SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

UNITED STATES OF AMERICA
V.
FALLBROOK PUBLIC UTILITY DISTRICT, ET AL

CIVIL NO. 1247-SD-GT-RBB

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SECTION 1 - SUMMARY

Section 1 - A summary of the Santa Margarita River Watershed Annual Watermaster Report for the 2009-10 Water Year.

Section 2 - This Annual Watermaster Report is prepared pursuant to Section II of the U. S. District Court Order dated March 13, 1989. The Court has retained jurisdiction over all surface flows of the Santa Margarita River Watershed and all underground waters determined by the Court to be subsurface flow of streams or creeks or which is determined by the Court to add to, support or contribute to the Santa Margarita River stream system. Local vagrant groundwaters that do not support the Santa Margarita River stream system are outside Court jurisdiction.

Section 3 - Surface water flows varied in Water Year 2009-10. Flows for long-term stations on Murrieta Creek at Temecula, the Santa Margarita River near Temecula, and the Santa Margarita River at Ysidora were 182%, 172% and 173% of their long-term averages, respectively. Flows at Temecula Creek near Aguanga were 78% of the long term average. Direct surface diversions to use totaled 942 acre feet compared with 986 acre feet in 2008-09. The total quantity of water in storage in the Watershed on September 30, 2010, was 618,630 acre feet, of which 24,503 acre feet were Santa Margarita River water and 594,127 acre feet were imported water.

Section 4 - Groundwater extractions were 39,447 acre feet compared to 42,258 acre feet in 2008-09 as shown on Table 4.1. Water purveyors pumped 33,643 acre feet and 5,804 acre feet were pumped by other substantial users. Total annual local production including surface diversions for use for the period 2001-2010 is shown on Figure 1.1.

Section 5 - During 2009-10, 72,995 acre feet of net imports were distributed for use within the Santa Margarita River Watershed, as shown on Table 5.2. This compares with 86,612 acre feet in 2008-09 and represents a decrease of 15.7 percent. Annual imports for the period 2001-2010 are shown on Figure 1.2 and Table 5.4. Exports of wastewater and native water for use outside the watershed in 2009-10 were 18,523 acre feet. This compares with 18,862 acre feet in 2008-09 and represents a decrease of 1.8 percent.

Section 6 - Water rights during the 1950's and 1960's consisted primarily of riparian and overlying rights. Other rights included appropriative rights and federal reserved rights. More recently, water purveyors in the Watershed have begun exercising groundwater appropriative rights. Except for surface water appropriative rights, water rights generally have not been quantified in the watershed. Perfected appropriative surface water rights on file with the State Water Resources Control Board (SWRCB) amount to 990,719 gallons per day. This corresponds to 1.53 cfs or 3.04 acre feet per day of direct diversion rights and 54,313.5 acre feet of active storage rights.

Figure 1.1

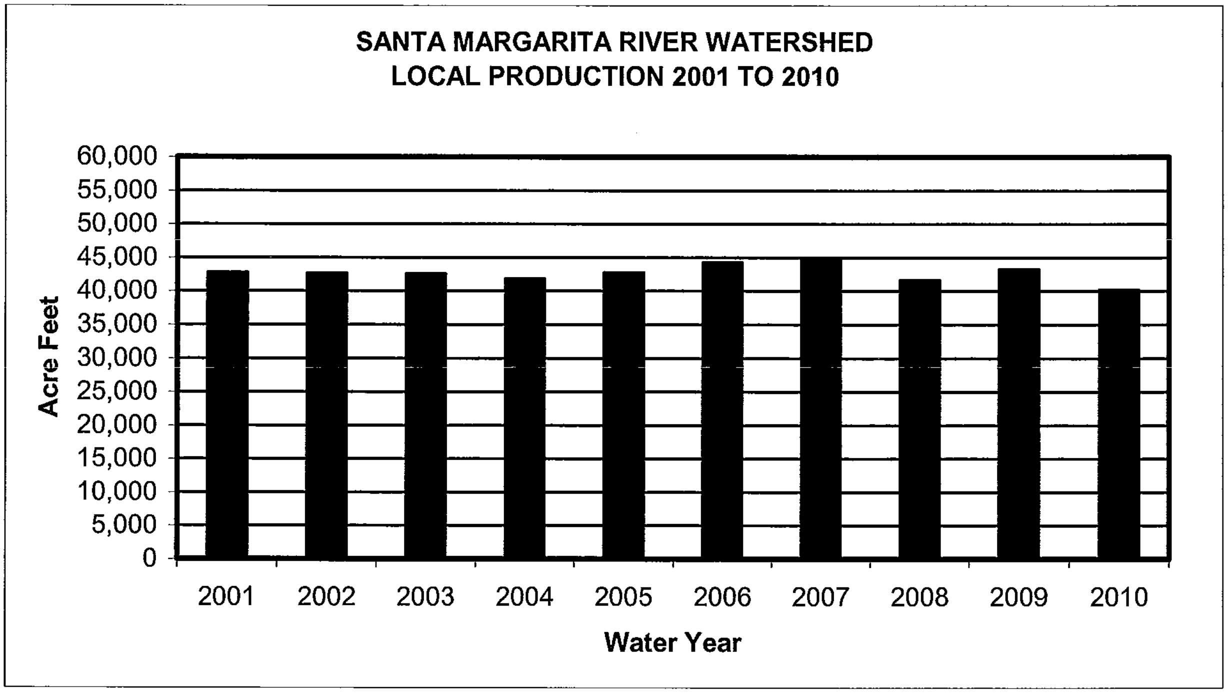
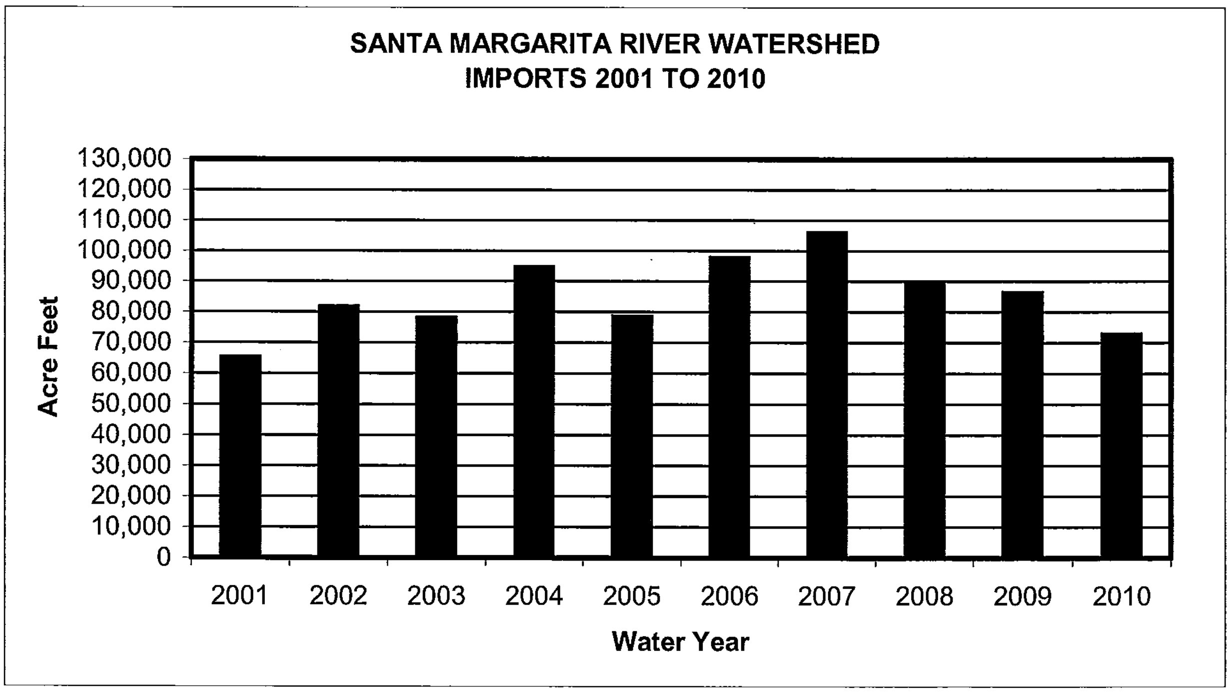


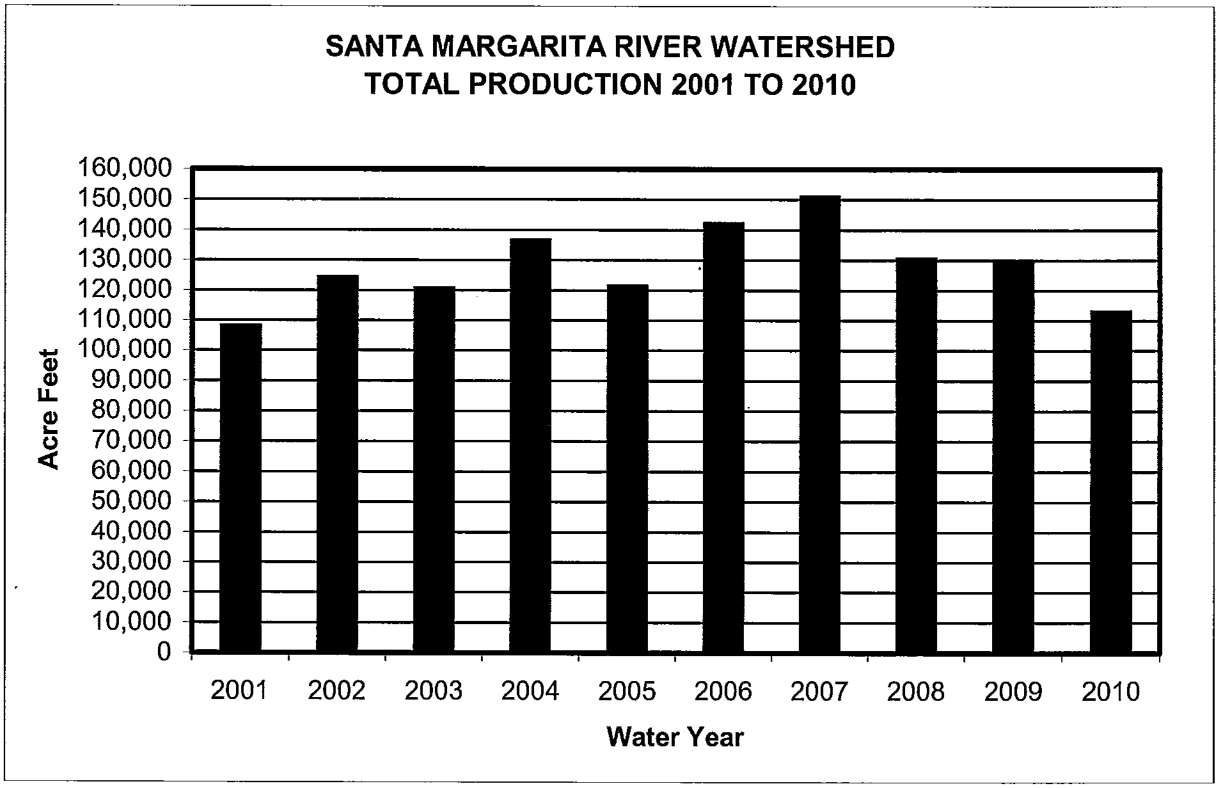
Figure 1.2



Section 7 –Total imported supplies plus local production totaled 113,198 acre feet compared to 129,714 acre feet reported in 2008-09. Of that quantity, 39,458 acre feet were used for agriculture; 6,811 acre feet were used for commercial purposes; 53,345 acre feet were used for domestic purposes; 30 acre feet were discharged to Murrieta Creek; 12 acre feet were discharged to Santa Gertrudis Creek; 59 acre feet were discharged from the potable connection to WR-34 outlet pipe; 3,812 acre feet were discharged by Rancho California WD during 2009-10 pursuant to the Cooperative Water Resource Management Agreement (CWRMA); 2,908 acre feet of fresh water were exported by Camp Pendleton; and 2,075 acre feet were recharged by Rancho California WD to storage. It is noted the agriculture use includes 394 acre feet of reclaimed water and thus the agriculture use of production is 39,064 acre feet. The overall system loss was 5,027 acre feet. System gain or loss is the result of many factors including errors in measurement, differences between periods of use and periods of production, leakage and unmeasured uses. This data are shown on Table 7.1.

Total annual production for the period 2001-2010 is shown on Figure 1.3.

Figure 1.3



Section 8 – Use of water from small storage ponds may be unauthorized. Camp Pendleton has taken the position that exportation of treated wastewater, the source of which is the native waters of the Santa Margarita River system, without legal authority for such exportation, is unauthorized use of water.

Section 9 - Threats to water supply include high nitrate levels in Rainbow Creek and Anza Valley in past years, potential overdraft conditions in the Murrieta-Temecula and Anza groundwater basins, and salt balance issues in the upper Watershed. Additional threats have been recently identified including high concentrations of nitrates, arsenic and fluoride in the Murrieta-Temecula area as well as the discovery of the Quagga mussel in imported supplies.

Section 10 – The U. S. Geological Survey (USGS) monitored surface water quality at the Temecula gaging station on the Santa Margarita River.

Groundwater samples from wells were analyzed for water quality by Camp Pendleton, Western MWD - Murrieta Division, Rancho California WD, and the USGS (on Indian Reservations) during 2009-10. The two primary constituents of interest are nitrates and total dissolved solids (TDS). The Basin Plan Objective for TDS of 750 mg/l was exceeded in seven of eleven wells at Camp Pendleton. Two wells sampled by Rancho California WD showed concentrations exceeding 750 mg/l, the Basin Plan Objective.

Section 11 - The Cooperative Water Resource Management Agreement between Camp Pendleton and Rancho California Water District was approved by the District Court on August 20, 2002. During the 2010 calendar year, Rancho California WD discharged 3,975 acre feet to the Santa Margarita River to meet flow requirements under the Agreement. During 2010, 5,372 acre feet were calculated as input to the groundwater account but the balance was already at the maximum balance of 5,000 acre feet and no additional water was credited to the account.

Section 12 - Projected Watermaster tasks for the next five years are listed.

Section 13 - A total Watermaster budget for the Water Year 2011-12 is proposed to be $606,060. This budget includes $373,835 for the Watermaster Office and $232,225 for operation of gaging stations and groundwater monitoring by the USGS.

SECTION 2 - INTRODUCTION

2.1 Background

On January 25, 1951, the United States of America filed Complaint No. 1247 in the United States District Court for the Southern District of California to seek a judicial determination of all respective water rights within the Santa Margarita River Watershed. The Final Judgment and Decree was entered on May 8, 1963, and appealed to the U. S. Court of Appeals. A Modified Final Judgment and Decree was entered on April 6, 1966. Among other things, the Decree provided that the Court:

> . . . retains continuing jurisdiction of this cause as to the use of all surface waters within the watershed of the Santa Margarita River and all underground or sub-surface waters within the watershed of the Santa Margarita River, which are determined in any of the constituent parts of this Modified Final Judgment to be a part of the sub-surface flow of any specific river or creek, or which are determined in any of the constituent parts of this Modified Final Judgment to add to, contribute to, or support the Santa Margarita River stream system.

In March 1989, the Court issued an Order appointing the Watermaster to administer and enforce the provisions of the Modified Final Judgment and Decree and subsequent orders of the Court. The appointing Order described the Watermaster's powers and duties as well as procedures for funding and operating the Watermaster's office. Also in 1989, the Court appointed a Steering Committee that at the conclusion of 2009-10 was comprised of representatives from the United States, Eastern Municipal Water District, Fallbrook Public Utility District, Metropolitan Water District of Southern California, Pechanga Tribe, Western Municipal Water District, and Rancho California Water District. The purposes of the Steering Committee are to assist the Court, to facilitate litigation, and to assist the Watermaster.

2.2 Authority

Section II of the appointing Order requires that the Watermaster submit a written report containing findings and conclusions to the Court promptly after the end of each water year.

2.3 Scope

The subjects addressed in this report are responsive to Section II of the appointing Order. Information and data contained in this report are based on information reported to the Watermaster by others. Therefore, the Watermaster does not guarantee the completeness and accuracy of the information presented in this report, although most of the data presented are based on measurements. Estimates by the Watermaster are so noted.

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SECTION 3 - SURFACE WATER AVAILABILITY AND USE

3.1 Surface Flow

Over the years, flows in the Santa Margarita River Watershed have been measured at the stations listed on Table 3.1. A number of these stations have been discontinued. During Water Year 2009-10 the USGS operated 13 stations under an agreement with the Watermaster. These include three stations where Riverside County Flood Control and Water Conservation District shares the local costs with the Watermaster. In addition to stream flows, the USGS also measures water elevation and precipitation at Vail Lake.

The USGS also operates several stations in the watershed under contract with Camp Pendleton. These include stream gaging stations on Fallbrook Creek and on the outlet channel and spillway for Lake O'Neill. The USGS also operates a tidal water level recorder on the Santa Margarita River at its mouth.

Monthly flows for stations in Water Year 2009-10 are shown on Table 3.2. Those flows consist of USGS discharge determinations available at the time this report is published. Official USGS discharges for 2009-10 are published by the USGS at the following website: *http://waterdata.usgs.gov/ca/nwis/sw*

In considering the historical record of flow at these stations, it should be recognized that the long term averages include variations in watershed conditions such as level of development, groundwater production, return flows, impoundments and vegetative use as well as hydrologic conditions, changes in gaging station locations and other factors. Descriptions of the various historical locations of gaging stations may be found in the publication, *Water Resources Data - California*, which was published annually by the USGS in hard copy form through Water Year 2003-04. For subsequent years the gaging station descriptions can be found at the website provided above.

TABLE 3.1

SANTA MARGARITA RIVER WATERSHED

STREAM GAGING STATIONS

2009-10

STATION NAME	STN. NO.	AREA SQ MI	RECORDS FROM	PERIOD OF RECORD 1920	1930	1940	1950	1960	1970	1980	1990	2000	2010
Temecula Creek Near Aguanga	1104 2400	131	USGS				8/57 ••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	•
Wilson Creek Above Vail Lake	1104 2490	122	USGS							10/89	10/94 •••••		
Temecula Creek At Vail Dam	1104 2520	320	USGS	2/23 ••••••	••••••••••	••••••••••	••••••••••	••••••••••	10/77 ••••••••				
Vail Lake at Temecula (Reservoir Storage)	1104 2510	320	USGS			10/48 •	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	•
Pechanga Creek Near Temecula	1104 2631	13.8	USGS							10/87 ••	••••••••••	••••••••••	•
Warm Springs Creek Near Murrieta	1104 2800	55.4	USGS							10/87 ••	••••••••••	••••••••••	•
Santa Gertrudis Creek Near Temecula	1104 2900	90.1	USGS							10/87 ••	• ••••••••	••••••••••	•
Murrieta Creek Near Murrieta	1104 2700	30	USGS								10/97 ••	••••••••••	•
Murrieta Creek At Temecula	1104 3000	222	USGS	10/25 ••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	•
Santa Margarita River Near Temecula	1104 4000	588	USGS	2/23 ••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	•
Rainbow Creek Near Fallbrook	1104 4250	10.3	USGS								9/89 ••••••••••	••••••••••	•
Sandia Creek Near Fallbrook	1104 4350	21.1	USGS								9/89 ••••••••••	••••••••••	•
Santa Margarita River At FPUD Sump *1/*	1104 4300	620	USGS	10/24 •••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	9/80 •	9/89 ••••••••••	••••••••••	•
Santa Margarita River Tributary Near Fallbrook	1104 4600	0.52	USGS					10/61 9/65 ••••					
DeLuz Creek Near DeLuz	1104 4800	33	USGS								10/92 ••••••	••••••••••	•
DeLuz Creek Near Fallbrook *2/*	1104 4900	47.5	USGS/ USMC				2/51 ••••••••	••••••••••	77 ••••••••		9/89-9/90 •	4/02-2/03 •	
Santa Margarita River Near DeLuz Station	1104 5000	705	USGS	10/24 - 9/26 ••									
Fallbrook Creek *3/* Near Fallbrook	1104 5300	6.97	USGS/ USMC					10/64 •••••	9/76 •••••••	12/88 •	••••••••••	••••••••••	•
Santa Margarita River At Ysidora *4/*	1104 6000	723	USGS	3/23 ••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••	•
			WATER YEAR ENDING	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010

1/ Period of record includes measurements for Santa Margarita near Fallbrook (#11044500) for period October 1924 to September 1980
2/ Recorded by USMC, Camp Pendleton October 1966 to 1977
3/ Recorded by USMC, Camp Pendleton prior to October 1993
4/ Station temporarily operated as SMR at USMC Diversion Dam near Ysidora #11045050 from February 26, 1999 to September 27, 2001

TABLE 3.2

SANTA MARGARITA RIVER WATERSHED
MEASURED SURFACE WATER FLOW
2009-10
Quantities in Acre Feet

GAGING STATION	DRAINAGE AREA SQ MI	MONTH OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR TOTAL	ANNUAL AVERAGE THRU 2009	YEARS OF RECORD THRU 2009
Temecula Creek Near Aguanga	131	22	31	212	1,420	1,240	651	370	251	91	31	14	16	4,349	5,580	52
Pechanga Creek Near Temecula 1/	13.1	0	0	22	92	7	0	0	0	0	0	0	0	121	467	22
Warm Springs Creek Near Murrieta	55.4	0	0	478	2,260	766	18	45	0	0	0	0	0	3,567	3,060	22
Santa Gertrudis Creek Near Temecula	90.2	0	0	308	1,250	350	0	57	0	0	0	0	0	1,965	2,870	22
Murrieta Creek Near Murrieta 2/	30	0	0	377	3,490	1,520	243	138	4	0	0	0	0	5,772	----- 3/	-----
															4,430	8 (1998-2005)
Murrieta Creek At Temecula	222	0	0	2,150	11,610	4,050	207	345	4	3	1	1	0	18,371	10,075	85
Santa Margarita River Near Temecula	588	184	184	2,910	13,950	5,230	616	717	416	686	485	272	244	25,894	15,086	61 (1949-2009)
															20,390	26 (1923-48)
Rainbow Creek Near Fallbrook	10.3	6	36	321	827	781	215	98	20	11	6	2	3	2,326	2,640	20
Sandia Creek Near Fallbrook	21.1	79	100	476	1,700	1,530	701	490	294	172	101	93	93	5,829	6,950	20
Santa Margarita River At FPUD Sump	620	223	405	3,070	16,820	4,440	1,080	1,120	483	757	482	239	291	29,410	30,030	20
DeLuz Creek Near DeLuz	33	0	0	220	3,140	1,820	507	141	114	1	0	0	0	5,943	8,800	17 (1993-2009)
Santa Margarita River At Ysidora	723	0	0	3,250	30,650	13,150	3,160	2,450	987	373	212	68	0	54,300	31,403 4/	61 (1949-2009)
															31,390	26 (1923-48)
Fallbrook Creek Near Fallbrook	6.97	0	0	64	258	208	52	29	20	4	2	0	0	637	1,240	21 (1989-2009)
															1,462 5/	12 (1965-76)

1/ In summer 2006 gaging location was moved upstream 0.4 miles from prior location to current location 100 feet upstream of Metropolitan Water District pipe crossing, 0.4 miles upstream of the Rainbow Canyon Road/Old Highway 395 Bridge.
2/ Previously published as Murrieta Creek at Tenaja Road
3/ Continuous record stopped on February 22, 2005 in lieu of bridge installation. Only discharge measurements were taken from February 2005 until September 2007.
4/ Includes record of two years at Santa Margarita River at USMC Diversion Dam near Ysidora station
5/ Includes wastewater flows

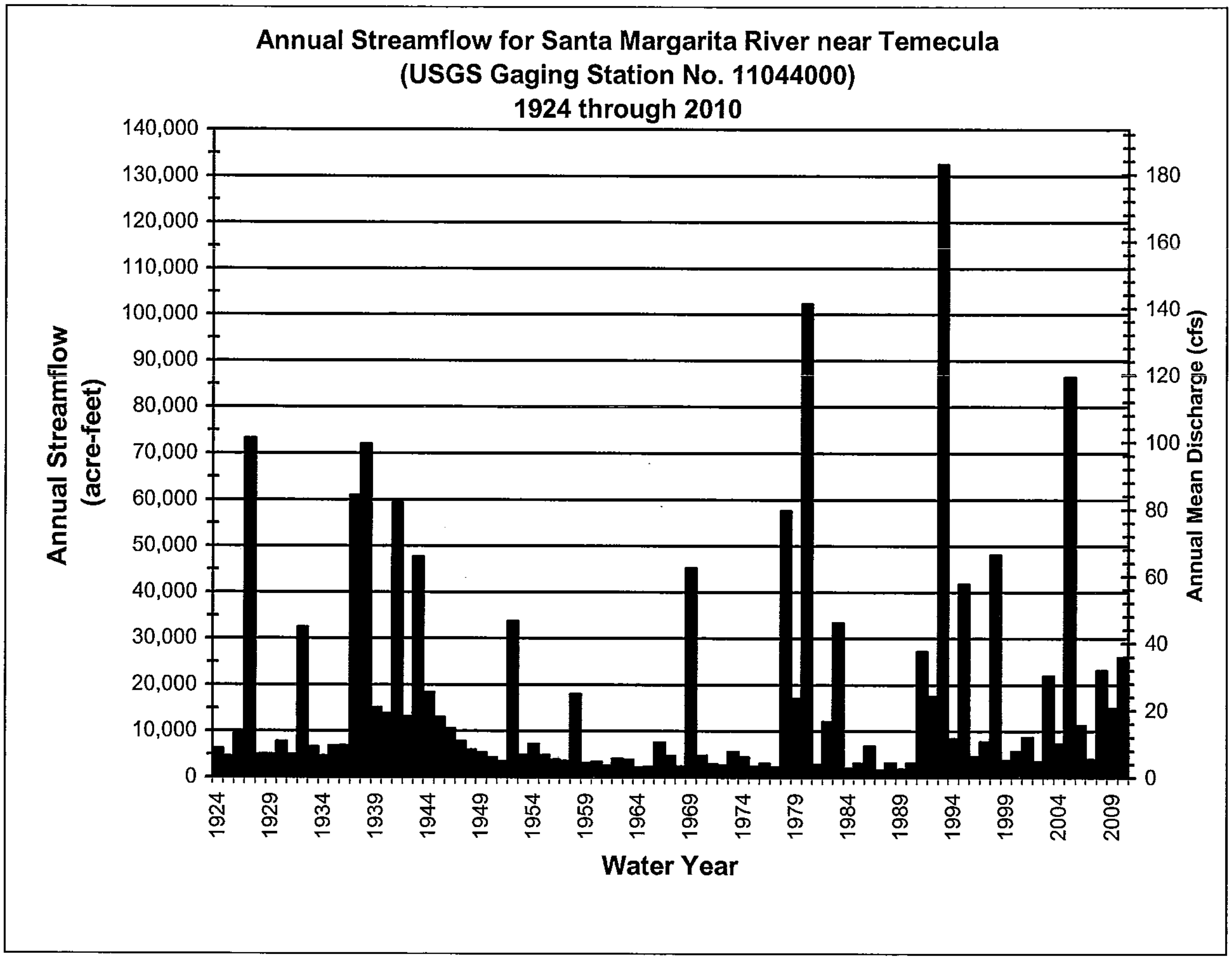
Total flows at four long-term stations for Water Years 2008-09 and 2009-10 are compared with their averages in the tabulation below. Average flows for the Santa Margarita River stations near Temecula and near Ysidora are shown for two periods: before and after Vail Dam was constructed (1923 to 1948, and 1949 to 2009).

	TOTAL FLOW		AVERAGE FLOW
	2008-09 Acre Feet	2009-10 Acre Feet	Through 2009 Acre Feet
Temecula Creek Near Aguanga	2,302	4,349	5,580 (1957-2009)
Murrieta Creek At Temecula	9,134	18,371	10,075 (1925-2009)
Santa Margarita River Near Temecula	14,948	25,894	15,086 (1949-2009) 20,390 (1923-1948)
Santa Margarita River At Ysidora (various locations)	20,082	54,300	31,403 (1949-2009) 31,390 (1923-1948)

The foregoing tabulation indicates the flows for Water Year 2009-10 were varied with three stations showing flows above normal and one gage with flows below normal. Flows for long-term stations on Murrieta Creek at Temecula, the Santa Margarita River near Temecula and the Santa Margarita River at Ysidora were 182%, 172% and 173% of their long-term averages, respectively. Flows at Temecula Creek near Aguanga were 78% of the long-term average.

The Santa Margarita River near Temecula station is of particular interest relative to discharge requirements specified in the Cooperative Water Resource Management Agreement (CWRMA) between Camp Pendleton and Rancho California WD, as described in Section 11. The long-term time series for annual streamflow for Santa Margarita River near Temecula is provided on Figure 3.1 showing the 2009-10 flows were in the fourth quartile and 74% greater than the flows for the prior year.

Figure 3.1

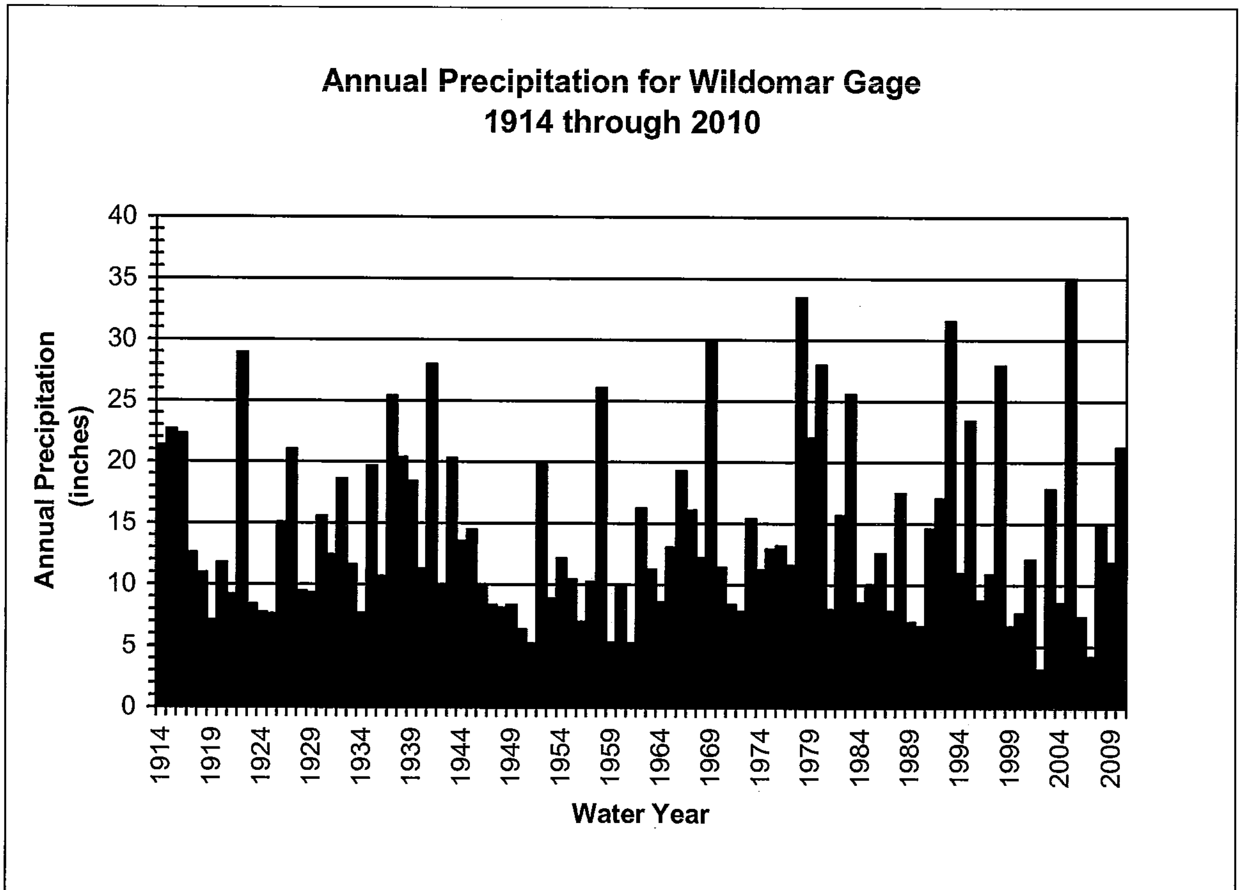


It is also interesting to review long-term precipitation records relative to long-term streamflow. Figure 3.2 shows the long-term time series for annual precipitation for the Wildomar gage maintained by the Riverside County Flood Control and Water Conservation District. The Wildomar gage is specified in the CWRMA for determining water year types in establishing Rancho California WD discharge requirements to meet flows for the Santa Margarita River near Temecula. The long-term average precipitation for the Wildomar Gage for the period 1914 through 2010 is 14.02 inches. The reported precipitation for Water Year 2009-10 is 21.19 inches, which is in the fourth quartile for the period of record.

Monthly flows shown in Table 3.2 consist primarily of naturally occurring surface runoff, including return flows, except for Rancho California WD discharges into the Santa Margarita River and Murrieta Creek. Most of the Rancho California WD discharges are pursuant to the CWRMA. During Water Year 2009-10 the total CWRMA discharges into the Santa Margarita River and Murrieta Creek equaled 3,871 acre feet.

The discharges into Santa Margarita River totaled 3,812 acre feet from outlet WR-34, located just upstream from the Santa Margarita River near Temecula gaging station. In 2009 Rancho California WD extended a pipeline from its distribution system to discharge at the same location as the outlet WR-34. Discharges from the potable connection to the Santa Margarita River totaled 59 acre feet. There were no discharges to Murrieta Creek from the System River Meter.

Figure 3.2



During 2009-10, Rancho California WD also released 30 acre feet from wells into Murrieta Creek, and 12 acre feet from wells into Santa Gertrudis Creek.

3.2 Surface Water Diversions

Surface diversions to surface water storage and groundwater storage are shown in Table 3.3 for Vail Lake and Table 3.4 for Lake O'Neill. In general, diversions to surface storage at Vail Lake and Lake O'Neill are computed as being equal to inflow less spill, however, diversion to surface storage at Vail Lake excludes inflow during the period from May 1 through October 31 when Permit 7032 does not allow such diversions. Inflow to Vail Lake is calculated as the sum of evaporation, spill, releases and change of storage. Inflow into Vail Lake during the period when diversions are not permitted is released and not credited to groundwater storage.

It is noted the Vail Lake inflow for May through September totaled 578 acre feet but Rancho California WD was able to release only 177 acre feet during this period due to limitations resulting from pipeline construction. Releases in the amount of 777 acre feet were made in October 2010 after pipeline construction was completed resulting in the May through October total inflows of 772 acre feet compared to the total releases during this period of 954 acre feet.

Direct surface diversions for 2009-10 are shown in Table 3.5. The use is primarily irrigation. Estimated consumptive uses, losses and returns are also shown.

3.3 Water Storage

Major water storage facilities in the Santa Margarita River Watershed are listed on Table 3.6, together with the water in storage on September 30, 2009 and September 30, 2010. Total Santa Margarita River stream system water in storage at the end of Water Year 2009-10 totaled 24,503 acre feet, compared to 22,709 acre feet at the end of the previous year. Imported water in storage in Lake Skinner and Diamond Valley Lake, both operated by Metropolitan Water District of Southern California (MWD), is also shown on Table 3.6.

TABLE 3.3

SANTA MARGARITA RIVER WATERSHED
SURFACE WATER DIVERSIONS TO STORAGE FOR VAIL LAKE
2009-10
Quantities in Acre Feet

	Surface Water Storage		
	2007-08	**2008-09**	**2009-10**
Storage end of prior year	26,450	24,160	21,920
Inflow - Total	6,664	3,227	7,466
Inflow to be Bypassed [1]	216	225	571
Spill	0	0	0
Diversions to Surface Storage [2]	6,448	3,002	6,895
Annual Evaporation	3,893	4,006	4,164
Releases - Total	5,061	1,461	1,372
Release to GW Storage [3]	4,845	1,236	801
Change of Storage	(2,290)	(2,240)	1,930
Storage End of Year	24,160	21,920	23,850
	Groundwater Storage		
Recharge Release from Vail Lake	4,845	1,236	801

Data reported by Rancho California WD except end of year storage reported by U. S. Geological Survey

1/ Inflow to be bypassed Oct 1 to Oct 31 and May 1 to Sept 30 in accordance with Permit 7032

2/ Inflow less Spill less Inflow to be Bypassed

3/ Total Release less Inflow to be Bypassed

TABLE 3.4

SANTA MARGARITA RIVER WATERSHED

SURFACE WATER DIVERSIONS TO STORAGE FOR LAKE O'NEILL

2009-10

Quantities in Acre Feet

	Surface Water Storage		
	2007-08	**2008-09**	**2009-10**
Storage end of prior year	615	879	789
Inflow - Total	3,253 [1]	1,730 [2]	3,080 [3]
Spill	0	78	265
Diversions to Surface Storage	3,253 [4]	1,652 [4]	2,815 [4]
Annual Evaporation	394	501	405
Releases - Total	1,510	836	1,790
Release to GW Storage	1,510	836	1,790
Apparent Seepage to GW	1,084 [5]	405 [5]	756 [5]
Change of Storage	264	(90)	(136)
Storage End of Year	879	789	653
	Groundwater Storage		
Recharge Release from Lake O'Neill	2,594 [6]	1,241 [6]	2,546 [6]
Deliveries to Recharge Ponds	7,788	6,335	5,931
Indirect Recharge from Ditch System	1,330	1,119	1,124
TOTAL	11,712	8,695	9,601

1/ 2,047 AF diverted from the Santa Margarita River, 734 AF estimated inflow from Fallbrook Creek, 322 AF from local runoff, and 150 AF from rainfall on lake surface

2/ 1,065 AF diverted from the Santa Margarita River, 418 AF estimated inflow from Fallbrook Creek, 145 AF from local runoff, and 102 AF from rainfall on lake sur2/face

3/ 1,787 AF diverted from the Santa Margarita River, 849 AF estimated inflow from Fallbrook Creek, 296 AF from local runoff, and 148 AF from rainfall on lake surface

4/ Inflow less Spill

5/ Includes seepage losses, leakage through flashboards and unaccounted for water

6/ Includes Release to GW Storage and Apparent Seepage to GW from Lake O'Neill

TABLE 3.5

SANTA MARGARITA RIVER WATERSHED
SURFACE WATER DIVERSIONS TO USE
2009-10
Quantities in Acre Feet

DIVERTER	Surface Diversions	Consumptive Use[1]	Consumptive Loss[2]	Return
Blue Bird Ranch	31.5	21.2	3.2	7.1
James Carter	52.0	35.1	5.2	11.7
Chambers	8.0	5.4	0.8	1.8
Cal June, Inc.	9.0	6.1	0.9	2.0
Hill Springs Farm LLC	38.0	25.7	3.7	8.6
Sage Ranch Nursery	100.0	67.5	10.0	22.5
Rose Family 1985 Trust	7.0	4.7	0.7	1.6
Val Verde Partners (Strange)	56.8	38.3	5.7	12.8
Wilson Creek Dev. LLC	400.0	270.0	40.0	90.0
Cahuilla Indian Reservation	5.6	3.7	0.7	1.2
San Diego State University	41.3	27.9	4.1	9.3
TOTAL	749.2	505.6	75.0	168.6

1 Consumptive use equals 75% of Diversions less Losses
2 Losses equal 10% of Diversions
3 Returns equal 25% of Diversions less Losses

TABLE 3.6

SANTA MARGARITA RIVER WATERSHED
WATER IN STORAGE
2009-10
Quantities in Acre Feet

Santa Margarita River Storage	Total Capacity 1/	Water in Storage 9/30/2009	Water in Storage 9/30/2010
Dunn Ranch Dam	90	0	0
Upper Chihuahua Creek Reservoir	47	0	0
Vail Lake	49,370	21,920	23,850
Lake O'Neill	1,380	789	653
SUBTOTAL	**50,887**	**22,709**	**24,503**
Imported Water Storage			
Lake Skinner	44,000	39,935 R	38,748
Diamond Valley Lake	810,000	351,271	555,379
SUBTOTAL	**854,000**	**391,206** R	**594,127**
TOTAL STORAGE	**904,887**	**413,915** R	**618,630**

1/ Capacity shown is current capacity reported by owner. Original capacity or decreed capacity may not be reflected in this table.
R - Revised

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SECTION 4 - SUBSURFACE WATER AVAILABILITY

4.1 General

Much of the water from the Santa Margarita River stream system is obtained by pumping subsurface water. The Court has identified two basic types of subsurface water in its interlocutory judgments. One type is vagrant, local, percolating waters that do not add to, support or contribute to the Santa Margarita River or its tributaries. Such waters have been determined to be outside the continuing jurisdiction of the Court. These waters are typically found in the basement complex and/or residuum deposits in the Watershed. Wells tapping these deposits typically have low yields.

Other subsurface waters were found by the Court to add to, contribute to and support the Santa Margarita River and/or its tributaries. Aquifers containing such waters have been designated by the Court as younger alluvium and older alluvium. Younger alluvial deposits are commonly exposed along streams and in valleys. Older alluvium may be found underneath younger alluvium and is not limited to areas along stream channels. Older alluvium may or may not be exposed at ground surface. The use of subsurface water found in younger and older alluvium is generally under the continuing jurisdiction of the Court and is reported upon in this report.

4.2 Extractions

Total production of Santa Margarita River water by substantial water users in the Watershed from all sources is listed on Table 4.1 by hydrologic area along with estimated consumptive use and return flows. Recovery of imported water that has been directly recharged is not included in Table 4.1. Substantial water users include water purveyors as well as private irrigators who irrigate eight acres or more or use an equivalent quantity of water.

In 2009-10, production by purveyors totaled 33,643 acre feet, compared to 36,697 acre feet in 2008-09. Monthly quantities are shown in Appendix A and annual production for water years between 1966 and 2010 is shown in Appendix B.

The quantities of subsurface extractions by private irrigators are based on the irrigated acreage and the crop type. These quantities are reported in Appendix C to total 5,804 acre feet in 2009-10. Of the subsurface extractions, 75 percent is estimated to have been consumptively used and 25 percent to have been return flow. Return flow is that portion of the total deliveries that is not consumed. Although return flows average about 25 percent, such flows are affected with the type of use (domestic, commercial and irrigation), the type of irrigation application (drip, micro-sprinkler, furrow), and exports from watersheds.

TABLE 4.1

SANTA MARGARITA RIVER WATERSHED
SANTA MARGARITA RIVER WATER PRODUCTION BY SUBSTANTIAL USERS
2009-10

HYDROLOGIC AREA		WATER PURVEYOR PRODUCTION ACRE FEET	OTHER IRRIGATED ACRES *	OTHER IRRIGATION PRODUCTION ACRE FEET *	TOTAL GROUNDWATER PRODUCTION ACRE FEET	SURFACE WATER DIVERSIONS ACRE FEET *	TOTAL PRODUCTION ACRE FEET	ESTIMATED CONSUMPTIVE USE ACRE FEET 1/	ESTIMATED RETURN FLOW ACRE FEET
Wilson Creek **Above Aguanga GWA** Includes Anza Valley	*(Lake Riverside, (Anza MWC, Cahuilla)*	338	609 2/	1,442	1,780	6	1,786	1,339	447
Temecula Creek **Above Aguanga GWA**	*(Quiet Oaks MHP)*	23	307	680	703	38	741	553	188
Aguanga GWA	*(Outdoor Resorts) (Jojoba Hills)*	565	590	1,740	2,305	457	2,762	2,037	725
Upper Murrieta Creek (Warm Springs Creek above 7S/3W-14)		0	0	0	0	0	0	0	0
Lower Murrieta Creek (Santa Gertrudis/Tucalota Creek above 7S/2W-18 -- Includes FPUD Diversion from Lake Skinner)		0	410	44	44	120	164	114	43
Murrieta-Temecula GWA	*(RCWD **, WMWD (Murrieta Division), EMWD, Pechanga and Hawthorn)*	26,935	857	1,338	28,273	52	28,325	21,240	7,085
Santa Margarita River Below the Gorge									
Deluz Creek		0	297	556	556	46	602	448	154
Sandia Creek		0	55	0	0	9	9	6	3
Rainbow Creek		0	0	0	0	0	0	0	0
Santa Margarita River	*(USMC)*	5,782	20	4	5,786	41	5,827	2,636	883
TOTAL		**33,643**	**3,145**	**5,804**	**39,447**	**769** 3/	**40,216**	**28,373**	**9,528**

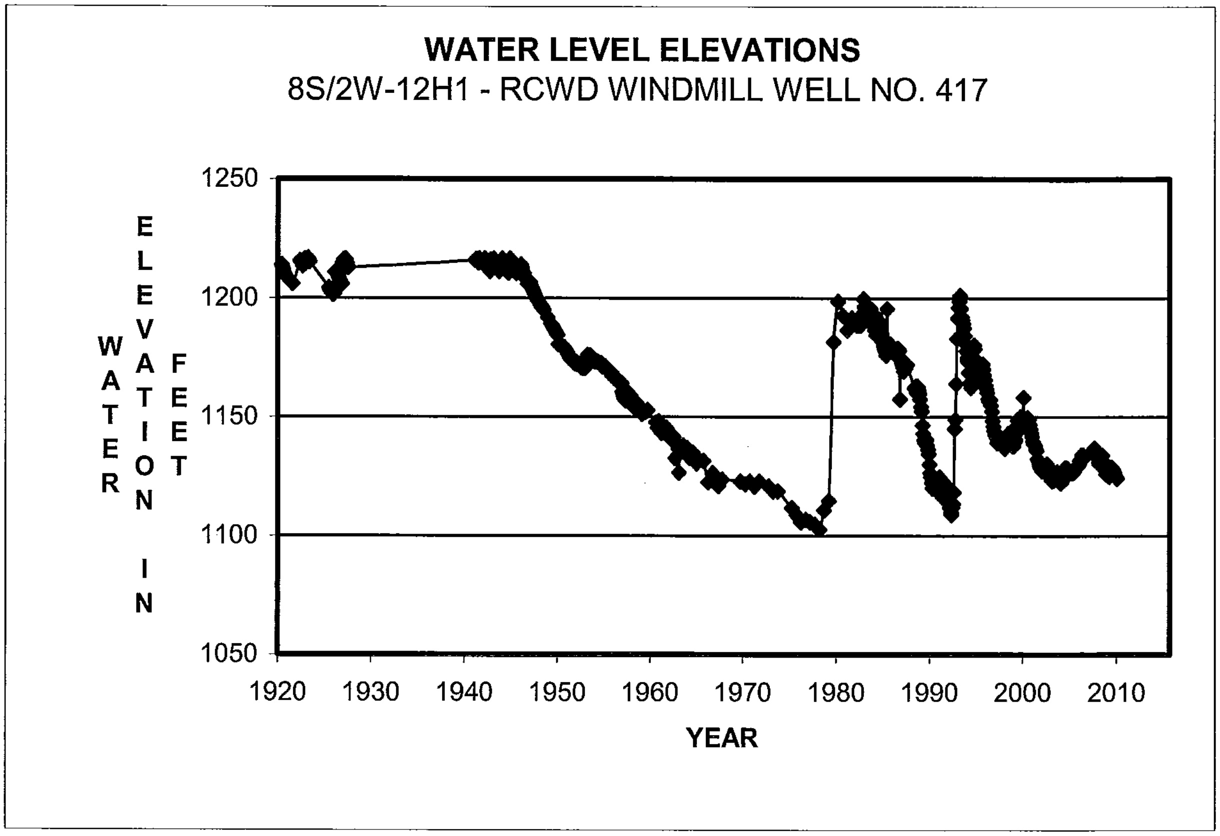
1/ Estimated consumptive use is equal to 75% of Total Groundwater Production plus 75% of Surface Water Diversions less 10% (CU = .75 {GW + .90 * SW}), except for Camp Pendleton where export of 2,908 acre feet is excluded and return flows include any measured wastewater returns to the watershed.
2/ Includes lands overlying deep aquifer in Anza Valley.
3/ Includes surface water diversion for irrigation, commercial and domestic use.
* - Data taken from Appendix C.
** - RCWD pumped an additional 318 AF that was exported to the San Mateo Watershed

4.3 Water Levels

Water levels in selected wells in the Watershed are measured periodically by various entities. Historical water levels in five wells at various locations in the Watershed are shown in this report on Figures 4.1, 4.2, 4.3, 4.4 and 4.5.

Figure 4.1 shows water levels in Well No. 8S/2W-12H1 (Windmill Well) located in the Rancho California WD service area downstream from Vail Lake. Note the extended drawdown from 1945 to 1978, the major recoveries during the wet years in 1980 and 1993, and the effect of relatively dry years after 1980 and after 1993. Water levels declined 1.4 feet between September 30, 2009 and September 30, 2010. It should be noted that the Windmill Well is located in Pauba Valley about 1.5 miles downslope from the Valle de los Caballos (VDC) recharge area, where releases from Vail Lake as well as imported water are recharged. In Water Year 2009-10 12,858 acre feet of imported water were recharged in the VDC of which 84 percent was recovered in the same year.

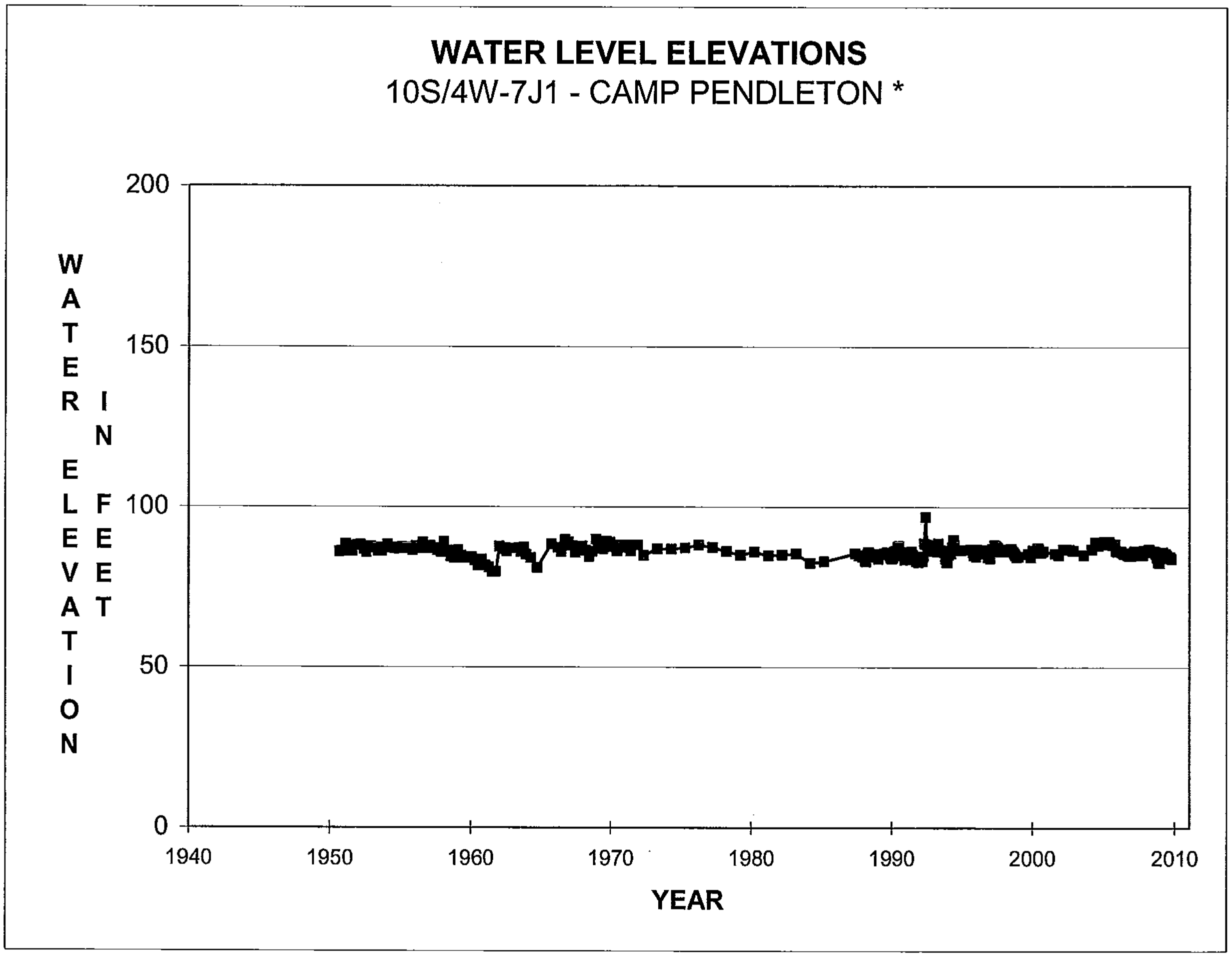
FIGURE 4.1



Collar El. 1216.7 Feet; Depth 515 Feet; Drilled in Alluvium
Ref: RCWD reports (1920-2010)

Figure 4.2 shows water levels at Camp Pendleton in Well No. 10S/4W-7J1 (previously referred to as 10S/4W-7J4) a monitoring well located in the Upper Sub-basin. Fluctuations in recent years illustrate recharge during the winter months and drawdown each summer, with the water levels generally between 82 and 90 feet in elevation. Water levels in Well 7J1 declined 0.4 feet in the period between September 2009 and September 2010.

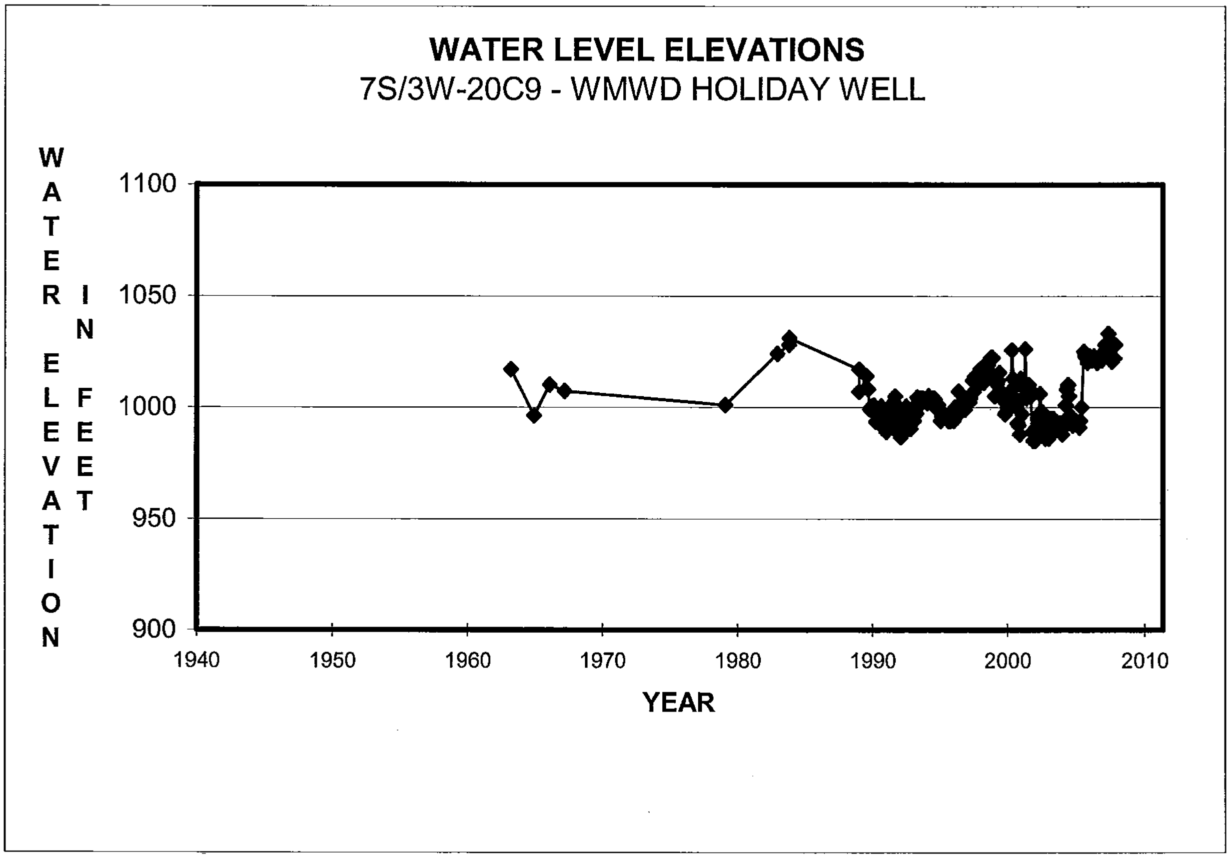
FIGURE 4.2



Ground El. 92 Feet; Depth 141 Feet; Perf. Unknown; Drilled in Alluvium
Camp Pendleton Records (1950-72) (1988-2010); Leeds Hill Study (1973-85) Dates Estimated
* Well previously referred to as 10S/4W-7J4

Figure 4.3 shows water levels from Holiday Well No. 7S/3W-20C9 in the Murrieta Division service area of Western Municipal Water District. The Holiday Well was used as a production well until February 2006 but now is used only as a monitoring well. Water levels in this well remained the same between August 31, 2009 and September 30, 2010. Water levels in the Lynch Well, 7S/3W-17R2, which serves as a monitoring well and had no production in 2009-10, declined by 2 feet.

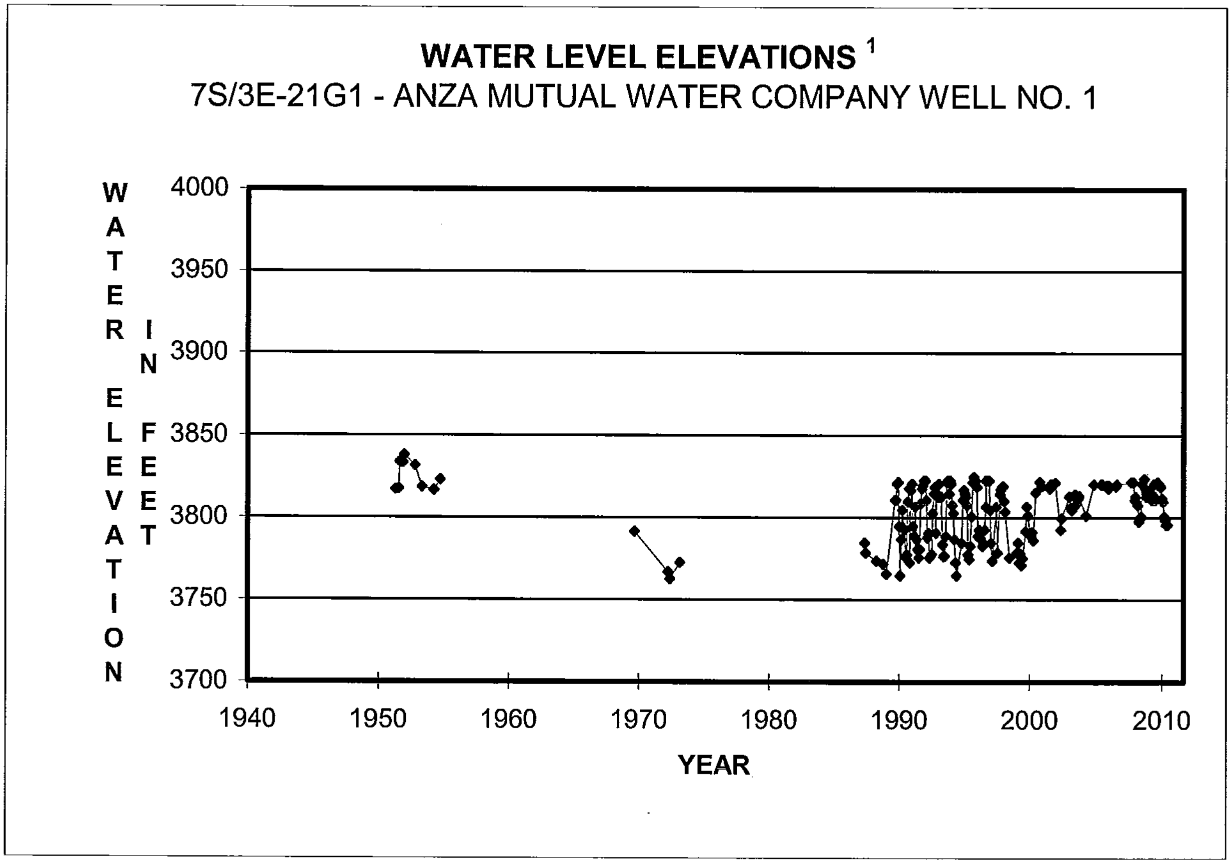
FIGURE 4.3



Ground El. 1090 Feet; Depth 307 Feet; Perf. 60 - 307 Feet
Western Municipal Water District

Figure 4.4 shows water levels for Well No. 7S/3E-21G1, Anza Mutual Water Company Well No. 1, a production well located in the Anza Valley. Water levels in this well declined 25 feet by the end of 2009-10. As may be noted from Figure 4.4, recent measurements show annual 50 foot fluctuations in groundwater levels at this well, partly in response to the operation of nearby irrigation wells. Current levels are within the historical range.

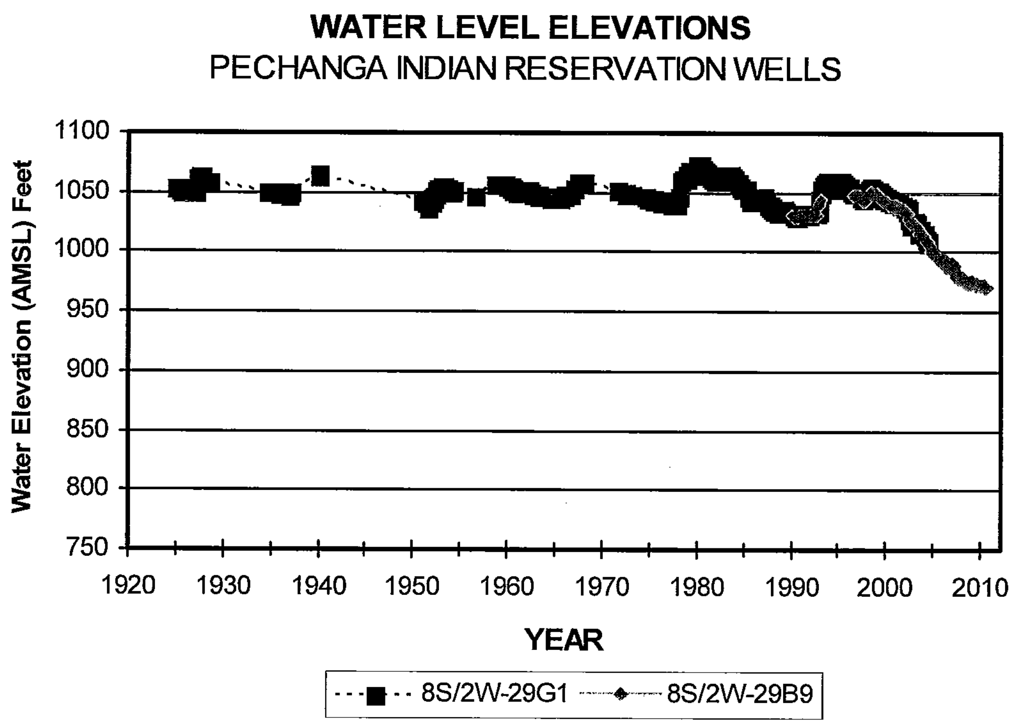
FIGURE 4.4



[1] Static water levels plotted after April 1999
Ground El. 3862.6 Feet; Depth 260 Feet; Perf. 20 - 260 Feet; Drilled in Alluvium
Anza Mutual Water Co. Well No. 1 (1987-2010); DWR Bulletin 91-22 (1950-73)

Figure 4.5 shows water levels at Well No. 8S/2W-29G1, located in Wolf Valley on the Kelsey Tract of the Pechanga Indian Reservation. The well is not used for water production and its depth as measured in 1972 was 159 feet. Water levels collected since 1925 reflect unconfined groundwater levels. As shown on Figure 4.5 the groundwater levels have fluctuated within a 44 foot range above and below elevation 1050 feet in response to wet years and dry periods until recently. In the past few dry years, levels have declined below their usual range. In November 2004, this well went dry due to the preceding relatively dry hydrological conditions and pumping of the nearby New Kelsey Well on the Pechanga Reservation. In order to continue to monitor water levels on the Pechanga Indian Reservation, water levels for Well No. 8S/2W-29B9 are also shown on Figure 4.5. Well No. 8S/2W-29B9 is completed in the younger alluvium. As shown on Figure 4.5 water levels for Well No. 8S/2W-29B9 coincide with water levels for the common period of record for Well No. 8S/2W-29G1. Water levels in Well 8S/2W-29B9 declined by 2 feet in 2009-10.

FIGURE 4.5



8S/2W-29G1: Ground El. 1091.1 Feet; Depth 159.1 Feet
8S/2W-29B9: Ground El. 1075.93 Feet; Depth 113.0 Feet
U.S. Geological Survey Records

Changes in water levels in the above noted wells between the end of the previous Water Year and the end of the 2010 Water Year are shown below:

Well	Water Elevation 2009 Feet	Water Elevation 2010 Feet	Change in Water Level Feet
RCWD 8S/2W-12H1	1125.5	1124.1	Down 1.4
USMC 10S/4W-7J1*	84.3	83.9	Down 0.4
WMWD 7S/3W-20C9	1022.0**	1022.0	No Change
Anza MWC 7S/3E-21G1	3820.6	3795.6***	Down 25.0
Pechanga IR 8S/2W-29B9	973.0****	971.0	Down 2.0
Pechanga IR 8S/2W-29G1	N/A	N/A	Well Dry

* Well previously referred to as 10S/4W-7J4
** Reading taken 8/31/09
*** Reading taken 8/01/10
**** Reading taken 8/27/09

4.4. Groundwater Storage

Bulletin 118 Update 2003 prepared by the State of California Department of Water Resources describes three groundwater basins in the Santa Margarita River Watershed: Santa Margarita Valley, Temecula Valley, and Coahuila (Cahuilla) Valley. These basins are also known as the Santa Margarita Groundwater Basin, the Murrieta-Temecula Groundwater Basin, and the Anza Groundwater Basin. Groundwater storage in each of these basins is described in this section.

Santa Margarita Groundwater Basin – The Santa Margarita Groundwater Basin is located along the Santa Margarita River at Camp Pendleton and includes three sub-basins: Upper, Chappo, and Ysidora. Useable groundwater storage is summarized in Table 4.2. Table 4.2 shows that the total combined storage for all the sub-basins between the depths of 5 and 100 feet is 48,100 acre feet. However, much of that storage is below sea level. Thus, the useable capacity is considered to be 28,700 acre feet as shown in Table 4.2. In 2009-10 useable groundwater storage in place was computed for all three sub-basins to be 26,334 acre feet. The useable storage in place for the three sub-basins amounted to 26,601 acre feet in 2008-09. Thus there was a decline in groundwater storage in place of 267 acre feet for the water year. It may be noted that classification of storage as useable is made without allowances for maintenance of riparian habitat.

Table 4.2

SANTA MARGARITA RIVER WATERSHED

GROUNDWATER STORAGE AT CAMP PENDLETON
2009-10
Quantities in Acre Feet

	Sub-basin			
I. Available Storage	Upper	Chappo	Ysidora	Total
A. Total Storage [1]	12,500	27,000	8,600	48,100
B. Useable Storage	12,500	15,000 [2]	1,200 [3]	28,700
II. Unused Storage				
A. Wells used for Depth	10S/4W-7J1*	10S/4W-18L1	11S/5W-11D4	
B. Land Surface Elevation - Feet	92.0	73.6	18.8	
C. Depth to Water - Feet [4]	8.1	9.2	9.5	
D. Depth below 5 Feet	3.1	4.2	4.5	----
E. Average Area - Acres [5]	840	2,520	1,060	----
F. Specific Yield [6]	0.216	0.130	0.090	----
G. Unused Storage below 5 Feet	562	1,376	429	----
III. Useable Storage in Place [7]	11,939	13,624	771	26,334
IV. Useable Storage in Place 2008-09	12,010	13,906	685	26,601
V. Change in Storage 2009-10	(71)	(282)	86	(267)

1 Computed by USGS (Worts, F. C., Jr. and Boss, R. F., *Geology and Ground-Water Resources of Camp Pendleton, CA, July 1954)* as the storage between depths of 5 and 100 feet
2 Storage between 5 foot depth and sea level
3 Storage between 5 foot depth and 10 feet above sea level
4 Reported by Camp Pendleton as end of September values unless noted otherwise
5 Average area estimated over depth interval for unused storage
6 From Worts and Boss for depth interval of 5 to 50 feet
7 Useable storage includes stored water reserved for riparian habitat; however specific amount stored for such purposes not delineated.
* Previously referred to as Well 10S/4W-7J4

Murrieta-Temecula Groundwater Basin – The Murrieta-Temecula Groundwater Basin is located along Murrieta and Temecula Creeks in the Upper Santa Margarita River Watershed. Total groundwater storage at the end of water year 2001 was computed for each of 22 hydrologic subareas that make up the Groundwater Basin. These computations were based on the areal extent of each subarea, the thickness of each of three aquifers, (younger alluvium, Pauba aquifer and Temecula aquifer), a specific yield for each aquifer, and the depth to water in each aquifer at the end of the water year. Specific yields were based on unconfined conditions for all aquifers. The total groundwater storage in the uppermost 500 feet as of September 30, 2001, was estimated at 1,340,556 acre feet.

Annual changes in groundwater storage have been computed for the years since 2001 using two methodologies – a water budget method and a groundwater level method. The water budget method determines the change in storage as the difference between the major elements of inflow and outflow to the groundwater area. Table 4.3 shows the changes for Water Years 2006 through 2010. The change in groundwater storage for Water Year 2010 calculated using the water budget method is a decrease of 3,718 acre feet.

The groundwater level method is based on the changes in water levels in key wells in the hydrologic sub-areas as shown on Table 4.4. Unfortunately water levels were not available in 2010 for key wells in Subareas 5, and 13. In several of the past years there were no measurements available of Subareas 16 and 17. However, in 2009 and 2010 measurements in Subarea 16 were taken providing a change in storage between those two years. The well in Subarea 17 was measured for 2010, but there is no basis for comparison to past years due to no measurements in prior years. Well 402, the key well in sub-area 5, has not been measured in many years, thus sub-area 5 has been excluded from the computation in recent years. Apparently, roots have prevented measurement of water levels in Well 414, the key well in sub-area 13 since 2003. Sub-areas 16 and 17 overlie the Temecula aquifer that has a storativity of 0.0036 so water level changes in those subareas produce relatively minor storage changes compared to a similar change in the younger alluvium or Pauba aquifers. Changes in storage under the groundwater level method for Water Years 2006 through 2010 are shown in Table 4.4. The change in groundwater storage for Water Year 2010 is calculated as a gain of 1,064 acre feet.

The foregoing two methods are based on independent measurements and estimates. The estimates from the two methods are generally comparable for 2010 as well as 2002 through 2004 and 2009 as reported in prior Watermaster reports. The estimates from the two methods for 2005 through 2008 indicate differences in the results. It will take testing over a number of years under varying hydrologic conditions to refine these approaches. These values will be compared with those computed with the groundwater model that is used for implementation of the Cooperative Water Resource Management Agreement between Camp Pendleton and Rancho California WD when the model is updated.

TABLE 4.3

SANTA MARGARITA RIVER WATERSHED
CHANGES IN GROUNDWATER STORAGE
MURRIETA-TEMECULA GROUNDWATER AREA
Water Budget Method
Quantities in Acre Feet

Elements of Inflow	Water Year Ending				
	2006	2007	2008	2009	2010
Releases from Vail [1]	1,399	704	4,845	1,236	801
Releases from Lake Skinner [2]	292	54	132	142	156
Freshwater Releases to Stream [3]	4,923	3,859	4,092	5,302	3,913
Reclaimed Water Released to Stream [4]	0	0	0	0	0
Recharged Imported Water [5]	18,820	14,175	12,419	14,828	12,858
Return Flow from RCWD Groundwater Production [6]	9,250	9,137	8,660	9,325	8,441
Return Flow from Import Direct Use [7]	4,397	5,428	4,725	3,903	2,999
Return Flow from Applied Wastewater [8]	1,818	1,904	1,335	1,565	1,582
Underflow and Tributary Inflow [9]	9,212	785	27,906	15,251	30,674
Subtotal	50,111	36,046	64,114	51,552	61,424
Elements of Outflow					
Riparian Evapotranspiration and Underflow [10]	508	508	508	508	508
Total RCWD Groundwater Production [11]	40,216	39,727	37,653	40,541	36,698
Net Pumping by Others [12]	3,265	3,066	1,841	2,225	2,042
Surface Outflow [13]	11,271	3,894	23,071	14,948	25,894
Subtotal	55,260	47,195	63,073	58,222	65,142
Change in Groundwater Storage	(5,149)	(11,149)	1,041	(6,670)	(3,718)

1 - Table A-7, Vail Release and Recharge
2 - Section 5.4
3 - Table A-7, SMR Release
4 - Table A-7, Reclaimed Wastewater, Murrieta Creek Discharge (ceased October 18, 2002)
5 - Table A-7, Footnote 3
6 - Table 7.8, Total Production times 0.23
7 - Rancho Division Direct Use Imports, Table A-7 Footnote 3, times 0.23
8 -The sum of: (Reclaimed Wastewater Table A-7, Reuse in SMRW) plus (Table A-1, Reuse in SMRW), times 0.23
9 - Murrieta Creek Flow times 1.6697 which is based on a correlation between Murrieta Creek flow and Tributary Inflow, Areal Recharge and Subsurface Inflow for the period 1977-1998 as shown in Table II-10, Vol. II, Geology and Hydrology, Surface and Ground Water Model of the Murrieta-Temecula Ground Water Basin, California, dated January 31, 2003.
10 - Table II-10, Vol. II, Geology and Hydrology, Surface and Ground Water Model of the Murrieta-Temecula Ground Water Basin, California, dated January 31, 2003.
11 - Table 7.8 Total Production
12 - The sum of Groundwater Production from: [Table A-1 (EMWD), A-5 (Pechanga IR), A-10 (WMWD Murieta Division, previously A-5), Appendix C Murrieta-Temecula Groundwater Area], times .77
13 - Table 3.2 Santa Margarita near Temecula

TABLE 4.4

SANTA MARGARITA RIVER WATERSHED

CHANGES IN USEABLE GROUNDWATER STORAGE

MURRIETA-TEMECULA GROUNDWATER AREA

Groundwater Level Method

					Water Depth at End of Water Year Feet					Change in Depth Feet					Change in Storage in Water Year Feet				
Sub-area	Key Aquifer	Specific Yield/ Storativity	Key Well	Aquifer Area Acres	2006	2007	2008	2009	2010	2005 - 2006	2006 - 2007	2007 - 2008	2008 - 2009	2009 - 2010	2006	2007	2008	2009	2010
1	Temecula	0.0036	301 [3]	1371	116.54	129.00	166.96	198.02	199.60	6.28	(12.46)	(37.96)	(31.06)	(1.58)	31	(61)	(187)	(153)	(8)
2	Pauba	0.0398	439	479	31.17	37.10	39.81	34.73	28.67	(5.43)	(5.93)	(2.71)	5.08	6.06	(104)	(113)	(52)	97	116
3	Pauba	0.0309	146	802	28.96	33.36	43.80	34.38	28.62	(4.73)	(4.40)	(10.44)	9.42	5.76	(117)	(109)	(259)	233	143
4	Pauba	0.0350	401 [5]	694	169.80	82.71	175.88	111.37	61.40	(99.87)	87.09	(93.17)	64.51	49.97	(2,426)	2,115	(2,263)	1,567	1,214
5	Pauba	0.0319	402 [1]	1322	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
6	Pauba	0.0698	495	1562	89.88	101.24	107.68	105.95	96.55	(0.78)	(11.36)	(6.44)	1.73	9.40	(85)	(1,239)	(702)	189	1,025
7	Pauba	0.0012	211 [2]	719	134.75	88.17	172.33	160.02	153.00	(0.37)	46.58	(84.16)	12.31	7.02	0	40	(73)	11	6
8	Qyal	0.20	492	339	29.40	18.72	29.61	28.35	28.47	(1.84)	10.68	(10.89)	1.26	(0.12)	(125)	724	(738)	85	(8)
	Pauba	0.0891	492	496	29.40	18.72	29.61	28.35	28.47	(1.84)	10.68	(10.89)	1.26	(0.12)	(81)	472	(481)	56	(5)
9	Temecula	0.0036	410	2066	326.04	329.51	327.10	334.60	333.96	(1.91)	(3.47)	2.41	(7.50)	0.64	(14)	(26)	18	(56)	5
10	Qyal	0.20	426	1438	43.91	44.20	43.19	41.12	38.29	(4.95)	(0.29)	1.01	2.07	2.83	(1,424)	(83)	290	595	814
	Pauba	0.0746	426	1165	43.91	44.20	43.19	41.12	38.29	(4.95)	(0.29)	1.01	2.07	2.83	(430)	(25)	88	180	246
11	Qyal	0.20	422	1405	60.54	61.49	61.33	62.32	63.39	(0.22)	(0.95)	0.16	(0.99)	(1.07)	(62)	(267)	45	(278)	(301)
	Pauba	0.0634	422	1413	60.54	61.49	61.33	62.32	63.39	(0.22)	(0.95)	0.16	(0.99)	(1.07)	(20)	(85)	14	(89)	(96)
12	Qyal	0.20	417 [4]	1769	85.21	82.85	85.74	91.19	92.65	5.01	2.36	(2.89)	(5.45)	(1.46)	1,773	835	(1,022)	(1,928)	(517)
	Pauba	0.0422	417 [4]	752	85.21	82.85	85.74	91.19	92.65	5.01	2.36	(2.89)	(5.45)	(1.46)	159	75	(92)	(173)	(46)
13	Qyal	0.20	414 [1]	898	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Pauba	0.0198	414 [1]	398	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14	Temecula	0.0036	462	2084	409.71	420.46	407.13	423.20	416.80	17.47	(10.75)	13.33	(16.07)	6.40	131	(81)	100	(121)	48
15	Temecula	0.0036	464	1347	321.97	324.01	325.67	325.30	326.00	(2.00)	(2.04)	(1.66)	0.37	(0.70)	(10)	(10)	(8)	2	(3)
16	Temecula	0.0036	209 [1]	1967	---	---	---	503.60	511.70	---	---	---	---	(8.10)	---	---	---	---	(57)
17	Temecula	0.0036	139 [1]	2008	---	---	---	---	512.74	---	---	---	---	---	---	---	---	---	---
18	Pauba	0.0967	129 [2]	1546	204.62	205.22	212.51	217.39	221.44	(0.50)	(0.60)	(7.29)	(4.88)	(4.05)	(75)	(90)	(1,090)	(730)	(605)
19	Temecula	0.0036	466	1562	298.35	287.03	292.00	297.70	314.00	24.72	11.32	(4.97)	(5.70)	(16.30)	139	64	(28)	(32)	(92)
20	Pauba	0.0738	493	3231	273.78	267.95	268.02	270.75	274.78	6.35	5.83	(0.07)	(2.73)	(4.03)	1,514	1,390	(17)	(651)	(961)
21	Pauba	0.1392	463	2303	55.04	55.81	55.44	55.46	54.80	(0.12)	(0.77)	0.37	(0.02)	0.66	(38)	(247)	119	(6)	212
*	Pauba	0.0325	Lynch	1008	67.00	63.00	72.00	69.00	71.00	13.00	4.00	(9.00)	3.00	(2.00)	426	131	(295)	98	(66)
TOTAL															**(838)**	**3,410**	**(6,633)**	**(1,104)**	**1,064**

1 - Well not measured -sub-area excluded for change in storage calculation
2 - For 2007 used reading of April 29, 2007
3 - For 2006 used reading of July 30, 2006
4 - For 2007 used reading of March 4, 2007
5 - For 2010 used reading of August 1, 2010
* A portion of Murrieta Division of Western MWD

Anza Groundwater Basin – The Anza Groundwater Basin is located along Cahuilla Creek in the upper portion of the Santa Margarita River Watershed.

The most recent study that determined storage volumes was conducted by Riverside County in 1990. That study concluded that the groundwater storage of about 182,200 acre feet in 1950 had decreased to about 165,000 acre feet in 1986. The study also concluded that ". . . basin hydrogeologic features, production facilities conditions, and locations/depths of storage . . ." limited the useable portion to 40% of the groundwater storage or about 56,200 acre feet in 1986.

During Water Years 2005 through 2009 a series of water level measurements were made by the USGS in Anza Valley under contract with the Bureau of Indian Affairs. The data from these measurements are available at the USGS website: *http://nwis.waterdata.usgs.gov/ca/nwis/gwlevels* .

The wells included in the program can be located by selecting the latitude-longitude box selection criteria and specifying the following bounds:

North Latitude - 33° 37' 00"
South Latitude - 33° 30' 00"
West Longitude - 116° 48' 00"
East Longitude - 116° 38' 00"

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SECTION 5 - IMPORTS/EXPORTS

5.1 General

Court Orders require the Watermaster to determine the quantities of imported water used in the Watershed. Most of the water imported into the Santa Margarita River Watershed is delivered by Metropolitan Water District of Southern California (MWD) to local districts. MWD obtains its water from the State Water Project (SWP) and the Colorado River. Both the SWP and the Colorado River system have major storage reservoirs to provide long-term carryover storage. The quantities of water in storage at the end of the water year in the major reservoirs in each system are indicated on Table 5.1. Total storage in the SWP for the last ten years is shown graphically on Figure 5.1. Similarly, total storage for the Colorado River Reservoirs for the last ten years is shown on Figure 5.2. It may be seen from Table 5.1 that during Water Year 2009-10 water in storage in the SWP increased from 2.06 million acre feet on September 30, 2009 to 2.72 million acre feet on September 30, 2010. Storage on September 30, 2010 corresponds to about 51 percent of the total SWP storage capacity.

Water in storage in the Colorado River system decreased 1.1 million acre feet from 33.8 million acre feet in the prior year to 32.7 million acre feet on September 30, 2010. On September 30, 2010 those reservoirs contained 51 percent of their total combined capacity.

The California Department of Water Resources prepares projections of water availability in the SWP for the coming year (2011) on a monthly basis from February through May. The report DWR Bulletin 120-4-11 dated May 1, 2011, indicated that statewide precipitation October 1 through April 30 was 135 percent of average compared to 110 percent last year. As of April 20, 2011, the SWP allocation for 2011 will meet 80 percent of contractors' requests.

The following entities imported water directly or indirectly from MWD into the Santa Margarita River Watershed:

Eastern Municipal Water District
Elsinore Valley Municipal Water District
Fallbrook Public Utility District
Rainbow Municipal Water District
Rancho California Water District
U. S. Naval Weapons Station – Fallbrook Annex
Western Municipal Water District

TABLE 5.1

SANTA MARGARITA RIVER WATERSHED
STORAGE IN STATE WATER PROJECT AND COLORADO RIVER RESERVOIRS
Thousands of Acre Feet /1

STATE WATER PROJECT RESERVOIRS

Reservoir	Total Capacity	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Oroville	3,540	1,488	1,400	2,284	1,753	2,877	2,833	1,568	1,097	1,337	1,755
San Luis (State Share)	1,060	516	394	653	514	925	911	445	200	224	415
Pyramid	171	162	165	165	161	160	163	166	163	166	164
Castaic	324	287	310	314	298	306	266	313	268	200	260
Silverwood	73	72	72	70	72	72	72	73	71	70	70
Perris	132	122	115	114	116	82	72	66	69	62	61
Total	5,300	2,647	2,456	3,600	2,914	4,422	4,317	2,631	1,868	2,059	2,725
Percent of Capacity		50%	46%	68%	55%	83%	81%	50%	35%	39%	51%

MAJOR COLORADO RIVER RESERVOIRS

Reservoir	Total Capacity	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Flaming Gorge	3,789	2,982	2,675	2,635	2,679	3,177	3,130	3,063	3,024	3,394	3,154
Blue Mesa	941	597	275	387	507	588	667	687	650	651	609
Navajo	1,709	1,409	872	729	935	1,516	1,420	1,510	1,319	1,314	1,412
Powell	27,000	19,135	14,468	12,109	9,170	11,939	11,917	11,929	14,509	15,463	15,267
Mead	28,537	19,873	17,093	15,618	13,937	15,219	13,887	12,505	12,013	10,933	10,092
Mohave	1,818	1,610	1,577	1,643	1,605	1,573	1,584	1,545	1,586	1,501	1,575
Havasu	648	567	565	562	589	554	555	576	584	564	560
Total	64,442	46,173	37,525	33,683	29,422	34,566	33,160	31,815	33,685	33,820	32,669
Percent of Capacity		72%	58%	52%	46%	54%	51%	49%	52%	52%	51%

1/ Storage reported for end of water year on September 30

FIGURE 5.1

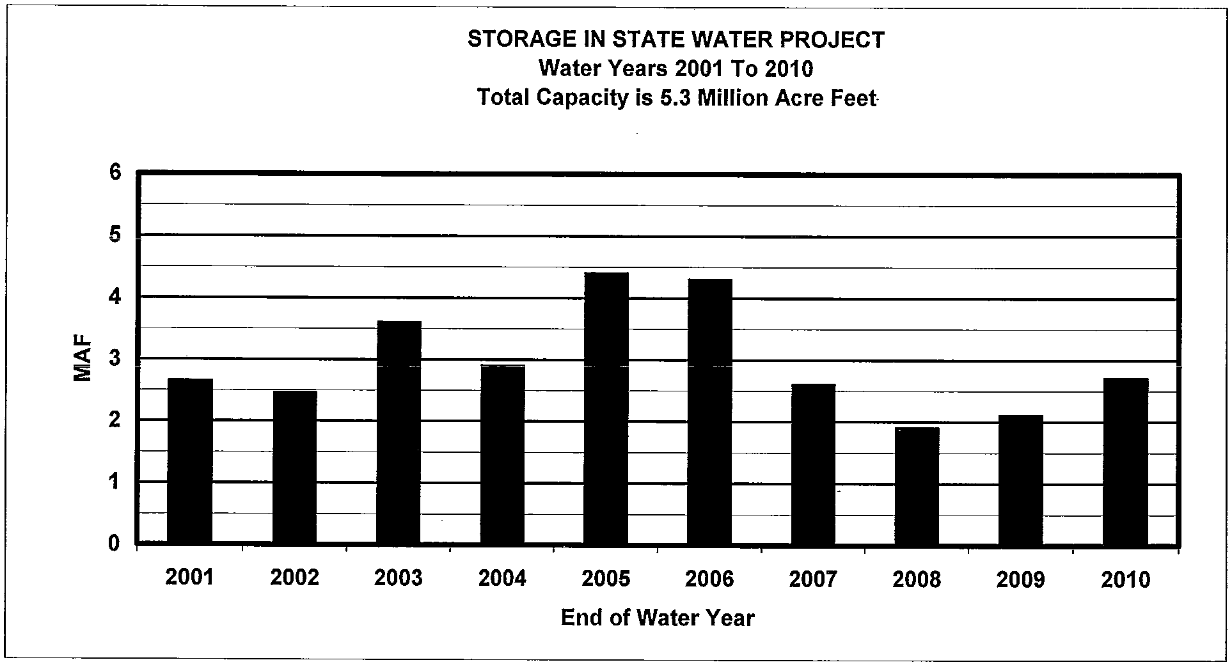
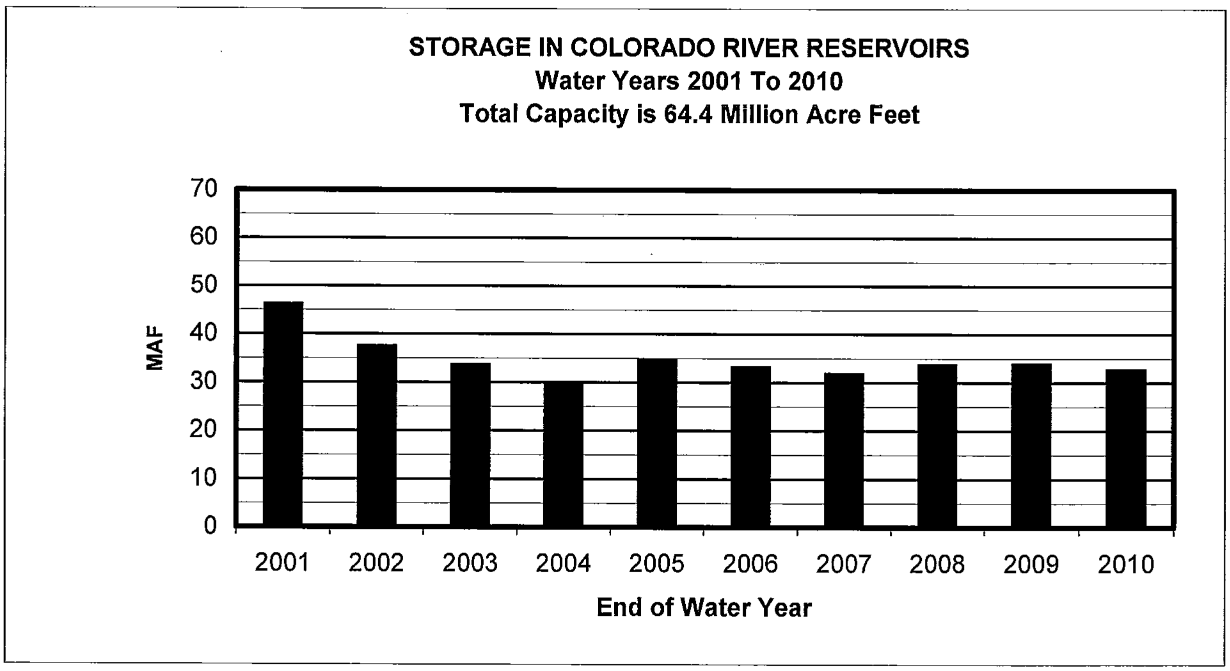


FIGURE 5.2



In addition to net deliveries through member agencies, MWD, pursuant to a Court Order, imported 372 acre feet of water into the Santa Margarita River Watershed for irrigation of lands in Domenigoni Valley during 2009-10. MWD also imported an additional 13 acre feet into the Watershed as a result of maintenance releases from its storage and delivery system all from Lake Skinner to Warm Springs Creek Tributaries and Rainbow Creek.

Water is also imported into the Santa Margarita River Watershed from adjacent watersheds. Such importation occurs from the Santa Ana Watershed where Elsinore Valley MWD delivers water to a portion of its service area that is inside the Santa Margarita River Watershed. Elsinore Valley MWD obtains its supply from imports or from wells outside the Santa Margarita River Watershed.

At Camp Pendleton there is a pipeline connection to wells located in the Las Flores Creek Watershed to the north of the Santa Margarita River Watershed. Water can be either imported or exported through that line, depending on relative water demands and pumping capacities.

Exportations from the Santa Margarita River Watershed include water pumped at Camp Pendleton that is used in the San Luis Rey River Watershed to the south or in the Las Flores Creek Watershed to the north. The wastewater that is derived from the exported fresh water is returned to the watershed for treatment at the Southern Region Tertiary Treatment Plant. Reclaimed wastewater is used for irrigation both within and outside the watershed. Treated wastewater in excess of reclaimed use is exported for discharge at the Oceanside Outfall. Wastewater from the Fallbrook area and the Naval Weapons Station is exported by the Fallbrook Public Utility District and wastewater in the Elsinore Valley MWD is exported by that district. Rancho California WD exports water into the San Mateo Creek Watershed.

Eastern MWD uses a 24-inch pipeline along Winchester Road to transport wastewater from the Temecula Valley Regional Water Reclamation Facility to areas within the Watershed for reuse as well as for export of up to 10 MGD from the Watershed. Eastern MWD uses a second, 48-inch pipeline along Palomar Valley for delivery of reclaimed wastewater for reuse and export from the Watershed. Rancho California WD also uses the Palomar Valley pipeline for exporting wastewater from the Watershed. The exported wastewater can be reused outside the watershed, delivered to storage facilities or discharged to Temescal Creek. In 2009-10, Eastern MWD's export of wastewater that was discharged to Temescal Creek was 1,930 acre feet. Rancho California WD had no export of wastewater for discharge to Temescal Creek in 2010.

The following paragraphs of this report describe imports and exports during Water Year 2009-10 and during the period 1966-2010. There is also discussion of MWD's Lake Skinner and Diamond Valley Lake operations.

5.2 Water Year 2009-10

During 2009-10 a total of 72,995 acre feet of water of net imported supplies were distributed for use in the Santa Margarita River Watershed. This compares with 86,612 acre feet in 2008-09 and represents a decrease of approximately 16 percent. The term net imports is used because several entities report gross imports into the Santa Margarita River Watershed but due to system configurations and operations a portion of the gross imports may be transported to serve areas outside of the watershed. Thus, the net imports reflect the quantities of imported supplies used within the Santa Margarita River Watershed. Net imports into the Santa Margarita River Watershed are listed on Table 5.2 for Water Year 2009-10.

The water exported from the Santa Margarita River Watershed for 2009-10 primarily includes wastewater except for Camp Pendleton and Rancho California WD. As described in Section 7, Camp Pendleton exports native water for use outside the watershed. Also, Rancho California WD exports groundwater as part of a blended water supply to serve customers in the San Mateo Watershed. Exports from the Santa Margarita River Watershed for 2009-10 were 18,523 acre feet as shown on Table 5.2. This compares to 18,862 acre feet in 2008-09 and represents a decrease of about 2 percent.

The quality of the water supplies imported through the MWD system in 2009-10 is indicated by the average monthly total dissolved solids at the Skinner Treatment Plant effluent line as shown on Table 5.3. The table also shows the percent of imported water obtained from the SWP. Water imported by Elsinore Valley MWD has the same quality as the MWD system.

5.3 Water Years 1966-2010

Water quantities imported by districts into the Santa Margarita River Watershed during Water Years 1966-2010 are shown on Table 5.4. Total imports to these districts are measured; however some districts serve lands outside the Watershed. For these districts, which include Eastern MWD, Elsinore Valley MWD, Fallbrook PUD and Rainbow MWD, the portion delivered in the Santa Margarita River Watershed must be estimated.

Review of the historical trend of total imports shown on Table 5.4 indicates significant year-to-year variations with relatively low imports in wet years and higher imports in dry years, combined with an underlying growth rate to serve increasing municipal water demands in the Murrieta-Temecula area.

TABLE 5.2

SANTA MARGARITA RIVER WATERSHED

IMPORTS/EXPORTS

2009-10

Quantities in Acre Feet

	NET IMPORTS										EXPORTS 3/								
											CAMP PENDLETON								
YEAR MONTH	EASTERN MWD	ELSINORE VALLEY MWD	FALLBROOK PUD	MWD 1/	MURRIETA DIVISION WESTERN MWD	RAINBOW MWD	RANCHO CAL WD	U. S. NAVAL WS	WESTERN MWD 2/	TOTAL NET IMPORTS	EXPORTS 4/	WASTEWATER RETURNS 5/	NET EXPORT	U.S. NAVAL WS	EASTERN MWD 6/	ELSINORE VALLEY MWD	FALLBROOK PUD	RANCHO CAL WD 7/	TOTAL EXPORTS
2009																			
OCT	1,387	764	770	52	160	204	3,997	9	6	7,349	465	104	361	1.4	893	82	91	47	1,475
NOV	1,095	785	685	31	128	169	3,125	5	5	6,028	405	95	310	0.5	950	101	81	29	1,472
DEC	96	456	286	4	85	96	1,490	3	5	2,521	281	54	227	0.2	1,105	103	138	24	1,597
2010																			
JAN	582	400	319	21	56	53	1,808	2	5	3,246	336	63	273	0.5	1,172	102	124	18	1,690
FEB	325	278	146	6	39	47	1,288	5	4	2,138	303	54	249	0.4	1,133	88	97	13	1,580
MAR	912	382	397	15	33	26	1,793	4	5	3,567	359	72	287	0.2	1,285	101	112	12	1,797
APR	760	530	416	33	96	83	1,275	5	5	3,203	378	79	299	0.5	1,071	94	86	34	1,585
MAY	1,768	755	688	43	110	91	2,918	7	6	6,386	452	100	352	0.4	978	80	96	24	1,530
JUNE	1,851	768	810	41	72	133	6,122	7	6	9,810	485	108	377	0.5	861	92	86	22	1,439
JULY	1,684	846	866	38	201	168	5,832	7	5	9,647	546	109	437	0.6	713	90	91	29	1,361
AUG	1,687	1,082	924	49	227	188	5,894	7	5	10,063	592	124	468	1.3	876	94	91	29	1,559
SEPT	1,405	880	885	52	255	195	5,352	8	5	9,037	541	113	428	0.5	792	93	88	37	1,439
TOTAL	13,552	7,926	7,192	385	1,462	1,453	40,894	69	62	72,995	5,143	1,075	4,068	7	11,829	1,120	1,181	318	18,523

1/ Metropolitan Water District direct deliveries in Domenigoni Valley of 372 AF as shown on Table A-4 plus miscellaneous maintenance releases of 13 AF in January 2010 from MWD system to the following creeks: 8.0 AF to Tucalota Creek, 2.6 AF to Warm Springs Creek, and 2.4 AF to Rainbow Creek.
2/ Improvement District A - Rainbow Canyon Only (WR-13)
3/ All exports are wastewater except as noted for Camp Pendleton and Rancho California WD.
4/ Agricultural and Camp Supply use outside the SMRW, reclaimed use outside the SMRW, plus export to Oceanside Outfall as shown on Table A-8.
5/ Estimated as reclaimed percentage of Camp Supply use outside the SMRW as shown on Table A-8.
6/ Includes Other Reuse shown on Table A-1 which includes changes of storage in Winchester and Sun City storage ponds, evaporation and percolation losses, and discharges to Temescal Creek in the Santa Ana Watershed for discharge to Temescal Creek.
7/ Includes groundwater used in San Mateo Watershed and wastewater exported via Palomar Valley pipeline.

TABLE 5.3

SANTA MARGARITA RIVER WATERSHED
TOTAL DISSOLVED SOLIDS
CONCENTRATION OF IMPORTED WATER

YEAR MONTH	TOTAL DISSOLVED SOLIDS MG/L /1		PERCENT STATE PROJECT WATER *	
	2008-09	2009-10	2008-09	2009-10
OCT	576	439	22	52
NOV	543	569	30	17
DEC	541	597	32	8
JAN	614	612	17	3
FEB	643	604	6	5
MAR	625	607	8	3
APR	587	572	12	24
MAY	566	526	19	29
JUNE	575	530	21	26
JULY	537	505	30	33
AUG	536	516	28	31
SEPT	540	476	23	36

1/ As measured in the Skinner Treatment Plant Effluent line.

* - Skinner Plant treated a blend of California State Project Water and Colorado River water

TABLE 5.4

SANTA MARGARITA RIVER WATERSHED
IMPORTS/EXPORTS

Quantities in Acre Feet

	NET IMPORTS										EXPORTS 5/								
											CAMP PENDLETON								
WATER YEAR	EASTERN MWD	ELSINORE VALLEY MWD	FALLBROOK PUD 1/	MWD 2/	MURRIETA DIVISION WESTERN MWD	RAINBOW MWD	RANCHO CAL WD 3/	U.S. NAVAL WS	WESTERN MWD 4/	TOTAL IMPORTS	EXPORTS	WASTEWATER RETURNS	NET EXPORT	U. S. NAVAL WS	EASTERN MWD	ELSINORE VALLEY MWD	FALLBROOK PUD	RANCHO CAL WD 7/	TOTAL EXPORTS
1966	1,604	N/R	3,351	0	0	1,308	0	0	24	6,287	3,251	974	2,277	0	0	0	0		2,277
1967	1,630	N/R	2,852	0	0	1,095	0	0	20	5,597	3,180	1,243	1,937	0	0	0	0		1,937
1968	1,464	N/R	3,423	0	0	1,377	0	0	27	6,291	3,368	1,214	2,154	0	0	0	0		2,154
1969	1,741	N/R	2,837	0	0	1,253	0	0 E	25	5,856	3,276	1,170	2,106	0	0	0	0		2,106
1970	1,417	N/R	3,538	0	0	1,689	0	0 E	31	6,675	3,809	1,113	2,696	0	0	0	0		2,696
1971	1,383	N/R	3,405	0	0	1,650	0	76 E	34	6,548	3,527	1,090	2,437	0	0	0	0		2,437
1972	1,470	N/R	3,916	0	0	2,037	0	115 E	34	7,572	3,543	1,168	2,375	0	0	0	0		2,375
1973	1,533	N/R	3,210	0	0	1,616	0	115 E	30	6,504	3,544	1,187	2,357	0	0	0	0		2,357
1974	1,601	N/R	3,967	0	0	2,049	0	115 E	36	7,768	3,532	1,140	2,392	0	0	0	0		2,392
1975	1,969	N/R	3,597	0	0	1,247	0	115 E	34	6,962	3,098	1,530	1,568	0	0	0	0		1,568
1976	2,493	N/R	4,627	0	0	2,239	119	115 E	35	9,628	3,619	1,497	2,122	0	0	0	0		2,122
1977	2,947	N/R	5,212	0	0	2,343	1,845	115 E	24	12,486	3,194	1,416	1,778	0	0	0	0		1,778
1978	2,551	569	5,202	0	0	2,188	5,774	115 E	26	16,425	3,071	1,283	1,788	0	0	0	0		1,788
1979	1,894	712	5,723	0	0	2,348	7,009	115 E	24	17,824	4,756	1,427	3,329	0	0	0	0		3,329
1980	1,192	696	6,404	0	0	2,489	10,126	115 E	25	21,047	3,651	1,405	2,246	0	0	0	0		2,246
1981	716	798	8,543	0	0	3,153	15,282	115 E	34	28,642	3,892	1,249	2,643	0	0	0	0		2,643
1982	1,112	678	7,079	0	0	2,460	13,378	115 E	34	24,856	3,761	1,273	2,488	0	0	0	0		2,488
1983	1,211	658	6,720	0	0	2,190	5,752	115 E	26	16,672	3,000	1,242	1,758	26 E	0	0	1,003		2,787
1984	699	816	8,506	0	0	3,068	6,716	115 E	26	19,946	3,243	1,120	2,123	26 E	0	0	1,032		3,181
1985	679	808	7,831	0	0	3,410	7,158	102	27	20,015	3,377	1,200	2,177	26 E	0	0	1,060		3,263
1986	760	882	8,585	0	0	2,945	11,174	94	34	24,474	3,326	981	2,345	16 P	0	0	1,096		3,457
1987	1,155	938	8,656	0	0	3,390	7,564	116	36	21,855	3,444	1,799	1,645	26	0	4	1,129		2,805
1988	2,047	1,032	8,033	0	0	2,985	17,854	120	36	32,108	3,457	1,872	1,585	26	0	55	1,154		2,820
1989	3,746	1,341	9,066	0	0	3,003	22,895	128	23	40,202	3,418	1,446	1,972	23	0	74	1,181		3,250
1990	5,601	2,255	10,103	0	0	3,818	22,030	145	22	43,974	2,971	1,451	1,520	27	0	114	1,271		2,932
1991	9,479	2,421	7,962	0	0	2,904	21,238	109	21	44,134	2,168	1,219	949	13	0	134	960		2,056
1992	8,593	2,190	7,893	0	0	2,277	16,931	99	25	38,008	2,426	1,548	878	7	0	140	1,083		2,108
1993	5,393	1,914	6,925	0	0	1,965	11,411	117	31	27,756	2,329	1,926	403	16	705	150	1,255		2,529
1994	7,150	3,221	7,250	0	0	1,651	16,386	73	37	35,768	2,702	1,501	1,201	5	3,159	170	1,068		5,603
1995	4,625	3,117	6,538	547	0	1,661	15,108	125	29	31,750	2,781	1,611	1,170	12	3,908	185	1,153		6,428
1996	4,960	4,181	7,993	1,005	0	1,815	23,600	100	35	43,689	3,577	1,493	2,084	5	2,993	213	1,035		6,330
1997	3,284	4,283	7,894	3,521	0	1,429	26,992	109	30	47,542	3,643	1,932	1,711	6	3,201	226	1,021		6,165
1998	5,117	5,100	6,382	5,023	0	1,601	19,584	97	31	42,935	3,742	2,073	1,669	8	4,513	247	1,482		7,919
1999	4,327	6,134	7,430	3,781	0	1,727	34,490	111	41	58,041	3,558	2,130	1,428	5	4,133	254	1,377		7,197
2000	7,256	7,172	9,365	712	0	2,217	55,409	104	42	82,277	4,072	2,115	1,957	7	3,649	279	1,634		7,526
2001	5,948	6,592	8,398	689	0	1,804	41,823	73	59	65,386	3,653	2,075	1,578	8	4,457	310	1,643		7,996
2002	8,117	7,596	9,580	595	0	1,676	54,148	97	64	81,873	3,701	1,950	1,751	9	5,325	412	1,495		8,992
2003	9,062	7,091	9,130	495	102	1,510	50,744	88	42	78,264	3,767	1,688	2,079	10	7,636	483	1,706	64	11,978
2004	9,138	8,438	11,749	766	330	1,888	62,408	73	50	94,840	4,951 6/	0	4,951	8	9,115	600	1,620	312	16,606
2005	10,858	8,215	9,702	556	75	1,610	47,614	40	62	78,732	4,625 6/	0	4,625	16	11,676	927	1,782	1,574	20,600
2006	14,161	9,819	10,622	506	316	1,851	60,611	64	66	98,016	4,912 6/	0	4,912	8	10,906	938	1,716	1,379	19,859
2007	15,398	10,811	12,292	660	723	2,262	63,818	70	45	106,079	5,152 6/	0	5,152	12	10,553	837	1,142	364	18,060
2008	14,952	9,951	8,934	493	2,180	1,790	50,683	82	54	89,119	4,774 6/	0	4,774	11	12,789	901	1,139	361	19,975
2009 R	14,472	9,075	8,557	607	1,654	1,852	50,270	74	51	86,612	5,362 8/	1,119	4,243	12	12,027	1,069	1,144	367	18,862
2010	13,552	7,926	7,192	385	1,462	1,453	40,894	69	62	72,995	5,143 8/	1,075	4,068	7	11,829	1,120	1,181	318	18,523

1/ Includes DeLuz Heights MWD prior to 1991
2/ Metropolitan Water District direct deliveries in Domenigoni Valley plus miscellaneous maintenance releases beginning 2009
3/ For period 2003 to present values shown are net imports excluding imported water delivered to San Mateo Watershed
4/ Improvement District A - Rainbow Canyon Only (WR-13)
5 / All exports are wastewater except as noted for Camp Pendleton and Rancho Cal WD
6 / Includes export of native water plus wastewater from in-basin use
7 / Includes groundwater used in San Mateo Watershed and wastewater exported to Santa Ana Watershed
8/ Includes export of native water plus reclaimed wastewater.

N/R - Not Reported
P - Partial year data
E - Estimate
R - Revised

Exports over the 1966-2010 period are also shown on Table 5.4. These include estimated water exports on Camp Pendleton less estimated wastewater returns, as well as an estimate of exports by the Fallbrook Public Utility District and the Naval Weapons Station after 1983, and Elsinore Valley MWD after 1986. Exports by Eastern MWD were initiated in 1992-1993 and Rancho California WD began exporting water in 2002-03. Exports do not include water that naturally flows from the Santa Margarita River into the Pacific Ocean.

5.4 Lake Skinner

Lake Skinner is a 44,000 acre foot reservoir constructed by MWD on Tucalota Creek, within the Santa Margarita River Watershed. The purpose of Lake Skinner is to provide regulatory and emergency storage capacity for water imported to southern California. MWD does not have a water right to store or divert water in Lake Skinner. Accordingly, a Memorandum of Understanding and Agreement on Operation of Lake Skinner (MOU), dated November 12, 1974, approved by the Court on January 16, 1975, contains provisions to protect Santa Margarita River Watershed water users from potential effects of Lake Skinner on either subsurface or surface flows.

Protection against a decrease in subsurface flows caused by the dam is afforded by a provision in the MOU that requires that MWD release water from Lake Skinner into Tucalota Creek if groundwater levels in Well AV-28B fall below an elevation of 1356.64 feet. At the end of September 30, 2010, the well level was 1359.40 feet, an increase of 0.95 feet compared to September 30, 2009.

The MOU also provides that all local surface inflow that enters Lake Skinner will be released into Tucalota Creek. In its 1980 modification the MOU provides that local surface inflow is to be determined by using the hydrologic equation for Lake Skinner that is specified in the MOU. That equation is used to determine inflow and the related release for large flood events. However, in many years the local inflow is small compared to the large quantities of imported water inflow and outflow at Lake Skinner. The error of measurement for these large inflows and outflows is larger than the local inflow in many instances. Accordingly, MWD also monitors the flow in Tucalota Creek, Rawson Creek and Middle Creek during storms and uses those observations to supplement the hydrologic equation.

On February 16, 2005, the Court approved an Order Amending the MOU to provide for diversion from Lake Skinner on Fallbrook PUD's behalf after specified releases are made, according to State Water Resource Control Board Permit 11356 and the amended Lake Skinner MOU. In 2009-10 a total of 20 acre feet of water accumulated in Lake Skinner for diversion to Fallbrook PUD.

In 2009-10 MWD records show local inflow to Lake Skinner as 176 acre feet with required releases in accordance with the MOU as 156 acre feet. In addition, MWD released eight acre feet from Lake Skinner in 2009-10 into Tucalota Creek for maintenance purposes.

5.5 Diamond Valley Lake

Diamond Valley Lake is located in Diamond and Domenigoni Valleys within the Santa Margarita River Watershed. The Lake was created by three dams, one each at the east and west ends of Domenigoni/Diamond Valley and a saddle dam at the low point on the north rim. The East Dam diverts surface and groundwater flows from a 4.2 square mile drainage area in the Santa Margarita River Watershed, known as Goodhart Canyon, into the Santa Ana River Watershed. The West Dam intercepts existing westward surface and subsurface flows from an additional 13.19 square mile area.

MWD does not have a water right to store local waters in the reservoir, so a Memorandum of Understanding and Agreement on Operation of Domenigoni Valley Reservoir (now known as Diamond Valley Lake) (MOU) was developed and approved by the Court on January 19, 1995. Among other things, the MOU provides:

> The quantity and quality of surface runoff that would flow past the West Dam in the absence of the Reservoir will be determined and a like quantity of water of similar quality will be released from the Reservoir or San Diego Canal (SDC) into Warm Springs Creek.

The MOU indicates that the required releases would be determined by measuring the surface inflows into Goodhart Canyon Detention Basin. A quantity equal to 4.1 times the measured flow will be released into Warm Springs Creek.

Total required releases into Warm Springs Creek during 2009-10 were 45.851 acre feet. The total released during the year was 45.851 acre feet.

Although all surface waters within the Santa Margarita River Watershed in Domenigoni Valley and Diamond Valley are subject to the continuing jurisdiction of the Court, groundwater contained within the younger alluvium, north of the south line of Section 9, Township 6 South, Range 2 West, SBM is not considered by the Court to be a part of the Santa Margarita River system as long as groundwater levels are below an elevation of 1400 feet. During 2009-10 groundwater elevations in Well MO-6, which is located along the south line of Section 9, increased 2.09 feet from 1365.67 feet at the beginning of the water year to 1367.76 feet on October 5, 2010.

During 2009-10, there were no injections into the Domenigoni Valley groundwater basin pursuant to Agreements for Mitigation of Groundwater. However, pursuant to a Court Order, MWD imported 372 acre feet of water into the Santa Margarita River Watershed for irrigation of lands in Domenigoni Valley. As previously noted the groundwater in the Domenigoni Valley groundwater basin is outside this Court's jurisdiction when groundwater levels are below 1400 feet.

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SECTION 6 - WATER RIGHTS

6.1 General

Water is used in the Santa Margarita River Watershed under a variety of water rights. In the early 1960's, the U. S. District Court in its Interlocutory Judgments described water rights in the Watershed as primarily riparian rights and overlying rights. Riparian rights belong to owners of land parcels located adjacent to streams in the Watershed or overlying younger alluvium deposits generally along the stream channels. Overlying rights were divided by the Court into two categories based on the location where the water is obtained and used. Water extracted from lands where subsurface waters add to, contribute to and support the Santa Margarita River stream system was found to be subject to the continuing jurisdiction of the Court. Lands in this category were identified by the Court and listed in Interlocutory Judgments. In general, these parcels of land overlie younger or older alluvium deposits. The Court has stated that the issue of apportionment of water rights has not been presented to the Court, but the Court would litigate the apportionment if and when in the future it becomes necessary to do so.

The other category of overlying use applies to parcels of land where subsurface flows do not add to, contribute to or support the Santa Margarita River stream system. These parcels were also identified by the Court and found to be outside the continuing jurisdiction of the Court. In general, these lands overlie basement complex or residuum deposits.

The Court also described a number of other rights in the Watershed. These included surface water appropriative water rights that have been administered by the State of California since 1914. These rights are discussed in the following subsection of this report.

In Interlocutory Judgment No. 41, the Court found that the United States reserved rights to the use of the waters of the Santa Margarita River stream system which under natural conditions would be physically available on the Cahuilla, Pechanga and Ramona Indian Reservations, including rights to the use of groundwater, sufficient for the present and future needs of the Indians residing thereon. In Interlocutory Judgment No. 44, the Court recognized and reserved water rights for lands within the Cleveland and San Bernardino National Forests and for lands being administered pursuant to the Taylor Grazing Act.

Since the early 1960's there have been substantial changes in water use in the Watershed, especially in the Murrieta-Temecula Groundwater Area. During the 1950's and early 1960's when this case was under active litigation, most of the water use in the Murrieta-Temecula area consisted of individual property owners pumping water for use on their own properties. In 1965, the Rancho California WD was formed. The District developed Agency Agreements with most of the landowners within the District. In these

Agency Agreements, the landowners "...without transferring any water rights and privileges pertaining to said land...." designated the District as their exclusive agent for the development and management of their water supply.

Thus, many landowners within the Rancho California WD are not exercising their overlying rights. Instead, Rancho California WD pumps groundwater and uses it throughout the District area as agent on behalf of the landowners.

Rancho California WD also pumps water as a groundwater appropriator along with Western Municipal Water District within its Murrieta Division.

Another change from the early 1960's is the large scale importation of water into the Santa Margarita River Watershed by Rancho California WD. A portion of such importation finds its way into the groundwater aquifers. The legal status of return flows from imported supplies as well as direct recharge of imported water was clarified by the final judgment in *City of Los Angeles v. City of San Fernando, et al.,* 1975 14 Cal. 3rd 199. This decision in the Supreme Court of the State of California made two major findings with respect to imported water.

The first was that agencies have the right to recharge and store imported water in a groundwater basin and to extract the imported water for use, subject to applicable state and federal laws. In addition, agencies that import and deliver water to lands overlying a groundwater basin have a continuing right to extract the return flow from such water. The return flow is that portion of the imported supply that percolates into the groundwater basin. In the San Fernando case this portion was found to range from 20 percent to 35.7 percent of the imported supplies.

The Rancho Division of the Rancho California WD overlies the Murrieta-Temecula Groundwater Area. Thus a portion of the import supply delivered to the Rancho Division of Rancho California WD percolates into the underlying aquifers.

Imported water is also supplied to the Santa Rosa Division within Rancho California WD, however only a relatively small part of this division overlies the Murrieta-Temecula Groundwater Area. Thus there is less imported water return flow from the Santa Rosa Division.

Classification of Rancho California WD supplies into various water right categories is discussed in Section 7 of this Report.

Camp Pendleton representatives contend that the Court has jurisdiction over imported water to the full extent that imported water, as well as its use, its returns and its products, affects in any significant manner the water rights within the Watershed over which the Court has traditionally asserted its jurisdiction. Other parties dispute the Court's jurisdiction over imported water.

6.2 Appropriative Surface Water Rights

Another broad category of water rights used in the Watershed is surface water appropriative rights. Since 1914, these rights have been administered by the SWRCB.

A list of current permits, licenses and other active rights obtained from the SWRCB is shown on Table 6.1. A permit by the SWRCB authorizes water diversion, sets terms for the water project's completion and development of water use, and may impose other conditions. After the permittee demonstrates that construction is complete, water is being put to use and the permit conditions have been met, the SWRCB can issue a license. The license remains in effect as long as the license conditions are met and the water is put to beneficial use.

Active direct diversion rights and storage rights from creeks in the Watershed are summarized below:

	Direct Diversions Gallons Per Day	Storage Acre Feet
Cahuilla Valley	720	5
Cottonwood Creek	485,000	60
Cutca Creek	5,825	---
DeLuz Creek	4,700	100
Fern Creek	213,000	100
Kohler Canyon	158,000	40
Long Canyon Spring	89	---
Rainbow Creek	---	0.5
Rattlesnake Canyon	12,000	---
Temecula Creek	13,050	40,000
Tucalota Creek	---	10,000
Sandia Canyon	---	8
Sourdough Spring	55	---
Santa Margarita River	96,730	4,000
Nelson Creek	1,550	---
TOTAL	990,719	54,313.5

These direct diversion rights of 990,719 gallons per day correspond to 1.53 cfs or 3.04 acre feet per day.

TABLE 6.1

SANTA MARGARITA RIVER WATERSHED
APPROPRIATIVE WATER RIGHTS

PERMITS AND LICENSES

APPLICATION I.D.	OWNER	FILING DATE	SOURCE OF WATER	POINT OF DIVERSION	AMOUNT	USE	STATUS
A006629	William H. & Sandra J. Cyrus	4/9/30	Coahuila Valley	Sec. 4, 7S, 3E	DD-720 gpd	D	License
A007035	Nyla Lawler Trust	8/10/31	Cutca Creek	Sec. 29, 9S, 1E	DD-5725 gpd	D/I	License
A009137	JR SA, LLC	10/07/37	Temecula Creek	Sec. 12, 9S, 1E	DD-400 gpd	D	License
A009291	Richard W. Long	5/13/38	Nelson Creek	Sec. 23, 8S, 5W	DD-1550 gpd	D	License
A010806	James R., Phyllis & Bruce Grammer	4/22/44	Temecula Creek	Sec. 34, 9S, 2E	DD-2880 gpd	D	License
A011161	Roy C. Pursche & Barbara Booth	9/26/45	Rattlesnake Canyon	Sec. 28, 9S, 2E	DD-12,000 gpd	D/I	License
A011518	Rancho California Water District	8/16/46	Temecula Creek	Sec. 10, 8S, 1W	ST-40,000 AF	D/I/IN/M/R	Permit
A011587	U. S. Bureau of Reclamation	10/11/46	Santa Margarita River	Sec. 12, 9S, 4W	ST-10,000 AF	D/I/M	Permit
A012178	Fallbrook Public Utility District	11/28/47	Tucalota Creek	Sec. 3, 7S, 2W	ST-10,000 AF	D/I/M	Permit
A012179	U. S. Bureau of Reclamation	11/28/47	Santa Margarita River	Sec. 12, 9S, 4W	ST-10,000 AF	D/I/M	Permit
A013505	Robert R. Baum	12/12/49	Cottonwood Creek	Sec. 30, 8S, 4W	DD-0.75 cfs & ST-42 AF	R/S	License
A017239	Nancy A. Wiley	8/15/56	Temecula Creek	Sec. 20, 9S, 2E	DD-120 gpd	D/E	License
A020507	Robert R. Baum	11/24/61	Cottonwood Creek	Sec. 19, 8S, 4W Sec. 30, 8S, 4W	ST-18 AF	I/R	License
A020608	Pete and Dorothy Prestininzi	2/13/62	DeLuz Creek	Sec. 20, 8S, 4W	ST-100 AF	D/I/R	License
A020742	U. S. Cleveland National Forest	4/24/62	Sourdough Spring	Sec. 25, 9S, 1E	DD-55 gpd	E	License
A021074	U. S. Cleveland National Forest	12/07/62	Cutca Spring	Sec. 17, 9S, 1E	DD-100 gpd	S/W	License
A021471A	U. S. Department of Navy	9/23/63	Santa Margarita River	Sec. 5, 10S, 4W Sec. 2, 11S, 5W	ST-4,000 AF	D/I/M/Z	License
A021471B	U. S. Bureau of Reclamation	9/23/63	Santa Margarita River	Sec. 32, 9S, 4W	ST-165,000 AF	D/I/M/Z	Permit
A027756	James R. Grammer	5/23/83	Temecula Creek	Sec. 3, 10S, 2E	DD-9,650 gpd	I/W	License
A028133	B&E Inv., Inc.	5/14/84	Cahuilla Creek	Sec. 15, 8S, 2E	ST-5AF	E/H/I/R/S	Permit

OTHER RIGHTS

F005751S*	U. S. Cleveland National Forest	1/01/70	Long Canyon Spring	Sec. 16, 9S, 1E	DD-89 gpd	E/R/S/W	
S000024**	Judge Dial Perkins	12/26/86	Santa Margarita River	Sec. 12, 9S, 4W	DD-133.3 gpd	D	
S000751**	Lawrence Butler	5/31/67	Fern Creek	Sec. 31, 8S, 4W	DD-0.33 cfs ST-100 AF	I	
S011411**	Agri Empire, Inc.	5/16/84	Kohler Canyon	Sec. 33, 9S, 2E	DD-0.245 cfs ST-40 AF	I/S	
S012235**	Lenny F. Kuszmaui	8/27/85	DeLuz Creek	Sec. 4, 9S, 4W	DD-4700 gpd	D/I	
S014009**	San Diego State University	6/7/93	Santa Margarita River	Sec. 27, 8S, 3W	DD-0.15 cfs	D/I/Z	
001583***	George F. Yackey	12/27/77	Sandia Canyon	Sec. 25, 8S, 4W	ST-8.0 AF	S	
002380***	Chris R. & Jeanette L. Duarte	12/16/77	Rainbow Creek	Sec. 12, 9S, 3W	ST-0.5 AF	S	

KEY TO USE: *DD - Direct Diversion*, *ST - Diversion to Storage*, *IN - Industrial*, *D - Domestic*, *I - Irrigation*, *R - Recreation*, *M - Municipal*, *W - Fish & Wildlife Protection and/or Enhancement*, *E - Fire Protection*, *S - Stockwatering*, *H - Fish Culture*, *Z - Other*

NOTES: ** Federal Filing* *** Statement of Diversion and Use* **** Stock Filing*

Storage rights shown in Table 6.1 include 185,000 acre feet of storage rights on the Santa Margarita River held by the U. S. Bureau of Reclamation (ID Nos. 11587, 12179, and 21471B) that have not been exercised. The deadline for exercising these rights is currently set at December 31, 2008. On November 14, 2008, the U. S. Bureau of Reclamation filed petitions for time extensions for completion of beneficial use under the three permits. On September 14, 2009 change petitions were filed to amend the permits to conform to the Santa Margarita Conjunctive Use Project being developed jointly by the U. S. Bureau of Reclamation, Department of the Navy Marine Corps Base Camp Pendleton, and Fallbrook Public Utility District. Those extension and change petitions have been accepted and in accordance with SWRCB Order 2009-0063-EXEC they are under consideration in tandem.

Table 6.1 also lists other rights recognized by the SWRCB. These rights generally are based on Statements of Water Diversion and Use that have been filed with the SWRCB. Such statements include one by the United States on behalf of the Cleveland National Forest, which states that the diversion and use of water from Long Canyon Spring is made pursuant to a withdrawal and reservation of the land and resources for National Forest System purposes as of February 14, 1907.

Besides the federal filing, there are also Statements of Water Diversion and Use filed by other entities. Four of these statements represent riparian or pre-1914 appropriative diversions from DeLuz Creek, Fern Creek and Santa Margarita River that have been reported to the SWRCB. The other statement represents a pre-1914 appropriative right to divert water from a spring in Kohler Canyon into a 40 acre foot reservoir.

The last two rights noted on Table 6.1 represent filings made in 1977 pursuant to Subchapter 2.5 to Chapter 3 of Title 23 of the California Code of Regulations. That subchapter deals with Water Rights for Stockponds.

In addition to appropriative rights under SWRCB jurisdiction, there are a number of nonstatutory appropriative rights that were established prior to 1914. These rights continue to be used to support diversions of water from the Santa Margarita River stream system. Such rights, which are listed in the various Interlocutory Orders developed in this litigation, are shown on Table 6.2.

In 1990-91, in Order No. 91-07, the SWRCB revised its Order No. 89-25 entitled, "Order Adopting Declaration of Fully Appropriated Stream Systems and Specifying Conditions for Acceptance of Applications and Registrations." These Orders list the Santa Margarita River stream system as fully appropriated "from the confluence of the Santa Margarita River and the Pacific Ocean upstream including all tributaries where hydraulic continuity exists."

TABLE 6.2

SANTA MARGARITA RIVER WATERSHED
PRE - 1914 APPROPRIATIVE WATER RIGHTS
Listed in Interlocutory Judgments

INTERLOCUTORY JUDGMENT	LISTED OWNER	CURRENT OWNER	DATE OF APPROPRIATION	SOURCE OF WATER	POINT OF DIVERSION	AMOUNT	USE
NO. 32	Anderson, Nina B.	Nezami, Mohammed Poladian, Abraham	April 11, 1892	Fern Creek	NW 1/4 Of SE 1/4 Sec 31, T8S, R4W	32 gpm	Irrigation
NO. 32	Butler, Lawrence W. and Mary C.	Vanginkel, Norman Tr and Vanginkel, Deborah Tr San Diego Gas & Electric	Sept. 23, 1896	Fern Creek	NW 1/4 Of SE 1/4 Sec 31, T8S, R4W	Capacity of 8 inch pipe	Irrigation
NO. 32	Wilson, Samuel M. and Hazel A.	Shirley, Bobbie	Aug. 3, 1911	DeLuz Creek	NW 1/4 Of SW 1/4 Sec 32, T8S, R4W	50 miner's inches 65 AF/Yr	Irrigation
NO. 24	United States	United States	1883	Santa Margarita River	Sec 5, T10S, R4W	20 cfs 1200 AF/Yr	Domestic Irrigation Stock Water

The consequences of this Order are as follows:

1. The Board is precluded from accepting any application to appropriate water from the Santa Margarita River System except where the proposed appropriation is consistent with conditions contained in the Declaration.

2. Initiation of a water right pursuant to the Water Rights Permitting Reform Act of 1988 (Water code Section 1228 et seq.) --that is, by registering small use domestic appropriations--is precluded, except where the proposed appropriation is consistent with conditions contained in the Declaration. Small use domestic appropriations refer to uses that do not exceed direct diversions of 4,500 gallons per day or diversion by storage of 10 acre feet per year for incidental aesthetic, recreational, or fish and wildlife purposes.

3. Pursuant to Water Code Section 1206(a) the Board is authorized, but not required, to cancel pending applications where inconsistent with conditions contained in the Declaration; previous Orders implement a procedure for disposition of such applications pending on the effective date of the Declaration.

The Order provides for reconsideration of the Order either upon petition of an interested party or upon the Board's own motion.

6.3 Fallbrook PUD Changes Point of Diversion and Place of Use for Permit No. 11356

On November 20, 2001, the Chief of the Division of Water Rights of the State Water Resources Control Board authorized an Order Approving Changes in Source Point of Diversion, Place of Use and Amending the Permit (No. 11356). The permit allows Fallbrook PUD to divert and store up to 10,000 acre feet per year at Lake Skinner. The Court approved an Order Amending the Memorandum of Understanding and Agreement on Operation of Lake Skinner on February 16, 2005. The Amendment provides for diversions from Lake Skinner after specified releases are made.

On December 18, 2009, Fallbrook PUD filed a petition for a time extension for completion of beneficial use under Permit No. 11356. The petition was accepted and noticed by the SWRCB on January 23, 2009 and is pending.

6.4 Federal Reserved Water Rights Claims by Cahuilla and Ramona Bands

On October 6, 2006, the Cahuilla Band of Indians filed a Motion to Intervene as Plaintiff-Intervenor in *United States v. Fallbrook Public Utility District, et al.* The Cahuilla Band also filed a Complaint asking the Court to quantify its federal reserved water rights by confirming elements of the water rights as declared and decreed by the Court in Interlocutory Judgment No. 41. On October 16, 2006, the Ramona Band of Cahuilla filed a similar motion and Complaint. On January 22, 2007, the Court issued an Order granting the Motions to Intervene and filing the Complaints in Intervention. On February 25, 2009, the Court ordered the Cahuilla Band and Ramona Band as plaintiffs to serve by April 30, 2009 all water right holders subject to the Court's jurisdiction within the entire watershed. Service was completed and the parties commenced negotiations. On April 1, 2009, the Cahuilla and Ramona Bands filed motions to dismiss claims against certain downstream defendants and to file second amended complaints to limit the claims to the Anza-Cahuilla Groundwater Area. On April 29, 2009, the Court issued an Order granting the motions. The parties are progressing with negotiations and Court proceedings for quantification of each Band's federal reserved water rights based on the second amended complaints.

6.5 Federal Reserved Water Rights Claims by Pechanga Band

In 1974, the Pechanga Band of Luiseño Indians filed a Motion to intervene as a Plaintiff-Intervenor in *United States v. Fallbrook Public Utility District, et al.* and in 1975 the Court granted the Motion. Rather than filing a complaint asking the Court to quantify its federal reserved water rights, the Pechanga Band is in the process of resolving its claims to water rights in the Santa Margarita River Watershed through a comprehensive settlement agreement with the United States and principal water districts, including Rancho California WD, Eastern MWD, and Metropolitan Water District. On December 17, 2009, Pechanga and Rancho California WD announced an agreement on a framework, developed with the assistance of Metropolitan Water District and the United States Federal Negotiating Team, to resolve Pechanga's water rights claims. On April 27, 2009, Pechanga and Rancho California WD agreed to a Settlement Conceptual Agreement and on June 11, 2009, the Rancho California WD Board approved the Settlement Conceptual Agreement. On November 16, 2009, the parties announced the Pechanga Water Rights Settlement Agreement was finalized. On December 11, 2009 and January 26, 2010 the Pechanga Indian Water Rights Settlement Act was introduced in the United States House of Representatives and Senate, respectively. The parties are now in the process of obtaining Congressional and Court approvals.

SECTION 7 - WATER PRODUCTION AND USE

7.1 General

Water production and use data were obtained from several types of substantial users including water purveyors, Indian Reservations, mobile home parks and private landowners. Private landowners who qualify as substantial water users are those who irrigate eight or more acres or who produce or use an equivalent quantity of water.

Major water purveyors who reported production and use data in the 2009-10 Water Year are listed as follows:

Anza Mutual Water Company
Eastern Municipal Water District
Elsinore Valley Municipal Water District
Fallbrook Public Utility District
Lake Riverside Estates
Metropolitan Water District of Southern California
Rainbow Municipal Water District
Rancho California Water District
U. S. Marine Corps, Camp Pendleton
U.S. Naval Weapons Station, Fallbrook Annex
Western Municipal Water District

Lake Riverside Estates is listed with major water purveyors although it does not deliver water to customers. However it does produce make-up water for losses from Lake Riverside.

In addition to the major purveyors, there are a number of smaller water systems in the Watershed. Of these, Quiet Oaks Mobile Home Park, Jojoba Hills SKP Resort, Outdoor Resorts Rancho California, Inc. and Hawthorn Water System are substantial users.

Three Indian Reservations, the Cahuilla, Pechanga and Ramona, are noted in Interlocutory Judgment No. 41, the Judgment that deals with Water Rights on Indian Reservations in the Watershed. Estimates and/or measurements of water production and use are reported for the Cahuilla, Pechanga and Ramona Indian Reservations.

A portion of a fourth Reservation, the Pauma Mission Reserve Tract of the Pauma Yuima Band of Mission Indians, is also located within the Watershed. However, these lands overlie basement complex, which waters have been found by the Court to not add to, support or contribute to the Santa Margarita River stream system.

The final category of water users is private landowners who use water primarily for irrigation.

The water use data collected for the 2009-10 Water Year are summarized on Table 7.1. Total imported supplies plus local production totaled 113,198 acre feet compared to 129,714 reported in 2008-09. Of that quantity, 39,458 acre feet were used for agriculture; 6,811 acre feet were used for commercial purposes; 53,345 acre feet were used for domestic purposes; 30 acre feet were discharged to Murrieta Creek; 12 acre feet were discharged to Santa Gertrudis Creek; 59 acre feet were discharged from the potable connection to WR-34 outlet pipe; 3,812 acre feet were discharged by Rancho California WD during 2009-10 pursuant to the Cooperative Water Resource Management Agreement (CWRMA); 2,908 acre feet of fresh water were exported by Camp Pendleton; and 2,075 acre feet were recharged by Rancho California WD to storage. It is noted the agriculture use for Pechanga includes 394 acre feet of reclaimed wastewater and thus this amount is double counted on Table 7.1 relative to production from the Santa Margarita River Watershed. Actual agriculture use of production from the watershed is 39,064 acre feet reflecting the reduction of 394 acre feet of reclaimed wastewater used by Pechanga. In order for the totals to balance on Table 7.1, the 394 acre feet of reclaimed water is subtracted from the indicated loss for Pechanga as reflected in Footnote 13 for Table 7.1.

The overall system loss was 5,027 acre feet. System gain or loss is the result of many factors including errors in measurement, differences between periods of use and periods of production, leakage and unmeasured uses.

Monthly production and use data for major water purveyors are attached to this report as Appendix A. Uses are listed under agricultural, ag/domestic, commercial and domestic categories. The definition of agricultural, ag/domestic, commercial and domestic uses varies for the different purveyors in the Watershed. Accordingly definitions of these uses for major water purveyors are shown on Table 7.2. It is noted that much of the non-agricultural water use in the Watershed can also be considered municipal use, which includes both the domestic and commercial uses shown in tables in this report. Similar data for Water Years 1966-2010 are summarized in tables presented in Appendix B. Appendix C presents information on substantial users outside purveyor service areas.

7.2 Water Purveyors

Anza Mutual Water Company

Anza Mutual Water Company's service area is in the eastern part of the Watershed in the Anza Valley. Production is from two wells: Well No. 1 drilled in 1951 and perforated from 20 feet to 260 feet; and Well No. 2 drilled later to a depth of 287 feet and perforated in the bottom 130 feet. Production for 2009-10 was 36.97 acre feet from Well No. 1 as shown in Appendix A, Table A-11. Well No. 2 was not in use for 2009-10. Water levels in Well No. 1 decreased 25 feet from last year.

TABLE 7.1

SANTA MARGARITA RIVER WATERSHED

WATER PRODUCTION AND USE

2009-10

Quantities in Acre Feet

	PRODUCTION			USE					
	WELL/ SURFACE	IMPORT	TOTAL	AG	COMM	DOM	LOSS	TOTAL	WATER RIGHT
WATER PURVEYORS									
Anza Mutual Water Company	37	0	37	0	0	33	4 1/	37	Appropriative
Eastern MWD	0	13,552	13,552	0	0	12,874	678	13,552	Appropriative
Elsinore Valley MWD	0	7,926	7,926 12/	133	1,718	6,075	0	7,926	---------
Fallbrook PUD	20	7,192	7,212	3,576	512	2,857	267	7,212	Appropriative
Lake Riverside Estates	255	0	255	0	255 2/	0	0	255	Appropriative
Metropolitan Water District	0	372	372	354	0 3/	0	18	372	---------
Murrieta Division of Western MWD	753	1,462	2,215	264	140	1,642	169	2,215	Appropriative
Rainbow MWD	0	1,453	1,453	1,147	0	174	132	1,453	---------
Rancho California WD	25,367 4/	40,894 5/	66,261	26,342 6/	3,766	26,778	9,375 7/	66,261	Various
U.S.M.C. - Camp Pendleton	5,782	0	5,782	202	------ 8/	2,405	3,175 1/ 9/	5,782	Appropriative/ Riparian
U.S. Naval Weapons Station	0	69	69	0	------ 8/	63	6 1/	69	---------
Western MWD Improvement Dist. A Through Rancho California WD	0	62	62	0	56	0	6 1/	62	---------
INDIAN RESERVATIONS									
Cahuilla	52	0	52	0	------	52	0	52	Overlying/Reserved
Pechanga	791	0	791	531	364	235	(339) 13/	791	Overlying/Reserved
SMALL WATER SYSTEMS									
Quiet Oaks Mobile Home Park	23	0	23	8	0	13	2 1/	23	Riparian/Overlying
Outdoor Resorts	510	0	510	429	0	73	8 1/	510	Overlying
Jojoba Hills SKP Resort	55	0	55	0	0	49	6 1/	55	Overlying
Hawthorn Water System	24	0	24	0	0	22	2 1/	24	Appropriative
OTHER SUBSTANTIAL USERS	6,547 10/	0	6,547	6,472	0	0	75 11/	6,547	
TOTAL	**40,216**	**72,982**	**113,198**	**39,458**	**6,811**	**53,345**	**13,584** 14/	**113,198**	

1/ Assumes 10% system loss
2/ Recreation Use
3/ Construction use at Diamond Valley Lake
4/ 24,884 AF production from Old Alluvium and 801 AF of Vail Recovery less 318 AF exported to the San Mateo Watershed
5/ Includes 24,737 AF direct use; 12,858 AF direct recharge; 3,812 AF from MWD WR-34; and minus 513 AF export
6/ 21,456 AF Ag, and 4,886 AF Ag/Domestic
7/ 30 AF discharged into Murrieta Creek; 12 AF discharged into Santa Gertrudis Creek; 3,812 AF discharged into Santa Margarita River from MWD WR-34; 0 AF from System River Meter; 59 AF from potable connection to WR-34 outlet pipe and 2,075 AF of import remaining in storage; and a system loss of 3,387 AF
8/ Listed with Domestic uses
9/ Includes exports of 2,908 acre feet
10/ 749 AF for surface diversion plus 5,850 AF from groundwater as shown in Appendix C, minus 52 AF on the Cahuilla Reservation
11/ 10% of surface diversions
12/ Sales figures
13/ Includes a system loss of 55 acre feet, minus 394 acre feet of reclaimed wastewater from EMWD, accounted for on Table A-1. See Table A-5 for Pechanga production and use
14/ Includes an overall system loss of 5,027 AF

TABLE 7.2

SANTA MARGARITA RIVER WATERSHED
DEFINITIONS OF WATER USE
BY MUNICIPAL WATER PURVEYORS
2009-10

DISTRICT	AGRICULTURAL	DOMESTIC	COMMERCIAL
EASTERN MUNICIPAL WATER DISTRICT	A commercial enterprise producing a crop/livestock on at least 5 acres and able to accept a delivery of at least 24 consecutive hours	Single family, multiple units and agricultural uses of less than 5 acres	Not reported
ELSINORE VALLEY MUNICIPAL WATER DISTRICT	Delivery of water for agricultural purposes in growing or raising for commerce, trade or industry or for use by public eduational or correctional institutions	Delivery of water to single family residential customers in single, detached residential units	Delivery of water to multi-family residential units; commercial, industrial establishments; cities, political sub-divisions or quasi-governmental associations
FALLBROOK PUBLIC UTILITY DISTRICT	AG - A commercial enterprise producing a crop/livestock/fowl on at least 1 acre fully used for ag purposes; can include incidental domestic use related to residency AG/DOM - Water used for both ag and domestic purposes	Single family, multi-unit and large domestic residences and the first 20,000 gallons used by an ag/domestic meter	Offices, businesses, schools and hydrants
PECHANGA INDIAN RESERVATION	Irrigation, including water used for golf course, parks, grass areas, and landscaping	Residential	Resort, on-Reservation businesses, tribal facilities
RAINBOW MUNICIPAL WATER DISTRICT	AG- 1 acre or more of plantable, resalable products DOM/AG - Same as Ag with a house on the parcel	DOMESTIC - Homes	Generally no commercial use in district
RANCHO CALIFORNIA WATER DISTRICT	AG - 1 acre or more of plantable, resalable products GOLF - Outside water use at golf courses VINEYARDS - Outside irrigation for vineyards LANDSCAPE - Landscaping around freeways, parking lots, office buildings, median strips. AG/DOM - First 1600 c.f. for each user alloted to domestic, and the balance to agriculture	DOMESTIC - Homes MULTIPLE - Apartments and Condominiums	COMMERCIAL - Office buildings, industrial users other than agri-businesses FLOATING - Fire hydrants used during construction CONSTRUCTION - Other fire hydrants used for grading LAKE SKINNER - Recreational use at Lake Skinner MISCELLANEOUS - Schools, fire departments, parks, government agencies DETECTOR CK. METERS - Only used when there is a fire
MURRIETA DIVISION OF WESTERN MUNICIPAL WATER DISTRICT	Agricultural uses and irrigation for crops	Homes and multiple units	Businesses, public agencies, schools and construction
USMC, CAMP PENDLETON	Irrigation - Water used for ag purposes, not landscaping, golf courses or parks	Camp Supply - Includes landscaping, parks and commercial use	Reported under Camp Supply

Interlocutory Judgment No. 33 divides aquifers in Anza Valley at this location into two categories: the shallow aquifer and the deep aquifer. Based on information available to the Court the shallow aquifer was determined to include the younger and older alluvial deposits in the Anza Groundwater Basin and extend to a maximum but variable depth of approximately 100 feet. The deep aquifer underlies the shallow aquifer in an area about one-half mile in width and two miles in length, within portions of Sections 16, 17, 21, 22, 27 and 28 of Township 7 South, Range 3 East, SBM. Anza Mutual Water Company's wells are within the area of the deep aquifer. From the perforated intervals in the wells, it may be concluded that most of the production from Well No. 1 and all of the production from Well No. 2 are from the deep aquifer. Interlocutory Judgment No. 33 concluded that waters contained in the deep aquifer did not add to, support or contribute to the Santa Margarita River stream system and were, therefore, declared to be outside the Court's jurisdiction.

Thus, most of the water produced by the Anza Mutual Water Company is outside the Court's jurisdiction. The relatively small portion pumped from the shallow aquifer in Well No. 1 is pumped under a groundwater appropriative right. Data for Water Years 1989-2010 are shown in Appendix Table B-12.

Eastern Municipal Water District

Eastern Municipal Water District is a member agency of Metropolitan Water District and its service area includes a portion of the Rancho California Water District and the Murrieta Division of Western Municipal Water District. Within the Watershed, Eastern MWD wholesales water to those districts and also retails water directly to consumers. Water sold to Rancho California WD and the Murrieta Division of Western MWD is not listed in this report as imported water to Eastern MWD.

Eastern MWD's service area outside Rancho California WD and the Murrieta Division of Western MWD is located in the northern part of the Watershed. Water for Eastern MWD's retail service area is all imported with no groundwater production during 2009-10.

Imports, not including water wholesaled to Rancho California WD or the Murrieta Division of Western MWD or delivered to Elsinore Valley MWD, totaled 15,024 acre feet. A portion of that import amounting to 1,472 acre feet was exported from the Santa Margarita River Watershed for delivery to Eastern MWD's retail customers located outside the watershed, resulting in net import to the watershed of 13,552 acre feet. These data are shown in Appendix A.

In addition to importing fresh water, Eastern MWD also reclaims wastewater at its Temecula Valley Regional Water Reclamation Facility.

Disposition of wastewater from the Temecula Valley Regional Water Reclamation Facility (Facility) service area for Water Years 2008-09 and 2009-10 is shown below:

Use	2008-09 Quantity AF	2008-09 Percent %	2009-10 Quantity AF	2009-10 Percent %
Reuse in Santa Margarita	2,615	18	2,882	20
Reuse outside Santa Margarita	6,786	46	7,026	48
Subtotal	9,401	64	9,908	68
Discharge to Dissipater at Temescal Creek	2,772	19	1,930	13
Other	2,469	17	2,873	19
TOTAL	14,642	100	14,711	100

It can be noted that the quantities of reclaimed wastewater used within the Santa Margarita River Watershed increased from 2,615 acre feet in 2008-09 to 2,882 acre feet in 2009-10. During the same period reuse outside the Santa Margarita River Watershed increased from 6,786 acre feet to 7,026 acre feet. From the foregoing it may be concluded that 20 percent of the wastewater is reused in the watershed and 48 percent is used outside the watershed. The quantity of wastewater discharged to the dissipater at Temescal Creek decreased from 2,772 acre feet to 1,930 acre feet. The Other use increased from 2,469 acre feet to 2,873 acre feet. This Other use includes changes of storage in Winchester and Sun City storage ponds, as well as evaporation and percolation losses.

Because of concerns about the potential export of native Santa Margarita water, the sources of water supply to the Facility service area were determined and are shown on Table 7.3. In 2009-10, 19 percent of the supply to the service area was groundwater. Thus, the percent of groundwater supply was less than the percentage of wastewater reused within the Santa Margarita Watershed, and on a proportional basis there was no export of native waters. It is noted that Rancho California WD does not agree with this method for calculating export of native waters.

TABLE 7.3

SANTA MARGARITA RIVER WATERSHED

WATER DELIVERIES TO TEMECULA VALLEY
REGIONAL WATER RECLAMATION FACILITY SERVICE AREA

	2006		2007		2008		2009		2010	
Eastern MWD	AF	%	AF	%	AF	%	AF	%	AF	%
Deliveries to TVRWRF Service Area										
1. Groundwater	0		0		0		0		0	
2. Import 1/	14,161		15,398		14,952		14,472		13,552	
3. Total	14,161		15,398		14,952		14,472		13,552	
Rancho California WD										
Deliveries to TVRWRF Service Area										
1. Groundwater 2/	8,150		5,923		5,700		5,230		6,093	
2. Import 3/	12,753		17,230		16,431		15,609		13,303	
3. Total 4/	20,903		23,153		22,131		20,839		19,396	
Total Deliveries to TVRWRF Service Area										
1. Groundwater	8,150	23.2%	5,923	15.4%	5,700	15.4%	5,230	14.8%	6,093	18.5%
2. Import	26,914	76.8%	32,628	84.6%	31,383	84.6%	30,081	85.2%	26,855	81.5%
3. Total	35,064	100.0%	38,551	100.0%	37,083	100.0%	35,311	100.0%	32,948	100.0%

1/ EMWD imports are based on discharges from EM-17.
2/ Based on ratio of groundwater to total production in Rancho Division of RCWD
3/ Based on ratio of import to total production in Rancho Division of RCWD
4/ Total RCWD deliveries in TVRWRF Service Area

On August 4, 2009, a Judgment was entered in *United States and Fallbrook Public Utility District v. Eastern Municipal Water District and Rancho California Water District* (CV 04-8182 CBM (RNBx), United States District Court, Central District of California) pertaining to the contractual obligations of the 1990 Four Party Agreement and the export of treated wastewater from the Santa Margarita River Watershed. On May 17, 2011, the United States Court of Appeals for the Ninth Circuit issued an Order granting the parties' joint motion to dismiss the appeals in this matter and thus the August 4, 2009 Judgment stands. For purposes of this annual report the export of treated wastewater will be reported consistent with prior annual reports with no changes pursuant to the Judgment. The Watermaster will reevaluate the calculations and reporting to be included in future annual reports.

Estimates of water production and use for the period 1966-2010 are shown in Appendix B.

Elsinore Valley Municipal Water District

Elsinore Valley Municipal Water District provides water to its service area around Lake Elsinore, a portion of which is within the Santa Margarita River Watershed. Elsinore Valley MWD obtains its supply from ten wells, all located outside the Santa Margarita River Watershed, and also imports Metropolitan Water District water through Eastern MWD and Western MWD.

As shown in Appendix A, Elsinore Valley MWD reports that 7,926 acre feet of imported water was delivered in the portion of its service area that is inside the Santa Margarita River Watershed in 2009-10. Also during 2009-10, approximately 1,120 acre feet of wastewater were exported from that same area.

Production and use during the period 1966 to 2010 are shown in Appendix B.

Fallbrook Public Utility District

In 2009-10, Fallbrook Public Utility District imported 12,772 acre feet through its contract with the San Diego County Water Authority as shown in Appendix A. Of this quantity, 2,438 acre feet were delivered to the former DeLuz Heights Water District service area that is entirely within the Santa Margarita River Watershed. Of the remaining importations it is estimated that 46 percent, or 4,754 acre feet, were delivered to lands inside the Santa Margarita River Watershed. The remainder was delivered to lands in the adjacent San Luis Rey River Watershed. Thus, imports to the Watershed totaled 7,192 acre feet in 2009-10. In addition, Fallbrook PUD received 20 acre feet of water by exchange for water diverted at Lake Skinner for a total production of 7,212 acre feet. It is noted Fallbrook PUD is working with the Watermaster to refine estimates of deliveries inside and outside the watershed, and such refinements will be included in future annual reports.

In addition, Fallbrook PUD has three wells; however, in 2009-10, there was no pumpage from these wells. In 2009-10, Fallbrook PUD treated 1,215 acre feet of wastewater from areas served within the Watershed, of which 27 acre feet were reused in the Watershed, and the remainder was exported.

Production during the period 1966 to 2010 included direct diversions from the Santa Margarita River for water years before 1972 as well as imported water and well production as shown in Appendix B.

Lake Riverside Estates

Lake Riverside Estates pumps water from Well No. 7S/2E-32C1, into Lake Riverside to replace evaporation losses. Production for 2009-10 was 255 acre feet as shown in Appendix A, Table A-11. The production well was drilled in 1962 and is located in an area of younger alluvium in the Cahuilla Groundwater Basin. The well was drilled to a depth of 338 feet.

Interlocutory Judgment No. 33 indicates that the owners of lands in the Cahuilla Groundwater Basin have correlative overlying rights to the use of the groundwater that is the basis for this production. Data for 1989 to 2010 are shown on Appendix Table B-12.

Metropolitan Water District of Southern California

Pursuant to a Court Order, Metropolitan Water District (MWD) imported 372 acre feet of water into the Santa Margarita River Watershed for irrigation of lands in Domenigoni Valley. MWD did not import any water for groundwater recharge and there was no water used for construction purposes. As previously noted, the groundwater in the Domenigoni Valley groundwater basin is outside this Court's jurisdiction when groundwater levels are below 1400 feet. This production is shown on Appendix Table A-4, and production for the period 1966 to 2010 is shown on Appendix Table B-5.

Rainbow Municipal Water District

Rainbow Municipal Water District is located in San Diego County in the south-central part of the Watershed. In 2009-10 the District imported a total of 20,769 acre feet of water as shown on Table B-7. However, most of the District is in the San Luis Rey River Watershed and only about seven percent of the District's imported supply was delivered to the portion of their service area inside the Santa Margarita River Watershed. As shown on Appendix Table A-6, total deliveries of imported water in the Santa Margarita River Watershed in 2009-10 amounted to 1,453 acre feet.

The import production for years between 1966 and 2010 is shown on Appendix Table B-7.

Rancho California Water District

Rancho California Water District serves water to a 99,600 acre service area in the central portion of the Watershed. The District produced water from 48 wells in 2009-10 and also imported water, as shown on Appendix Table A-7. Use is shown under the categories of agriculture, ag/domestic, commercial and domestic. In Water Year 2009-10 well production of native water included 25,685 acre feet from the Murrieta-Temecula Groundwater Area. This quantity included 24,884 acre feet from the older alluvium, and 801 acre feet of recovered Vail recharge. A portion of the groundwater amounting to 318 acre feet was exported for use in the San Mateo Watershed, resulting in a net well production of 25,367 acre feet.

Import supplies totaled 41,407 acre feet of which 24,737 acre feet were used for direct use, 12,858 acre feet were recharged, and 3,812 acre feet were discharged by the District to the Santa Margarita River from MWD Meter WR-34 during 2009-10 pursuant to the Cooperative Water Resource Management Agreement (CWRMA). A portion of that import amounting to 513 acre feet were exported from the Santa Margarita River Watershed resulting in net import to the Watershed of 40,894 acre feet.

During 2009-10, use totaled 66,261 acre feet including 21,456 acre feet by agriculture; 4,886 acre feet by ag/domestic; 3,766 acre feet by commercial; 26,778 acre feet by domestic; 3,913 acre feet were released into Murrieta Creek, Santa Gertrudis Creek and the Santa Margarita River; 2,075 acre feet of import were recharged to storage; and 3,387 acre feet were system loss.

In 2009-10 Rancho California WD did not export wastewater from the Watershed to the dissipater at Temescal Creek in the Santa Ana Watershed.

Rancho California WD produces groundwater under a variety of rights as follows:

1. Recovery of water appropriated at Vail Lake
2. Recovery of import return flows and recharged imported water
3. Groundwater appropriative rights
4. As agent on behalf of overlying landowners

Vail Appropriation

Rancho California WD's Vail Dam appropriative rights are described in Application No. 11518 as amended on June 17, 1947, and in Permit 7032 originally issued on February 18, 1948. Permit 7032 was subsequently amended on July 28, 1971 and April 22, 2009. The water right provides that the District may store up to 40,000 acre feet in Vail Reservoir each year between November 1 and April 30, subject to applicable limitations. The water so stored may be used for recreational uses at Vail Lake and municipal, domestic, industrial, and irrigation uses within the entire service area of Rancho California WD. Such uses may be by direct diversion from Vail Lake or by recovery of water released from Vail and spread downstream in Pauba Valley. Points of re-diversion for recovery from underground storage are permitted for 12 production wells: Rancho California WD Well Nos. 109, 110, 123, 132, 152, 153, 157, 158, 210, 232, 233, and 234.

A total of 801 acre feet were released from Vail during 2009-10 for groundwater recharge. Releases from Vail for groundwater recharge for the period 1980 to 2010 are shown on Appendix Table B-8.

Permit 7032 operations for 2009-10 are summarized on Table 7.4. The recovery from groundwater recharge for 2009-10 was 801 acre feet corresponding to the amount released from Vail for recharge and thus there was no change in the Vail recharge account balance.

It is noted with the issuance of the amended Permit 7032 in 2009 the place of use, purposes of use, and permitted points of re-diversion were changed. Accordingly, the reporting of Permit 7032 operations needs to be modified to reflect the changed permit conditions. Table 7.4 was modified to reflect the changes subject to further refinement as part of the update of the CWRMA groundwater model. The reporting on Table 7.4 reflects the assumption that all water released from Vail for recharge in 2009-10 was recovered from the younger alluvium by pumping from the permitted recovery wells. The remainder of the pumping from the younger alluvium was apportioned to direct import recharge. The updated groundwater model will be used to develop a refined accounting methodology for recharge and recovery of Vail releases and imported water. The updated model will also be used to evaluate the status of and accounting for the Vail recharge account and the imported water carryover account.

Imported Water Return Flows

Return flows for 2009-10 based on imported water use in the Rancho Division and Santa Rosa Division are shown on Table 7.5 and on Table 7.6.

In those tables, imported water is allocated to agricultural, ag/domestic, commercial and domestic uses in each of eight hydrogeologic areas in the Rancho Division service area and three hydrogeologic areas in the Santa Rosa Division service area. This allocation is the proportion of the total deliveries to each use that is made up of imported water. In 2009-10, 54.44 percent of the supply to the Rancho Division was imported and 59.01 percent of the supply to the Santa Rosa Division was imported.

In general the Santa Rosa Division does not overlie the groundwater area. However there are several areas classified as being in the Santa Rosa Division that do overlie the groundwater area and generate return flows from imported supplies. Data from most of these lands have been reported since December 1991.

TABLE 7.4

SANTA MARGARITA RIVER WATERSHED
RANCHO CALIFORNIA WATER DISTRICT
PERMIT 7032 OPERATIONS
2009-10
Quantities in Acre Feet

Diversion to Storage in Vail Lake /1		6,895
Release to Groundwater Storage /1		801
Recovery from Groundwater Storage /2 /3		
Younger Alluvium	801	
Older Alluvium	0	
Total		801
Vail Recharge Account Balance from 2008-09		54,297
Release minus Recovery		0
Vail Recharge Account Balance for 2009-10		54,297

1/ See Table 3.3
2/ Permitted Points of Re-Diversion RCWD Well Nos. 109, 110, 123, 132, 152, 153, 157, 158, 210, 232, 233 and 234
3/ Total pumping from Vail recovery wells is greater than amount shown as recovered under Permit 7032.
Total pumping from the 12 recovery wells shown on Table 7.8.

TABLE 7.5

SANTA MARGARITA RIVER WATERSHED

RANCHO CALIFORNIA WATER DISTRICT

RETURN FLOW CREDIT

2009-10

RANCHO DIVISION

Quantities in Acre Feet

HYDROGEOLOGIC AREAS

	0 NO HYDRO-GEO CODE	1 MURRIETA WOLF 1/2 QYAL 1/2 QTOAL	2 SANTA GERTRUDIS QYAL	3 LOWER MESA QTOAL	4 PAUBA QYAL	5 SOUTH MESA QTOAL	6 UPPER MESA QTOAL	7 PALOMAR QTOAL	TOTAL
AGRICULTURAL *									
Total Use	797.98	830.34	549.92	2,204.63	280.27	612.27	688.49	734.83	6,698.72
% Import	54.44	54.44	54.44	54.44	54.44	54.44	54.44	54.44	
Import Use	434.42	452.04	299.38	1,200.20	152.58	333.32	374.81	400.04	3,646.80
% Credit	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	
Credit	108.61	113.01	74.84	300.05	38.15	83.33	93.70	100.01	911.70
AG/DOMESTIC									
Total Use	492.17	37.69	0.00	35.06	359.20	35.76	431.60	140.31	1,531.80
% Import	54.44	54.44	54.44	54.44	54.44	54.44	54.44	54.44	
Import Use	267.94	20.52	0.00	19.09	195.55	19.47	234.97	76.39	833.91
% Credit	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	
Credit	66.98	5.13	0.00	4.77	48.89	4.87	58.74	19.10	208.48
COMMERCIAL									
Total Use	125.86	1,161.49	751.29	660.37	243.13	113.14	33.23	6.67	3,095.20
% Import	54.44	54.44	54.44	54.44	54.44	54.44	54.44	54.44	
Import Use	68.52	632.32	409.01	359.51	132.36	61.59	18.09	3.63	1,685.03
% Credit	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	
Credit	6.85	63.23	40.90	35.95	13.24	6.16	1.81	0.36	168.50
DOMESTIC									
Total Use	1,037.13	2,393.48	2,350.47	10,497.15	633.75	3,546.45	1,549.67	459.32	22,467.42
% Import	54.44	54.44	54.44	54.44	54.44	54.44	54.44	54.44	
Import Use	564.62	1,303.01	1,279.60	5,714.67	345.01	1,930.70	843.65	250.05	12,231.31
% Credit	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	
Credit	141.15	325.75	319.90	1,428.67	86.25	482.67	210.91	62.51	3,057.83
TOTAL USE	2,453.14	4,423.00	3,651.68	13,397.21	1,516.35	4,307.63	2,703.00	1,341.13	33,793.14
TOTAL									
Total Import Use	1,335.50	2,407.89	1,987.98	7,293.47	825.50	2,345.08	1,471.52	730.11	18,397.05
Total Credit	323.60 **	507.12	435.65	1,769.44	186.52	577.03	365.17	181.98	4,346.51
Total Credit Qyal		253.56	435.65		186.52				875.73
Total Credit Qtoal		253.56		1,769.44		577.03	365.17	181.98	3,147.18

* Includes golf course and landscape irrigation

** This credit not applied to either Qyal or Qtoal

TABLE 7.6

SANTA MARGARITA RIVER WATERSHED
RANCHO CALIFORNIA WATER DISTRICT
RETURN FLOW CREDIT
2009-10
SANTA ROSA DIVISION
Quantities in Acre Feet

	HYDROGEOLOGIC AREAS			
	1 MURRIETA WOLF 1/2 QYAL 1/2 QTOAL	3 LOWER MESA QTOAL	8 RTS 279, 280 & 285 1/4 QYAL 3/4 QTOAL	TOTAL
AGRICULTURAL *				
Total Use	48.26	0.00	562.52	610.77
% Import	59.01	59.01	59.01	
Import Use	28.47	0.00	331.93	360.40
% Credit	25.00	25.00	25.00	
Credit	7.12	0.00	82.98	90.10
AG/DOMESTIC				
Total Use	15.66	0.00	0.00	15.66
% Import	59.01	59.01	59.01	
Import Use	9.24	0.00	0.00	9.24
% Credit	25.00	25.00	25.00	
Credit	2.31	0.00	0.00	2.31
COMMERCIAL				
Total Use	4.37	0.00	577.58	581.95
% Import	59.01	59.01	59.01	
Import Use	2.58	0.00	340.81	343.39
% Credit	10.00	10.00	10.00	
Credit	0.26	0.00	34.08	34.34
DOMESTIC				
Total Use	83.63	0.00	1,348.82	1,432.45
% Import	59.01	59.01	59.01	
Import Use	49.35	0.00	795.90	845.25
% Credit	25.00	25.00	25.00	
Credit	12.34	0.00	198.98	211.31
TOTAL USE	151.92	0.00	2,488.92	2,640.84
TOTAL				
Total Import Use	89.64	0.00	1,468.64	1,558.28
Total Credit	22.02	0.00	316.04	338.06
Total Credit Qyal	11.01		79.01	90.02
Total Credit Qtoal	11.01	0.00	237.03	248.04

* Includes golf course and landscape irrigation

The percentage of imported water that becomes return flow varies according to the use as follows:

Agricultural Use	25%
Ag/Domestic Use	25%
Commercial Use	10%
Domestic Use	25%

Based on the foregoing factors, the return flow credit for 2009-10 is computed to be 4,346.51 acre feet for the Rancho Division and 338.06 acre feet for the Santa Rosa Division, as shown on Tables 7.5 and 7.6 respectively.

Some of the hydrogeologic areas overlie older alluvium and some overlie younger alluvium. Comparison of exposures of younger alluvium with maps of the District's hydrogeologic areas indicates that the Santa Gertrudis, Pauba and half of the Murrieta-Wolf areas overlie younger alluvium. The area of the Santa Rosa Division that overlies the groundwater area is one-fourth in the younger alluvium and three-fourths in the older alluvium. Import return flows in these areas can be credited against pumping from the younger alluvium. These credits for 2009-10 are 875.73 acre feet for the Rancho Division and 90.02 acre feet for the Santa Rosa Division, as shown on Tables 7.5 and 7.6 respectively.

Rancho California WD imported an additional 12,858 acre feet of water for groundwater recharge in 2009-10, of which 10,783 acre feet were recovered.

Division of Local Water

During 2009-10, Rancho California WD pumped 36,698 acre feet of groundwater, comprised of 25,915 acre feet of local water and 10,783 acre feet of recovered imported water. Some of this water was pumped from the younger alluvium and some from the older alluvium. The Court determined that water in both the younger alluvium and older alluvium adds to, contributes to and supports the Santa Margarita River stream system. The primary reason for differentiating between younger alluvium and older alluvium production is that, in California, production from the younger alluvium is generally considered to be governed by water rights that apply to the regulation of surface waters. Production from the older alluvium is generally considered to be governed by regulations that apply to groundwater. Of the 25,915 acre feet of local water, 230 acre feet were delivered to the Pechanga Indian Reservation under the terms of the Wolf Valley Groundwater Management Agreement. This production is shown on Appendix Table A-5.

During joint development of a groundwater model of the area it was necessary to develop estimates of the transmissivity for each aquifer. These estimates were based on pumping tests. The resulting transmissivity values were then used to estimate the relative groundwater production from each aquifer. For Rancho California WD wells, the percent production estimated to originate in the younger alluvium is shown in Table 7.7.

Production from the younger alluvium and older alluvium for 2009-10 using the percentages noted in Table 7.7 is presented in Table 7.8. It may be noted that 11,584 acre feet were pumped from the younger alluvium and 25,114 acre feet were pumped from the older alluvium in 2009-10.

The production of 11,584 acre feet from the younger alluvium, as shown on Table 7.8 includes recovery of 801 acre feet of Vail recharge and 10,783 acre feet of direct import recharge. The recovered Vail recharge of 801 acre feet is determined as the total Vail release from recharge shown on Table 7.4

Rancho California WD imported 12,858 acre feet of water in 2009-10 for direct recharge of which 10,783 acre feet were recovered leaving 2,075 acre feet as unrecovered direct recharge.

Imported water carryover to 2009-10 includes the following:

		AF
1.	Carryover from 2008-09	50,438
2.	Unrecovered direct recharge in 2009-10	2,075
3.	Import Return Flow Credit for 2009-10	966
4.	Total Carryover to 2010-11	53,479

Thus, 53,479 acre feet of imported supplies remain available to offset younger alluvium production in future years.

TABLE 7.7

SANTA MARGARITA RIVER WATERSHED
PERCENT PRODUCTION FROM YOUNGER ALLUVIUM IN RANCHO CALIFORNIA WATER DISTRICT WELLS

RCWD WELL NO.	LOCATION TOWNSHIP/ RANGE/ SECTION	SEAL DEPTH FEET	PERFORATED INTERVAL FEET	DEPTH YOUNGER ALLUVIUM FEET	PERCENT YOUNGER ALLUVIUM %		REMARKS
106	7S/3W-26R1	55	130-210; 250-310; 340-440; 700-740; 780-980	0	0.0%	Murrieta	No. 108 Winchester, clay 0'-40'
107	7S/3W-26J1	55	60-120; 190-260; 280-300; 390-590	58	0.0%	Murrieta	No. 105 - gravel & clay 58'-84'
108	7S/3W-25E1		60-110; 190-280; 350-410; 430-450; 470-490; 530-590	55	0.0%	Murrieta	Formerly No. 109 gravel/sandy clay 55'-70'
109	8S/2W-17J1	52	70-150; 170-210	75	84.0%		Brown clay and gravel 75' to 105'
110	8S/1W-6K1	54	75-155	165	97.0%		Clay 165'-190'. Prior to 10/23/97 perf int. 70-150; 200-240; 320-380; 420-460
113	7S/2W-25H1	52	96-136; 275-462; 482-542	Shallow	0.0%		
116	8S/1W-6J	Unknown	60-120; 140-200; 220-260; 270-330; 370-390	150	94.0%		Clay 150'-170'
119	8S/2W-19J	55	170-260; 300-470		0.0%	Wolf Valley	Perforated below 170'
123	8S/1W-7B	55	100-260; 300-380; 420-500	135	65.0%		Brown Sand Clay 135'-210'
129	7S/2W-20L	Unknown	180-290; 416-480; 520-600	Shallow	0.0%	Santa Gertrudis Creek	Qyal very shallow along Santa Gertrudis Creek
132	8S/1W-7D	55	70-390; 430-500	135	82.0%		Brown Clay Streaks 135'-175'
135	7S/3W-27M10	55	70-170	50	0.0%	Murrieta Valley	Silty clay 50'-69'
141	8S/2W-11P	55	120-190; 215-235; 270-380; 430-510	104	0.0%		Silt & sand 104'-185'; Well 11L1 is 112'
144	7S/3W-27D	55	983-1123; 1143-1283; 1343-1483; 1503-1743	25	0.0%	Murrieta Valley	Sand with silty clay 25'-45'
146	7S/3W-28	50	50-190	42	0.0%	Murrieta	
152	8S/1W-5K	50	70-470; 490-540	130	90.8%		Forebay
153	8S/1W-5K3	50	50-220	170	99.0%		Forebay
157	8S/1W-5L	50	50-210	128	96.8%		Forebay
158	8S/1W-5K	50	50-210	100	96.5%		Forebay
205	7S/3W-35A	50	150-1000	10	0.0%	Santa Gertrudis/ Murrieta Valley	Sandy clay 10'-20'
210	8S/2W-12K	None	48-228	140	94.0%		Clay cobblestones 160'-167', 175'-227'
218	8S/2W-20B5	27	48-289	40	0.0%		Old 28; clay with sand layer 40'-60'; now monitoring wells 427, 428 and 429
466	8S/3W-1P2	Unknown	106-822	49	0.0%	Long Canyon	Old 219, Cantarini, hard clay 49'-60'
220	7S/3W-26Q1	34	114-450	58	0.0%		Clay 58' - 73'
467	8S/2W-12K1	Unknown	50-100; 100-140	140	100.0%		Old 221, JK, Exh. 16, Monitoring well since 1983
223	8S/2W-20C1	Unknown	48-250	60	94.0%	Wolf Valley	CAT Well; east of Wildomar Fault; nearby Exh 16 wells 17Q @62' & 17M @55' are also east of Wildomar Fault
224	8S/2W-15D	Unknown	48-250	106	68.0%		Old Well 50, clay 106'-138'
230	8S/2W-11J1	Unknown	24-31; 32.5-34; 35-40; 61-65; 70-76; 80-85; 86.5-91; 92.5-98.5	>119	100.0%		Old Well 30, depth of well is 119'
231	8S/2W-20B6	55	80-120; 150-270	35	0.0%		Old 104, P-34, Clay 20'-23'; 35'-41'; East of Wildomar Fault
232	8S/2W-11J3	51	95-135; 175-215; 235-295	135	92.0%		Old 111, 105, P-31; coarse sand & clay 135' - 155'
233	8S/2W-12K2	51	95-135; 175-215; 235-295	145	88.0%		Old 112, P32; sand and clay at 145'-220'
234	8S/2W-11P1	52	80-100; 120-140; 200-240; 280-320; 340-400	125	74.0%		Brown Clay at 125'; sand and clay at 125'-140'
235	8S/3W-1Q1	55	Unknown	Shallow	0.0%	Long Canyon	
240	8S/2W-11L1	Unknown	48-298	112	86.0%		Old Well No. 40; clay 112'-136'
301	7S/3W-18Q1	93	140-280; 280-520; 540-640	26	0.0%	Murrieta	Old JR1; blue clay 26'-32'

TABLE 7.8

SANTA MARGARITA RIVER WATERSHED
RANCHO CALIFORNIA WATER DISTRICT
WELL PRODUCTION FROM YOUNGER AND OLDER ALLUVIUM
2009-10
Quantities in Acre Feet

WELL NO.	QYAL	QTOAL	TOTAL
101	0.00	250.00	250.00
102	0.00	242.00	242.00
106	0.00	261.00	261.00
108	0.00	634.00	634.00
109	378.84	72.16	451.00
110	1,260.03	38.97	1,299.00
113	0.00	547.00	547.00
118	0.00	735.00	735.00
119 *	0.00	352.00	352.00
120	0.00	1,742.00	1,742.00
121	0.00	0.00	0.00
122 *	0.00	430.00	430.00
123	129.35	69.65	199.00
124	0.00	327.00	327.00
125	0.00	258.00	258.00
126	0.00	759.00	759.00
128	0.00	0.00	0.00
129	0.00	0.00	0.00
130	0.00	888.00	888.00
131	0.00	1,048.00	1,048.00
132	1,063.54	233.46	1,297.00
133	0.00	655.00	655.00
135	0.00	85.00	85.00
138	0.00	1,911.00	1,911.00
139	0.00	393.00	393.00
140	0.00	1,087.00	1,087.00
141	0.00	481.00	481.00
143	0.00	651.00	651.00
144	0.00	458.00	458.00
145	0.00	683.00	683.00
146	0.00	49.00	49.00
149	0.00	173.00	173.00
151	0.00	442.00	442.00
152	1,694.33	171.67	1,866.00
153	1,129.59	11.41	1,141.00
155	0.00	1.00	1.00
156	0.00	838.00	838.00
157	1,465.55	48.45	1,514.00
158	1,604.80	58.21	1,663.00
201	0.00	0.00	0.00
203	0.00	562.00	562.00
205	0.00	1,639.00	1,639.00
207	0.00	0.00	0.00
208	0.00	0.00	0.00
209	0.00	0.00	0.00
210	578.10	36.90	615.00
211*	0.00	444.00	444.00
215	0.00	293.00	293.00
216	0.00	273.00	273.00
217	0.00	874.00	874.00
231	0.00	0.00	0.00
232	820.64	71.36	892.00
233	1,232.88	168.12	1,401.00
234	226.44	79.56	306.00
235	0.00	933.00	933.00
301	0.00	0.00	0.00
302	0.00	0.00	0.00
309	0.00	2,656.00	2,656.00
TOTAL	**11,584.09**	**25,113.92**	**36,698.00**

* - A total of 230 AF of water from Wells 119, 122 and 211 was delivered to Pechanga Indian Reservation for their use.

Western Municipal Water District

Western Municipal Water District operations within the Watershed are comprised of three categories. First, Western MWD wholesales imported water to Rancho California WD. Deliveries to Rancho California WD are included under Rancho California WD. Second, Western MWD serves water to its Murrieta Division in the vicinity of the City of Murrieta. Third, Western MWD serves imported water to its Improvement District A near the southern boundary of Riverside County along the I-15 freeway. Improvement District A is operated by Rancho California WD under an operations and maintenance contract on behalf of Western MWD.

Murrieta Division

In November 2005, Western MWD merged with the Murrieta County Water District assuming their operations in an area in the vicinity of the City of Murrieta. Prior Watermaster Reports present information under Murrieta County Water District.

All of the Murrieta Division of Western MWD wells are located in the Murrieta-Temecula Groundwater Area. Interlocutory Judgment No. 30 indicates the younger alluvium deposits in Murrieta Valley extend in various depths to a maximum of approximately 30 feet from the ground surface.

The Court noted that it was impossible, based on evidence available in 1962, to determine with exactness the depth of the younger alluvial deposits throughout the Valley. However, the Court did retain continuing jurisdiction so that subsequent findings could be made, if needed. Older alluvial deposits are found below the younger alluvium.

Six of the seven Murrieta Division wells are perforated at depths of 106 feet or more. The Holiday Well has perforations beginning at a depth of 60 feet. This depth is well below the maximum depth of younger alluvium found by the Court in 1962. In addition, water depths in the Holiday Well remained around 68 feet in 2009-10, and there has been no production from the Holiday Well since March 2006. Accordingly all of Murrieta Division well production is from the older alluvium under a groundwater appropriative right.

In Water Year 2009-10, the Murrieta Division of Western MWD produced 753 acre feet of water from the North Well and imported 1,462 acre feet as shown on Appendix Table A-10.

The following table itemizes the production from the Murrieta Division wells:

Well Designation	Well Name	2009-10 Production Acre Feet	Casing Depth Feet	Water Depth Feet	Well Depth Feet	Perforated Interval Feet
7S/3W-20	New Clay	0	101	247 – 259	940	330 – 350 370 – 470 680 – 790 830 – 900
7S/3W-20C9	Holiday	0	25	64 – 80	307	60 – 307
7S/3W-20G5	House	0	50	*	298	120 – 252
7S/3W-17R2	Lynch	0	26	55 – 76	212	172 – 212
7S/3W-18J2	North	753	50	270 – 295	650	240 – 260 500 – 640
7S/3W-20D	South	0	50	169 – 190	446	120 – 446
7S/3W-7M	Alson	0	50	*	416	106 – 416
TOTAL		753				

* Water levels not measured during Water Year 2009-10

Western MWD's Murrieta Division production for the period between 1966 and 2010 is shown on Appendix Table B-11.

Improvement District A

In Water Year 2009-10, imports to Improvement District A amounted to approximately 62 acre feet as shown on Appendix Table A-11. Deliveries to Improvement District A through turnout WR-13 for the period 1966 to 2010 are shown on Table 5.4 and Appendix Table B-12.

U. S. Marine Corps - Camp Pendleton

Camp Pendleton is located on the coastal side of the Santa Margarita River Watershed. Water was provided by 13 wells that produced 5,782 acre feet in Water Year 2009-10: three wells used for agricultural production and ten wells used for Camp Supply. This production is from the younger alluvium and is based on riparian and appropriative rights. The water is used for both agricultural use and Camp Supply including domestic and commercial uses as well as irrigation for landscaping and park areas. For 2009-10, 645 acre feet were used for agricultural use and 5,137 acre feet were used for Camp Supply. Camp Pendleton water use is located both inside and outside the Watershed. A total of 2,874 acre feet were used inside the Watershed and 2,908 acre feet were exported to areas of the Base outside the Watershed. The production and use of water for Camp Pendleton are shown on Appendix Table A-8.

Beginning in December 2008 all wastewater for Camp Pendleton is treated at the Southern Region Tertiary Treatment Plant replacing the regional treatment Plant Nos. 1, 2, 3, and 13. On March 11, 2009, the Regional Water Quality Control Board issued Order No. R9-2009-0021 for a Master Reclamation Permit for the Camp Pendleton Southern Region Tertiary Treatment Plant. Wastewater effluent is discharged to either: (1) approved areas for use of reclaimed water for irrigation purposes; or (2) the Oceanside Outfall under NPDES Permit No. CA0109347, Order No. R9-2003-0155, and Order No. R9-2008-0096. The approved areas for use of reclaimed water are located both within and outside the Watershed. In Water Year 2009-10 the total amount of reclaimed wastewater for Camp Pendleton was 2,241 acre feet as shown on Appendix Table A-8. A total of 402 acre feet were reclaimed for irrigation purposes with 6 acre feet used within the Watershed and 396 acre feet used outside the Watershed. An additional 1,839 acre feet of reclaimed wastewater were exported by Camp Pendleton to the Oceanside Outfall.

Production and estimated use inside and outside the Watershed, as well as wastewater reclamation and use, are shown in Appendix B for the period 1966-2010. It is noted the format and reporting shown on Appendix Table B-9 were changed for the Annual Watermaster Report for Water Year 2008-09. Prior reports show for the period 1966 through 2003 reclaimed use inside the Watershed reported as recharged wastewater from ponds and recharge areas. In addition, the prior reports distinguished the source of the recharged wastewater between wastewater treated within or outside the Watershed at the various regional treatment plants. The format and reporting for Water Year 2009-10 on Appendix Tables A-8 and B-9 reflect current and anticipated operations for the foreseeable future. Accordingly the prior format is obsolete and the reader is directed to prior reports from 2008 and earlier for additional information regarding historical wastewater operations.

U. S. Naval Weapons Station, Fallbrook Annex

The U. S. Naval Weapons Station (NWS) occupies about 9,148 acres northeast of Camp Pendleton. Since 1969 the NWS has relied on imported water delivered via Fallbrook PUD for its supply. Wastewater is exported from the NWS, Fallbrook Public Utility District and the Watershed via an outfall line maintained by Fallbrook PUD with an easement across Camp Pendleton. In 2009-10, 69 acre feet were imported of which 7 acre feet of wastewater were exported, as shown on Appendix Table A-9. Imports and use between 1966 and 2010 are shown on Appendix Table B-10.

7.3 Indian Reservations

Water use information about the Cahuilla, Pechanga and Ramona Indian Reservations in the Watershed is described in the following sections:

Cahuilla Indian Reservation

In general, domestic water use on the Cahuilla Indian Reservation is not measured; however reports indicate that 330 people reside on the Reservation. These residents use water primarily for domestic purposes. Annual domestic water use, based on 125 gallons per capita per day, amounts to a total annual use of about 46 acre feet from wells listed in Appendix C. In addition reports indicate Reservation non-irrigated lands are used for the grazing of 500 cattle. Based on a daily requirement of 10 gallons per head per day, the annual use is estimated to be about 6 acre feet.

The foregoing estimate is for total domestic water use on the Reservation. A portion of this use may not be under Court jurisdiction, but the estimate will be used until individual well production quantities are available to allow determination of the portion under Court jurisdiction. The estimated domestic use and stock watering is included on Table 4.1 under water purveyor production.

An additional 5 acre feet pumped from well 7S/2E-26B3 were put to commercial use at a casino. This water overlies basement complex and is outside Court jurisdiction.

Under federal law, production from groundwaters within the lands of the Cahuilla Indian Reservation in either the younger or older alluvial deposits which are a part of the shallow aquifer of the Anza Ground Water Area or which are part of the Cahuilla Ground Water Basin can be considered to be under a federal reserved right, in accordance with Interlocutory Judgment No. 41 which provides as follows in Order No. 3:

> *IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the United States of America intended to reserve, and did reserve, rights to the use of the waters of the Santa Margarita River which under natural conditions would be physically available on the Cahuilla Indian Reservation, including rights to the use of ground waters, sufficient for the present and future needs of the Indians residing thereon with priority dates of December 27, 1875, for lands transferred by the Executive Order of that date; March 14, 1887, for lands transferred by the Executive Order of that date; December 29, 1891, for lands transferred by the Executive Order of that date.*

Pechanga Indian Reservation

On December 21, 2006 the Pechanga Band of Luiseño Mission Indians and Rancho California WD entered into a Groundwater Management Agreement for the Wolf Valley Groundwater Basin. The Pechanga Band and Rancho California WD agreed to manage jointly groundwater pumping from the basin and to manage the basin to protect groundwater resources. Among other things the agreement provides for Rancho California WD to deliver pumped groundwater from its wells to Pechanga.

During 2009-10, Pechanga received 230 acre feet of delivered groundwater from Rancho California WD. In addition the Pechanga Water System produced 561 acre feet from wells, and received 394 acre feet of reclaimed wastewater from Eastern MWD, resulting in a total production for Pechanga of 1,185 acre feet. The monthly production and uses for the Pechanga Indian Reservation are shown in Appendix A, Table A-5. Information about Pechanga Water System wells is shown below:

Well Designation 8S/2W	Name	2009 Water Depth Feet	2010 Water Depth Feet	Well Depth Feet	Perforated Interval Feet
29A2	Kelsey	144	144	425	105 - 415
29B10	Eduardo	252	255	697	437 - 687
29B11	Eagle III	173	170	645	275 - 635
29J3	South Boundary	---	145	350	150 - 340
28M5	Cell Tower	158	128	518	372 - 432
					468 - 508
28R1	Ballpark Well	170	89	1,000	126 - 996
19Q1	Zone V Rock 1	403	44	451	210 - 430

The total groundwater pumping for the Pechanga Water System wells decreased from 702 acre feet in 2008-09 to 561 acre feet in 2009-10. The total pumping in Wolf Valley by Rancho California WD Well Nos. 119, 122 and 211 for both the district's use and for delivery to Pechanga also decreased from 2,247 acre feet in 2008-09 to 1,226 acre feet in 2009-10. Therefore, the total pumping in Wolf Valley for 2009-10 decreased by 1,162 acre feet.

The wells listed above are in areas of younger alluvium at ground surface. The depth of the younger alluvium in Wolf Valley was estimated by representatives of Rancho California WD and the United States for Rancho California WD Wells No. 495 (8S/2W-20E) and No. 119 (8S/2W-19J) to be in the range of 120 to 170 feet in depth. Thus, based on available well construction data, some of the production is from the younger alluvium and some from the older alluvium. Under state law production from the wells that originate in the older alluvium can be considered to be under a groundwater appropriative right or an overlying right, depending on the circumstances at each well.

Under federal law, production from groundwaters that originate in either the younger or older alluvium within the Murrieta-Temecula Ground Water Area can be considered to be under a federal reserved right, in accordance with Interlocutory Judgment No. 41 which provides as follows in Order No. 7:

> *IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the United States of America intended to reserve, and did reserve, rights to the use of the waters of the Santa Margarita River stream system which under*

> *natural conditions would be physically available on the Pechanga Indian Reservation, including rights to the use of ground waters sufficient for the present and future needs of the Indians residing thereon with priority dates of June 27, 1882, for those lands established by the Executive Order of that date; January 9, 1907, for those lands transferred by the Executive Order of that date; August 29, 1893, for those lands added to the Reservation by Patent on that date; and May 25, 1931, for those lands added to the Reservation by Patent of that date.*

Production and uses for the Pechanga Indian Reservation for Water Years 1991- 2010 are shown on Appendix Table B-6.

<u>Ramona Indian Reservation</u>

The Ramona Indian Reservation occupies 560 acres of land of which 321 acres are inside the Watershed. The water supply is provided for domestic use by two individual wells. Total production for 2009-10 is reported as 1.9 acre feet. It has not been determined whether the groundwater production is under Court jurisdiction and thus the estimated water use is not included in the various water use tabulations provided throughout the report.

Under federal law, production from groundwaters contained in shallow aquifer of the Anza Ground Water Basin overlain by lands of the Ramona Indian Reservation within the watershed of the Santa Margarita River can be considered to be under a federal reserved right, in accordance with Interlocutory Judgment No. 41 that provides as follows in Order No. 1:

> *IT IS ORDERED, ADJUDGED AND DECREED that the United States of America when it established the Ramona Indian Reservation intended to reserve and did reserve rights to the use of the waters of the Santa Margarita River stream system which under natural conditions would be physically available on the Ramona Reservation, including rights to the use of ground waters, sufficient for the present and future needs of the Indians residing thereon with a priority date of December 29, 1891.*

7.4 <u>Small Water Systems</u>

There are a number of small water systems for mobile home parks in the Watershed. These range from relatively permanent structures, to those catering to recreational vehicles and campgrounds. Water production from wells is shown on Appendix Table A-11 for Quiet Oaks Mobile Home Park, Hawthorn Water System, Outdoor Resorts Rancho California, Inc., and Jojoba Hills SKP Resort. Data for previous water years is shown on Appendix Table B-12.

7.5 Irrigation Water Use

Estimated water production reported by substantial users for irrigation in the Santa Margarita River Watershed is shown on Table 7.1 to be 6,547 acre feet. This quantity includes 5,804 acre feet of well production and 749 acre feet of surface diversion as shown in Appendix C.

SECTION 8 - UNAUTHORIZED WATER USE

8.1 General

From time to time there are complaints of unauthorized water uses of various types in the Watershed. Such complaints are investigated in accordance with the powers and duties of the Watermaster. The status of the current list of unauthorized uses is described as follows:

8.2 Unauthorized Small Storage Ponds

Many small dams and reservoirs have been constructed on streams in the Watershed. The legal basis for these ponds is described in the 1988-89 Watermaster Report. Basically, the Court has held that storage of water in ponds less than 10 acre feet in capacity and used for stock watering is a valid use of riparian water. The Court has also held that:

> The temporary or non-seasonal impoundment by riparian owners for the purpose of providing a head for irrigation or for the purpose of temporarily accumulating sufficient water to make possible efficient irrigation is a proper riparian use of water.

Criteria for determining non-seasonal storage of irrigation water have yet to be developed.

8.3 Rancho California Water District Water Use

A number of unauthorized water use issues raised by the United States are settled so long as the Cooperative Water Resource Management Agreement (CWRMA) between the United States on behalf of Camp Pendleton and Rancho California Water District is in effect.

As further explained in Section 11, many of these issues are described in Appendix F. One area of past concern pertains to Rancho California WD's petition to the State Water Resources Control Board (SWRCB) to change the place of use, type of use and re-diversion facilities in Permit 7032. On April 22, 2009, the SWRCB issued an order and amended Permit 7032 with the desired changes and conditions to resolve concerns by Camp Pendleton and the U. S. Fish and Wildlife Service. The reporting of Vail Lake operations in accordance with Amended Permit 7032 is provided on Table 3.3 and in Section 7.

8.4 Exportation of Treated Wastewater Derived from Native Waters

Camp Pendleton continues to assert that the exportation of treated wastewater, the source of which is the native waters of the Santa Margarita River System, without a legal basis for such exportation is an unauthorized water use. On May 17, 2011 the United States Court of Appeals for the Ninth Circuit issued an Order granting the parties' joint motion to dismiss the appeals in *United States and Fallbrook Public Utility District v. Eastern Municipal Water District and Rancho California Water District* (CV 04-8182 CBM (RNBx), United States District Court, Central District of California) and thus the August 4, 2009 Judgment in this case stands. The Watermaster will reevaluate the calculations and reporting of exportation of treated wastewater to be included in future annual reports.

SECTION 9 - THREATS TO WATER SUPPLY

9.1 General

General threats to the long-term water supply in the Santa Margarita River Watershed, which have been described in previous Watermaster Reports, are as follows:

1. High nitrate concentrations in Rainbow Creek and in Anza Valley.

2. Potential overdraft conditions at various locations in the Watershed.

3. Potentially adverse salt balance conditions in the upper Santa Margarita River area.

Additional threats to the long-term water supply have been recently identified and are described in the following sections. These additional threats include: (1) high nitrate concentrations in the Murrieta-Temecula area, (2) high concentrations of arsenic and fluoride in the Murrieta-Temecula area, and (3) discovery of the Quagga mussel in imported supplies from the Colorado River system.

9.2 High Nitrate Concentrations

In past years, high concentrations of nitrate have been measured in Anza Valley and on Rainbow Creek. Conditions in Anza Valley were generally described in the 1993-94 report. Additional water quality data for Anza Valley have been collected periodically by the Riverside County Department of Health Services and the USGS.

As described in prior Watermaster Reports, in 1999 the Regional Water Quality Control Board, San Diego Region (Regional Board) began preparation of a plan for Total Maximum Daily Loads (TMDLs) for Total Nitrogen and Total Phosphorus on Rainbow Creek. On February 9, 2005, the Regional Board adopted an amendment to the Basin Plan to include the Total Nitrogen and Total Phosphorus TMDLs and implementation plan. The State Water Resources Control Board, on November 16, 2005, and Office of Administrative Law, on February 1, 2006, subsequently approved the Basin Plan amendment. The U.S. Environmental Protection Agency granted final approval of the TMDLs on March 22, 2006.

The full plan and implementation programs are presented on the Regional Board's website:

http://www.waterboards.ca.gov/sandiego/water_issues/programs/tmdls/rainbowcreek.shtml

Recent data show high concentrations of nitrate pose a risk to water supplies in the Murrieta-Temecula area. In January 2006, Western MWD ceased production from the Holiday Well because nitrate concentrations exceeded the Maximum Contaminant Level (MCL) of 45 mg/l. The depth to the top of the perforated interval for the Holiday Well is only 60 feet and the high nitrate concentrations appear to be a result of nearby septic systems and agricultural practices. Concentrations of nitrate for some of the other Western MWD and Rancho California WD wells in the Murrieta-Temecula area have been detected in the range of 20 to 25 mg/l, which is below the MCL. The other Western MWD and Rancho California WD wells have deeper perforated intervals than the Holiday Well.

9.3 Potential Overdraft Conditions

Previous Watermaster reports have noted concerns about overdraft conditions in Anza Valley and in the Murrieta-Temecula area. Previous studies for Anza Valley include 1976 and 1988 reports by the U. S. Geological Survey and a 1990 report by a consultant to Riverside County. No further studies relative to groundwater use in Anza Valley are available. Historical measurements of groundwater levels for Anza Mutual Water Company's Well No. 1 (7S/3E-21G1) located in Anza Valley are plotted in this Report on Figure 4.4.

No recent published studies of safe yield are available for the Murrieta-Temecula area. Groundwater resources in much of the area are being managed by Rancho California WD. The District prepares an annual groundwater production program with the goal of developing the maximum perennial yield from the basin. The District monitors water levels and well production in each of several hydrogeologic subareas. Each year that data, combined with other information including water quality, natural and artificial recharge, pump settings, and well construction factors, are used to develop a recommended production program. Production rates are commonly lowered in subareas where water levels have declined over several years, and production rates are increased in areas where decline has not occurred. As a final check the recommended production rates are checked using the latest version of the Rancho California WD groundwater model.

In addition, Rancho California WD in cooperation with Camp Pendleton is in the process of refining a multi-level groundwater monitoring network, pursuant to the Cooperative Water Resource Management Agreement. The purpose of the network is to develop data for use in assessing safe yield operations. In September 2006 the USGS began drilling and constructing the Pala Park Groundwater Monitoring Well as part of this network. The monitoring well was completed with six piezometers and continuous water level recording devices. In 2009 the groundwater monitoring network was expanded to include the Wolf Valley Monitoring Well previously constructed by the USGS under a cooperative program with the Pechanga Band. Groundwater levels and water quality data for the two monitoring wells are reported in Appendix E.

Groundwater level data for three additional wells in the Murrieta-Temecula Groundwater Area are included in this report as Figures 4.1, 4.3 and 4.5. Water levels in the Windmill Well (8S/2W-12H1) located at the eastern part of Pauba Valley declined 1.4 feet in 2009-10. Water levels in Well 7S/3W-20C9 in the Murrieta Division of Western MWD area did not change from last year.

Well 8S/2W-29G1 on the Pechanga Indian Reservation in Wolf Valley became dry at the end of 2003-04. The declining water levels in Well 8S/2W-29G1 appear to be attributed to recent relatively dry hydrologic conditions and pumping of the nearby New Kelsey Well. To allow continued monitoring of water levels on the Reservation, Well No. 29G1 has been replaced with Well No. 8S/2W-29B9 which declined 2.0 feet in 2009-10.

9.4 Salt Balance

A key issue in management of a groundwater basin is potential build up of salts from imported water supplies and use of reclaimed wastewater. Such a build-up could decrease the usability of waters in a basin. Consideration must be given to measures that allow desalination of water supplies and export of salts from a basin to offset the salt load in water entering the groundwater basin.

During 2009-10, Eastern MWD exported 7,026 acre feet of treated wastewater from the watershed for reuse and 1,930 acre feet were exported for operational reasons for discharge to Temescal Creek. Additional treated wastewater may have been exported from the watershed through recirculation in the system but such additional amounts have not been determined. At an average Total Dissolved Solids (TDS) concentration of 650 mg/l there is approximately 1,768 pounds of salt in every acre foot of wastewater. Thus in 2009-10, approximately 7,917 tons of salt were exported by Eastern MWD through the export of 8,956 acre feet of wastewater.

In addition to export of treated wastewater, the salt balances of the Murrieta-Temecula groundwater area and the lower Santa Margarita River groundwater area are affected by discharges from wells into Murrieta Creek, Temecula Creek and Santa Gertrudis Creek. In 2009-10 wells discharged 42 acre feet, as shown below, together with estimated total dissolved solids for each well. Additional water quality data for the wells are provided in Appendix D.

Well No.	Release Acre Feet	TDS mg/l	Sample Date
101	6	670	6/02/10
102	3	700	6/20/95
106	4	340	9/01/10
108	8	350	8/13/10
118	21	640	9/02/10
Total	42		

The salt balance for the Murrieta-Temecula groundwater area is affected by the use of reclaimed wastewater for irrigation. The total use of reclaimed wastewater by Eastern Municipal WD, Rancho California WD, and the Pechanga Band within the Santa Margarita River Watershed for 2009-10 was 6,880 acre feet compared to 6,806 acre feet in 2008-09 and compared to 690 acre feet in 1986-87. Assuming an average TDS concentration of wastewater of 650 mg/l, the salt loading for 6,880 acre feet of reclaimed wastewater is approximately 6,085 tons. It is expected that the use of reclaimed wastewater within the watershed will increase in the future including expanded use of reclaimed wastewater by the Pechanga Band and expanded use by agricultural customers of Rancho California WD.

Trend analyses of TDS levels from groundwater samples throughout the Murrieta-Temecula groundwater area show a mix of increasing and decreasing trends depending upon location and aquifer. A more detailed study should be conducted to analyze available data and develop a comprehensive regional salinity management plan.

9.5 High Arsenic Concentrations

The maximum contaminant level (MCL) for arsenic is 10 ug/l. High concentrations of arsenic have been detected in groundwater wells for both the Murrieta Division of Western MWD and Rancho California WD posing a risk to water supplies in the Murrieta-Temecula area. In November 2007 Western MWD ceased pumping from the New Clay Well due to arsenic levels exceeding the MCL.

The elevated arsenic levels have significantly impacted groundwater pumping and distribution system operations for Rancho California WD. Two wells have been taken out of production due to arsenic levels exceeding the MCL. In 2010 five other wells showed levels exceeding the MCL with four wells still in operation under approved blending plans. Two additional wells showed levels approaching the MCL and may be included in a blending plan in the future.

9.6 High Fluoride Concentrations

The MCL for fluoride is 2 mg/l and samples exhibiting high concentrations of arsenic often show high concentrations of fluoride in the Murrieta-Temecula area. High levels of fluoride are impacting operations for Rancho California WD. One of the wells operating by Rancho California WD under an approved blending plan for arsenic was originally approved for blending due to fluoride levels exceeding the MCL.

9.7 Quagga Mussel

In early January 2007 the invasive, non-native Quagga mussel was discovered in Lake Mead. Subsequently, upon thorough inspection, MWD discovered the mussel throughout the Colorado River Aqueduct system including in August 2007 finding the mussels in Lake Skinner. To date no mussels have been found in Diamond Valley Lake.

The Quagga mussel is indigenous to the Ukraine and was discovered in the United States in September 1989 with the first sighting in the Great Lakes. The Quagga mussel is a small freshwater mollusk ranging in size from microscopic in the embryonic stage to about two inches in length at the adult stage. The mussels can be transported during the larval stage with currents or running water and at the adult stage by attaching to hard surfaces such as boats.

The Quagga mussel is a filter feeder removing food and nutrients from the water column decreasing the food source for zooplankton and therefore altering the food web. The filtration of the water also alters water clarity impacting aquatic plants and water chemistry. The economic impact is also significant because these species can rapidly colonize on hard surfaces, clogging water intake structures, pipes, and screens and reducing pumping and distribution capacities. Costs are also associated with maintenance of facilities and control of the species.

Since the discovery of Quagga mussels in the Colorado River Aqueduct and Lake Skinner, MWD has implemented various control activities. In July 2007, the aqueduct was shut down for ten days for inspection, chlorination, and removal of adult populations. Also in July 2007, MWD initiated continuous chlorination in the Colorado Aqueduct to control the spread of Quagga mussels. Releases from Lake Skinner are chlorinated at the outlet tower prior to distribution through the raw water delivery system.

Effective October 10, 2007, Assembly Bill 1683 added Section 2301(a)(1) to the California Fish and Game Code prohibiting the release of Quagga mussels into the waters of the state. Assembly Bill 1683 also requires development of a Quagga mussel control plan. On December 8, 2007 MWD temporarily suspended required releases of water to Tucalota Creek from Lake Skinner and Warm Springs Creek from the San Diego Canal near Diamond Valley Lake. These required releases would have been made in accordance with memoranda of agreement for releasing native inflows from the reservoirs. On March 6, 2008 MWD provided notice to the parties in *United States v. Fallbrook Public Utility District, et al.* regarding the temporary suspension of required releases of native water inflows from Lake Skinner and Diamond Valley Lake. On June 23, 2008, MWD provided notice to the parties in *United States v. Fallbrook Public Utility District, et al.* regarding the resumption of required releases of native water inflows from Lake Skinner and Diamond Valley Lake, according to MWD's Action Plan submitted to California Department of Fish and Game on May 30, 2008. On April 5, 2010 the California Department of Fish and Game approved the Quagga Mussel Control Plan for Lake Skinner. MWD is still operating under the May 30, 2008 Action Plan and June 23, 2008 Notice describing provisions for releases to Warm Springs Creek from the State Water Project Eastside Pipeline to meet release requirements at Diamond Valley Lake.

Infestation by the Quagga mussel has also altered Rancho California WD operations in accordance with the Cooperative Water Resource Management Agreement. Beginning on April 10, 2008 Rancho California WD periodically ceased making releases of raw water from Turnout WR-34 on the MWD Pipeline No. 5 to meet make-up flow requirements for the Santa Margarita River. Alternatively Rancho California WD releases make-up flows from its treated water distribution system at the System River Meter located just upstream of the Murrieta Creek at Temecula gaging station or from the potable connection to the WR-34 discharge location. The treated water is de-chlorinated prior to release to Murrieta Creek.

On July 17, 2009, Rancho California WD submitted its Quagga mussel response and control action plan to the California Department of Fish and Game. Key components of the plan include:

- Raw MWD water is released into the Santa Margarita Watershed only when chlorination is being performed at Lake Skinner.

- All watercraft vessels, trailers, and equipment are being inspected before launching in Vail Lake.

SECTION 10 - WATER QUALITY

10.1 Surface Water Quality

The USGS collected continuous water quality measurements for dissolved oxygen, pH, specific conductance and temperature at the Santa Margarita River near Temecula gaging station during 2009-10. Data collected at the station are published by the USGS. The highest average daily high and the lowest average daily low for each parameter for each month are shown in Table 10.1 for months in Water Year 2010.

Surface water quality data collected by the USGS in 2004-05 for Cahuilla Creek are shown in Appendix Table D-12. No surface water quality data for Cahuilla Creek were collected in 2009-10.

Surface water quality data collected in prior years by Camp Pendleton, Eastern MWD, and Rancho California WD are listed in earlier Watermaster reports.

10.2 Groundwater Quality

During 2009-10 water quality data were collected from wells at Western MWD – Murrieta Division, Rancho California WD, Pechanga Indian Reservation, and Camp Pendleton.

Western MWD – Murrieta Division sampled three wells in 2009-10 as shown in Appendix D-3. The three wells were each subjected to standard chemical analysis in addition to samplings for nitrates only. The North Well was sampled 21 times and included ten samples subjected to standard chemical analysis. Concentrations of nitrates were generally below the drinking water standard of 45 mg/l as nitrate for samples in the three wells ranged from less than 1.1 mg/l to 5.8 mg/l.

Water quality data for Rancho California WD wells are shown in Appendix Table D-4. Samples were collected from 44 wells during 2009-10. Of the 44 wells, 37 wells were analyzed for nitrates and TDS only. Nitrate concentrations ranged up to 22 mg/l as nitrate, with the drinking water standard being 45 mg/l as nitrate. The remaining 7 wells were subjected to standard chemical analysis. Samples from two wells (Wells 109 and 158) show TDS concentrations exceeding 750 mg/l, the Basin Plan objective. A third well (Well 123) shows a concentration equal to 750 mg/l. Well 101, which last year showed TDS concentrations exceeding 750 mg/l, showed reduced TDS concentrations for 2009-10 to 620 and 670 mg/l.

TABLE 10.1

SANTA MARGARITA RIVER WATERSHED

**RANGES IN AVERAGE DAILY CONCENTRATION
OF DISSOLVED OXYGEN, PH, SPECIFIC CONDUCTANCE AND TEMPERATURE
AT SANTA MARGARITA RIVER NEAR TEMECULA**

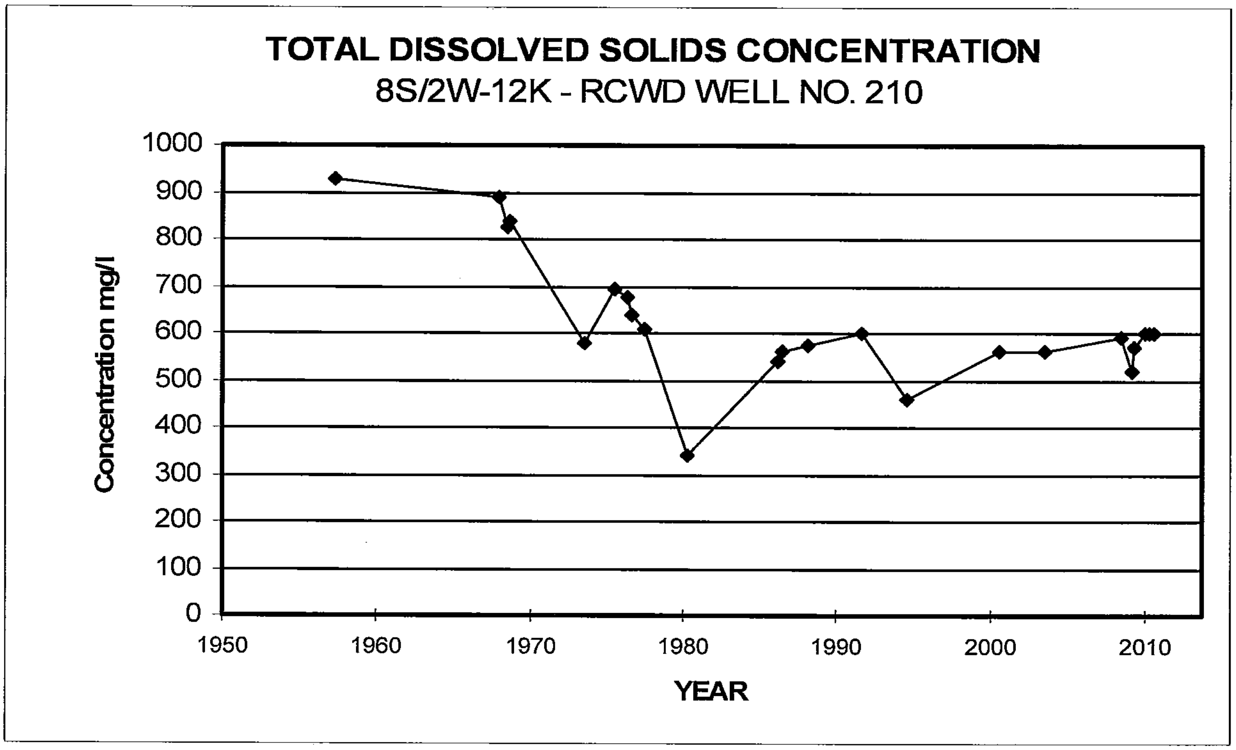
Water Year 2009-10

COLLECTION MONTH/YEAR	DISSOLVED OXYGEN mg/l		pH		SPECIFIC CONDUCTANCE microsiemens/cm		TEMPERATURE Deg C	
	High	Low	High	Low	High	Low	High	Low
2009								
October	9.7	6.9	8.6	7.8	928	694	26.2	17.7
November	9.7	8.0	8.2	7.7	1,190	720	23.8	16.6
December	11.2 *	7.1 *	8.7 *	7.6 *	1,670 *	161 *	16.8 *	9.3 *
2010								
January	12.0	9.5	8.1	7.6	1,640	139	16.7	9.2
February	12.5	9.0	8.7	7.6	1,190	176	19.3	10.3
March	11.5	8.7	8.7	8.0	1,070	619	19.7	13.1
April	11.1 *	7.5 *	8.4 *	7.2 *	1,060 *	286 *	22.0 *	12.6 *
May	10.5	8.0	8.9	8.1	984	712	24.3	15.7
June	9.2	7.8	8.8	7.8	944	768	28.0	21.9
July	8.3 *	7.3 *	8.8 *	7.8 *	894 *	774 *	28.9 *	25.0 *
August	8.0	6.7	8.5	7.9	1,040	816	27.3	25.0
September	8.2	6.3	8.4	7.8	822	737	26.6	23.6

* - Partial Record - Indicates months with interruptions in record at times due to malfunction of recording equipment. High and low values indicated for days with reported data. Daily data and number of days with no record can be viewed at the following website: *http://web10capp.er.usgs.gov/adr06_lookup/search.jsp* searching by site number 11044000

Total dissolved solids concentrations for Rancho California WD Well 210 are shown on Figure 10.1 for samples collected since 1957 when the well was constructed. The figure shows a decline in TDS from approximately 900 mg/l for the samples collected during the 1960's to the 500-600 mg/l range in recent years. As described in Section 9, trend analyses for other wells throughout the Murrieta-Temecula area show a mix of increasing and decreasing trends in TDS levels depending upon location and aquifer.

FIGURE 10.1



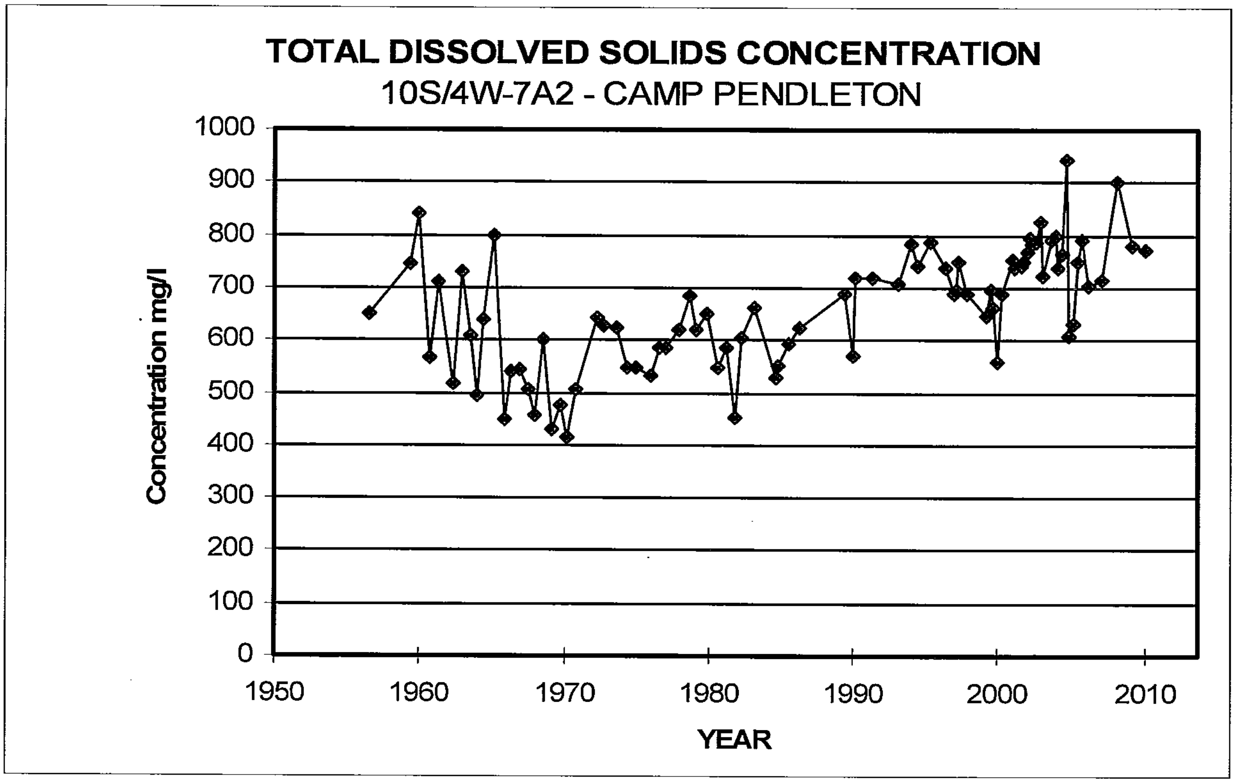
Appendix Table D-5 shows water quality data collected by the USGS from wells on Indian Reservations. In 2009-10 samples were collected from five wells on the Pechanga Indian Reservation. For the Pechanga wells TDS concentrations ranged from 220 to 335 mg/l, similar to concentrations from the prior years.

In 2009-10 no samples were collected from wells on the Cahuilla Indian Reservation.

During 2009-10 samples of groundwater were collected from eleven wells at Camp Pendleton as shown on Appendix Table D-6. All eleven wells were subjected to standard chemical analysis with results generally consistent with the historical results. Of the eleven wells sampled, seven provided a sample where TDS concentrations exceeded 750 mg/l, the Basin Plan Objective. Ten wells were tested for TDS levels in both 2009 and 2010. One of the ten wells showed TDS concentrations that exceeded those in the prior year and eight wells showed a decline of TDS concentrations compared to the previous year. One well showed the same concentration as the previous year.

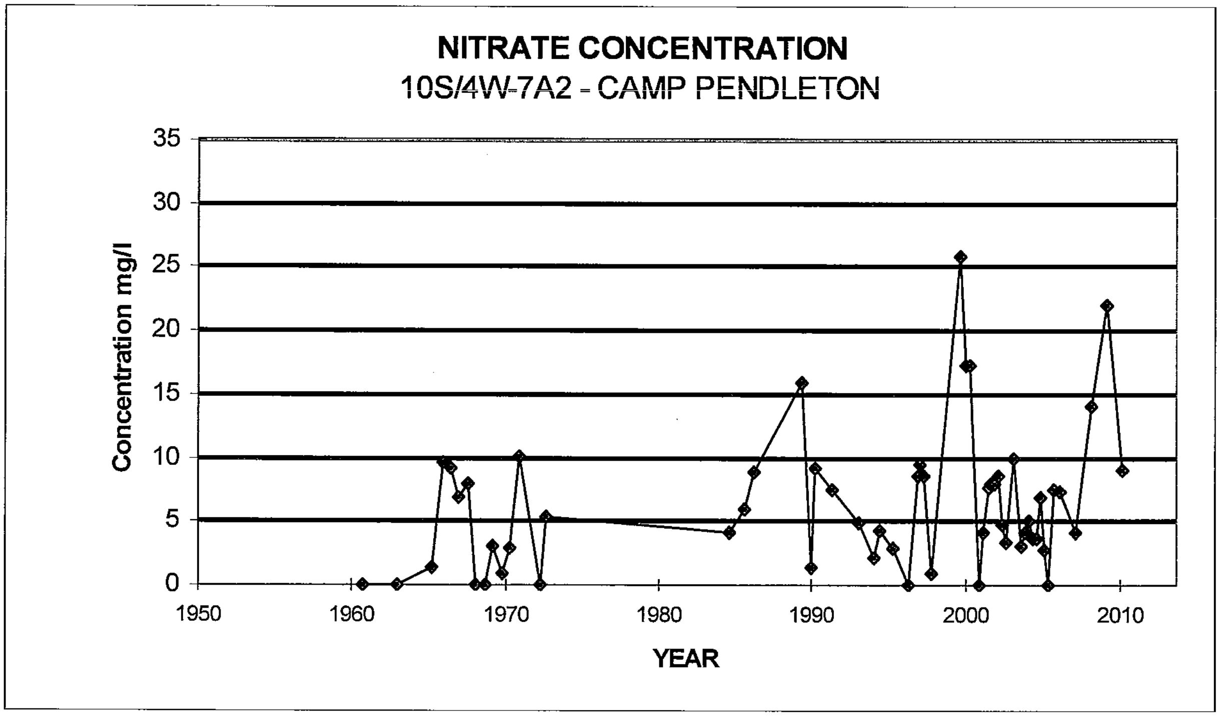
Historical TDS concentrations for Camp Pendleton Well 7A2 are shown on Figure 10.2 for samples collected since mid-1950. The figure shows a decline between mid-1950 and 1970, then a period of increasing concentrations to levels in the 550-950 mg/l range. Analysis of the sample collected in 2009-10 indicated TDS concentrations of 770 mg/l, a decrease of 10 mg/l compared to the sample taken last year.

FIGURE 10.2



Historical nitrate concentrations for the same well (7A2) are shown on Figure 10.3. The one sample collected in 2009-10 shows a nitrate concentration of 8.7 mg/l, a decrease from last year.

FIGURE 10.3



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SECTION 11 – COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT

11.1 General

On August 20, 2002, the Cooperative Water Resource Management Agreement (CWRMA) between Camp Pendleton and Rancho California WD was approved by the District Court. The CWRMA provisions specify required accounting will be reported on a calendar year basis and accordingly Section 11 and Appendix E, which serve as the annual report required under CWRMA, present data reported on a calendar year basis. However, the remainder of the Annual Watermaster Report is prepared on a water year basis requiring the CWRMA calendar year reporting to be converted to a water year basis to be incorporated into other sections of the report. The water year period begins on October 1 and concludes on September 30 of the following year.

The CWRMA provides that on May 1 of each year the Technical Advisory Committee is to compute a hydrologic index for the year based on streamflow and precipitation between October and April. In May 2010 the hydrologic index was determined and the year classified as a "Very Wet" hydrologic year. The hydrologic year establishes the required flows at the Santa Margarita River near Temecula gaging station for the calendar year. Required flows for 2009-10, a "Very Wet" year, are listed in Section 5 of the CWRMA and are shown on Table 11.1.

As indicated above, CWRMA calendar year accounting must be converted to a water year basis for other sections of the annual report. The data for October through December 2009 for the various accounts are needed to convert the amounts shown on Table 11.1 to water year values. These data for October through December 2009 were reported in the prior year Annual Watermaster Report. To assist the reader in calculating water year amounts for various CWRMA operations, Table 11.2 in the current report is a repeat of Table 11.1 from the prior year report. Additional information concerning the operations underlying the values reported on Table 11.2 can be found in the prior year report.

Prior to implementation of the Cooperative Water Resource Management Agreement entered into by Rancho California Water District (RCWD) and the United States on behalf of Camp Pendleton, each year there were contentions raised by Camp Pendleton with respect to various aspects of the Annual Watermaster Report. These contentions are settled so long as that agreement is in effect. Accordingly, there is no need to raise those particular issues or publish them in the main text of the annual report or in related correspondence.

TABLE 11.1

SANTA MARGARITA RIVER WATERSHED

MONTHLY SUMMARY OF REQUIRED FLOWS, DISCHARGES, CREDITS AND ACCOUNTS COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT

2010 CALENDAR YEAR - VERY WET YEAR

Month	USGS Official Discharge AF	USGS Website Daily Discharge AF	Minimum Flow Maintenance Requirement cfs /1,2	Section 5 Flows cfs /3	No. of Days 10-Day Running Average is Less Than Required Flow	Discharge from WR-34 Per MWD AF /4	Climatic Credits Earned AF /5	Camp Pendleton Groundwater Account /6 Input AF	Camp Pendleton Groundwater Account /6 Cumulative Balance AF
Jan	13,949.0	12,786.6	8.9	24.1	0	337.8	0.0	774.7	5,000.0
Feb	5,231.8	5,271.5	8.9	24.1	0	169.7	0.0	699.8	5,000.0
Mar	615.7	603.4	8.9	24.1	0	366.7	0.0	774.7	5,000.0
Apr	716.6	743.8	8.9	24.1	0	328.4	0.0	749.8	5,000.0
May	416.3	427.0	5.0/11.5	15.7	0	417.0	0.0	258.2	5,000.0
June	686.3	686.3	11.5	12.2	0	667.9	0.0	41.7	5,000.0
July	485.4	471.1	11.5/4.3	9.7	0	488.7	0.0	160.7	5,000.0
Aug	271.7	270.7	4.4	9.2	0	290.3	0.0	295.1	5,000.0
Sept	244.4	244.4	4.1	9.4	0	278.7	0.0	315.4	5,000.0
Oct	509.6	509.6	3.9	10.1	0	243.0	0.0	381.2	5,000.0
Nov	491.0	491.0	4.5	11.5	0	195.7	0.0	416.5	5,000.0
Dec	24,030.9	24,126.1	5.3	13.5	0	191.0	0.0	504.2	5,000.0
CALENDAR YEAR TOTAL	**47,648.7**	**46,631.5**			**0**	**3,974.9**	**0.0**	**5,372.0**	**FULL**

Monthly totals are rounded to the nearest tenth of an acre foot.

1 - Minimum Flow Maintenance Requirement for January thru April equals 11.5 cfs less 1.7 cfs CAP Credit from 2009 less 0.9 CAP Credit carried over from 2008.

2 - On May 4, 2010, Camp Pendleton requested a modification to the May through July flow requirements to aid in water facilities operations and a flow and habitat study in the Santa Margarita River. In May the flow requirement was reduced from 11.5 cfs to 5.0 cfs. An intermediate flow of 9.0 cfs was applied for May 1-5. Flow requirements were reduced to 5.0 cfs for May 6-26; an intermediate flow requirement of 9.0 cfs was applied on May 27; and flow requirements were increased to 11.5 cfs for May 28-31. The flow requirement for June was unchanged at 11.5 cfs. The flow requirement for July was increased from 9.7 cfs to 11.5 cfs for July 1-16, but was subsequently reduced to 4.3 cfs for July 17-31 in order to forego Make-Up water for the rest of the year.

3 - The Table in Section 5 of the CWRMA sets forth guaranteed monthly flows at the gorge once the Hydrologic Condition for the calendar year is established.

4 - CAP Credit equals WR-34 discharge in excess of 4,000 AF. No CAP Credit was earned for 2010.

5 - Climatic Credits equal the WR-34 discharges less actual Flow Requirements, which is the flow indicated in Section 5 of the CRWMA less applicable credits but not less than 3.0 cfs. No climatic credits can be earned during a Very Wet Year.

6 - Camp Pendleton's rights to groundwater equals the Flow indicated in Section 5 of the CWRMA less the Actual Flow Maintenance Requirement which cannot be less than 3.0 cfs. Input to groundwater account shown but cumulative balance did not increase due to account balance maximum of 5,000 AF.

TABLE 11.2

SANTA MARGARITA RIVER WATERSHED

MONTHLY SUMMARY OF REQUIRED FLOWS, DISCHARGES, CREDITS AND ACCOUNTS COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT

2009 CALENDAR YEAR - ABOVE NORMAL YEAR

Month	USGS Official Discharge AF	USGS Website Daily Discharge AF	Minimum Flow Maintenance Requirement cfs /1,2	Section 5 Flows cfs /3	No. of Days 10-Day Running Average is Less Than Required Flow	Discharge from WR-34 Per MWD AF /4	Climatic Credits Earned AF /5	Camp Pendleton Groundwater Account /6 Input AF	Camp Pendleton Groundwater Account /6 Cumulative Balance AF
Jan	633.9	664.5	10.6	17.8	0	642.1 *	0.0	387.4	5,000.0
Feb	3,798.3	3,798.3	10.6	17.8	0	223.7 **	0.0	349.9	5,000.0
Mar	664.5	664.5	10.6	17.8	0	656.3	0.0	387.4	5,000.0
Apr	645.0	645.0	10.6	17.8	0	623.4	0.0	374.9	5,000.0
May	223.7	222.5	5.7/3.0	11.7	0	227.8 ***	0.0	12.3	5,000.0
June	680.3	686.3	11.5	9.4	0	709.1	0.0	0.0	5,000.0
July	708.1	708.1	11.5	7.8	0	746.0	0.0	0.0	5,000.0
Aug	240.6	226.1	6.5/3.0	7.6	0	254.0	0.0	248.1	5,000.0
Sept	176.3	178.7	3.0	7.4	0	186.7	0.0	261.8	5,000.0
Oct	184.3	184.7	3.0	7.7	0	202.6 +	0.0	289.0	5,000.0
Nov	184.1	178.7	3.0	8.8	0	189.3 ++	0.0	345.1	5,000.0
Dec	2,906.8	2,907.0	3.3	10.4	0	133.7	0.0	436.6	5,000.0
TOTAL	**11,045.9**	**11,064.4**			**0**	**4,794.6**	**0.0**	**3,092.4**	**FULL**

Monthly totals are rounded to the nearest tenth of an acre foot.

1 - Minimum Flow Maintenance Requirement for January thru April equals 11.5 cfs less 0.9 cfs CAP Credit less 0 Climatic Credit.

2 - On April 30, 2009, Camp Pendleton requested a modification to the flow requirements to aid in a water quality and habitat study. Flow requirements were reduced in May and increased in June, July and Augst, with no net change in required flows. The flow requirement was decreased in May from 11.5 cfs to to 3.0 cfs with an intermediate flow requirement of 5.7 cfs for the first four days of May. Flow requirements were increased for June, July and August from 9.4 cfs, 7.8 cfs, and 7.6 cfs, respectively, to 11.5 cfs, 11.5 cfs, and 10 cfs, respectively. Subsequently, from August 1 through December 31, 2009, Camp Pendleton requested to forego make-up water and reduce the required flow to simulate Critically Dry Hydrologic Conditions. The request to forego water reduced the modified August flow requirement from 10 cfs to 3.0 cfs, with a 6.5 cfs intermediate flow period from August 1-5. The intermediate flows in May and August were intended to provide a transition between the high and low flows.

3 - The Table in Section 5 of the CWRMA sets forth guaranteed monthly flows at the gorge once the Hydrologic Condition for the calendar year is established.

4 - CAP Credit equals WR-34 discharge in excess of 4,000 AF; for 2009 the CAP Credit earned was 795 AF.

* - Includes 46.4 AF from System River Meter and 105.6 AF from potable connection to WR-34 outlet pipe from January 24 -- 31 for MWD shutdown

** - Includes 21.3 AF from System River Meter and 48.4 from potable connection to WR-34 outlet pipe from February 1 -- 4 for MWD shutdown

*** - Includes 67.3 AF from potable connection to WR-34 outlet pipe from May 3 -- 12 and May 27 for MWD Shutdown

+ - Includes 2.5 AF from potable connection to WR-34 outlet pipe on October 31 because of MWD shutdown

++ - Includes 56.8 AF from potable connection to WR-34 outlet pipe from November 1 -- 10 because of MWD shutdown

5 - Climatic Credits equal the WR-34 discharges less actual Flow Requirements, which is the flow indicated in Section 5 of the CRWMA less applicable credits but not less than 3.0 cfs. No climatic credits can be earned during an Above Normal Year.

6 - Camp Pendleton's rights to groundwater equals the Flow indicated in Section 5 of the CWRMA less the Actual Flow Maintenance Requirement which cannot be less than 3.0 cfs. Input to groundwater account shown but cumulative balance did not increase due to account balance maximum of 5,000 AF.

11.2 Required Flows

Under the CWRMA Rancho California WD guarantees that the ten-day running average of the measured flows at the Santa Margarita River near Temecula gaging station shall meet the required flows for each month during the year. In order to meet the required flows, Rancho California WD discharges make-up water from two primary sources both discharging into the river at the same location immediately upstream from the USGS gaging station for Santa Margarita River near Temecula. The first primary source of make-up water is raw water from MWD Aqueduct No. 5 discharged at Outlet WR-34. The second primary source of make-up water is from the Rancho California WD treated water distribution system through a potable connection to the WR-34 outlet pipe. In prior years, make-up water was also discharged from the treated water distribution system to Murrieta Creek from two system discharge meters collectively referred to as the System River Meter. The two discharge meters are located on opposite sides of Murrieta Creek immediately downstream of the USGS gaging station for Murrieta Creek at Temecula, which is located approximately 2,000 feet upstream of the confluence of Temecula Creek and Murrieta Creek. The System River Meter is operable as a secondary source of make-up water if needed.

Flow requirements are based on two-thirds of the median natural flow of the Santa Margarita River at the Gorge for a given hydrologic year type. During the winter period (January through April) the District shall maintain a ten-day running average equal to 11.5 cfs less carry-over credits less requested Foregone Make-Up Water, but not less than 3.0 cfs. The District may earn Climatic Credits in Below Normal and Critically Dry years if it has provided Make-Up Water in excess of the Actual Requirement. The Climatic Credit is equal to the Make-Up Water released less the Actual Requirement less Credits. The Actual Requirement is determined on May 1 of each year and applied retroactively to the flows during the winter period. During the non-winter period (May through December) the District shall maintain a ten-day running average equal to the flow requirements specified in the Agreement as determined on May 1st less requested Foregone Make-Up Water. When the District is required to provide Make-Up Water in any calendar year in excess of 4,000 acre feet, it may apply a CAP Credit for such excess during the following two winter periods. At no time is the District required to make up more than 11.5 cfs.

The measured daily flows, the ten-day running average, and the differences between the running average and the required flows are shown in Appendix E-1. Two listings of daily discharges are shown in the tables in Appendix E-1: the USGS official discharge and the USGS website discharge. The discharges shown on the website are those that dictate daily decisions regarding the quantities of Make-Up Water required and those discharges are used to compute the ten-day running average. The official discharge is a more refined estimate developed later by the USGS for publication.

The number of days each month when the ten-day running average was less than the required flow is summarized on Table 11.1. For calendar year 2010 there were no days when the running average was less than the required flow. Unlike in previous years, Rancho California WD did not have to release any water from the System River Meter to meet the required flows under CWRMA during certain periods of the year due to MWD operational shutdowns and Quagga mussel threats.

During calendar year 2010 the total releases by Rancho California WD from WR-34 were 3,975 acre feet. No climatic credits were used in calendar year 2010 and no climatic credits were earned in accordance with CWRMA provisions that no climatic credits can be earned in a Very Wet Year.

There were no CAP Credits accumulated in calendar year 2010 for use in subsequent years to meet required releases by Rancho California WD.

The CWRMA also provides that Camp Pendleton may acquire rights to groundwater above the gorge by foregoing its right to make-up water from the District, or to the extent that the District's Actual Flow Maintenance requirements are less than the flows in the table in Section 5 of the CWRMA. The maximum cumulative balance for the Camp Pendleton groundwater account is 5,000 acre feet. During calendar year 2010, 5,372 acre feet were calculated as input to the groundwater account but the balance was already at the maximum balance of 5,000 acre feet and no additional water was credited to the account.

11.3 Water Quality

The U. S. Geological Survey continuously monitors four parameters of water quality at the Santa Margarita River near Temecula gaging station, including dissolved oxygen, pH, specific conductance, and temperature. The daily averages for each of these parameters are reported annually. Monthly highs and lows for each parameter are listed in Table 10.1 for the water year ending September 30, 2010.

11.4 Monitoring Programs

The CWRMA provides for the establishment of two monitoring programs: (1) Section 5(g) provides for a program to assess the impacts of operations on water supply, water quality and riparian habitat within Camp Pendleton and (2) Section 7(d) provides for a program to assess safe yield operations of Rancho California WD through the use of a multi-level groundwater monitoring network and periodic updates of the CWRMA Groundwater Model.

During 2007-08, Camp Pendleton initiated the Section 5(g) program named as the Lower Santa Margarita River Watershed Monitoring Program (Program) to evaluate whether the increased flows under CWRMA influence threatened and endangered species, riparian and wetland habitats, or water quality downstream. The Program will also support other water quality monitoring and watershed management activities in the Santa Margarita River Watershed. A copy of the Statement of Work for the Lower Santa Margarita River Watershed Monitoring Program was provided in the 2007 and 2008 Annual Watermaster Reports. The monitoring was funded for a two-year period and the final report, *Hydrological and Biological Support to Lower Santa Margarita River Watershed Monitoring Program Water Years 2008-2009* was published on February 21, 2010.

In September 2006 the USGS under contract with Camp Pendleton and Rancho California WD constructed a multi-level monitoring well for the Murrieta-Temecula groundwater basin in accordance with Section 7(d) of CWRMA. The Pala Park Groundwater Monitoring Well is located near the confluence of Pechanga and Temecula creeks and was completed to a total depth of 1,499 feet. Six piezometers were installed for continuous water level recording in the saturated zone for the lower five screened intervals and a temperature probe for the upper-most screened interval to detect moisture in the unsaturated zone. The USGS monitoring program for the Pala Park Groundwater Monitoring Well is included in the ongoing Watermaster budget beginning in year 2007-08.

In 2009 the groundwater monitoring program was expanded to include the Wolf Valley Monitoring Well that was previously constructed under a cooperative agreement between the USGS and the Pechanga Band. Two piezometers are installed at the Wolf Valley Well. Approved Watermaster funding of the water quality monitoring for Pala Park Well was used for water quality sampling at both the Pala Park and Wolf Valley wells in 2010. The groundwater level monitoring for the Wolf Valley Well was previously funded by the Pechanga Band, but is now included in the ongoing Watermaster budget beginning in year 2009-10.

Information concerning the construction of the Pala Park and Wolf Valley monitoring wells, groundwater levels, and water quality data can be found at the following website: http://ca.water.usgs.gov/temecula/. Information obtained from the website as well as supplemental information for the Pala Park Groundwater Monitoring Well can be found in Appendix E-2. Construction information, groundwater levels, and water quality data for the Wolf Valley Groundwater Monitoring Well are provided in Appendix E-3.

In 2010 the water quality monitoring program also included collecting data for the two sources of supply for recharge at the head of Pauba Valley: (1) imported supplies for recharge at Rancho California WD VDC Recharge Facilities, and; (2) native supplies from Temecula Creek as sampled at Vail Lake. Funding from the Watermaster budget was used to collect and analyze a sample in 2010 for the imported supplies as shown in Appendix E-4. The USGS previously collected a sample in 2007. Water quality data for Vail Lake were obtained from Rancho California WD and summarized for one sampling location in Appendix E-5

Also during 2007 Camp Pendleton and Rancho California WD initiated an effort to update the CWRMA Groundwater Model in accordance with Section 7(d). Work on updating the groundwater model continued during 2010. The update will incorporate data collected from the Pala Park Groundwater Monitoring Well and other wells in the Murrieta-Temecula groundwater basin as well as take advantage of recent software and computing advancements.

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SECTION 12 - FIVE YEAR PROJECTION OF WATERMASTER OFFICE TASKS, EXPENDITURES AND REQUIREMENTS

12.1 General

Projected tasks over the next five years are listed below in two categories: normal tasks, which are part of the usual Watermaster office operation; and additional tasks, which are foreseen but are not part of the normal office operations.

12.2 Normal Tasks

Tasks that are normally part of the Watermaster Office operation are as follows:

1. Update List of Substantial Users
2. Collect Water Production, Use, Import and Availability Data
3. Collect Well Location, Construction and Water Level Data
4. Administer Water Rights
5. Collect Water Quality Data
6. Monitor Water Quality and Water Right Activities
7. Administer Lake Skinner and Diamond Valley Lake MOU's
8. Administer Steering Committee Matters
9. Prepare Court Reports/Budgets
10. Monitor Streamflow and Water Quality Measuring
11. Data Management
12. Administer Cooperative Water Resource Management Agreement

12.3 Additional Tasks

Tasks that have been identified but which are not part of normal operations are as follows:

1. Prepare List of All Water Users Under Court Jurisdiction
2. Prepare Inventory of Ponds and Reservoirs
3. Determine Salt Balance

12.4 Projected Expenditures

Projected expenditures for the current year and over the next five years are listed as follows:

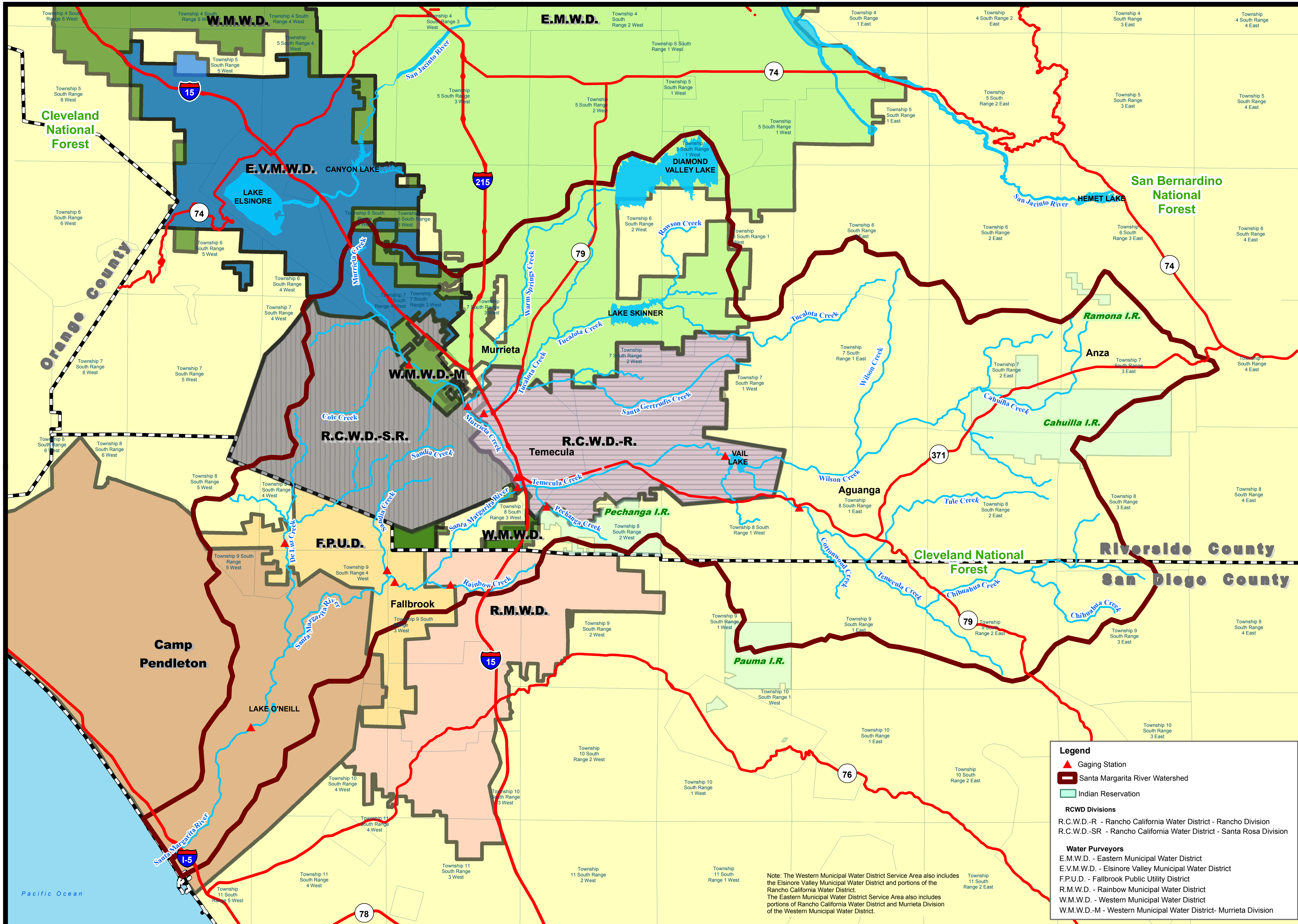
Year		Watermaster Office	USGS Groundwater Monitoring	USGS Gaging Stations	Total
Current Year	2010-11	$334,635	$27,700	$203,825	$566,160
Projected Years	2011-12	$373,835	$31,300	$200,925	$606,060
	2012-13	$385,100	$54,900	$207,000	$647,000
	2013-14	$396,700	$79,200	$213,200	$689,100
	2014-15	$408,600	$104,300	$219,600	$732,500
	2015-16	$420,900	$107,400	$226,200	$754,500

SECTION 13 - WATERMASTER OFFICE BUDGET 2011-2012

A total Watermaster Budget of $606,060 for the Water Year ending September 30, 2012 is shown below.

This budget includes $373,835 for the Watermaster Office and $232,225 for USGS gaging station operations and groundwater monitoring. The budgeted cost for services provided by the U. S. Geological Survey is based on the annual renewal of a cooperative agreement with the Watermaster.

	APPROVED BUDGET CURRENT YEAR 2010-11	PROPOSED BUDGET 2011-12
Watermaster Office		
Rent	$ 14,500	$ 14,700
Accounting Services	6,100	6,200
Supplies	1,200	1,400
General Liability & Professional Insurance	500	500
Printing	7,000	9,500
Audit	6,300	6,300
Publications	2,000	2,300
Clerical/Data Management	82,700	86,300
Telephone/Internet	2,700	3,000
Miscellaneous Operating/Maintenance	1,835	1,835
Mileage/Travel	800	800
Office Equipment and Software	2,000	2,000
IT System/Website	10,000	10,000
Watermaster		
Consulting Services	177,000	208,000
Travel Reimbursement	20,000	21,000
SUBTOTAL WATERMASTER OFFICE	**$ 334,635**	**$ 373,835**
USGS		
Gaging Station Operation and Maintenance	$ 175,925	$ 177,325
Water Quality Operation and Maintenance	27,900	23,600
Groundwater Monitoring Wells Water Levels	16,800	20,300
Groundwater Monitoring Wells Water Quality	10,900	11,000
SUBTOTAL USGS	**$ 231,525**	**$ 232,225**
TOTAL	**$ 566,160**	**$ 606,060**



Map Produced by:
Rancho California Water District
Geographic Information Systems
March 2009

1 inch = 4 miles

Major Water Purveyors
Santa Margarita River Watershed Watermaster

DATE: 3/9/2009 NAME: rosul FILE: F:\GIS\Projects\WatermasterMap\01-28-09\watermasters_02-11-09_v5.mxd

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

APPENDIX A

WATER PRODUCTION AND USE

WATER YEAR 2009-10

September 2011

TABLE A-1

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

EASTERN MUNICIPAL WATER DISTRICT
2009-10
Quantities in Acre Feet

	PRODUCTION					USE						RECLAIMED WASTEWATER			
MONTH YEAR	WELLS	IMPORT 1/	EXPORT FROM SMRW 2/	NET IMPORT	TOTAL	AG 3/	COMM	DOM 4/	TOTAL	LOSS	TOTAL USE	REUSE IN SMRW 5/	REUSE OUTSIDE SMRW	OTHER REUSE 6/	TOTAL
2009															
OCT	0	1,584	197	1,387	1,387	0	0	1,318	1,318	69	1,387	292	467	426	1,185
NOV	0	1,408	313	1,095	1,095	0	0	1,040	1,040	55	1,095	223	796	154	1,173
DEC	0	617	521	96	96	0	0	91	91	5	96	164	520	585	1,269
2010															
JAN	0	600	18	582	582	0	0	553	553	29	582	78	265	907	1,250
FEB	0	535	210	325	325	0	0	309	309	16	325	103	201	932	1,236
MAR	0	896	(16)	912	912	0	0	866	866	46	912	15	268	1,017	1,300
APR	0	710	(50)	760	760	0	0	722	722	38	760	156	628	443	1,227
MAY	0	1,829	61	1,768	1,768	0	0	1,679	1,679	89	1,768	276	523	455	1,254
JUNE	0	1,812	(39)	1,851	1,851	0	0	1,758	1,758	93	1,851	336	688	173	1,197
JULY	0	1,915	231	1,684	1,684	0	0	1,600	1,600	84	1,684	496	1,041	(328)	1,209
AUG	0	1,700	13	1,687	1,687	0	0	1,603	1,603	84	1,687	352	890	(14)	1,228
SEPT	0	1,418	13	1,405	1,405	0	0	1,335	1,335	70	1,405	391	739	53	1,183
TOTAL	0	15,024	1,472	13,552	13,552	0	0	12,874	12,874	678	13,552	2,882	7,026	4,803	14,711

1/ Does not include deliveries to Rancho California WD, Elsinore Valley MWD or Western MWD

2/ Portion of imported supplies exported for delivery to Eastern MWD's retail customers located outside the watershed

3/ Figures are 95% of water pumped and imported to allow for 5% loss

4/ Figures are 95% of water pumped and imported to allow for 5% loss

5/ No sewage diverted to RCWD for 2010 water year for treatment at Santa Rosa Water Reclamation Facility.
Reuse within watershed includes 1,035 AF sold to RCWD and 394 sold to Pechanga Band.

6/ Other Reuse includes changes of storage in Winchester and Sun City storage ponds, evaporation and percolation losses, and discharges to Temescal Creek in the Santa Ana Watershed of 1,930 AF.

TABLE A-2

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

ELSINORE VALLEY MUNICIPAL WATER DISTRICT
2009-10
Quantities in Acre Feet

	PRODUCTION			USE						
MONTH YEAR	WELLS	IMPORT	TOTAL	AG	COMM	DOM	TOTAL DELIVERED	LOSS *	TOTAL USE	WASTEWATER EXPORTED
2009										
OCT	0	764	764	15	183	566	764	0	764	82
NOV	0	785	785	19	184	582	785	0	785	101
DEC	0	456	456	8	88	360	456	0	456	103
2010										
JAN	0	400	400	6	53	341	400	0	400	102
FEB	0	278	278	2	24	252	278	0	278	88
MAR	0	382	382	3	56	323	382	0	382	101
APR	0	530	530	9	106	415	530	0	530	94
MAY	0	755	755	12	162	581	755	0	755	80
JUNE	0	768	768	12	179	577	768	0	768	92
JULY	0	846	846	14	205	627	846	0	846	90
AUG	0	1,082	1,082	17	259	806	1,082	0	1,082	94
SEPT	0	880	880	16	219	645	880	0	880	93
TOTAL	0	7,926	7,926	133	1,718	6,075	7,926	0	7,926	1,120

* Assumes no loss

TABLE A-3

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

FALLBROOK PUBLIC UTILITY DISTRICT
2009-10
Quantities in Acre Feet

	PRODUCTION								USE						WASTEWATER			
MONTH YEAR	TOTAL LAKE SKINNER DIVERSIONS	LAKE SKINNER DIVERSIONS DELIVERED	TOTAL DISTRICT IMPORT 1/	DELUZ AREA IMPORT	FALLBROOK AREA IMPORT	SMRW IMPORT 2/	TOTAL SMRW IMPORT	TOTAL PRODUCTION	AG	COMM	DOM	TOTAL IN SMRW	LOSS*	TOTAL USE IN SMRW	FROM SMRW	REUSE IN SMRW	FROM U. S. N.W.S.	EXPORTED FROM SMRW
2009																		
OCT	0	0	1,371	257	1,114	513	770	770	414	55	370	839	(69)	770	96	4	1	91
NOV	0	0	1,189	255	934	430	685	685	384	51	274	709	(24)	685	85	3	1	81
DEC	0	0	549	62	487	224	286	286	150	38	188	376	(90)	286	139	1	0	138
2010																		
JAN	18	0	574	103	470	216	319	319	139	28	154	321	(2)	319	125	1	1	124
FEB	2	18	295	20	274	126	146	164	44	23	114	181	(17)	164	98	0	0	97
MAR	0	2	726	117	608	280	397	399	120	22	119	261	138	399	113	0	0	112
APR	0	0	763	120	643	296	416	416	185	36	197	418	(2)	416	88	2	1	86
MAY	0	0	1,257	203	1,055	485	688	688	270	37	207	514	174	688	99	3	0	96
JUNE	0	0	1,414	295	1,119	515	810	810	414	53	294	761	49	810	90	3	0	86
JULY	0	0	1,536	296	1,240	570	866	866	429	50	289	768	98	866	94	3	1	91
AUG	0	0	1,564	378	1,187	546	924	924	536	56	313	905	19	924	96	4	1	91
SEPT	0	0	1,534	332	1,203	553	885	885	491	63	338	892	(7)	885	92	4	1	88
TOTAL	20	20	12,772	2,438	10,334	4,754	7,192	7,212	3,576	512	2,857	6,945	267	7,212	1,215	27	7	1,181

1/ Includes deliveries from Lake Skinner Diversion
2/ Approximately 46% of the Fallbrook area is within the Santa Margarita River Watershed
*Loss = Total production less total use

TABLE A-4

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

METROPOLITAN WATER DISTRICT
DELIVERIES IN DOMENIGONI VALLEY
2009-10
Quantities in Acre Feet

PRODUCTION				USE					
MONTH YEAR	WELLS	IMPORT TO SMRW	TOTAL IN SMRW	AG	COMM/ DOM *	GW RECHARGE	TOTAL DELIVERED	LOSS **	TOTAL USE
2009									
OCT	0	52	52	50	0	0	50	2	52
NOV	0	31	31	30	0	0	30	1	31
DEC	0	4	4	3	0	0	3	1	4
2010									
JAN	0	8	8	7	0	0	7	1	8
FEB	0	6	6	5	0	0	5	1	6
MAR	0	15	15	14	0	0	14	1	15
APR	0	33	33	32	0	0	32	1	33
MAY	0	43	43	41	0	0	41	2	43
JUNE	0	41	41	39	0	0	39	2	41
JULY	0	38	38	36	0	0	36	2	38
AUG	0	49	49	47	0	0	47	2	49
SEPT	0	52	52	50	0	0	50	2	52
TOTAL	0	372	372	354	0	0	354	18	372

* Construction water
** Loss = 5%

TABLE A-5

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

PECHANGA INDIAN RESERVATION
2009-10
Quantities in Acre Feet

	PRODUCTION				USE					
MONTH YEAR	WELLS ON RESERVATION 1/	DELIVERED GROUNDWATER FROM RCWD 2/	RECLAIMED WASTEWATER FROM EMWD 3/	TOTAL	AG	COMM	DOM	TOTAL DELIVERED	LOSS 4/	TOTAL USE
2009										
OCT	40	41	30	111	52	33	21	106	5	111
NOV	52	21	15	88	32	34	16	82	6	88
DEC	40	1	1	42	12	25	8	45	(3)	42
2010										
JAN	44	5	5	54	10	28	12	50	4	54
FEB	28	5	6	39	5	22	7	34	5	39
MAR	37	20	23	80	28	33	14	75	5	80
APR	34	15	24	73	36	21	14	71	2	73
MAY	53	19	50	122	59	35	24	118	4	122
JUNE	65	16	61	142	72	33	28	133	9	142
JULY	54	34	68	156	86	32	30	148	8	156
AUG	59	29	67	155	78	37	32	147	8	155
SEPT	55	24	44	123	61	31	29	121	2	123
TOTAL	561	230	394	1,185	531	364	235	1,130	55	1,185

1/ Total production attributed to Eduardo, Eagle III, Kelsey, Cell Tower, Ballpark and Zone V Rock 1 wells.
2/ Water provided from Rancho California WD Well Nos. 119, 122, and 211.
3/ Reclaimed wastewater provided by Eastern MWD via Wheeling Agreement with Rancho California WD shown as a component of production for Table A-5 only to illustrate water budget for Reservation. Actual production for Watershed accounted for on Table A-1 and Table 7.1 for Eastern MWD.
4/ Loss determined as Total Production less Total Delivered

TABLE A-6

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

RAINBOW MUNICIPAL WATER DISTRICT
2009-10
Quantities in Acre Feet

	PRODUCTION			USE				
MONTH YEAR	LOCAL	IMPORT TO WATERSHED	TOTAL IN WATERSHED	AG	COMMERCIAL/ DOMESTIC	TOTAL DELIVERIES	LOSS*	TOTAL USE
2009								
OCT	0	204	204	162	23	185	19	204
NOV	0	169	169	134	20	154	15	169
DEC	0	96	96	71	16	87	9	96
2010								
JAN	0	53	53	39	9	48	5	53
FEB	0	47	47	36	7	43	4	47
MAR	0	26	26	19	5	24	2	26
APR	0	83	83	66	9	75	8	83
MAY	0	91	91	73	10	83	8	91
JUNE	0	133	133	107	14	121	12	133
JULY	0	168	168	135	18	153	15	168
AUG	0	188	188	149	22	171	17	188
SEPT	0	195	195	156	21	177	18	195
TOTAL	0	1,453	1,453	1,147	174	1,321	132	1,453

*Loss = 10% of use

TABLE A-7

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

RANCHO CALIFORNIA WATER DISTRICT
2009-10
Quantities in Acre Feet

	PRODUCTION							USE									VAIL	RECLAIMED WASTEWATER
MONTH YEAR	WELLS 1/	EXPORT 2/	NET WELLS	IMPORT 3/	EXPORT 4/	NET IMPORT	TOTAL	AG	AG/ DOM	COMM	DOM	SMR RELEASE 5/	IMPORT RECHARGE TO STORAGE 6/	TOTAL USE	LOSS 7/	TOTAL	RELEASE AND RECHARGE 8/	REUSED IN SMRW 9/
2009																		
OCT	2,535	47	2,488	4,080	83	3,997	6,485	3,061	660	422	3,236	207	(21)	7,565	(1,080)	6,485	70	310
NOV	2,248	29	2,219	3,171	46	3,125	5,344	2,379	517	354	2,487	193	161	6,091	(747)	5,344	170	294
DEC	1,480	24	1,456	1,509	19	1,490	2,946	1,077	224	433	1,931	135	677	4,477	(1,531)	2,946	304	311
															0			
2010															0			
JAN	1,491	18	1,473	1,825	17	1,808	3,281	778	196	144	1,326	341	423	3,208	73	3,281	154	332
FEB	771	13	758	1,300	12	1,288	2,046	144	37	225	1,092	171	364	2,033	13	2,046	0	317
MAR	1,949	12	1,937	1,800	7	1,793	3,730	215	64	165	972	369	108	1,893	1,837	3,730	0	372
APR	2,570	34	2,536	1,292	17	1,275	3,811	1,391	356	280	2,068	332	(472)	3,955	(144)	3,811	0	331
MAY	2,669	24	2,645	2,946	28	2,918	5,563	1,352	321	279	1,841	419	(389)	3,823	1,740	5,563	18	340
JUNE	2,202	22	2,180	6,178	56	6,122	8,302	2,130	490	324	2,441	674	620	6,679	1,623	8,302	22	333
JULY	2,764	29	2,735	5,897	65	5,832	8,567	2,748	592	383	3,220	494	244	7,681	886	8,567	12	387
AUG	2,545	29	2,516	5,969	75	5,894	8,410	3,054	701	351	3,022	294	150	7,572	838	8,410	23	378
SEPT	2,461	37	2,424	5,440	88	5,352	7,776	3,127	728	406	3,142	284	210	7,897	(121)	7,776	28	293
TOTAL	25,685	318	25,367	41,407	513	40,894	66,261	21,456	4,886	3,766	26,778	3,913	2,075	62,874	3,387	66,261	801	3,998

1/ Wells recovered 24,884 AF from older alluvium and 801 AF from Vail recharge. An additional 230 AF was delivered to Pechanga Indian Reservation and is shown on Table A-5.
2/ Groundwater used in San Mateo Watershed
3/ Includes 24,737 AF direct use (13,038 AF to Rancho Division and 11,699 AF to Santa Rosa Division); 12,858 AF direct recharge; and 3,812 AF from MWD WR-34.
4/ Import used in San Mateo Watershed
5/ 30 AF into Murrieta Creek from Wells 101, 102, and 118; 12 AF into Santa Gertrudis Creek from Wells 106 and 108;
0 AF from System River Meter; 59 AF from potable connection to WR-34 outlet pipe and 3,812 AF from MWD WR-34
6/ 12,858 AF of direct recharge less 10,783 AF of import recovery
7/ Loss = Total production less total use and includes 376 acre feet pumped from wells 102, 135 and 146 directly into reclaimed water system.
8/ Vail releases and the related Vail recharge are computed as Total Release less Inflow to be bypassed.
9/ Does not include1,035 AF reclaimed wastewater purchased from EMWD.

TABLE A-8

SANTA MARGARITA RIVER WATERSHED
U.S.M.C. - CAMP PENDLETON
2009-10
Quantities in Acre Feet

	PRODUCTION			USE						RECLAIMED WASTEWATER				EXPORTS		
MONTH YEAR	AG LOCAL	CAMP SUPPLY	TOTAL	AGRICULTURE IN SMRW 1/	AGRICULTURE OUT SMRW	CAMP SUPPLY IN SMRW 2/	CAMP SUPPLY OUT SMRW	TOTAL EXPORT	TOTAL IN SMRW 3/	RECLAIMED USE IN SMRW	RECLAIMED USE OUT SMRW 4/	EXPORTED TO OCEANSIDE OUTFALL	TOTAL 5/	TOTAL 6/	WASTE WATER RETURNS 7/	NET EXPORT
2009																
OCT	68	496	564	21	47	258	238	285	279	1	39	141	181	465	104	361
NOV	12	452	464	4	8	235	217	225	239	0	22	158	180	405	95	310
DEC	0	258	258	0	0	134	124	124	134	0	7	150	157	281	54	227
2010																
JAN	0	303	303	0	0	158	145	145	158	0	8	183	191	336	63	273
FEB	0	256	256	0	0	133	123	123	133	2	3	177	182	303	54	249
MAR	0	344	344	0	0	179	165	165	179	0	20	174	194	359	72	287
APR	5	379	384	2	3	197	182	185	199	0	24	169	193	378	79	299
MAY	56	480	536	18	38	250	230	268	268	0	46	138	184	452	100	352
JUNE	68	514	582	21	47	267	247	294	288	1	48	143	192	485	108	377
JULY	141	523	664	44	97	272	251	348	316	1	61	137	199	546	109	437
AUG	147	594	741	46	101	309	285	386	355	1	66	140	207	592	124	468
SEPT	148	538	686	46	102	280	258	360	326	0	52	129	181	541	113	428
TOTAL	645	5,137	5,782	202	443	2,672	2,465	2,908	2,874	6	396	1,839	2,241	5,143	1,075	4,068

1/ Agricultural water use is divided with 31% used inside the SMRW and 69% used outside the SMRW.
2/ Camp Supply water use is divided with 52% used inside the SMRW and 48% used outside the SMRW.
3/ Assumes no losses
4/ Reclaimed use for irrigation of golf course, landscaping and park areas.
5/ All wastewater treated at Southern Regional Tertiary Treatment Plant (SRTTP) beginning December 2008.
6/ Agriculture and Camp Supply use outside the SMRW, reclaimed use outside the SMRW, plus export to Oceanside Outfall
7/ Percent Camp Supply reclaimed estimated as 2,241 AF divided by 5,137 AF equals 43.62%. Wastewater returns estimated as 43.62% of Camp Supply use outside of SMRW.

TABLE A-9

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

U. S. NAVAL WEAPONS STATION, FALLBROOK ANNEX
2009-10
Quantities in Acre Feet

	PRODUCTION			USE				WASTEWATER
MONTH YEAR	LOCAL	IMPORT TO WATERSHED 1/	TOTAL	AG	COMMERCIAL/ DOMESTIC	LOSS 2/	TOTAL USE	EXPORTED
2009								
OCT	0.0	9.0	9.0	0.0	8.2	0.8	9.0	1.4
NOV	0.0	5.1	5.1	0.0	4.6	0.5	5.1	0.5
DEC	0.0	3.0	3.0	0.0	2.7	0.3	3.0	0.2
2010								
JAN	0.0	1.5	1.5	0.0	1.4	0.1	1.5	0.5
FEB	0.0	4.6	4.6	0.0	4.2	0.4	4.6	0.4
MAR	0.0	4.3	4.3	0.0	3.9	0.4	4.3	0.2
APR	0.0	5.3	5.3	0.0	4.8	0.5	5.3	0.5
MAY	0.0	6.6	6.6	0.0	6.0	0.6	6.6	0.4
JUNE	0.0	7.4	7.4	0.0	6.7	0.7	7.4	0.5
JULY	0.0	7.0	7.0	0.0	6.4	0.6	7.0	0.6
AUG	0.0	6.9	6.9	0.0	6.3	0.6	6.9	1.3
SEPT	0.0	8.0	8.0	0.0	7.3	0.7	8.0	0.5
TOTAL	0.0	68.7	68.7	0.0	62.5	6.2	68.7	7.0

1/ - Import via Fallbrook Public Utility District

2/ - Loss = 10% of Use

TABLE A-10

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

WESTERN MUNICIPAL WATER DISTRICT
MURRIETA DIVISION
2009-10
Quantities in Acre Feet

	PRODUCTION			USE					
MONTH YEAR	WELLS	IMPORT	TOTAL	AG	COMM	DOM	TOTAL DELIVERED	LOSS *	TOTAL USE
2009									
OCT	79	160	239	32	16	156	204	35	239
NOV	84	128	212	38	21	157	216	(4)	212
DEC	65	85	150	17	0	132	149	1	150
2010									
JAN	72	56	128	9	1	95	105	23	128
FEB	51	39	90	5	0	81	86	4	90
MAR	58	33	91	8	0	70	78	13	91
APR	76	96	172	0	14	107	121	51	172
MAY	74	110	184	28	22	133	183	1	184
JUNE	74	72	146	32	18	154	204	(58)	146
JULY	64	201	265	41	18	159	218	47	265
AUG	56	227	283	53	17	197	267	16	283
SEPT	0	255	255	1	13	201	215	40	255
TOTAL	753	1,462	2,215	264	140	1,642	2,046	169	2,215

* Loss = Total production less total delivered

TABLE A-11

SANTA MARGARITA RIVER WATERSHED

MISCELLANEOUS WATER PRODUCTION AND IMPORTS

2009-10

Quantities in Acre Feet

	IMPORT	PRODUCTION					
MONTH YEAR	WESTERN MWD IMPORTS TO IMPROVEMENT DISTRICT A	ANZA MUTUAL WATER COMPANY	RANCHO CALIFORNIA OUTDOOR RESORTS	QUIET OAKS MOBILE HOME PARK	LAKE RIVERSIDE ESTATES	HAWTHORN WATER SYSTEM	JOJOBA HILLS SKP RESORT
2009							
OCT	5.60	5.73	9.81	N/A	3.73	2.13 ***	5.75
NOV	5.30	2.94	2.49	N/A	10.27	2.13 ***	4.33
DEC	4.70	4.79	4.21	N/A	14.05	2.13 ***	2.51
2010							
JAN	4.90	1.10 ***	4.82	N/A	0.60	0.52 ****	2.91
FEB	4.20	1.10 ***	5.19 **	N/A	0.76	0.52 ****	1.79
MAR	5.10	1.10 ***	5.19 **	N/A	1.00	0.52 ****	3.67
APR	5.00	1.44	3.62	N/A	18.94	0.52 ****	4.53
MAY	6.30	3.12	9.06	N/A	25.67	2.91 ****	5.20
JUNE	5.50	4.14	7.53	N/A	51.52	2.91 ****	6.63
JULY	5.30	2.89	11.06	N/A	52.54	2.91 ****	5.90
AUG	5.10	4.89	6.77	N/A	51.27	2.91 ****	6.09
SEPT	5.30	3.73	11.27	N/A	24.84	3.90	6.08
SUBTOTAL			81.02	15.00			
			429.40 *	8.30 *			
TOTAL	62.30	36.97	510.42	23.30	255.19	24.01	55.39

N/A Monthly readings not available
* Estimated non-metered use
** Two month average
*** Three month average
**** Four month average

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

APPENDIX B

WATER PRODUCTION AND USE

WATER YEAR 1965-66 TO WATER YEAR 2009-10

September 2011

TABLE B-1

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

EASTERN MUNICIPAL WATER DISTRICT
Quantities in Acre Feet

	PRODUCTION					USE						RECLAIMED WASTEWATER					
WATER YEAR	WELLS	IMPORT 1/	EXPORT FROM SMRW	NET IMPORT	TOTAL	AG 2/	COMM	DOM 3/	TOTAL	LOSS	TOTAL USE	REUSE IN SMRW 4/	REUSE OUTSIDE SMRW	OTHER REUSE 5/	RELEASE TO RIVER	RECHARGE	TOTAL
1966	0	1,604	0	1,604	1,604	1,520	0	4	1,524	80	1,604	0	0		0	100	100
1967	0	1,630	0	1,630	1,630	1,544	0	4	1,548	82	1,630	0	0		0	100	100
1968	0	1,464	0	1,464	1,464	1,386	0	5	1,391	73	1,464	0	0		0	100	100
1969	0	1,741	0	1,741	1,741	1,648	0	6	1,654	87	1,741	0	0		0	100	100
1970	0	1,417	0	1,417	1,417	1,340	0	7	1,346	71	1,417	0	0		0	101	101
1971	0	1,383	0	1,383	1,383	1,306	0	8	1,314	69	1,383	0	0		0	119	119
1972	0	1,470	0	1,470	1,470	1,388	0	8	1,396	74	1,470	0	0		0	242	242
1973	0	1,533	0	1,533	1,533	1,447	0	10	1,456	77	1,533	0	0		0	217	217
1974	0	1,601	0	1,601	1,601	1,511	0	10	1,521	80	1,601	0	0		0	193	193
1975	0	1,969	0	1,969	1,969	1,859	0	11	1,871	98	1,969	0	0		0	253	253
1976	145	2,493	0	2,493	2,638	2,356	0	150	2,506	132	2,638	134	0		0	155	289
1977	431	2,947	0	2,947	3,378	2,723	64	423	3,209	169	3,378	244	0		0	70	314
1978	375	2,551	0	2,551	2,926	2,409	0	371	2,780	146	2,926	300	0		0	75	375
1979	289	1,894	0	1,894	2,183	1,784	0	290	2,074	109	2,183	350	0		0	147	497
1980	281	1,192	0	1,192	1,473	1,116	0	283	1,399	74	1,473	375	0		0	220	595
1981	282	716	0	716	998	663	0	285	948	50	998	375	0		0	304	679
1982	321	1,112	0	1,112	1,433	1,038	0	323	1,361	72	1,433	375	0		0	386	761
1983	106	1,211	0	1,211	1,317	1,131	0	120	1,251	66	1,317	375	0		0	466	841
1984	236	699	0	699	935	644	0	244	888	47	935	400	0		0	525	925
1985	314	679	0	679	993	624	0	319	943	50	993	450	0		0	565	1,015
1986	229	760	0	760	989	700	0	239	940	49	989	600	0		0	509	1,109
1987	89	1,155	0	1,155	1,244	638	0	543	1,182	62	1,244	650	0		0	554	1,204
1988	4	2,047	0	2,047	2,051	524	0	1,424	1,948	103	2,051	650	0		0	650	1,300
1989	685	3,746	0	3,746	4,431	1,146	0	3,064	4,209	222	4,431	1,058	0		0	1,636	2,694
1990	492	8,578	2,977	5,601	6,093	978	0	4,810	5,788	305	6,093	1,567	0		0	2,160	3,727
1991	456	16,621	7,142	9,479	9,935	851	0	8,587	9,438	497	9,935	1,282	0		0	2,272	3,554
1992	527	13,486	4,893	8,593	9,120	29	0	8,635	8,664	456	9,120	1,323	0		245	2,385	3,953
1993	524	7,287	1,894	5,393	5,917	36	0	5,585	5,621	296	5,917	1,709	990	(285)	192	2,020	4,626
1994	232	10,082	2,932	7,150	7,382	0	0	7,013	7,013	369	7,382	2,687	2,465	694	0	0	5,846
1995	182	11,539	6,914	4,625	4,807	16	0	4,551	4,567	240	4,807	2,154	1,357	2,551	0	0	6,062
1996	299	11,730	6,770	4,960	5,259	0	0	4,996	4,996	263	5,259	2,979	2,473	520	0	0	5,972
1997	408	5,093	1,809	3,284	3,692	0	0	5,226	5,226	(1,534)	3,692	3,126	2,319	882	0	0	6,327
1998	240	6,609	1,492	5,117	5,357	0	0	5,090	5,090	267	5,357	2,949 6/	2,139	2,374	0	0	7,462
1999	669	7,118	2,719	4,327	4,996	0	0	4,746	4,746	250	4,996	3,741 7/	3,070	1,063	0	0	7,874
2000	630	9,179	1,923	7,256	7,886	0	0	7,493	7,493	393	7,886	4,669 8/	3,664	(15)	0	0	8,318
2001	355	9,219	3,271	5,948	6,303	0	0	5,989	5,989	314	6,303	4,571 9/	3,249	1,208	0	0	9,028
2002	13	12,777	4,954	8,117	8,130	0	0	7,724	7,724	406	8,130	4,843 10/	4,863	462	0	0	10,168
2003	0	14,175	5,113	9,062	9,062	0	0	8,610	8,610	452	9,062	3,542 11/	2,955	4,681	0	0	11,178
2004	0	17,381	8,243	9,138	9,138	0	0	8,960	8,960	178	9,138	3,221	3,688	5,427	0	0	12,336
2005	0	16,336	5,478	10,858	10,858	0	0	10,749	10,749	109	10,858	2,664 12/	2,690	8,986	0	0	14,340
2006	0	21,034	6,873	14,161	14,161	0	0	13,453	13,453	708	14,161	3,108 13/	3,510	7,396	0	0	14,014
2007	0	21,161	5,763	15,398	15,398	0	0	14,628	14,628	770	15,398	3,550 14/	5,960	4,593	0	0	14,103
2008	0	18,714	3,762	14,952	14,952	0	0	14,204	14,204	748	14,952	1,450	5,925	6,864	0	0	14,239
2009	0	16,919	2,447	14,472	14,472	0	0	13,748	13,748	724	14,472	2,615	6,786	5,241	0	0	14,642
2010	0	15,024	1,472	13,552	13,552	0	0	12,874	12,874	678	13,552	2,882	7,026	4,803	0	0	14,711

1/ Does not include deliveries to RCWD, Elsinore Valley MWD, Western MWD
2/ Figures are 95% of water pumped and imported to allow for 5% loss.
3/ Figures are 95% of water pumped and imported to allow for 5% loss.
4/ Reuse within watershed includes noted amount of sewage distributed to RCWD for treatment by RCWD, reclaimed wastewater sold to RCWD for delivery to RCWD reclaimed wastewater customers, and beginning in 2009 reclaimed wastewater sold to the Pechanga Band.
5/ Other Reuse includes changes in storage in Winchester and Sun City storage ponds, evaporation and percolation losses, and discharges to the Santa Ana Watershed.
6/ Includes 905 AF of sewage diverted to RCWD
7/ Includes1,159 AF of sewage diverted to RCWD
8/ Includes1,162 AF of sewage diverted to RCWD
9/ Includes1,201 AF of sewage diverted to RCWD
10/ Includes1,219 AF of sewage diverted to RCWD
11/ Includes 1,056 AF of sewage diverted to RCWD
12/ Includes 574 AF of sewage diverted to RCWD
13/ Includes 910 AF of sewage diverted to RCWD
14/ Includes 797 AF of sewage diverted to RCWD

TABLE B-2

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

ELSINORE VALLEY MUNICIPAL WATER DISTRICT

Quantities in Acre Feet

	PRODUCTION			USE						
WATER YEAR	WELLS	IMPORT	TOTAL	AG	COMM	DOM	TOTAL DELIVERED	LOSS *	TOTAL USE	WASTEWATER EXPORTED
1966										
1967										
1968										
1969										
1970										
1971										
1972										
1973										
1974										
1975										
1976										
1977										
1978										
1979										
1980										
1981										
1982										
1983										
1984										
1985										
1986										
1987										
1988										
1989	0	1,341	1,341				1,341	0	1,341	74
1990	0	2,255	2,255				2,255	0	2,255	114
1991	0	2,421	2,421				2,421	0	2,421	134
1992	0	2,190	2,190				2,190	0	2,190	140
1993	0	2,964	2,964	539	84	2,341	2,964	0	2,964	150
1994	0	3,232	3,232	687	93	2,452	3,232	0	3,232	170
1995	0	3,127	3,127	520	100	2,507	3,127	0	3,127	185
1996	0	4,197	4,197	871	109	3,217	4,197	0	4,197	213
1997	0	4,296	4,296	848	118	3,330	4,296	0	4,296	226
1998	0	5,100	5,100	667	1,396	3,037	5,100	0	5,100	247
1999	0	6,133	6,133	921	1,626	3,586	6,133	0	6,133	254
2000	0	7,174	7,174	1,089	1,971	4,114	7,174	0	7,174	279
2001	0	6,215	6,215	925	1,815	3,475	6,215	0	6,215	310
2002	0	7,596	7,596	1,173	1,902	4,521	7,596	0	7,596	412
2003	0	7,091	7,091	63	2,665	4,363	7,091	0	7,091	483
2004	0	8,438	8,438	96	3,238	5,104	8,438	0	8,438	600
2005	0	8,215	8,215	104	3,044	5,067	8,215	0	8,215	927
2006	0	9,819	9,819	127	4,118	5,574	9,819	0	9,819	938
2007	0	10,811	10,811	150	4,509	6,152	10,811	0	10,811	837
2008	0	9,951	9,951	115	4,149	5,687	9,951	0	9,951	901
2009	0	9,075	9,075	147	2,015	6,913	9,075	0	9,075	1,069
2010	0	7,926	7,926	133	1,718	6,075	7,926	0	7,926	1,120

* Assumes no loss

TABLE B-3

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

FALLBROOK PUBLIC UTILITY DISTRICT

Quantities in Acre Feet

	PRODUCTION									USE				
WATER YEAR	TOTAL LAKE SKINNER DIVERSIONS	LAKE SKINNER DIVERSIONS DELIVERED	WELLS	TOTAL DISTRICT IMPORT 1/	DELUZ AREA IMPORT	FALLBROOK AREA IMPORT	FALLBROOK SMRW IMPORT 2/	TOTAL SMRW IMPORT	TOTAL PRODUCTION	AG	COMM/ DOM	TOTAL IN SMRW	LOSS 3/	TOTAL USE IN SMRW
1966			176	11,169	0	11,169	3,351	3,351	3,404	2,735	328	3,063	341	3,404
1967			16	9,508	0	9,508	2,852	2,852	2,857	2,253	319	2,572	285	2,857
1968			13	11,411	0	11,411	3,423	3,423	3,427	2,554	531	3,085	342	3,427
1969			178	9,458	0	9,458	2,837	2,837	2,891	1,787	814	2,601	290	2,891
1970			305	11,794	0	11,794	3,538	3,538	3,630	2,649	617	3,266	364	3,630
1971			7	11,350	0	11,350	3,405	3,405	3,407	2,386	681	3,067	340	3,407
1972			0	13,054	0	13,054	3,916	3,916	3,916	2,749	775	3,524	392	3,916
1973			0	10,610	.38	10,572	3,172	3,210	3,210	2,156	732	2,888	322	3,210
1974			0	12,911	134	12,777	3,833	3,967	3,967	2,703	868	3,571	396	3,967
1975			0	11,492	213	11,279	3,384	3,597	3,597	2,420	816	3,236	361	3,597
1976			0	13,147	431	12,716	4,196	4,627	4,627	3,200	965	4,165	462	4,627
1977			20	13,435	587	12,848	4,625	5,212	5,232	3,536	1,174	4,710	522	5,232
1978			97	12,626	651	11,975	4,551	5,202	5,299	3,504	1,265	4,769	530	5,299
1979			187	12,865	961	11,904	4,762	5,723	5,910	3,820	1,498	5,318	592	5,910
1980			192	13,602	1,191	12,411	5,213	6,404	6,596	4,258	1,678	5,936	660	6,596
1981			87	16,878	1,994	14,884	6,549	8,543	8,630	5,688	2,144	7,832	798	8,630
1982			0	13,270	1,805	11,465	5,274	7,079	7,079	4,614	1,862	6,476	603	7,079
1983			0	12,298	1,969	10,329	4,751	6,720	6,720	4,320	1,871	6,191	529	6,720
1984			0	15,429	2,609	12,820	5,897	8,506	8,506	5,814	2,077	7,891	615	8,506
1985			0	14,256	2,358	11,898	5,473	7,831	7,831	5,187	2,135	7,322	509	7,831
1986			0	15,383	2,794	12,589	5,791	8,585	8,585	5,698	2,319	8,017	568	8,585
1987			0	15,313	2,986	12,327	5,670	8,656	8,656	5,793	2,281	8,074	582	8,656
1988			28	14,460	2,559	11,901	5,474	8,033	8,061	5,181	2,348	7,529	532	8,061
1989			94	16,179	3,007	13,172	6,059	9,066	9,160	5,620	2,706	8,326	834	9,160
1990			15	17,568	3,745	13,823	6,358	10,103	10,118	6,275	2,878	9,153	965	10,118
1991			46	13,939	2,871	11,068	5,091	7,962	8,008	5,146	2,314	7,460	548	8,008
1992			45	13,698	2,950	10,748	4,943	7,893	7,938	5,285	2,201	7,486	452	7,938
1993			86	12,695	2,010	10,685	4,915	6,925	7,011	4,329	2,349	6,678	333	7,011
1994			83	13,124	2,246	10,878	5,004	7,250	7,333	4,282	2,666	6,948	385	7,333
1995			3	11,620	2,208	9,412	4,330	6,538	6,541	3,818	2,798	6,316	225	6,541
1996			0	14,168	2,733	11,435	5,260	7,993	7,993	4,411	3,247	7,658	335	7,993
1997			0	14,005	2,688	11,317	5,206	7,894	7,894	4,351	3,249	7,600	294	7,894
1998			0	11,757	1,803	9,954	4,579	6,382	6,382	3,245	2,798	6,043	339	6,382
1999			0	14,307	1,572	12,735	5,858	7,430	7,430	3,748	3,271	7,019	411	7,430
2000			0	15,983	2,705	14,478	6,660	9,365	9,365	5,138	3,903	9,041	324	9,365
2001			0	15,249	2,562	12,687	5,836	8,398	8,398	4,413	3,537	7,950	448	8,398
2002			0	17,422	2,900	14,522	6,680	9,580	9,580	5,185	4,036	9,221	359	9,580
2003			0	15,864	3,393	12,471	5,737	9,130	9,130	6,041	3,737	9,778	(648)	9,130
2004			0	19,640	5,027	14,613	6,722	11,749	11,749	7,018	4,222	11,240	509	11,749
2005	1,261	1,261	0	17,452	3,101	14,351	6,601	9,702	10,963	4,654	4,213	8,867	2,096	10,963
2006	106	106	0	18,403	3,994	14,409	6,628	10,622	10,728	5,958	4,019	9,977	751	10,728
2007	0	0	0	20,750	5,087	15,664	7,205	12,292	12,292	7,271	4,500	11,771	521	12,292
2008	31	31	0	15,540	3,307	12,233	5,627	8,934	8,965	4,492	3,962	8,454	511	8,965
2009	0	0	0	15,355	2,767	12,588	5,790	8,557	8,557	4,151	3,896	8,047	510	8,557
2010	20	20	0	12,772	2,438	10,334	4,754	7,192	7,212	3,576	3,369	6,945	267	7,212

1/ Includes deliveries from Lake Skinner Diversion beginning 2005
2/ Total SMRW production equals SMRW Import plus 30% local (1966-1971)
3/ Loss = Total production less total use (Neglects change in Storage at Red Mtn After 1985)

TABLE B-4

SANTA MARGARITA RIVER WATERSHED
ANNUAL WASTEWATER PRODUCTION AND DISTRIBUTION
FALLBROOK PUBLIC UTILITY DISTRICT
Quantities in Acre Feet

WATER YEAR	TOTAL WASTEWATER PRODUCTION	PERCENT WASTEWATER FROM SMRW	WASTEWATER FROM SMRW	WASTEWATER REUSED IN SMRW	WASTEWATER FROM U.S.N.W.S.	WASTEWATER EXPORTED FROM SMRW	PERCENT WASTEWATER FROM SLR WATERSHED 1/	WASTEWATER IMPORTED FROM SLR WATERSHED
1966	395	81	320		0	0	19	75
1967	460	80	368		0	0	20	92
1968	524	80	419		0	0	20	105
1969	588	79	465		0	0	21	123
1970	652	78	509		0	0	22	143
1971	717	78	559		0	0	22	158
1972	782	77	602		0	0	23	180
1973	847	76	644		0	0	24	203
1974	912	75	684		0	0	25	228
1975	976	75	732		0	0	25	244
1976	1,040	74	770		0	0	26	270
1977	1,105	73	807		0	0	27	298
1978	1,170	72	842		0	0	28	328
1979	1,234	72	888		0	0	28	346
1980	1,298	71	922		0	0	29	376
1981	1,363	70	954		0	0	30	409
1982	1,428	69	985		0	0	31	443
1983	1,492	69	1,029		26 E	1,003	0	0
1984	1,556	68	1,058		26 E	1,032	0	0
1985	1,621	67	1,086		26 E	1,060	0	0
1986	1,685	66	1,112		18 P	1,094	0	0
1987	1,750	66	1,155		27	1,128	0	0
1988	1,815	65	1,180		25	1,155	0	0
1989	1,881	64	1,204		22	1,182	0	0
1990	1,952	66	1,298		27	1,271	0	0
1991	1,622	60	973		11	962	0	0
1992	1,730	63	1,090		7	1,083	0	0
1993	2,051	62	1,271		16	1,255	0	0
1994	1,834	58	1,073		5	1,068	0	0
1995	1,941	60	1,165		12	1,153	0	0
1996	1,799	58	1,040		5	1,035	0	0
1997	1,780	58	1,027		6	1,021	0	0
1998	2,297	65	1,490		8	1,482	0	0
1999	2,175	64	1,382		5	1,377	0	0
2000	2,164	76	1,641		7	1,634	0	0
2001	2,191	76	1,675	24	8	1,643	0	0
2002	2,061	74	1,532	28	9	1,495	0	0
2003	2,276	76	1,737	21	10	1,706	0	0
2004	2,199	75	1,654	26	8	1,620	0	0
2005	2,505	73	1,822	24	16	1,782	0	0
2006	2,479	71	1,750	26	8	1,716	0	0
2007	1,951	61	1,183	29	12	1,142	0	0
2008	1,940	61	1,178	28	11	1,139	0	0
2009	1,900	62	1,187	31	12	1,144	0	0
2010	1,972	62	1,215	27	7	1,181	0	

NOTE: Measured quantities available for Total Wastewater in Water Year 1969 and July 1989. All other quantities are estimated (1966 - 1989). Prior to 1983, Wastewater was discharged into Fallbrook Creek. After 1983, Wastewater was discharged into an ocean outfall.

1/ - San Luis Rey Watershed
E - Estimated
P - Partial Year Data

TABLE B-5

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

METROPOLITAN WATER DISTRICT DELIVERIES IN DOMENIGONI VALLEY

Quantities in Acre Feet

	PRODUCTION			USE					
WATER YEAR	WELLS	IMPORT TO SMRW	TOTAL IN SMRW	AG	COMM/ DOM *	GW RECHARGE	TOTAL DELIVERED	LOSS **	TOTAL USE
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0
1977	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0
1995	0	547	547	337	183	0	520	27	547
1996	0	1,005	1,005	725	230	0	955	50	1,005
1997	0	3,521	3,521	561	2,747	37	3,345	176	3,521
1998	0	5,023	5,023	183	4,183	406	4,772	251	5,023
1999	0	3,781	3,781	384	2,829	379	3,592	189	3,781
2000	0	712	712	87	339	251	677	35	712
2001	0	689	689	480	0	175	655	34	689
2002	0	595	595	540	25	0	565	30	595
2003	0	496	495	470	0	0	470	25	495
2004	0	766	766	728	0	0	728	38	766
2005	0	556	556	528	0	0	528	28	556
2006	0	506	506	481	0	0	481	25	506
2007	0	660	660	627	0	0	627	33	660
2008	0	493	493	469	0	0	469	24	493
2009	0	465	465	441	0	0	441	24	465
2010	0	372	372	354	0	0	354	18	372

* Construction Water
** Loss = 5%

TABLE B-6

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

PECHANGA INDIAN RESERVATION

Quantities in Acre Feet

	PRODUCTION 1/					USE 2/					
WATER YEAR	SURFACE DIVERSION	WELLS ON RESERVATION	DELIVERED GROUNDWATER FROM RCWD	RECLAIMED WASTEWATER FROM EMWD	TOTAL	AG	COMM	DOM	TOTAL DELIVERED	LOSS 3/	TOTAL USE
1966											
1967											
1968											
1969											
1970											
1971											
1972											
1973											
1974											
1975											
1976											
1977											
1978											
1979											
1980											
1981											
1982											
1983											
1984											
1985											
1986											
1987											
1988											
1989											
1990											
1991	0	58	0	0	58	0	0	58	N/R	N/R	58
1992	0	66	0	0	66	0	0	66	N/R	N/R	66
1993	0	91	0	0	91	0	0	91	N/R	N/R	91
1994	0	70	0	0	70	0	0	70	N/R	N/R	70
1995	0	63	0	0	63	0	4	59	N/R	N/R	63
1996	0	145	0	0	145	0	45	100	N/R	N/R	145
1997	4	167	0	0	171	0	25	146	N/R	N/R	171
1998	4	175	0	0	179	0	62	117	N/R	N/R	179
1999	4	241	0	0	245	33	84	128	N/R	N/R	245
2000	4	370	0	0	374	51	182	141	N/R	N/R	374
2001	4	291	0	0	295	56	85	154	N/R	N/R	295
2002	4	460	0	0	464	73	194	174	441	23	464
2003	4	600	0	0	604	78	354	148	580	24	604
2004	4	721	0	0	725	81	537	71	689	36	725
2005	0	608	0	0	608	140	401	61	602	6	608
2006	0	754	0	0	754	159	401	194	N/R	N/R	754
2007	0	919	154	0	1,073	275	517	229	1,021	52	1,073
2008	0	865	412	0	1,277	599	370	282	1,251	26	1,277
2009	0	702	250	268	1,220	548	441	195	1,184	36	1,220
2010	0	561	230	394	1,185	531	364	235	1,130	55	1,185

1/ Records prior to 1991 not available.
2/ For period 1991 through 2006 uses shown as reported to Watermaster and published in prior Watermaster reports.
3/ For 2007 loss assumed to be 5% for all use types; for prior years any losses shown as reported to Watermaster.
For 2008, 2009, 2010 loss determined as Total Production less Total Delivered
N/R--Not reported.

TABLE B-7

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

RAINBOW MUNICIPAL WATER DISTRICT
Quantities in Acre Feet

	PRODUCTION			USE				
WATER YEAR	LOCAL	IMPORT TO DISTRICT	TOTAL IN WATERSHED 1/	AG 2/	COMMERCIAL/ DOMESTIC 3/	TOTAL DELIVERIES	LOSS 4/	TOTAL USE
1966	0	14,538	1,308	1,049	140	1,189	119	1,308
1967	0	12,167	1,095	878	117	995	100	1,095
1968	0	15,301	1,377	1,104	147	1,252	125	1,377
1969	0	13,917	1,253	1,005	134	1,139	114	1,252
1970	0	18,764	1,689	1,354	181	1,535	154	1,689
1971	0	18,338	1,650	1,324	177	1,500	150	1,650
1972	0	22,633	2,037	1,634	218	1,852	185	2,037
1973	0	17,955	1,616	1,296	173	1,469	147	1,616
1974	0	22,768	2,049	1,643	219	1,863	186	2,049
1975	0	13,856	1,247	1,000	133	1,134	113	1,247
1976	0	24,878	2,239	1,796	240	2,035	204	2,239
1977	0	26,038	2,343	1,879	251	2,130	213	2,343
1978	0	24,312	2,188	1,755	234	1,989	199	2,188
1979	0	26,084	2,348	1,883	251	2,134	213	2,347
1980	0	27,660	2,489	1,997	266	2,263	226	2,489
1981	0	35,036	3,153	2,529	337	2,866	287	3,153
1982	0	27,334	2,460	1,973	263	2,236	224	2,460
1983	0	24,957	2,190	1,735	256	1,991	199	2,190
1984	0	32,526	3,068	2,483	306	2,789	279	3,068
1985	0	28,612	3,410	2,798	302	3,100	310	3,410
1986	0	29,023	2,945	2,353	324	2,677	268	2,945
1987	0	29,449	3,390	2,765	317	3,082	308	3,390
1988	0	29,070	2,985	2,372	342	2,714	271	2,985
1989	0	32,034	3,003	2,385	345	2,730	273	3,003
1990	0	34,612	3,818	3,003	468	3,471	347	3,818
1991	0	27,754	2,904	2,276	364	2,640	264	2,904
1992	0	26,056	2,277	1,877	193	2,070	207	2,277
1993	0	23,766	1,965	1,655	132	1,787	178	1,965
1994	0	22,173	1,651	1,368	133	1,501	150	1,651
1995	0	20,935	1,661	1,398	112	1,510	151	1,661
1996	0	24,835	1,815	1,487	163	1,650	165	1,815
1997	0	24,638	1,429	1,139	160	1,299	130	1,429
1998	0	19,693	1,601	1,315	141	1,456	145	1,601
1999	0	24,961	1,727	1,411	159	1,570	157	1,727
2000	0	30,446	2,217	1,861	154	2,015	202	2,217
2001	0	27,214	1,804	1,439	202	1,641	163	1,804
2002	0	32,854	1,676	1,368	156	1,524	152	1,676
2003	0	29,156	1,510	1,237	136	1,373	137	1,510
2004	0	33,686	1,888	1,567	149	1,716	172	1,888
2005	0	25,135	1,610	1,331	133	1,464	146	1,610
2006	0	29,797	1,851	1,529	154	1,683	168	1,851
2007	0	32,939	2,262	1,871	185	2,056	206	2,262
2008	0	24,390	1,790	1,461	167	1,628	162	1,790
2009	0	27,075	1,852	1,463	220	1,683	169	1,852
2010	0	20,769	1,453	1,147	174	1,321	132	1,453

1/ 1966 through 1982 estimated to be 9% of total district imports
2/ 1966 through 1982 estimated to be 80.2% of total deliveries to watershed
3/ 1966 through 1982 estimated to be 10.7% of total deliveries to watershed
4/ Loss = 10% of use

TABLE B-8

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

RANCHO CALIFORNIA WATER DISTRICT

Quantities in Acre Feet

	PRODUCTION							USE									VAIL		RECLAIMED WASTEWATER	
YEAR	WELLS	EXPORT 1/	NET WELLS	IMPORT	EXPORT 2/	NET IMPORT	TOTAL	AG	AG/ DOM	COMM	DOM	SMR RELEASE	IMPORT RECHARGE TO STORAGE	TOTAL USE	LOSS 3/	TOTAL	RELEASE AND RECHARGE	IRRIGATION 4/	REUSE IN SMRW	MURRIETA CREEK DISCHARGE 5/
1966				0	0	0	0						0				0	185	0	0
1967	4,288			0	0	0	4,288						0				0	1,136	0	0
1968	5,100			0	0	0	5,100						0				0	398	0	0
1969	3,617			0	0	0	3,617						0				0	697	0	0
1970	6,721			0	0	0	6,721						0				0	540	0	0
1971	7,960			0	0	0	7,960						0				0	1,541	0	0
1972	8,369			0	0	0	8,369						0				0	203	0	0
1973	7,726			0	0	0	7,726						0				0	524	0	0
1974	10,163			0	0	0	10,163						0				0	1,066	0	0
1975	10,357			0	0	0	10,357						0				0	369	0	0
1976	11,809			119	0	119	11,928						0				0	50	0	0
1977	10,522			1,845	0	1,845	12,367						0				0	0	0	0
1978	8,930			5,774	0	5,774	14,704						0				0	0	0	0
1979	11,371			7,009	0	7,009	18,380						0				0	0	0	0
1980	12,621			10,126	0	10,126	22,747						0				10,944	0	0	0
1981	15,612			15,282	0	15,282	30,894						0				6,802	0	0	0
1982	12,631			13,378	0	13,378	26,009						0				6,058	0	0	0
1983	16,675 6/			5,752	0	5,752	22,427						0				12,113	715	0	0
1984	25,660			6,716	0	6,716	32,376						0				6,612	1,144	0	0
1985	24,373			7,158	0	7,158	31,531						0				5,027	1,201	0	0
1986	26,997			11,174	0	11,174	38,171						0				8,722	1,053	0	0
1987	33,735			7,564	0	7,564	41,299						0				8,089	273	48	0
1988	21,367			17,854	0	17,854	39,221						0				4,844	0	82	0
1989	26,131			22,895	0	22,895	49,026	25,333		3,316	13,198	852	0 7/	42,699	6,327	49,026	0	0	168	0
1990	33,241			22,030	0	22,030	55,271	27,643		3,940	14,916	902	0	47,401	7,870	55,271	0	0	133	0
1991	26,503			21,238	0	21,238	47,741	32,924		2,941	10,603	785	0 8/	47,253	488	47,741	6,253	0	352	0
1992	29,968			16,931	0	16,931	46,899	30,651		2,406	9,672	683	0	43,412	3,487	46,899	2,244	0	374	0
1993	31,029			11,411	0	11,411	42,440	29,265		2,141	10,618	519	0	42,543	(103)	42,440	31,704	0	378	0
1994	32,725			16,386	0	16,386	49,111	32,534		2,322	12,370	467	0	47,693	1,418	49,111	8,469	0	1,936	0
1995	33,111			15,108	0	15,108	48,219	31,081		2,526	13,779	1,464	0	48,850	(631)	48,219	11,158	0	1,753	0
1996	36,086			23,600	0	23,600	59,686	35,912		2,752	16,330	2,149	0	57,143	2,543	59,686	9,427	0	2,264	0
1997	33,980			26,992	0	26,992	60,972	38,287		3,350	18,635	2,978	164	63,414	(2,442)	60,972	1,725	0	693 9/	0
1998	26,851			19,584	0	19,584	46,435	28,307		2,805	16,273	459	0	47,844	(1,409)	46,435	4,514	0	1,376 9/	1,179
1999	30,598			34,490	0	34,490	65,088	37,157		3,674	19,610	1,044	2,286	63,771	1,317	65,088	1,010	0	1,524 9/	1,654
2000	27,938			55,409	0	55,409	83,347	40,672	3,339	2,162	23,783	1,067	8,008	79,031	4,316	83,347	(49)	0	3,550 9/	1,854
2001	26,421			41,823	0	41,823	68,244	30,383	4,525	4,053	22,866	514	2,374	64,715	3,529	68,244	(361)	0	3,719 9/	2,015
2002	24,895			54,148	0	54,148	79,043	35,747	5,345	5,285	26,573	715	1,454	75,119	3,924	79,043	(314)	0	4,519 9/	2,180
2003	25,238	64	25,174	50,927	183	50,744	75,918	30,277	4,645	4,457	26,044	4,896	2,750	73,069	2,849	75,918	(658)	0	3,780 9/	104
2004	25,353	312	25,041	63,170	762	62,408	87,449	33,467	5,549	4,883	29,314	3,201	5,094	81,508	5,941	87,449	(101)	0	3,257 9/	0
2005	27,606	319	27,287	48,192	578	47,614	74,901	25,819	5,083	4,790	26,656	3,384	5,162	70,894	4,007	74,901	(1,269)	0	4,284 9/	0
2006	27,559	317	27,242	61,336	725	60,611	87,853	30,888	6,448	5,190	30,209	4,923	6,163	83,821	4,032	87,853	1,399	0	4,796 9/	0
2007	27,645	364	27,281	64,792	974	63,818	91,099	34,810	7,049	5,063	31,820	3,859	2,247	84,848	6,251	91,099	704	0	4,730 9/	0
2008	26,239	361	25,878	51,453	770	50,683	76,561	26,388	5,621	4,785	31,759	4,092	1,417	74,062	2,499	76,561	4,845	0	4,355 9/	0
2009	27,820	367	27,453	50,988	718	50,270	77,723	26,811	5,986	4,306	30,159	5,302	2,357	74,921	2,802	77,723	1,236	0	4,191 9/	0
2010	25,685	318	25,367	41,407	513	40,894	66,261	21,456	4,886	3,766	26,778	3,913	2,075	62,874	3,387	66,261	801	0	3,998 9/	0

1/ Groundwater used in San Mateo Watershed
2/ Import used in San Mateo Watershed
3/ Loss = Total production less total use
4/ Irrigation 1966 to 1976 by pumping from Vail Lake.
Figures from 1966 to 1972 supplied by USGS; 1972 to 2002 supplied by RCWD.
5/ Discharge from 2MGD Demonstration project
6/ Includes 98 acre feet from wells out of groundwater area
7/ Import recharge was 2,294 AF but portion remaining in storage was not computed due to lack of data
8/ Import recharge was 701 AF but portion remaining in storage was not computed due to lack of data
9/ Does not include EMWD reclaimed wastewater production

TABLE B-9

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

U.S.M.C. - CAMP PENDLETON
EXCLUDING NAVAL WEAPONS STATION SHOWN ON B-10

Quantities in Acre Feet

	PRODUCTION			USE						RECLAIMED WASTEWATER				
WATER YEAR	AG LOCAL	CAMP SUPPLY	TOTAL	AGRICULTURE IN SMRW 1/	AGRICULTURE OUT SMRW	CAMP SUPPLY IN SMRW 2/	CAMP SUPPLY OUT SMRW	TOTAL EXPORT	TOTAL IN SMRW 3/	RECLAIMED USE IN SMRW 4/	RECLAIMED USE OUT SMRW 5/	EXPORTED TO OCEANSIDE OUTFALL	TOTAL 6/	NET EXPORT 7/
1966	1,101	4,605	5,706	429	672	2,026	2,579	3,251	2,455	1,893			1,893	
1967	796	4,811	5,607	310	486	2,117	2,694	3,180	2,427	2,156			2,156	
1968	986	4,939	5,925	385	601	2,172	2,767	3,368	2,557	2,080			2,080	
1969	940	4,821	5,761	367	573	2,058	2,763	3,276	2,485	2,189			2,189	
1970	1,106	5,481	6,587	431	675	2,347	3,134	3,809	2,778	2,145			2,145	
1971	819	5,291	6,110	319	500	2,264	3,028	3,527	2,583	2,011			2,011	
1972	817	5,323	6,140	319	498	2,278	3,045	3,543	2,597	2,068			2,068	
1973	1,003	5,121	6,124	391	612	2,189	2,932	3,544	2,580	2,137			2,137	
1974	909	5,202	6,111	355	554	2,224	2,978	3,532	2,579	2,055			2,055	
1975	757	4,593	5,350	295	462	1,957	2,636	3,098	2,252	2,519			2,519	
1976	885	5,384	6,269	345	540	2,305	3,079	3,619	2,650	2,447			2,447	
1977	994	4,506	5,500	388	606	1,918	2,588	3,194	2,306	2,358			2,358	
1978	176	5,177	5,353	69	107	2,213	2,964	3,071	2,282	2,446			2,446	
1979	1,070	7,213	8,283	417	653	3,109	4,104	4,756	3,527	2,493			2,493	
1980	835	5,495	6,330	326	509	2,353	3,142	3,651	2,679	2,506			2,506	
1981	1,464	5,240	6,704	571	893	2,241	2,999	3,892	2,812	2,368			2,368	
1982	1,447	5,024	6,471	564	883	2,146	2,878	3,761	2,710	2,254			2,254	
1983	942	4,215	5,157	367	575	1,790	2,425	3,000	2,157	2,494			2,494	
1984	1,078	4,501	5,579	420	658	1,916	2,585	3,243	2,336	2,443			2,443	
1985	1,069	4,764	5,833	417	652	2,039	2,725	3,377	2,456	2,619			2,619	
1986	953	4,807	5,760	372	581	2,062	2,745	3,326	2,434	2,240			2,240	
1987	1,098	4,838	5,936	428	670	2,064	2,774	3,444	2,492	3,166			3,166	
1988	1,223	4,721	5,944	477	746	2,010	2,711	3,457	2,487	3,396			3,396	
1989	856	5,044	5,900	334	522	2,148	2,896	3,418	2,482	2,747			2,747	
1990	855	4,228	5,083	333	522	1,779	2,449	2,971	2,112	2,728			2,728	
1991	554	3,159	3,713	216	338	1,329	1,830	2,168	1,545	2,289	362		2,651	
1992	898	3,254	4,152	350	548	1,376	1,878	2,426	1,726	2,481	279		2,760	
1993	1,067	2,879	3,946	416	651	1,201	1,678	2,329	1,617	2,975	205		3,180	
1994	1,471	3,150	4,621	574	897	1,345	1,805	2,702	1,919	2,535	279		2,814	
1995	985	3,768	4,753	384	601	1,588	2,180	2,781	1,972	2,453	280		2,733	
1996	1,000	5,199	6,199	390	610	2,232	2,967	3,577	2,622	2,444	330		2,774	
1997	1,066	5,238	6,304	416	650	2,244	2,994	3,644	2,660	2,920	509		3,429	
1998	1,026	5,468	6,494	400	626	2,352	3,116	3,742	2,752	3,008	222		3,230	
1999	1,064	5,054	6,118	415	649	2,145	2,909	3,558	2,560	3,023	205		3,228	
2000	1,296	5,765	7,061	506	790	2,483	3,282	4,072	2,989	3,152	411		3,563	
2001	1,025	5,341	6,366	399	626	2,314	3,027	3,653	2,713	3,140	454		3,594	
2002	1,184	5,269	6,453	462	722	2,290	2,979	3,701	2,752	2,900	469		3,369	
2003	1,270	5,210	6,480	495	775	2,218	2,992	3,767	2,713	2,687	415		3,102	
2004	1,227	5,538	6,765	479	748	2,396	3,142	3,890	2,875	0	444	2,544	2,988	
2005	1,317	4,902	6,219	514	803	2,134	2,768	3,571	2,648	0	489	2,526	3,015	
2006	1,530	5,311	6,841	597	933	2,301	3,010	3,943	2,898	0	449	2,298	2,747	
2007	1,385	5,850	7,235	540	845	2,535	3,315	4,160	3,075	0	416	2,309	2,725	
2008	1,606	5,315	6,921	579	1,027	2,603	2,712	3,739	3,182	0	357	2,430	2,787	
2009 R	882	5,516	6,398	273	609	2,593	2,923	3,532	2,866	49	488	1,966	2,503	4,243
2010	645	5,137	5,782	202	443	2,672	2,465	2,908	2,874	6	396	1,839	2,241	4,068

1/ For years 1966 - 2007 agricultural water use is divided with 39% used inside SMRW and 61% used outside SMRW, thereafter proportions are provided by Camp Pendleton.
2/ Prior to 1969 44% used inside the SMRW and 56% used outside the SMRW. For 1969 - 2007 Camp Supply water use inside SMRW equals 44% of sum of Camp. Supply production plus Naval Weapons Station Import, less the NWS Import. Annual proportions provided by Camp Pendleton beginning 2008.
3/ Assumes no losses.
4/ For years 1966 - 2003 reclaimed use inside SMRW reported as recharged wastewater from ponds and recharge areas. See prior reports from 2008 and earlier for additional information.
5/ Reclaimed use for irrigation of golf course, landscaping and park areas.
6/ All wastewater treated at Southern Regional Tertiary Treatment Plant (SRTTP) beginning December 2008.
7/ Net Export equals the sum of Agriculture Out, Camp Supply Out, Reclaimed Out and export to Oceanside Outfall, minus wastewater return, as shown on Table A-8.
R - Revised

TABLE B-10

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

U. S. NAVAL WEAPONS STATION, FALLBROOK ANNEX

Quantities in Acre Feet

	PRODUCTION			USE				WASTEWATER
WATER YEAR	LOCAL	IMPORT TO WATERSHED 1/	TOTAL	AG	COMMERCIAL/ DOMESTIC	LOSS 2/	TOTAL USE	EXPORTS
1966	87	0	87	0	79	9	87	0
1967	92	0	92	0	83	9	92	0
1968	108	0	108	0	97	11	108	0
1969	138	0	138	0	113	25	138	0
1970	152	0	152	0	125	27	152	0
1971	39 P	76 E	115	0	100	15	115	0
1972	0	115 E	115	0	105	10	115	0
1973	0	115 E	115	0	105	10	115	0
1974	0	115 E	115	0	105	10	115	0
1975	0	115 E	115	0	105	10	115	0
1976	0	115 E	115	0	105	10	115	0
1977	0	115 E	115	0	105	10	115	0
1978	0	115 E	115	0	105	10	115	0
1979	0	115 E	115	0	105	10	115	0
1980	0	115 E	115	0	105	10	115	0
1981	0	115 E	115	0	105	10	115	0
1982	0	115 E	115	0	105	10	115	0
1983	0	115 E	115	0	105	10	115	26 E
1984	0	115 E	115	0	105	10	115	26 E
1985	0	102	102	0	93	9	102	26 E
1986	0	94	94	0	85	9	94	18 P
1987	0	116	116	0	105	11	116	27
1988	0	120	120	0	109	11	120	25
1989	0	128	128	0	116	12	128	22
1990	0	145	145	0	132	13	145	27
1991	0	109	109	0	99	10	109	11
1992	0	99	99	0	90	9	99	7
1993	0	117	117	0	106	11	117	16
1994	0	73	73	0	66	7	73	5
1995	0	125	125	0	114	11	125	12
1996	0	100	100	0	91	9	100	5
1997	0	109	109	0	99	10	109	6
1998	0	97	97	0	88	9	97	8
1999	0	111	111	0	101	10	111	5
2000	0	104	104	0	95	9	104	7
2001	0	73	73	0	66	7	73	8
2002	0	97	97	0	88	9	97	9
2003	0	88	88	0	80	8	88	10
2004	0	73	73	0	66	7	73	8
2005	0	40	40	0	36	4	40	16
2006	0	64	64	0	58	6	64	8
2007	0	70	70	0	64	6	70	12
2008	0	82	82	0	75	7	82	11
2009	0	74	74	0	67	7	74	12
2010	0	69	69	0	63	6	69	7

1/ - Estimate 1969-1984 - Records not available
2/ - Loss = 10% of Use

E - Estimate
P - Partial year data

TABLE B-11

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

WESTERN MUNICIPAL WATER DISTRICT
MURRIETA DIVISION

Quantities in Acre Feet

	PRODUCTION			USE					
WATER YEAR	WELLS	IMPORT	TOTAL	AG	COMM	DOM	TOTAL DELIVERED	LOSS *	TOTAL USE
1966	41	0	41	0	0	37	37	4	41
1967	45	0	45	0	0	41	41	4	45
1968	54	0	54	0	0	49	49	5	54
1969	54	0	54	0	0	49	49	5	54
1970	73	0	73	0	0	66	66	7	73
1971	83	0	83	3	0	72	75	8	83
1972	111	0	111	10	0	91	101	10	111
1973	92	0	92	11	0	72	84	8	92
1974	132	0	132	14	0	107	120	12	132
1975	153	0	153	18	0	121	139	14	153
1976	117	0	117	22	0	84	106	11	117
1977	170	0	170	21	0	134	155	15	170
1978	169	0	169	19	0	135	154	15	169
1979	197	0	197	19	0	160	179	18	197
1980	218	0	218	20	0	178	198	20	218
1981	265	0	265	30	0	211	241	24	265
1982	230	0	230	21	0	188	209	21	230
1983	216	0	216	14	0	182	196	20	216
1984	304	0	304	26	0	250	276	28	304
1985	308	0	308	19	0	261	280	28	308
1986	305	0	305	22	0	255	277	28	305
1987	326	0	326	23	0	273	296	30	326
1988	303	0	303	13	35	262	275	28	303
1989	286	0	286	11	72	262	344	(4)	286
1990	465	0	465	13	76	266	355	110	465
1991	459	0	459	15	88	250	353	106	459
1992	492	0	492	6	122	302	430	62	492
1993	508	0	508	4	105	323	432	76	508
1994	512	0	512	10	103	324	437	75	512
1995	521	0	521	12	99	321	432	89	521
1996	629	0	629	88	113	384	585	44	629
1997	638	0	638	76	99	392	567	71	638
1998	603	0	603	79	90	362	531	72	603
1999	827	0	827	79	125	548	752	75	827
2000	1,123	0	1,123	199	365	519	1,083	40	1,123
2001	1,389	0	1,389	163	414	740	1,317	72	1,389
2002	1,679	0	1,679	230	348	1,115	1,693	(14)	1,679
2003	1,748	102	1,850	272	275	1,340	1,887	(37)	1,850
2004	1,979	330	2,309	282	407	1,479	2,168	141	2,309
2005	2,098	75	2,173	262	274	1,539	2,075	98	2,173
2006	2,233	316	2,549	338	396	1,696	2,430	119	2,549
2007	1,978	723	2,701	467	276	1,980	2,723	(22)	2,701
2008	210	2,180	2,390	408	251	1,827	2,486	(96)	2,390
2009	861	1,654	2,515	396	219	1,723	2,338	177	2,515
2010	753	1,462	2,215	264	140	1,642	2,046	169	2,215

* Loss = Total production less total delivered

TABLE B-12

SANTA MARGARITA RIVER WATERSHED
MISCELLANEOUS WATER PRODUCTION AND IMPORTS

Quantities in Acre Feet

	IMPORT	PRODUCTION					
YEAR	WESTERN MWD IMPORTS TO IMPROVEMENT DISTRICT A	ANZA MUTUAL WATER COMPANY	OUTDOOR RESORTS RANCHO CALIFORNIA, INC.	QUIET OAKS MOBILE HOME PARK	LAKE RIVERSIDE ESTATES	HAWTHORN WATER SYSTEM	JOJOBA HILLS SKP RESORT
1966	23.50						
1967	20.40						
1968	27.00						
1969	24.60						
1970	30.60						
1971	34.40						
1972	34.10						
1973	30.20						
1974	36.40						
1975	34.20						
1976	35.00						
1977	24.20						
1978	26.00						
1979	24.00						
1980	24.70						
1981	34.30						
1982	34.20						
1983	26.00						
1984	26.00						
1985	27.00						
1986	34.40						
1987	35.50						
1988	35.70						
1989	22.80	33.00	42.00	23.50	249.52		
1990	21.90	37.00	50.69	23.50	247.42		
1991	20.70	35.06	50.59	12.21	339.77		
1992	24.60	31.21	42.86	12.24	279.04		
1993	31.40	32.16	42.44	12.20	192.09		
1994	36.60	37.32	38.04	23.82	262.69		
1995	29.10	45.69	69.54	22.60	130.06		
1996	35.10	45.53	58.59	21.96	219.73		
1997	30.40	43.87	83.42	30.25	233.56		
1998	31.00	39.54	87.42	24.41	134.96		
1999	40.70	33.30	70.74	25.70	209.55		
2000	41.90	44.67	90.10	24.58	316.57		53.28
2001	58.70	45.00	208.64	23.21	274.25		74.87
2002	64.40	41.10	216.13	24.43	323.65	82.87	91.83
2003	42.40	44.04	201.63	34.56	255.93	81.61	74.70
2004	50.30	40.44	216.77	32.20	350.80	94.19	74.89
2005	62.20	38.26	187.06	18.09	208.08	55.87	66.95
2006	65.80	51.36	198.92	27.30	268.60	40.25	64.68
2007	45.30	39.33	480.70	19.80	421.56	37.22	66.98
2008	53.90	34.13	483.69	23.30	334.31	21.56	65.50
2009	50.90	34.13	492.26	23.30	347.51	25.36	67.86
2010	62.30	36.97	510.42	23.30	255.19	24.01	55.39

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

APPENDIX C

SUBSTANTIAL USERS OUTSIDE

ORGANIZED WATER SERVICE AREAS

September 2011

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED 2009-10	IRRIGATED CROP 2009-10	WELL/ DIVERSION LOCATION TWP/RNG/SEC	WELL PRODUCTION AC. FT	SURFACE DIVERSION AC. FT
AGUANGA GROUNDWATER AREA								
Vail Custodial Services	43425 Sage Road	917-050-009	309.74	Total				
and	Aguanga, Ca. 92536	917-050-007	82.19	|				
Vail Lake Rancho California		581-070-013	43.10	of				
		581-070-015	2.73	|				
		581-070-016	157.21	|				
		581-150-013	120.56	|				
		581-150-016	25.37	|				
				30.00	Alfalfa	8S/1E-7N(1)	Total	
						8S/1E-7N(2)	of	
						8S/1E-7Q(1)	|	
						8S/1E-7Q(2)	90.00	
Val Verde Partners	m/t P.O. Box 1974	583-040-022	97.78	Total		8S/1E-19Q(1)	0.00	
	Rancho Santa Fe,	583-040-021	13.45	|	Oats and	8S/1E-19Q(2)	0.00	
	Ca. 92067	583-130-001-3	80.00	of	Pasture			
	43023 Hwy 79	583-120-001-2	120.00	|				
	Aguanga, CA 92536	583-060-003-9	41.60	13.45				
						8S/1E-29L Diversion		56.80
Kamata, Nobuo	42551 Hwy 79	583-040-028	25.52	0.00				
and Osamu	Aguanga, Ca. 92536	583-040-029	19.89	0.00		8S/1E-19K	0.00	
						8S/1E-19G4	0.00	
		583-040-024	23.48	0.00				
		583-040-025	23.12	0.00				
		583-040-026	23.16	0.00				
		583-040-027	22.64	0.00				
						8S/1E-29L Diversion		0.00
Aguanga	c/o Jim Holden	583-120-091	39.57	20.00	Row Crops	8S/1E-33D	Total	
Properties LLC	P. O. Box 519	583-120-083	68.09	65.00	Row Crops	8S/1E-28N1	|	
	Corona, Ca. 91718					8S/1E-28N(2)	|	
(Twin Creek Ranch)	44201 Hwy 79 Aguanga						|	
	44735 Hwy 79 Aguanga	583-120-090	132.82	40.00	Row Crops	8S/1E-29H	of	
		583-150-001	80.00	20.00	Row Crops		|	
							|	
		583-140-014	48.03	15.00	Row Crops	8S/1E-33F	|	
		583-140-015	40.00	35.00	Row Crops	8S/1E-33G1	|	
		583-140-016	40.00	36.00	Row Crops	8S/1E-33B	924.00	
		583-140-018	10.09					
		583-140-019	10.12					
		583-140-020	10.15					

 Well number in parentheses designated by Watermaster

APPENDIX C

SANTA MARGARITA RIVER WATERSHED

SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED 2009-10	IRRIGATED CROP 2009-10	WELL/ DIVERSION LOCATION TWP/RNG/SEC	WELL PRODUCTION AC. FT	SURFACE DIVERSION AC. FT
AGUANGA GROUNDWATER AREA (Cont)								
Robert Yanick	41750 Highway 79	917-050-006	233.57	40.00	Row Crops	8S/1W-13Q1	Total of	
	Aguanga, CA 92536					8S/1W-13Q2	420.00	
		917-170-003	80.81	25.00	Row Crops			
		917-290-001	126.26	20.00	Row Crops			
		917-290-002	82.25	20.00	Row Crops			
Dolores G. Harris	44444 Sage Road	581-160-025	18.10	Total Of		8S/1E-18J(1)	0.00	
	Aguanga, CA 92536			17.00	Citrus & Grass	8S/1E-18J(2)	0.00	
		581-160-015	7.42	10.00	Fruit			
		581-150-009	7.00	6.00	Fruit	8S/1E-18H(1)	9.99	
						8S/1E-18H(2)	0.00	
		581-180-022	30.00	0.00				
		581-180-004	20.00	0.00				
		581-180-020	20.00	0.00		8S/1E-17M	23.61	
		581-180-021	2.15			8S/1E-17E	22.37	
Valeywide Recreation and Parks District	901 W. Esplanade Ave San Jacinto, CA 92582	581-170-009	7.82	7.82	Grass	Used 8S/1E-17E	owned by Harris	
Wilson Creek Farms	Sage Road	581-170-012	190.40	60.00	Row Crops	8S/1E-17B	250.00	
	Aguanga, CA 92536	581-170-013	99.63					
	m/t P. O. Box 2921	581-180-005	2.76					
	Hemet, CA 92546	581-180-009	120.00	110.00	Row Crops			
		581-190-013	280.00					
		581-190-014	40.00					
Wilson Creek	Sage Road	581-070-002	160.00					
Development LLC	Aguanga, CA 92536	581-070-005	640.00			8S/1E-9Q		400.00
	m/t P. O. Box 2921	581-100-013	80.00					
	Hemet, CA 92546	581-100-019	30.00					
		581-100-020	10.00					
		581-100-022	20.00					
		581-100-038	9.53					
		581-100-039	9.23					
		581-100-040	8.91					
TOTAL AGUANGA GROUNDWATER AREA				**590.27**			**1,739.97**	**456.80**

 Well number in parentheses designated by Watermaster

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED 2009-10	IRRIGATED CROP 2009-10	WELL/ DIVERSION LOCATION TWP/RNG/SEC	WELL PRODUCTION AC. FT	SURFACE DIVERSION AC. FT
TEMECULA CREEK ABOVE AGUANGA GROUNDWATER AREA								
Agri-Empire, Inc.	m/t P. O. Box 490	113-090-01	377.07	120.00	Potatoes			
	San Jacinto, CA 92383	113-090-03	21.46					
		113-090-05	541.22					
		113-100-01	389.81			9S/2E-11B - Diversion		0.00
		113-130-01	150.09			9S/2E-17D - Spring		0.00
		113-140-03	196.54			9S/2E-16N2	0.00	
						9S/2E-16M	144.00	
						9S/2E-16F1	0.00	
						9S/2E-16N1	17.00	
						9S/2E-16F2	0.00	
						9S/2E-16K - Diversion		0.00
		113-140-04	503.24					
		113-140-05	45.09					
		113-140-06	93.94					
		114-020-09	37.16					
		114-030-08	331.79			9S/2E-22	0.00	
		114-030-26	42.87					
* Land leased from	37126 Hwy 79	113-140-01 *	358.62	80.00	Potatoes	9S/2E-16B(1)	149.00	
Arlie W. and	Warner Springs, CA 92086					9S/2E-16B(2)	0.00	
Coral R. Bergman						9S/2E-16G	0.00	
		113-140-02 *	38.75	0.00				
Hill Springs Farm LLC	m/t 555 Deodar Lane	113-060-012	63.21	20.00	Bermuda Grass	9S/2E-7D	38.00	
	Bradbury CA 91008					9S/2E-7E - Diversion		38.00
	38642 Highway 79	112-030-72	129.90	0.00		9S/1E-1M - Diversion		0.00
	Warner Springs, CA 92086	112-030-74	70.50	0.00		9S/1E-1Q(1)	0.00	
		112-030-38	40.00	0		9S/1E-12A	Domestic	
		112-030-67	67.41	0.00		Use 9S/1E-1Q(1)		
Lovingier Family Trust	35490 Highway 79	114-120-042	78.41	Total		9S/2E-35D1	Total	
	Warner Springs, CA 92086			|		9S/2E-35D1	|	
		114-070-007	76.42	|		9S/2E-27R1	|	
				of		9S/2E-27R2	of	
				|		9S/2E-27J	332.35	
		114-080-014	42.51	|				
		114-080-013	21.30	87.46	Pasture			
TOTAL TEMECULA CREEK ABOVE AGUANGA GROUNDWATER AREA				**307.46**			**680.35**	**38.00**

 Well number in parentheses designated by Watermaster

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED 2009-10	IRRIGATED CROP 2009-10	WELL/ DIVERSION LOCATION TWP/RNG/SEC	WELL PRODUCTION AC. FT	SURFACE DIVERSION AC. FT
WILSON CREEK ABOVE AGUANGA GROUNDWATER AREA								
ANZA VALLEY								
Greenwald, Alvin G.	6010 Wilshire Blvd #500	573-180-001	156.38	0.00		7S/3E-17E	0.00	
	Los Angeles, CA 90036	576-070-001	70.00	0.00		7S/3E-20N	0.00	
Agri-Empire, Inc.	P.O. Box 490							
	San Jacinto, CA 92383							
	Section 10	575-050-044	14.36	0.00				
		575-060-002	133.93	0.00		7S/3E-11N4	247.00	
						7S/3E-11P3	154.00	
	Section 13	575-100-037	57.80	0.00				
	Section 14	575-110-021	143.75	110.00	Row Crops	7S/3E-14D1	12.00	
		575-110-027	54.45	0.00				
		575-310-002	39.09	0.00		7S/3E-14C2	209.00	
		575-310-011	80.00	0.00				
		575-310-012	80.00	0.00				
		575-310-013	17.46	0.00				
		575-310-014	0.75	0.00				
		575-310-027	17.46	0.00				
		575-310-028	0.92	0.00				
		575-090-010	38.80	0.00				
	Section 17	573-180-011	39.74	0.00				
	Section 20	576-060-009	8.26	0.00				
		576-060-031	16.09	0.00				
		576-060-033	79.45	0.00				
		576-060-038	5.41	0.00				
		576-070-003	80.00	0.00				
		576-070-005	116.57	0.00				

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED 2009-10	IRRIGATED CROP 2009-10	WELL/ DIVERSION LOCATION TWP/RNG/SEC	WELL PRODUCTION AC. FT	SURFACE DIVERSION AC. FT
WILSON CREEK ABOVE AGUANGA GROUNDWATER AREA								
ANZA VALLEY (Cont)								
Agri-Empire, Inc. (Cont)								
* Leased from	Section 21	576-100-061	37.71	0.00				
Dyson Development		576-080-017*	133.71	133.29	Potatoes			
437 S. Highway 101								
Solana Beach, CA 92075								
	Section 22	576-100-061	37.71	37.71	Row Crops			
		576-110-001	160.00	80.00	Potatoes and Row Crops	7S/3E-21P(1)	235.00	
		576-110-002	28.00	0.00				
		576-110-003	2.00	0.00				
		576-110-004	50.00	30.00	Row Crops			
		576-110-006	19.29	0.00				
		576-110-007	17.82	0.00				
		576-110-008	17.00	0.00		7S/3E-21R (4)	213.00	
		576-110-009	18.41	0.00		7S/3E-21R3	314.00	
		575-130-003	19.55	0.00				
		575-130-006	40.89	0.00				
		575-130-008	18.56	90.00	Potatoes			
		575-130-009	20.06	0.00				
		575-130-010	20.07	0.00				
		575-130-011	19.19	0.00				
		575-130-012	18.18	0.00				
		575-130-013	19.02	0.00				
		575-130-014	19.00	0.00				
		575-130-015	17.58	0.00				
		575-120-018	20.45	59.23	Potatoes			
		575-120-019	20.45	0.00				
		575-120-033	4.69	0.00				
		575-120-034	4.68	0.00				
		575-120-035	4.28	0.00				
* Leased from Dionisios & Irini Argyros		575-120-028*	4.91	Total				
2813 Monogram Avenue		575-120-029*	1.90	|				
Long Beach, CA 90815		575-120-030*	4.90	of				
		575-120-031*	4.90	18.27	Potatoes			
	Section 23	575-140-006	9.90	0.00				
		575-140-020	90.48	0.00				

 Well number in parentheses designated by Watermaster

APPENDIX C

SANTA MARGARITA RIVER WATERSHED

SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED 2009-10	IRRIGATED CROP 2009-10	WELL/ DIVERSION LOCATION TWP/RNG/SEC	WELL PRODUCTION AC. FT	SURFACE DIVERSION AC. FT
WILSON CREEK ABOVE AGUANGA GROUNDWATER AREA								
ANZA VALLEY (Cont)								
Burnett, Gregory V.	36990 Bonita Vista, Anza	573-040-001	235.20	0.00		7S/3E-5	3.00	
	m/t P. O. Box 391111	573-040-002	30.00	0.00				
	Anza, CA 92539	573-050-001	246.33	0.00				

Cahuilla Indian Reservation

Domestic and Commercial Wells Reported by Bureau of Indian Affairs

Wells in Basement Complex	Wells out of Watershed	Wells with QYAL and/or QTOAL				Total of
7S/2E-14L1	8S/3E-2A1	7S/2E-14J1	7S/2E-28Q1	7S/3E-31L		
7S/2E-25D1	8S/3E-2B1	7S/2E-14M1	7S/2E-33C1	7S/3E-31L2		
7S/2E-26B1	8S/3E-2D1	7S/2E-14M2	7S/2E-33E1	7S/3E-34E1		
7S/2E-26B2	8S/3E-2E1	7S/2E-14R1	7S/2E-33N1	7S/3E-34N1		
7S/2E-26B3	8S/3E-2G1	7S/2E-23A1	7S/3E-27C1	7S/3E-34Q1		
7S/2E-34E1	8S/3E-2H1	7S/2E-23D1	7S/3E-27C2	8S/2E-4D1		
7S/2E-36A1	8S/3E-2K1	7S/2E-23F1	7S/3E-27H1	8S/2E-4N1		
7S/2E-36J1		7S/2E-23G1	7S/3E-27M1	8S/2E-4N2		
7S/2E-36R1		7S/2E-23H1	7S/3E-28A1	8S/2E-4P1		
7S/3E-26A1		7S/2E-23K1	7S/3E-28A2	8S/2E-4R1		
7S/3E-29Q1		7S/2E-23M1	7S/3E-28D1	8S/2E-4R2		
7S/3E-30H1		7S/2E-23P1	7S/3E-29C1	8S/3E-5Q1		
7S/3E-31A1		7S/2E-23Q1	7S/3E-29M1	8S/3E-6J1		
7S/3E-31N1		7S/2E-25C1	7S/3E-3OP1			
7S/3E-31Q1		7S/2E-25F1	7S/3E-3OQ1			
7S/3E-32D1		7S/2E-25R1	7S/3E-3OR1			
7S/3E-32D2		7S/2E-26E1	7S/3E-3OR2			
8S/3E-6B1		7S/2E-26L1	7S/3E-3OR3			
8S/3E-6B2		7S/2E-27A1	7S/3E-31C1			
8S/3E-6G1		7S/2E-27H1	7S/3E-31F1			
8S/3E-6R1		7S/2E-28N1			Domestic	46.00
					Stock Watering	5.60 (Surface Diversion)

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED 2009-10	IRRIGATED CROP 2009-10	WELL/ DIVERSION LOCATION TWP/RNG/SEC	WELL PRODUCTION AC. FT	SURFACE DIVERSION AC. FT
SUBTOTAL ANZA VALLEY				**558.50**			**1,433.00**	**5.60**
WILSON CREEK ABOVE AGUANGA GROUNDWATER AREA								
LEWIS VALLEY								
Green Shell Company	39850 Sage Road Hemet, CA 92343	571-080-012	80.00	50.00	Olive Trees	7S/1E-20Q	55.00	
SUBTOTAL LEWIS VALLEY				**50.00**			**55.00**	**0.00**
TOTAL WILSON CREEK ABOVE AGUANGA GROUNDWATER AREA				**608.50**			**1,488.00**	**5.60**

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APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED 2009-10	IRRIGATED CROP 2009-10	WELL/ DIVERSION LOCATION TWP/RNG/SEC	WELL PRODUCTION AC. FT	SURFACE DIVERSION AC. FT
MURRIETA-TEMECULA GROUNDWATER AREA								
Louidar	c/o McMillan Farm Mgt.	943-040-011	19.22	18.00	Citrus	7S/2W-28L	255.00	
	29379 Rancho Cal. Rd	943-060-010	90.76	89.00	Citrus			
	#201	943-060-011	26.47	29.00	Citrus			
	Temecula, CA 92390							
Anza Grove	c/o McMillan Farm Mgt.	942-180-002	40.28	Total				
Selina J Cavaletto	29379 Rancho Cal. Rd	942-240-003	40.83	of				
Lassalette Enterprise	#201	942-240-004	40.83					
	Temecula, CA 92390	942-240-005	39.31	155.00	Citrus	7S/2W-26B1	240.00	
Vail Lake USA LLC	29400 Rancho Cal. Road	917-240-019	54.13	0.00				
Mendoza, Bertha	Temecula, CA 92593	917-240-015	20.00	0.00				
		917-150-006	120.00	110.00	Citrus	8S/1W-21K(1)	262.00	
	38695 Highway 79	917-150-002	117.76	0.00		8S/1W-21K(2)		
	Warner Springs, CA 92086					8S/1W-21P(1)		
						8S/1W-21P(2)		
James A. Carter	Highway 79 S	943-230-001	109.34	75.00	Grapes			
	Temecula, CA	917-250-004	80.00	Total		8S/1W-25Q	0.00	
	m/t P. O. Box 28739	917-250-005	80.00	of		8S/1W-25P	28.00	
	Santa Ana, CA 92799-8739					8S/1W-25N(1)Spring 3		0.00
		917-250-007	240.00	220.00	Grapes	8S/1W-36K Spring 4		0.00
						8S/1W-36H Spring 6		0.00
						8S/1W-36K(1)	59.00	
						8S/1W-36K(2)	56.00	
						8S/1W-36K(3)	94.00	
						8S/1W-36L - Stream Diversion		52.00
Regency Properties	44051 Rainbow Cyn Rd.	922-220-002	86.11	Total		8S/2W-19(D)	304.05	
Temecula Creek Golf	Temecula, CA 92592	922-220-003	5.75					
		922-220-004	52.18					
		922-220-007	14.36					
		922-220-008	3.99	of				
		922-230-002	59.29					
		922-230-003	1.00					
		922-230-004	40.00					
		922-230-007	25.00					
		922-230-008	16.11	150.00	Grass			
Carson, David M.	25471 Hayes Ave	909-260-036	8.87	7.00	Pasture	7S/3W-29G	39.90	
and Carol J.	Murrieta, CA 92362	909-260-042	4.31	3.50	Pasture			
TOTAL MURRIETA-TEMECULA GROUNDWATER AREA				**856.50**			**1,337.95**	**52.00**

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APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED 2009-10	IRRIGATED CROP 2009-10	WELL/ DIVERSION LOCATION TWP/RNG/SEC	WELL PRODUCTION AC. FT	SURFACE DIVERSION AC. FT
SANTA MARGARITA RIVER BELOW GORGE								
DE LUZ CREEK								
Stehly Family Holdings	40922 DeLuz Road	101-271-28	45.01	0.00		8S/4W-29D(1)		
LLC	Fallbrook, CA 92028			0.00		8S/4W-29D(2)	0.00	
Prestininzi, Pete	2525 E. Mission Road	101-220-12	31.63	6.00	Pasture & Flowers			
and Dorothy N.	Fallbrook, CA 92028	101-210-53	50.44	12.00	Avocados	8S/4W-20A(1)	16.00	
	Richmond Truck Trail				and Citrus	8S/4W-20H(1)	16.00	
	and DeLuz Murrieta Road					8S/4W-20H(2)	14.00	
						8S/4W-20A - Diversion		0.00
Varela, Alfred	41125 DeLuz Rd	101-210-11	15.23	8.50	Avocados	8S/4W-20Q(1)	21.60	
	Fallbrook, CA 92028			0.50	Citrus	8S/4W-20Q(2)	Total	
Lake Forest LLC	41257 DeLuz Rd	101-210-12	30.28	10.00	Avocados	8S/4W-20Q(1)	Total	
	Fallbrook, CA 92028			18.00	Citrus	8S/4W-20Q(2)	of	
	m/t 26051 Glen Canyon Dr.					8S/4W-20Q(3)	66.20	
	Laguna Hills, CA 92653			2.00	Row crops			
Wagner Family Trust	41128 DeLuz	101-210-23	17.19	15.00	Avocados			
	Fallbrook, CA 92028	101-210-22	4.55	3.00	Persimmons	8S/4W-20P(1)	0.00	
						8S/4W-20P(2)	0.00	
						8S/4W-20P(3)	39.30	
Chambers, Robert R.	m/t 11439 Laurelcrest Dr.	101-571-03	41.72	20.00	Flowers	8S/4W-28A	52.00	
and Clytia M.	Studio City, CA 91604					8S/4W-28A - Diversion		8.00
	40888 DeLuz-Murrieta Rd.	102-130-42	73.14	5.00	Fruit	9S/4W-9B(1)*	25.00	
				20.00	Flowers	9S/4W-9B(2)*	1.00	
	* Well located in bedrock complex and outside the Court's jurisdiction					9S/4W-9B(3)*	41.00	
Welburn, Douglas J.	40787 DeLuz Murrieta Rd.	101-571-08	26.98	8.00	Gourds/Melons	8S/4W-28G1	35.00	
and Sue	Fallbrook, CA 92028			1.50	Fruit Trees			
	40751 DeLuz Murrieta Rd							
Nezami, Mohammed	2193 Calle Rociada	101-312-02	58.17	45.00	Flowers	8S/4W-31K(1)	Total	
Bluebird Ranch	Fallbrook, CA			5.00	Avocados	8S/4W-31K(2)	of	
	m/t P. O. Box 1089					8S/4W-31K(3)	|	
	Fallbrook, CA 92088	101-312-01	82.29	42.00	Flowers	8S/4W-31L	162.18	
						8S/4W-31L - Diversion		31.48
Vanginkel, Norman	39452 DeLuz Road	101-312-03	80.00	20.00	Nursery Stock	8S/4W-31J(2)	16.00	
and Deborah	Fallbrook, CA 92028					8S/4W-31J(3)	1.00	
	m/t 20664 Calle De La Ladera					8S/4W-31J(4)	50.00	
	Yorba Linda, CA 92887					8S/4W-31J(5)	0.00	
		102-052-04	22.04	10.00	Avocados			
		102-731-02	4.26					
Rose Family	William and Joanne Rose	101-430-27	2.73	Total of				
1985 Trust	39985 Daily Road	101-430-30	16.39	16.00	Avocados			
Ross Lake LLC	Fallbrook, CA 92028	101-500-01	16.62	17.00	Limes			
					Persimmons			
		101-480-14	13.20	13.00	Flowers	8S/4W-34- Lake Diversion		7.00
SUBTOTAL DELUZ CREEK				**297.50**			**556.28**	**46.48**

 Well number in parentheses designated by Watermaster

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED 2009-10	IRRIGATED CROP 2009-10	WELL/ DIVERSION LOCATION TWP/RNG/SEC	WELL PRODUCTION AC. FT	SURFACE DIVERSION AC. FT
SANTA MARGARITA RIVER BELOW GORGE (Cont)								
SANDIA CREEK								
Cal June, Inc.	m/t P. O. Box 9551 No. Hollywood, CA 91609 40376 Sandia Creek Fallbrook, CA 92028	101-360-40	126.32	55.00	Avocados	8S/4W-25P(1) 8S/4W-25P(2) 8S/4W-25P(3) 8S/4W-25P(4) 8S/4W-25P(5) 8S/4W-25P - Diversion		9.00
SUBTOTAL SANDIA CREEK				**55.00**			**0.00**	**9.00**
SANTA MARGARITA RIVER								
San Diego State University Foundation	47981 Willow Glen Rd. Temecula, CA m/t Matt Rahn, Director SDSU Foundation 5500 Campanile Dr. San Diego, CA 92182-4614	918-040-11 918-060-17	120.00 40.00	5.00 15.00	Citrus Avocados	8S/3W-33Q1 8S/3W-33Q(2) 8S/3W-33Q - Diversion	4.31 0.00	41.30
SUBTOTAL SANTA MARGARITA RIVER				**20.00**			**4.31**	**41.30**
TOTAL SANTA MARGARITA RIVER BELOW GORGE				**372.50**			**560.59**	**96.78**
LOWER MURRIETA								
Ronnenberg Family Trust (Sage Ranch Nursery)	c/o Cliff Ronnenberg 11292 Western Avenue Stanton, CA 90680 42522 E. Benton Rd. Aguanga, CA	571-020-046 571-020-047 571-020-048 571-020-049 571-020-004 571-520-007 571-520-008 571-520-009 571-520-010 915-140-003 915-140-008 470-210-007 470-220-004	81.09 40.80 36.75 148.86 1.50 109.50 99.43 80.23 78.20 101.65 21.39 53.62 121.00	0.00 0.00 0.00 0.00 0.00 Total | of | | | | 400.00	Olive trees	7S/1E-7D 7S/1E-7E - Diversion	5.50	100.00
EG High Desert Properties LLC	39800 E. Benton Rd. Temecula, CA 92390 m/t 12881 Bradley Avenue Sylmar, CA 91342	915-120-18	37.74	10.00	Pasture	7S/1W-10R(1) 7S/1W-10R(2) 7S/1W-10R(3) 7S/1W-10R(4) 7S/1W-10R(5) 7S/1W-10R(6) 7S/1W-10R(7)	Total of | 38.00 Domestic	
TOTAL LOWER MURRIETA				**410.00**			**43.50**	**100.00**
GRAND TOTAL				**3,145.23**			**5,850.36**	**749.18**
GRAND TOTAL	Not including Cahuilla Indian Reservation			**3,145.23**			**5,804.36**	**743.58**

 Well number in parentheses designated by Watermaster

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

APPENDIX D

WATER QUALITY DATA

September 2011

TABLE D-3

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY WESTERN MUNICIPAL WATER DISTRICT
MURRIETA DIVISION

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
Holiday Well	06/16/89	1300	775	122	39	100	2	178	66	372	40
7S/3W-20C09	10/18/91	---	---	---	---	---	---	---	---	---	25
	11/15/91	---	---	---	---	---	---	---	---	---	26
	12/13/91	---	---	---	---	---	---	---	---	---	28
	01/10/92	---	---	---	---	---	---	---	---	---	27
	02/07/92	---	---	---	---	---	---	---	---	---	27
	05/01/92	---	---	---	---	---	---	---	---	---	32
	05/29/92	---	---	---	---	---	---	---	---	---	28
	08/21/92	---	---	---	---	---	---	---	---	---	27
	01/22/93	960	605	83	29	83	2	130	84	278	33
	10/15/93	---	---	---	---	---	---	---	---	---	32
	03/30/94	---	---	---	---	---	---	---	---	---	44
	06/22/94	---	---	---	---	---	---	---	---	---	35
	09/14/94	---	---	---	---	---	---	---	---	---	31
	12/07/94	---	---	---	---	---	---	---	---	---	30
	03/01/95	---	---	---	---	---	---	---	---	---	32
	06/21/95	---	---	---	---	---	---	---	---	---	11
	09/13/95	---	---	---	---	---	---	---	---	---	27
	12/06/95	---	---	---	---	---	---	---	---	---	26
	03/27/96	---	---	---	---	---	---	---	---	---	15
	06/06/96	---	---	---	---	---	---	---	---	---	24
	09/11/96	---	---	---	---	---	---	---	---	---	22
	11/08/96	---	---	---	---	---	---	---	---	---	55
	11/14/96	---	---	---	---	---	---	---	---	---	25
	12/05/96	---	---	---	---	---	---	---	---	---	24
	03/27/97	---	---	---	---	---	---	---	---	---	20
	06/18/97	---	---	---	---	---	---	---	---	---	21
	12/03/97	---	---	---	---	---	---	---	---	---	18
	03/25/98	---	---	---	---	---	---	---	---	---	21
	04/22/98	1090	680	89	29	85	1	150	76	290	22
	06/17/98	---	---	---	---	---	---	---	---	---	23
	10/01/98	---	---	---	---	---	---	---	---	---	25
	12/02/98	---	---	---	---	---	---	---	---	---	28
	02/24/99	---	---	---	---	---	---	---	---	---	33
	03/24/99	---	---	---	---	---	---	---	---	---	26
	09/09/99	---	---	---	---	---	---	---	---	---	36

TABLE D-3 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY WESTERN MUNICIPAL WATER DISTRICT
MURRIETA DIVISION

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
Holiday Well (Cont)	12/03/99	---	---	---	---	---	---	---	---	---	32
7S/3W-20C09	07/12/00	---	---	---	---	---	---	---	---	---	21
	08/04/00	1290	790	110	36	99	---	180	110	320	21
	10/24/01	---	---	---	---	---	---	---	---	---	17
	03/06/02	---	---	---	---	---	---	---	---	---	15
	07/11/02	---	780	---	---	---	---	---	---	310	---
	10/03/03	---	800	113	---	---	---	---	---	332	---
	04/21/04	---	---	---	---	---	---	---	---	---	11
	01/27/05	---	980	160	47	---	---	---	---	440	---
	03/30/05	---	---	---	---	---	---	---	---	---	35
	01/26/06	1700	1000	160	48	130	1.6	240	130	---	46
	01/30/06	---	---	---	---	---	---	---	---	---	49
House Well	06/16/89	660	345	34	3	95	2	87	60	153	<1
7S/3W-20G06	02/27/91	770	---	---	---	---	---	110	65	168	<1
	03/01/91	730	---	---	---	---	---	110	---	---	<1
	03/08/91	680	420	42	5	90	2	110	68	122	<1
	05/10/91	750	---	---	---	---	---	---	---	---	<1
	10/11/91	---	---	---	---	---	---	---	---	---	<1
	11/08/91	---	---	---	---	---	---	---	---	---	<1
	05/22/92	---	---	---	---	---	---	---	---	---	<1
	08/14/92	---	---	---	---	---	---	---	---	---	<1
	01/22/93	720	415	40	5	106	2	100	68	168	<1
	09/07/94	---	---	---	---	---	---	---	---	---	<1
	12/27/95	---	---	---	---	---	---	---	---	---	<1
	03/22/95	---	---	---	---	---	---	---	---	---	<1
	06/14/95	---	---	---	---	---	---	---	---	---	<1
	09/06/95	---	---	---	---	---	---	---	---	---	<1
	12/27/95	---	---	---	---	---	---	---	---	---	<1
	03/20/96	---	---	---	---	---	---	---	---	---	<2
	06/12/96	---	---	---	---	---	---	---	---	---	<2
	09/04/96	---	---	---	---	---	---	---	---	---	<2
	12/26/96	---	---	---	---	---	---	---	---	---	<2
	03/19/97	---	---	---	---	---	---	---	---	---	<2
	06/12/97	---	---	---	---	---	---	---	---	---	<2

TABLE D-3 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY WESTERN MUNICIPAL WATER DISTRICT
MURRIETA DIVISION

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
House Well (Cont)	12/30/97	---	---	---	---	---	---	---	---	---	<2
7S/3W-20G06	03/18/98	---	---	---	---	---	---	---	---	---	<2
	04/15/98	660	360	30	3	94	1	91	62	130	<2
	06/10/98	---	---	---	---	---	---	---	---	---	<2
	10/01/98	---	---	---	---	---	---	---	---	---	<2
	12/23/98	---	---	---	---	---	---	---	---	---	<2
	02/17/99	---	---	---	---	---	---	---	---	---	<2
	03/17/99	---	---	---	---	---	---	---	---	---	<2
	06/09/99	---	---	---	---	---	---	---	---	---	<2
	09/01/99	---	---	---	---	---	---	---	---	---	<2
	12/22/99	---	---	---	---	---	---	---	---	---	ND
	03/15/00	640	370	29	3	92	2	82	61	130	<2
	06/07/00	---	---	---	---	---	---	---	---	---	<2
	09/27/00	---	---	---	---	---	---	---	---	---	<2
	10/24/01	---	---	---	---	---	---	---	---	---	<2
	03/06/02	---	---	---	---	---	---	---	---	---	<2
	07/11/02	---	440	---	---	---	---	---	---	170	---
	10/03/03	630	380	34	3	103	---	87	---	140	ND
	04/21/04	---	---	---	---	---	---	---	---	---	<2
South Well	09/07/90	690	405	62	17	68	2	83	56	229	4
7S/3W-20D	10/04/91	---	---	---	---	---	---	---	---	---	2
	11/01/91	---	---	---	---	---	---	---	---	---	3
	11/26/91	---	---	---	---	---	---	---	---	---	2
	05/15/92	---	---	---	---	---	---	---	---	---	<1
	10/01/93	---	---	---	---	---	---	---	---	---	2
	09/28/94	---	---	---	---	---	---	---	---	---	1
	12/21/94	---	---	---	---	---	---	---	---	---	3
	03/15/95	---	---	---	---	---	---	---	---	---	2
	06/07/95	---	---	---	---	---	---	---	---	---	2
	09/27/95	---	---	---	---	---	---	---	---	---	2
	12/20/95	---	---	---	---	---	---	---	---	---	3
	03/13/96	---	---	---	---	---	---	---	---	---	2
	06/15/96	---	---	---	---	---	---	---	---	---	3
	09/25/96	---	---	---	---	---	---	---	---	---	3
	12/18/96	---	---	---	---	---	---	---	---	---	3
	04/09/97	---	---	---	---	---	---	---	---	---	2
	06/04/97	---	---	---	---	---	---	---	---	---	2

ND - None Detected

TABLE D-3 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY WESTERN MUNICIPAL WATER DISTRICT
MURRIETA DIVISION

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
South Well (Cont)	03/11/98	---	---	---	---	---	---	---	---	---	<2
7S/3W-20D	04/08/98	820	500	73	18	67	2	92	73	250	3
	06/03/98	---	---	---	---	---	---	---	---	---	3
	10/01/98	---	---	---	---	---	---	---	---	---	3
	12/16/98	---	---	---	---	---	---	---	---	---	2
	03/10/98	---	---	---	---	---	---	---	---	---	2
	06/09/99	---	---	---	---	---	---	---	---	---	2
	09/22/99	---	---	---	---	---	---	---	---	---	<2
	12/15/99	---	---	---	---	---	---	---	---	---	ND
	02/09/00	810	460	55	14	84	1	99	63	210	<2
	05/03/00	---	---	---	---	---	---	---	---	---	<2
	08/04/00	780	440	47	9	100	---	99	48	210	<2
	08/23/00	---	---	---	---	---	---	---	---	---	<2
	10/24/01	---	---	---	---	---	---	---	---	---	<2
	03/20/02	---	---	---	---	---	---	---	---	---	4
	07/11/02	---	460	---	---	---	---	---	---	180	---
	10/03/03	---	460	59	---	---	---	---	---	207	---
	04/21/04	---	---	---	---	---	---	---	---	---	<2
	01/27/05	---	610	110	28	---	---	---	---	300	---
	03/30/05	---	---	---	---	---	---	---	---	---	5
	01/26/06	800	440	42	9.1	110	1.2	120	65	---	1.2
	04/12/06	---	---	---	---	---	---	---	---	---	6.1
	05/10/06	---	---	---	---	---	---	---	---	---	1.6
	06/14/06	---	---	---	---	---	---	---	---	---	1.4
	07/12/06	---	---	---	---	---	---	---	---	---	<1
	08/09/06	---	---	---	---	---	---	---	---	---	1.4
	09/13/06	---	---	---	---	---	---	---	---	---	1.5
	10/11/06	---	---	---	---	---	---	---	---	---	1.4
	11/08/06	---	---	---	---	---	---	---	---	---	1.3
	12/13/06	---	---	---	---	---	---	---	---	---	1.3
	01/10/07	---	---	---	---	---	---	---	---	---	1.4
	02/13/07	---	---	---	---	---	---	---	---	---	5.3
	03/14/07	---	---	---	---	---	---	---	---	---	1.2
	04/11/07	---	---	---	---	---	---	---	---	---	<2
	05/09/07	---	---	---	---	---	---	---	---	---	<2
	06/13/07	---	---	---	---	---	---	---	---	---	1.2
	07/11/07	---	---	---	---	---	---	---	---	---	4.7
	08/15/07	800	480	40	8.5	100	<1	110	61	200	1.1
	09/12/07	---	---	---	---	---	---	---	---	---	5.6

ND - None Detected

TABLE D-3 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY WESTERN MUNICIPAL WATER DISTRICT
MURRIETA DIVISION

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
South Well (Cont)	11/14/07	---	---	---	---	---	---	---	---	---	1.4
7S/3W-20D	12/04/07	---	---	---	---	---	---	---	---	---	1.2
	01/24/08	---	---	---	---	---	---	---	---	---	4.6
	03/26/08	---	---	---	---	---	---	---	---	---	3.9
	04/23/08	---	---	---	---	---	---	---	---	---	4.1
	06/09/08	---	---	---	---	---	---	---	---	---	4.1
	07/14/08	---	---	---	---	---	---	---	---	---	5.1
	09/08/08	---	---	---	---	---	---	---	---	---	4.9
	01/19/09	---	---	---	---	---	---	---	---	---	6.7
	11/13/09	1300	820	120	34	110	1.8	200	140	320	---
	11/17/09	---	---	---	---	---	---	---	---	---	5.8
North Well	06/16/89	730	390	40	7	98	2	98	45	201	<1
7S/3W-18J02	10/25/91	---	---	---	---	---	---	---	---	---	<1
	11/22/91	---	---	---	---	---	---	---	---	---	<1
	05/08/92	---	---	---	---	---	---	---	---	---	<1
	08/28/92	---	---	---	---	---	---	---	---	---	<1
	01/22/93	680	405	39	8	99	2	100	51	183	<1
	10/22/93	---	---	---	---	---	---	---	---	---	<1
	07/08/94	810	520	---	---	87	---	130	53	---	<1
	09/21/94	---	---	---	---	---	---	---	---	---	<1
	12/14/94	---	---	---	---	---	---	---	---	---	<1
	03/08/95	---	---	---	---	---	---	---	---	---	<1
	06/28/95	---	---	---	---	---	---	---	---	---	<1
	09/20/95	---	---	---	---	---	---	---	---	---	<1
	12/13/95	---	---	---	---	---	---	---	---	---	<1
	03/06/96	---	---	---	---	---	---	---	---	---	<2
	06/26/96	---	---	---	---	---	---	---	---	---	<2
	09/18/96	---	---	---	---	---	---	---	---	---	<2
	12/11/96	---	---	---	---	---	---	---	---	---	<2
	06/25/97	---	---	---	---	---	---	---	---	---	<2
	07/08/98	760	460	49	9	100	2	110	51	220	<2
	10/01/98	---	---	---	---	---	---	---	---	---	<2
	12/09/98	---	---	---	---	---	---	---	---	---	<2
	02/03/99	---	---	---	---	---	---	---	---	---	<2
	03/03/99	---	---	---	---	---	---	---	---	---	<2
	06/23/99	---	---	---	---	---	---	---	---	---	<2
	09/22/99	---	---	---	---	---	---	---	---	---	<2
	12/08/99	---	---	---	---	---	---	---	---	---	<2
	01/05/00	780	440	47	9	100	---	99	48	210	<2
	05/03/00	---	---	---	---	---	---	---	---	---	<2
	07/19/00	---	---	---	---	---	---	---	---	---	<2

TABLE D-3 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY WESTERN MUNICIPAL WATER DISTRICT
MURRIETA DIVISION

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
North Well (Cont)	10/24/01	---	---	---	---	---	---	---	---	---	<2
7S/3W-18J02	03/06/02	---	---	---	---	---	---	---	---	---	<2
	07/11/02	---	420	---	---	---	---	---	---	180	---
	10/03/03	---	440	53	---	---	---	---	---	---	---
	04/21/04	---	---	---	---	---	---	---	---	---	<2
	01/27/05	---	440	59	10	---	---	---	---	230	---
	03/30/05	---	---	---	---	---	---	---	---	---	<2
	01/26/06	820	450	60	11	96	2	120	52	---	1
	05/10/06	---	---	---	---	---	---	---	---	---	<1
	07/19/06	---	---	---	---	---	---	---	---	---	<1
	08/16/06	---	---	---	---	---	---	---	---	---	<1
	09/20/06	---	---	---	---	---	---	---	---	---	<1
	10/18/06	---	---	---	---	---	---	---	---	---	<1
	11/15/06	---	---	---	---	---	---	---	---	---	<1
	01/17/07	---	---	---	---	---	---	---	---	---	<1
	02/21/07	---	---	---	---	---	---	---	---	---	<2
	03/21/07	---	---	---	---	---	---	---	---	---	<2
	04/18/07	---	---	---	---	---	---	---	---	---	<2
	05/16/07	---	---	---	---	---	---	---	---	---	<2
	07/23/07	---	500	---	---	---	---	---	---	---	---
	07/26/07	---	540	---	---	---	---	---	---	---	---
	08/15/07	830	520	59	11	89	1.2	110	54	230	<2
	09/19/07	---	---	---	---	---	---	---	---	---	<2
	12/04/07	---	---	---	---	---	---	---	---	---	1.5
	01/24/08	---	---	---	---	---	---	---	---	---	1.8
	03/26/08	---	---	---	---	---	---	---	---	---	2.5
	04/23/08	---	---	---	---	---	---	---	---	---	2.0
	05/19/08	---	---	---	---	---	---	---	---	---	2.2
	06/16/08	---	---	---	---	---	---	---	---	---	2.1
	07/21/08	---	---	---	---	---	---	---	---	---	<2
	09/15/08	---	---	---	---	---	---	---	---	---	2.0
	01/19/09	---	---	---	---	---	---	---	---	---	1
	02/23/09	---	---	---	---	---	---	---	---	---	<2
	03/16/09	---	---	---	---	---	---	---	---	---	<2
	04/20/09	---	---	---	---	---	---	---	---	---	<2
	05/18/09	---	---	---	---	---	---	---	---	---	<2
	06/02/09	830	470	54	11	92	1.6	100	54	230	<2
	06/08/09	830	410	57	10	89	1.6	110	54	230	<2

TABLE D-3 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY WESTERN MUNICIPAL WATER DISTRICT
MURRIETA DIVISION

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
North Well (Cont)	06/15/09	---	---	---	---	---	---	---	---	---	<1
7S/3W-18J02	07/07/09	870	490	51	9.8	87	1.5	110	56	220	---
	07/20/09	830	460	54	10	90	1.7	110	52	220	<2
	08/03/09	820	480	49	9.4	82	1.4	120	49	220	<2
	08/25/09	---	---	---	---	---	---	---	---	---	1.2
	09/08/09	800	460	55	11	97	1.7	120	52	220	<2
	09/21/09	---	---	---	---	---	---	---	---	---	1.1
	10/05/09	780	470	55	11	97	1.8	110	53	220	<2
	10/19/09	---	---	---	---	---	---	---	---	---	<2
	11/02/09	790	470	55	11	91	1.7	110	53	220	<2
	11/16/09	---	---	---	---	---	---	---	---	---	<2
	12/07/09	810	480	56	11	94	1.8	110	52	220	<1
	12/21/09	---	---	---	---	---	---	---	---	---	<2
	01/04/10	810	470	57	11	91	1.7	110	52	220	<2
	01/18/10	---	---	---	---	---	---	---	---	---	<2
	02/01/10	860	460	59	13	87	1.7	110	54	240	1.2
	02/17/10	---	---	---	---	---	---	---	---	---	1.1
	03/01/10	810	460	56	11	88	1.7	110	55	220	<2
	03/15/10	---	---	---	---	---	---	---	---	---	<2
	04/07/10	820	450	56	11	92	1.5	110	52	220	<2
	04/19/10	---	---	---	---	---	---	---	---	---	<2
	05/03/10	810	450	57	11	92	1.5	110	52	220	<2
	05/17/10	---	---	---	---	---	---	---	---	---	1.1
	06/01/10	820	520	52	11	90	1.9	100	50	220	<2
	06/21/10	---	---	---	---	---	---	---	---	---	<2
	07/19/10	---	---	---	---	---	---	---	---	---	<2
	08/02/10	830	470	52	10	88	1.7	100	47	220	<2
	08/16/10	---	---	---	---	---	---	---	---	---	<2
New Clay Well	03/09/04	480	340	23	1	87	1	79	64	98	<2
7S/3W-20	01/26/06	590	310	20	1.2	93	1.2	85	57	---	<1
	01/31/06	---	---	---	---	---	---	---	---	---	7.2
	01/31/06	---	---	---	---	---	---	---	---	---	6.9
	04/04/06	---	---	---	---	---	---	---	---	---	<1
	04/12/06	---	---	---	---	---	---	---	---	---	<1
	05/10/06	---	---	---	---	---	---	---	---	---	<1
	06/07/06	---	---	---	---	---	---	---	---	---	<1
	07/05/06	---	---	---	---	---	---	---	---	---	<1
	08/02/06	---	---	---	---	---	---	---	---	---	<1
	09/06/06	---	---	---	---	---	---	---	---	---	<1

TABLE D-3 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY WESTERN MUNICIPAL WATER DISTRICT
MURRIETA DIVISION

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
New Clay Well (Cont)	10/04/06	---	---	---	---	---	---	---	---	---	<1
7S/3W-20	11/01/06	---	---	---	---	---	---	---	---	---	<1
	12/06/06	---	---	---	---	---	---	---	---	---	<1
	01/04/07	---	---	---	---	---	---	---	---	---	<1
	02/07/07	---	---	---	---	---	---	---	---	---	<1
	03/07/07	---	---	---	---	---	---	---	---	---	<2
	04/04/07	---	---	---	---	---	---	---	---	---	<2
	05/02/07	---	---	---	---	---	---	---	---	---	<2
	06/06/07	---	---	---	---	---	---	---	---	---	<2
	07/05/07	---	---	---	---	---	---	---	---	---	<2
	08/01/07	---	---	---	---	---	---	---	---	---	<2
	08/15/07	510	270	13	<1	91	1	65	50	83	<2
	09/05/07	---	---	---	---	---	---	---	---	---	<2
	12/04/07	---	---	---	---	---	---	---	---	---	<2
	03/26/08	---	---	---	---	---	---	---	---	---	<1
	04/23/08	---	---	---	---	---	---	---	---	---	<1
	05/05/08	---	---	---	---	---	---	---	---	---	<1
	06/02/08	---	---	---	---	---	---	---	---	---	<1
	07/07/08	---	---	---	---	---	---	---	---	---	<1
	09/02/08	---	---	---	---	---	---	---	---	---	<2
	01/19/09	---	---	---	---	---	---	---	---	---	<2
	11/13/09	630	350	25	4.7	97	1.5	84	76	110	---
	11/17/09	---	---	---	---	---	---	---	---	---	<2
Lynch Well 7S/3W-17R02	06/16/89	760	410	70	17	55	1	86	30	262	8
Morris Well 7S/3W-19R	09/07/90	530	280	38	7	68	3	50	49	168	3
Alson Well	06/06/90	1520	915	138	46	110	1	250	81	433	31
7S/3W-7M	07/21/98	1260	880	100	37	120	<1	180	92	330	23
	09/09/98	1200	850	110	39	120	<1	180	100	320	23
	05/03/00	---	---	---	---	---	---	---	---	---	20
	05/19/00	1290	800	97	36	110	<1	180	96	330	19
	11/28/01	1290	750	93	33	110	<1	180	96	310	17
	03/06/02	---	---	---	---	---	---	---	---	---	20
	07/01/02	---	650	---	---	---	---	---	---	270	---
	10/03/03	880	550	80	26	95	---	ND	ND	259	ND
	01/27/05	1100	640	100	32	110	---	150	81	320	---

ND - None Detected

TABLE D-3 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY MURRIETA COUNTY WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
Alson Well (Cont)	01/26/06	1500	870	120	41	120	1.2	230	120	---	18
7S/3W-7M	04/12/06	---	---	---	---	---	---	---	---	---	19
	05/10/06	---	---	---	---	---	---	---	---	---	18
	06/28/06	---	---	---	---	---	---	---	---	---	20
	07/26/06	---	---	---	---	---	---	---	---	---	20
	08/23/06	---	---	---	---	---	---	---	---	---	18
	09/27/06	---	---	---	---	---	---	---	---	---	21
	10/25/06	---	---	---	---	---	---	---	---	---	22
	11/22/06	---	---	---	---	---	---	---	---	---	22
	12/27/06	---	---	---	---	---	---	---	---	---	21
	01/24/07	---	---	---	---	---	---	---	---	---	22
	02/28/07	---	---	---	---	---	---	---	---	---	22
	03/29/07	---	---	---	---	---	---	---	---	---	23
	04/25/07	---	---	---	---	---	---	---	---	---	19

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TABLE D-4

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 101	06/01/88	810	495	76	15	79	8	116	16	314	---
7S/3W-34G1	08/05/88	---	---	---	---	---	---	---	---	---	<1
	05/23/90	630	365	30	6	91	2	101	35	107	3
	08/04/93	860	465	76	14	78	2	120	22	275	<1
	08/09/96	820	480	69	14	83	2	110	15	310	<2
	10/16/97	---	---	---	---	---	---	---	---	---	<2
	08/11/99	840	510	70	14	85	2	110	17	300	<2
	06/25/02	---	---	---	---	---	---	---	---	---	<2
	08/14/02	870	500	66	14	85	2.5	120	15	250	<2
	06/11/03	---	---	---	---	---	---	---	---	---	<2
	06/15/04	---	---	---	---	---	---	---	---	---	<2
	06/14/05	---	---	---	---	---	---	---	---	---	<1
	08/09/05	880	440	75	15	87	2.5	140	22	300	<1
	06/07/06	---	---	---	---	---	---	---	---	---	<1
	06/01/07	---	---	---	---	---	---	---	---	---	<2
	06/03/08	---	620	---	---	---	---	---	---	---	<2
	08/11/08	1000	550	91	18	110	2.9	150	36	300	<2
	09/09/08	---	620	---	---	---	---	---	---	---	---
	01/08/09	---	840	---	---	---	---	---	---	---	
	06/25/09	---	810	---	---	---	---	---	---	---	<2
	03/24/10	---	620	---	---	---	---	---	---	---	---
	06/02/10	---	670	---	---	---	---	---	---	---	<2
No. 102	01/04/89	695	370	9	2	134	1	101	25	195	<1
8S/3W-2Q1	01/15/92	930	615	38	4	160	3	160	55	250	<1
	05/17/95	850	475	21	1	144	1	120	130	98	<1
	06/20/95	1190	700	26	2	207	2	150	220	131	<1
	06/09/97	---	---	---	---	---	---	---	---	---	<2
No. 105	07/06/89	500	280	30	6	66	2	71	22	134	14
7S/3W-25M1	03/17/93	480	310	17	2	80	2	67	22	110	14

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 106	06/29/88	920	485	38	5	143	3	182	66	70	16
7S/3W-26R1	05/13/92	880	515	35	4	142	2	180	72	110	17
	05/16/95	870	495	32	3	138	2	160	57	116	14
	07/07/97	---	---	---	---	---	---	---	---	---	8
	07/20/98	---	---	---	---	---	---	---	---	---	9
	07/20/99	---	---	---	---	---	---	---	---	---	9
	07/06/00	---	---	---	---	---	---	---	---	---	8
	05/01/01	490	300	7	<1	96	<1	70	23	100	8
	07/10/01	---	---	---	---	---	---	---	---	---	12
	07/03/02	---	---	---	---	---	---	---	---	---	8
	07/07/03	---	---	---	---	---	---	---	---	---	6.8
	05/11/04	530	310	9	<1	93	1	80	25	88	8
	07/13/04	---	---	---	---	---	---	---	---	---	8
	07/07/05	---	---	---	---	---	---	---	---	---	6.5
	07/19/06	---	---	---	---	---	---	---	---	---	6.1
	05/02/07	550	290	8.8	<1	91	<1	84	26	85	3.7
	07/03/07	---	---	---	---	---	---	---	---	---	6
	07/07/08	---	370	---	---	---	---	---	---	---	12
	01/13/09	---	440	---	---	---	---	---	---	---	---
	04/16/09	---	310	---	---	---	---	---	---	---	---
	07/01/09	---	340	---	---	---	---	---	---	---	6.8
	03/18/10	---	440	---	---	---	---	---	---	---	---
	05/06/10	720	410	23	1.6	120	1.5	130	57	100	12
	06/02/10	---	390	---	---	---	---	---	---	---	---
	07/13/10	---	---	---	---	---	---	---	---	---	2
	09/01/10	---	340	---	---	---	---	---	---	---	---
No. 107	04/11/88	490	365	19	4	73	2	69	22	116	15
7S/3W-26J1	05/29/91	950	535	63	15	104	3	130	120	171	11
No. 108	05/25/88	780	455	51	11	96	2	120	68	153	14
7S/3W-25E1	05/29/91	930	500	59	14	104	3	130	110	153	10
	05/13/94	640	395	23	5	100	2	120	51	104	7
	05/16/95	---	---	---	---	---	---	---	---	---	5
	05/13/97	540	300	7	<1	110	<1	110	15	85	4
	05/05/99	---	---	---	---	---	---	---	---	---	8
	05/16/00	630	350	7	<1	110	<1	130	12	65	3
	05/02/01	---	---	---	---	---	---	---	---	---	2
	11/19/02	---	---	---	---	---	---	---	---	---	2
	04/14/05	---	---	---	---	---	---	---	---	---	2

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 108 (Cont)	04/18/06	---	---	---	---	---	---	---	---	---	1
7S/3W-25E1	05/12/06	750	360	8.2	<1	140	<1	190	7.9	50	1.1
	02/13/08	---	---	---	---	---	---	---	---	---	1.4
	08/06/08	---	400	---	---	---	---	---	---	---	---
	02/05/09	---	340	---	---	---	---	---	---	---	2.2
	05/08/09	730	380	7.2	<1	130	<1	170	9.4	60	<2.0
	08/05/09	---	370	---	---	---	---	---	---	---	---
	02/03/10	---	---	---	---	---	---	---	---	---	3
	05/06/10	---	380	---	---	---	---	---	---	---	---
	08/13/10	---	350	---	---	---	---	---	---	---	---
No. 109	06/01/88	1400	920	136	35	120	4	100	300	296	---
8S/2W-17J1	08/05/88	---	---	---	---	---	---	---	---	---	10
	06/12/91	1330	800	110	26	120	5	120	270	275	9
	06/22/94	1370	1010	138	32	124	5	140	320	287	7
	06/06/95	---	---	---	---	---	---	---	---	---	8
	06/13/97	1440	1010	130	31	140	4	140	330	280	10
	07/16/97	---	---	---	---	---	---	---	---	---	2.2 as N
	04/14/99	---	---	---	---	---	---	---	---	---	12
	04/11/00	---	---	---	---	---	---	---	---	---	13
	06/21/00	1330	870	120	28	130	4	120	280	270	3.2
	04/10/01	---	---	---	---	---	---	---	---	---	13
	06/11/03	1400	970	140	32	130	4	130	340	290	12
	06/19/03	1400	970	150	32	120	4.2	130	340	290	12
	01/07/04	---	---	---	---	---	---	---	---	---	13
	01/11/05	---	---	---	---	---	---	---	---	---	13
	01/04/06	---	---	---	---	---	---	---	---	---	12
	07/12/06	1300	930	130	30	130	4.8	130	280	280	12
	01/10/07	---	---	---	---	---	---	---	---	---	13
	01/04/08	---	---	---	---	---	---	---	---	---	13
	07/07/08	---	810	---	---	---	---	---	---	---	---
	01/13/09	---	860	---	---	---	---	---	---	---	16
	04/02/09	---	810	---	---	---	---	---	---	---	---
	07/06/09	---	770	---	---	---	---	---	---	---	---
	01/05/10	---	---	---	---	---	---	---	---	---	14
	04/07/10	---	930	---	---	---	---	---	---	---	---
	07/01/10	---	1000	---	---	---	---	---	---	---	---

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 110	03/31/88	1100	630	70	23	132	6	115	163	268	3
8S/1W-06K1	03/11/93	1010	610	60	21	124	5	110	200	201	3
	04/27/95	---	---	---	---	---	---	---	---	---	1
	07/20/99	---	---	---	---	---	---	---	---	---	<2
	07/06/00	---	---	---	---	---	---	---	---	---	2
	07/10/01	---	---	---	---	---	---	---	---	---	2
	03/11/02	850	500	58	20	81	5	74	190	160	<2
	07/03/02	---	---	---	---	---	---	---	---	---	<2
	09/16/03	---	---	---	---	---	---	---	---	---	2
	09/01/04	---	---	---	---	---	---	---	---	---	2
	03/02/05	810	510	56	21	79	4.9	76	170	150	<2
	09/07/05	---	---	---	---	---	---	---	---	---	1.8
	09/06/07	---	---	---	---	---	---	---	---	---	2
	03/04/08	980	560	59	21	95	4.6	110	160	190	2.5
	01/20/09	---	610	---	---	---	--- ---		---	---	---
	04/02/09	---	550	---	---	---	--- ---		---	---	---
	07/09/09	---	560	---	---	---	--- ---		---	---	---
	01/06/10	---	560	---	---	---	--- ---		---	---	---
	04/07/10	---	630	---	---	---	--- ---		---	---	---
	07/01/10	---	730	---	---	---	--- ---		---	---	---
	09/01/10	---	---	---	---	---	---	---	---	---	<2
No. 113	03/28/88	700	400	41	12	87	2	11	20	192	18
7S/2W-25H01	03/21/91	570	290	21	5	79	2	88	17	119	11
	03/03/94	700	410	46	13	86	2	120	25	189	19
	04/27/95	---	---	---	---	---	---	---	---	---	24
	03/20/97	880	500	53	15	96	2	140	33	200	22
	07/20/98	---	---	---	---	---	---	---	---	---	23
	09/16/98	---	---	---	---	---	---	---	---	---	22
	02/25/99	---	---	---	---	---	---	---	---	---	19
	04/14/99	---	---	---	---	---	---	---	---	---	17
	06/03/99	---	---	---	---	---	---	---	---	---	21
	09/14/99	---	---	---	---	---	---	---	---	---	22
	10/21/99	---	---	---	---	---	---	---	---	---	25
	11/02/99	---	---	---	---	---	---	---	---	---	22
	12/14/99	---	---	---	---	---	---	---	---	---	23
	01/11/00	---	---	---	---	---	---	---	---	---	18
	03/07/00	810	470	75	16	59	2	70	94	200	11
	04/11/00	---	---	---	---	---	---	---	---	---	23

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 113 (Cont)	05/03/00	---	---	---	---	---	---	---	---	---	24
7S/2W-25H01	06/21/00	---	---	---	---	---	---	---	---	---	23
	09/13/00	---	---	---	---	---	---	---	---	---	23
	10/06/00	---	---	---	---	---	---	---	---	---	21
	02/14/01	---	---	---	---	---	---	---	---	---	16
	05/30/01	---	---	---	---	---	---	---	---	---	23
	06/12/01	---	---	---	---	---	---	---	---	---	22
	08/01/01	---	---	---	---	---	---	---	---	---	22
	11/13/01	---	---	---	---	---	---	---	---	---	22
	05/01/02	---	---	---	---	---	---	---	---	---	19
	08/06/02	---	---	---	---	---	---	---	---	---	20
	11/05/02	---	---	---	---	---	---	---	---	---	21
	02/07/03	---	---	---	---	---	---	---	---	---	22
	03/05/03	1000	610	65	19	110	2.5	160	41	260	26
	08/05/03	---	---	---	---	---	---	---	---	---	21
	11/13/03	---	---	---	---	---	---	---	---	---	24
	02/10/04	---	---	---	---	---	---	---	---	---	24
	05/04/04	---	---	---	---	---	---	---	---	---	23
	08/10/04	---	---	---	---	---	---	---	---	---	24
	11/17/04	---	---	---	---	---	---	---	---	---	25
	02/09/05	---	---	---	---	---	---	---	---	---	25
	05/12/05	---	---	---	---	---	---	---	---	---	23
	11/02/05	---	---	---	---	---	---	---	---	---	25
	02/14/06	---	---	---	---	---	---	---	---	---	24
	03/08/06	880	540	54	15	100	2.3	140	31	210	24
	05/11/06	---	---	---	---	---	---	---	---	---	24
	08/03/06	---	---	---	---	---	---	---	---	---	21
	11/08/06	---	---	---	---	---	---	---	---	---	23
	02/07/07	---	---	---	---	---	---	---	---	---	24
	05/01/07	---	---	---	---	---	---	---	---	---	23
	08/07/07	---	---	---	---	---	---	---	---	---	23
	02/12/08	---	---	---	---	---	---	---	---	---	22
	05/06/08	---	540	---	---	---	---	---	---	---	21
	08/11/08	---	530	---	---	---	---	---	---	---	21
	11/06/08	---	570	---	---	---	---	---	---	---	24
	02/05/09	---	530	---	---	---	---	---	---	---	21
	03/03/09	930	520	56	15	97	2.1	150	41	210	22
	05/11/09	---	---	---	---	---	---	---	---	---	19
	08/04/09	---	520	---	---	---	---	---	---	---	20
	02/02/10	---	510	---	---	---	---	---	---	---	22
	05/07/10	---	600	---	---	---	---	---	---	---	22
	08/10/10	---	540	---	---	---	---	---	---	---	22

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 118	08/08/90	715	480	14	1	162	1	120	79	101	1
8S/3W-11B	09/26/90	---	---	---	---	---	---	---	---	---	1
	09/10/93	860	525	19	1	178	1	130	94	198	<1
	06/20/95	---	---	---	---	---	---	---	---	---	<1
	09/16/96	970	560	33	2	180	2	120	120	230	<2
	07/23/97	---	---	---	---	---	---	---	---	---	0.2 as N
	09/16/98	---	---	---	---	---	---	---	---	---	2
	11/02/99	1040	580	46	4	170	2	130	100	240	<2
	09/20/00	---	---	---	---	---	---	---	---	---	<2
	08/18/02	---	---	---	---	---	---	---	---	---	<2
	11/08/02	1100	590	46	4.5	160	1.3	140	94	240	<2
	09/23/03	---	---	---	---	---	---	---	---	---	<2
	12/30/04	---	---	---	---	---	---	---	---	---	<2
	01/25/05	---	---	---	---	---	---	---	---	---	<2
	09/07/05	---	---	---	---	---	---	---	---	---	<1
	11/03/05	980	590	55	5.1	150	1.7	140	110	240	<1
	09/05/07	---	---	---	---	---	---	---	---	---	1.1
	09/08/08	---	670	---	---	---	---	---	---	---	<2
	11/06/08	1100	640	71	150	150	1.9	150	140	250	ND
	12/05/08	---	660	---	---	---	---	---	---	---	---
	03/03/09	---	620	---	---	---	---	---	---	---	---
	06/04/09	---	610	---	---	---	---	---	---	---	---
	03/03/10	---	640	---	---	---	---	---	---	---	---
	06/02/10	---	630	---	---	---	---	---	---	---	---
	09/02/10	---	640	---	---	---	---	---	---	---	2.2
No. 119	07/16/96	450	280	44	9	35	<1	39	18	180	15
8S/2W-19J	08/14/97	---	---	---	---	---	---	---	---	---	12
	12/24/97	---	320	---	---	---	---	---	---	---	3.1 as N
	03/04/98	---	380	---	---	---	---	---	---	---	3.3 as N
	06/04/98	---	---	---	---	---	---	---	---	---	3.8 as N
	06/12/98	---	400	---	---	---	---	---	---	---	---
	09/16/98	---	---	---	---	---	---	---	---	---	3.7 as N
	01/08/99	---	430	---	---	---	---	---	---	---	---
	04/13/99	---	---	---	---	---	---	---	---	---	28
	06/02/99	---	560	---	---	---	---	---	---	---	4.8 as N
	07/27/99	940	640	103	21	58	1	70	150	264	30
	09/14/99	---	---	---	---	---	---	---	---	---	22
	09/14/99	---	---	---	---	---	---	---	---	---	4.8 as N
	10/26/99	---	---	---	---	---	---	---	---	---	24

ND - None Detected

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 119 (Cont)	11/02/99	---	---	---	---	---	---	---	---	---	22
8S/2W-19J	12/14/99	---	560	---	---	---	---	---	---	---	22
	04/04/00	---	---	---	---	---	---	---	---	---	20
	12/14/00	---	---	---	---	---	---	---	---	---	4.6 as N
	03/29/01	---	---	---	---	---	---	---	---	---	20
	06/20/01	---	---	---	---	---	---	---	---	---	4.2 as N
	09/14/01	---	---	---	---	---	---	---	---	---	4.2 as N
	09/28/01	---	---	---	---	---	---	---	---	---	18
	11/16/01	---	---	---	---	---	---	---	---	---	16
	05/23/02	---	480	---	---	---	---	---	---	---	18
	07/24/02	770	490	81	15	49	1.1	51	90	240	19
	11/08/02	---	---	---	---	---	---	---	---	---	15
	02/19/03	---	---	---	---	---	---	---	---	---	17
	02/10/04	---	---	---	---	---	---	---	---	---	15
	02/28/05	---	---	---	---	---	---	---	---	---	10
	07/06/05	820	600	95	20	63	1.4	64	140	260	13
	02/07/06	---	---	---	---	---	---	---	---	---	15
	02/07/07	---	---	---	---	---	---	---	---	---	15
	02/12/08	---	---	---	---	---	---	---	---	---	15
	05/14/08	---	520	---	---	---	---	---	---	---	13
	07/08/08	810	520	88	17	57	1.4	66	120	250	14
	08/11/08	---	480	---	---	---	---	---	---	---	13
	11/17/08	---	520	---	---	---	---	---	---	---	16
	02/05/09	---	460	---	---	---	---	---	---	---	13
	05/11/09	---	560	---	---	---	---	---	---	---	12
	08/04/09	---	540	---	---	---	---	---	---	---	14
	01/12/10	---	580	---	---	---	---	---	---	---	15
	04/09/10	---	560	---	---	---	---	---	---	---	13
	07/01/10	---	620	---	---	---	---	---	---	---	14
No. 120	06/20/90	570	330	6	1	116	1	82	31	113	11
8S/2W-17G	06/10/93	590	340	6	<1	122	1	85	35	104	12
	07/19/96	630	360	6	<1	120	1	88	42	120	14
	06/16/97	---	---	---	---	---	---	---	---	---	10
	08/14/97	---	---	---	---	---	---	---	---	---	9
	06/02/99	620	360	6	<1	122	<1	84	45	120	10
	06/06/00	---	---	---	---	---	---	---	---	---	11
	06/13/01	---	---	---	---	---	---	---	---	---	12
	06/01/02	670	370	8.1	<1	130	1	86	46	130	11
	06/11/03	---	---	---	---	---	---	---	---	---	12

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 120 (Cont)	06/22/04	---	---	---	---	---	---	---	---	---	15
8S/2W-17G	06/15/05	720	410	11	<1	140	1.3	90	62	140	12
	06/07/06	---	---	---	---	---	---	---	---	---	11
	06/01/07	---	---	---	---	---	---	---	---	---	10
	06/05/08	690	400	11	<1	140	104	89	66	140	10
	06/05/08	---	400	---	---	---	---	---	---	---	10
	09/15/08	---	350	---	---	---	---	---	---	---	---
	08/21/09	---	500	---	---	---	---	---	---	---	11
	02/02/10	---	440	---	---	---	---	---	---	---	---
	05/05/10	---	440	---	---	---	---	---	---	---	---
	08/09/10	---	430	---	---	---	---	---	---	---	11
No. 121	10/27/89	900	475	63	14	99	2	109	28	290	<1
7S/3W-34J	05/19/92	1000	560	72	17	120	3	170	56	270	<1
	07/18/97	---	---	---	---	---	---	---	---	---	ND
	07/24/97	---	640	---	---	---	---	---	---	---	ND
	08/20/97	---	---	---	---	---	---	---	---	---	ND
	09/03/97	---	---	---	---	---	---	---	---	---	ND
	06/19/02	---	---	---	---	---	---	---	---	---	ND
No. 122	06/23/97	---	---	---	---	---	---	---	---	---	6
8S/2W-20P1	07/25/97	660	460	64	13	44	1	61	65	190	8
	10/10/97	---	---	---	---	---	---	---	---	---	9
	12/23/97	---	400	---	---	---	---	---	---	---	1.8 as N
	03/25/98	---	450	---	---	---	---	---	---	---	2.2 as N
	06/03/98	---	---	---	---	---	---	---	---	---	2.4 as N
	06/05/98	---	460	---	---	---	---	---	---	---	---
	09/17/98	---	---	---	---	---	---	---	---	---	2.2 as N
	01/08/99	---	450	---	---	---	---	---	---	---	---
	06/03/99	---	470	---	---	---	---	---	---	---	2.1 as N
	04/13/99	---	---	---	---	---	---	---	---	---	9
	09/21/99	---	---	---	---	---	---	---	---	---	2.1 as N
	03/07/00	---	---	---	---	---	---	---	---	---	16
	04/04/00	---	---	---	---	---	---	---	---	---	9
	06/28/00	780	470	79	16	62	1	73	100	210	11
	12/13/00	---	---	---	---	---	---	---	---	---	2.5 as N
	03/27/01	---	---	---	---	---	---	---	---	---	2.5 as N
	04/18/01	---	---	---	---	---	---	---	---	---	10
	06/20/01	---	---	---	---	---	---	---	---	---	2.4 as N
	09/13/01	---	---	---	---	---	---	---	---	---	2.7 as N

ND - None Detected

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 122 (Cont)	12/13/01	---	550	---	---	---	---	---	---	---	---
8S/2W-20P2	05/14/02	---	570	---	---	---	---	---	---	---	9
	03/05/03	---	---	---	---	---	---	---	---	---	10
	03/16/04	---	---	---	---	---	---	---	---	---	12
	03/17/05	---	---	---	---	---	---	---	---	---	9
	03/21/06	---	---	---	---	---	---	---	---	---	9.4
	03/06/07	---	---	---	---	---	---	---	---	---	9.7
	03/03/08	---	---	---	---	---	---	---	---	---	8.5
	03/07/08	---	620	---	---	---	---	---	---	---	---
	10/08/08	---	620	---	---	---	---	---	---	---	---
	01/20/09	---	680	---	---	---	---	---	---	---	---
	03/10/09	---	---	---	---	---	---	---	---	---	8.9
	04/16/09	---	660	---	---	---	---	---	---	---	---
	07/14/09	---	670	---	---	---	---	---	---	---	---
	03/15/10	---	640	---	---	---	---	---	---	---	10
No. 123	06/06/90	1100	690	69	27	132	6	130	170	281	4
8S/1W-7B	06/10/93	1120	690	74	25	136	6	120	190	250	5
	02/05/97	930	550	55	18	110	5	83	130	250	1.3
	04/27/99	---	---	---	---	---	---	---	---	---	3
	06/02/99	---	---	---	---	---	---	---	---	---	3
	07/20/99	---	---	---	---	---	---	---	---	---	2
	08/11/99	---	---	---	---	---	---	---	---	---	2
	09/14/99	---	---	---	---	---	---	---	---	---	2
	10/21/99	---	---	---	---	---	---	---	---	---	2
	11/02/99	---	---	---	---	---	---	---	---	---	2
	02/09/00	1150	610	59	20	100	5	83	150	240	3
	02/09/01	---	---	---	---	---	---	---	---	---	3
	03/10/03	880	550	59	20	87	4.5	80	180	170	<2
	02/03/04	---	---	---	---	---	---	---	---	---	2
	02/14/05	---	---	---	---	---	---	---	---	---	2
	02/14/06	---	---	---	---	---	---	---	---	---	3.6
	03/14/06	890	530	65	22	88	5	91	180	180	2.3
	04/24/07	---	---	---	---	---	---	---	---	---	1.4
	05/01/07	---	---	---	---	---	---	---	---	---	2.7
	06/05/07	---	---	---	---	---	---	---	---	---	2.2
	07/05/07	---	---	---	---	---	---	---	---	---	2.5
	08/07/07	---	---	---	---	---	---	---	---	---	2.2
	09/05/07	---	---	---	---	---	---	---	---	---	2.1
	09/06/07	---	---	---	---	---	---	---	---	---	2

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
				Chemical Constituents - mg/l							
No. 123 (Cont)	10/03/07	---	---	---	---	---	---	---	---	---	2
8S/1W-7B	12/13/07	---	---	---	---	---	---	---	---	---	1.9
	01/10/08	---	---	---	---	---	---	---	---	---	1.4
	02/13/08	---	---	---	---	---	---	---	---	---	1.1
	03/03/08	---	---	---	---	---	---	---	---	---	1.3
	03/07/08	---	540	---	---	---	---	---	---	---	---
	04/08/08	---	---	---	---	---	---	---	---	---	2.2
	05/12/08	---	---	---	---	---	---	---	---	---	2.4
	06/23/08	---	---	---	---	---	---	---	---	---	2.7
	07/08/08	---	---	---	---	---	---	---	---	---	2.9
	08/12/08	---	---	---	---	---	---	---	---	---	2.6
	09/15/08	---	---	---	---	---	---	---	---	---	2.7
	11/06/08	---	---	---	---	---	---	---	---	---	2.6
	12/05/08	---	---	---	---	---	---	---	---	---	2
	01/07/09	---	640	---	---	---	---	---	---	---	ND
	02/04/09	---	---	---	---	---	---	---	---	---	1.6
	03/09/09	980	610	62	21	97	4.8	98	180	110	<2.0
	04/02/09	---	600	---	---	---	---	---	---	---	<2.0
	05/07/09										<2.0
	06/01/09	---	---	---	---	---	---	---	---	---	<2.0
	07/09/09	---	590	---	---	---	---	---	---	---	<2.0
	08/05/09	---	---	---	---	---	---	---	---	---	<2.0
	01/06/10	---	590	---	---	---	---	---	---	---	1.4
	02/02/10	---	---	---	---	---	---	---	---	---	1.1
	03/03/10	---	---	---	---	---	---	---	---	---	1.2
	04/08/10	---	600	---	---	---	---	---	---	---	1.2
	05/06/10	---	---	---	---	---	---	---	---	---	1.5
	06/02/10	---	---	---	---	---	---	---	---	---	<2
	07/01/10	---	750	---	---	---	---	---	---	---	<2
	08/10/10	---	---	---	---	---	---	---	---	---	2.4
	09/01/10	---	---	---	---	---	---	---	---	---	2.1
No. 124	06/20/90	660	380	38	4	92	3	97	48	153	13
8S/2W-11R1	07/22/93	690	430	42	5	89	3	90	57	159	17
	07/18/95	---	---	---	---	---	---	---	---	---	11
	10/26/99	700	420	45	4	94	3	97	61	160	16
	07/06/00	---	---	---	---	---	---	---	---	---	17
	07/10/01	---	---	---	---	---	---	---	---	---	16
	07/03/02	---	---	---	---	---	---	---	---	---	10
	10/02/02	600	330	24	2.4	92	1.9	75	38	150	10

ND - None Detected

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 124 (Cont)	01/08/03	---	---	---	---	---	---	---	---	---	2.3 as N
8S/2W-11R1	07/01/03	---	---	---	---	---	---	---	---	---	8.3
	07/07/04	---	---	---	---	---	---	---	---	---	9.4
	07/06/05	---	---	---	---	---	---	---	---	---	8.4
	10/05/05	580	360	19	2.4	96	1.6	74	35	140	7.8
	09/26/06	---	---	---	---	---	---	---	---	---	17
	09/05/07	---	---	---	---	---	---	---	---	---	8.2
	10/28/08	780	490	52	6.5	84	3.1	91	84	150	1.8
	01/13/09	---	390	---	---	---	---	---	---	---	---
	04/07/09	---	330	---	---	---	---	---	---	---	---
	07/09/09	---	320	---	---	---	---	---	---	---	---
	01/06/10	---	390	---	---	---	---	---	---	---	---
	07/01/10	---	390	---	---	---	---	---	---	---	---
	04/08/10	---	360	---	---	---	---	---	---	---	---
No. 125	06/20/90	740	425	17	5	132	3	99	54	186	4
8S/2W-12H	06/10/93	770	450	18	5	140	3	150	60	131	3
	06/20/95	---	---	---	---	---	---	---	---	---	2
	06/09/97	---	---	---	---	---	---	---	---	---	2
	09/17/98	---	---	---	---	---	---	---	---	---	3
	06/03/99	720	440	10	3	135	2	89	76	170	<2
	11/02/99	---	---	---	---	---	---	---	---	---	3
	11/15/00	---	---	---	---	---	---	---	---	---	2
	07/24/01	---	---	---	---	---	---	---	---	---	4
	06/19/02	700	400	8.8	2.3	130	1.8	87	54	170	<2
	07/03/02	---	---	---	---	---	---	---	---	---	2
	01/13/03	---	---	---	---	---	---	---	---	---	.38 as N
	07/01/03	---	---	---	---	---	---	---	---	---	<2
	06/09/04	---	---	---	---	---	---	---	---	---	<2
	06/14/05	650	350	8.3	2.1	130	1.6	82	52	180	1.8
	06/13/06	---	---	---	---	---	---	---	---	---	2.8
	06/05/07	---	---	---	---	---	---	---	---	---	1.6
	06/10/08	770	460	17	4.6	150	2.4	93	64	190	2.7
	09/15/08	---	370	---	---	---	---	---	---	---	---
	12/05/08	---	450	---	---	---	---	---	---	---	---
	03/04/09	---	440	---	---	---	---	---	---	---	---
	06/01/09	---	560	---	---	---	---	---	---	---	<2.0
	07/27/10	---	480	---	---	---	---	---	---	---	3.7

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 126	05/04/88	480	290	4	<1	106	<1	53	14	64	<1
8S/2W-15H	07/06/89	500	270	2	1	108	<1	55	11	98	<1
	07/18/95	540	315	1	<1	122	<1	72	11	122	<1
	07/07/97	---	---	---	---	---	---	---	---	---	<2
	07/16/97	---	---	---	---	---	---	---	---	---	0.2 as N
	07/23/97	---	---	---	---	---	---	---	---	---	0.2 as N
	08/20/97	---	---	---	---	---	---	---	---	---	0.4 as N
	09/03/97	---	---	---	---	---	---	---	---	---	0.2 as N
	09/17/97	---	---	---	---	---	---	---	---	---	0.2 as N
	07/20/98	520	330	2	<1	120	<1	56	11	130	<2
	09/16/98	---	300	---	---	---	---	---	---	---	0.4 as N
	04/14/99	---	---	---	---	---	---	---	---	---	2
	04/11/00	---	---	---	---	---	---	---	---	---	<2
	04/11/01	---	---	---	---	---	---	---	---	---	2
	07/12/01	530	300	2	<1	100	<1	53	12	140	<2
	06/20/02	---	---	---	---	---	---	---	---	---	<2
	08/06/02	---	---	---	---	---	---	---	---	---	<2
	01/08/03	---	---	---	---	---	---	---	---	---	0.25 as N
	11/04/03	---	---	---	---	---	---	---	---	---	<2
	07/22/04	520	310	1.5	ND	110	ND	59	10	120	0.27 as N
	11/03/04	---	---	---	---	---	---	---	---	---	<2
	11/02/05	---	---	---	---	---	---	---	---	---	<1
	11/08/06	---	---	---	---	---	---	---	---	---	<1
	07/03/07	530	330	1.4	<1	110	<1	62	10	140	<2
	11/14/07	---	---	---	---	---	---	---	---	---	1.9
	08/07/08	---	280	---	---	---	---	---	---	---	---
	02/04/09	---	280	---	---	---	---	---	---	---	---
	05/06/09	---	280	---	---	---	---	---	---	---	---
	08/04/09	---	270	---	---	---	---	---	---	---	---
	02/03/10	---	290	---	---	---	---	---	---	---	---
	05/06/10	---	390	---	---	---	---	---	---	---	---
	07/13/10	530	300	1.6	<1	110	<1	58	11	130	<2
	08/24/10	---	330	---	---	---	---	---	---	---	---

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 128	07/06/89	400	230	27	3	54	2	59	7	101	25
7/3W-36M	07/08/92	390	230	21	2	59	2	55	1	110	24
	07/20/95	380	275	16	2	66	1	65	10	101	19
	07/07/97	---	---	---	---	---	---	---	---	---	15
	07/20/98	370	260	12	<1	71	1	48	11	110	14
	06/02/99	---	---	---	---	---	---	---	---	---	13
	06/08/01	---	---	---	---	---	---	---	---	---	14
	07/10/01	400	230	10	<1	68	<1	44	12	100	12
	06/20/02	---	---	---	---	---	---	---	---	---	12
	01/08/03	---	---	---	---	---	---	---	---	---	12
	01/14/04	---	---	---	---	---	---	---	---	---	10
	07/14/04	390	240	8.3	1	67	1	48	11	92	13
	01/11/05	---	---	---	---	---	---	---	---	---	6
	01/10/06	---	---	---	---	---	---	---	---	---	7.9
No. 129	11/29/89	430	260	16	3	66	2	71	16	92	9
7S/2W-20L	08/08/90	440	280	20	5	64	2	72	14	119	10
	04/01/92	---	---	---	---	---	---	---	---	---	12
	09/10/93	470	275	24	6	60	2	74	16	110	13
	08/09/96	460	270	19	3	67	2	70	15	100	11
	02/04/97	---	---	---	---	---	---	---	---	---	53
	12/20/00	550	330	44	13	47	2	81	14	130	20
	03/22/01	---	---	---	---	---	---	---	---	---	20
	04/17/01	---	---	---	---	---	---	---	---	---	20
	05/02/01	---	---	---	---	---	---	---	---	---	18
	06/08/01	---	---	---	---	---	---	---	---	---	20
	10/16/01	---	---	---	---	---	---	---	---	---	19
	11/13/01	---	---	---	---	---	---	---	---	---	18
	02/26/02	---	---	---	---	---	---	---	---	---	16
	05/23/02	---	---	---	---	---	---	---	---	---	14
	09/18/02	---	---	---	---	---	---	---	---	---	15

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 130	02/17/88	650	365	16	1	132	1	69	64	0	4
8S/2W-11R	02/14/91	640	365	4	<1	132	1	68	56	122	---
	04/24/91	---	---	---	---	---	---	---	---	---	3
	02/09/94	650	410	3	<1	148	1	81	72	146	4
	05/16/95	---	---	---	---	---	---	---	---	---	4
	02/05/97	780	450	4	<1	170	<1	78	82	150	5
	05/14/97	---	---	---	---	---	---	---	---	---	4
	04/14/99	---	---	---	---	---	---	---	---	---	5
	02/10/00	750	440	4	<1	170	<1	76	77	170	5
	04/12/00	---	---	---	---	---	---	---	---	---	5
	05/25/00	---	---	---	---	---	---	---	---	---	6
	05/24/01	---	---	---	---	---	---	---	---	---	6
	05/24/02	---	---	---	---	---	---	---	---	---	5
	02/19/03	820	460	4.1	<1	170	<1	87	96	180	5
	05/04/04	---	---	---	---	---	---	---	---	---	5.1
	05/12/05	---	---	---	---	---	---	---	---	---	5
	02/14/06	800	450	4.1	<1	170	<1	83	91	200	5.1
	05/12/06	---	---	---	---	---	---	---	---	---	4.5
	05/01/07	---	---	---	---	---	---	---	---	---	4.5
	05/07/08	---	440	---	---	---	---	---	---	---	4.1
	08/12/08	---	470	---	---	---	---	---	---	---	---
	11/09/08	---	560	---	---	---	---	---	---	---	---
	02/11/09	840	440	4.6	<1	170	<1	91	110	150	4.8
	05/11/09	---	480	---	---	---	---	---	---	---	3.5
	08/31/09	---	470	---	---	---	---	---	---	---	---
	02/04/10	---	480	---	---	---	---	---	---	---	---
	05/06/10	---	410	---	---	---	---	---	---	---	4.5
	08/11/10	---	460	---	---	---	---	---	---	---	---
No. 131	03/10/88	530	270	4	<1	108	1	57	52	31	1
8S/1W-12J	03/21/91	630	335	7	<1	120	1	74	65	98	3
	03/03/94	660	345	9	<1	124	2	86	73	119	2
	03/30/95	---	---	---	---	---	---	---	---	---	2
	03/20/97	660	370	6	<1	125	1	81	73	100	2
	07/07/97	---	---	---	---	---	---	---	---	---	<2
	07/27/98	---	---	---	---	---	---	---	---	---	2
	06/03/99	---	---	---	---	---	---	---	---	---	<2
	03/07/00	720	380	9	<1	140	2	81	80	130	3
	06/21/00	---	---	---	---	---	---	---	---	---	2
	06/27/01	---	---	---	---	---	---	---	---	---	2

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 131 (Cont)	06/05/02	---	---	---	---	---	---	---	---	---	<2
8S/1W-12J	03/13/03	700	390	8	<1	130	1.4	88	88	130	3
	06/11/03	---	---	---	---	---	---	---	---	---	<2
	06/09/04	---	---	---	---	---	---	---	---	---	<2
	06/15/05	---	---	---	---	---	---	---	---	---	2
	03/07/06	710	420	9.1	<1	140	1.5	93	93	130	3
	06/07/06	---	---	---	---	---	---	---	---	---	1.7
	06/26/07	---	---	---	---	---	---	---	---	---	2.4
	06/04/08	---	390	---	---	---	---	---	---	---	1.5
	09/15/08	---	330	---	---	---	---	---	---	---	---
	12/03/08	---	430	---	---	---	---	---	---	---	---
	03/04/09	640	370	6	<1	130	1.2	71	77	130	<2.0
	03/04/09	---	380	---	---	---	---	---	---	---	---
	06/02/09	---	360	---	---	---	---	---	---	---	<2.0
	03/03/10	---	380	---	---	---	---	---	---	---	---
	06/02/10	---	360	---	---	---	---	---	---	---	2
	09/01/10	---	360	---	---	---	---	---	---	---	---
No. 132	04/18/88	1000	620	94	13	103	6	109	153	235	2
8S/1W-07D	05/08/91	920	590	64	19	110	5	100	160	201	<1
	05/13/94	730	460	50	15	78	5	73	110	195	1
	05/16/95	---	---	---	---	---	---	---	---	---	<1
	07/18/95	860	520	59	17	100	4	90	130	223	1
	07/20/98	900	590	69	20	110	5	89	150	230	2
	01/06/99	---	---	---	---	---	---	---	---	---	2
	02/03/99	---	---	---	---	---	---	---	---	---	2
	04/14/99	---	---	---	---	---	---	---	---	---	3
	06/03/99	---	---	---	---	---	---	---	---	---	3
	07/27/99	---	---	---	---	---	---	---	---	---	5
	08/11/99	---	---	---	---	---	---	---	---	---	4
	09/15/99	---	---	---	---	---	---	---	---	---	4
	10/21/99	---	---	---	---	---	---	---	---	---	4
	11/02/99	---	---	---	---	---	---	---	---	---	3
	12/15/99	---	---	---	---	---	---	---	---	---	3
	05/03/00	---	---	---	---	---	---	---	---	---	2
	05/16/01	800	500	57	17	74	5	63	180	150	3
	05/01/02	---	---	---	---	---	---	---	---	---	2
	05/03/05	---	---	---	---	---	---	---	---	---	<2
	05/12/06	---	---	---	---	---	---	---	---	---	3.2
	05/01/07	---	---	---	---	---	---	---	---	---	4.7

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 132 (Cont)	05/03/07	820	500	53	16	64	4.4	72	150	160	3.2
8S/1W-07D	05/06/08	---	670	---	---	---	---	---	---	---	3.6
	08/12/08	---	690	---	---	---	---	---	---	---	---
	11/06/08	---	650	---	---	---	---	---	---	---	---
	02/05/09	---	570	---	---	---	---	---	---	---	---
	05/11/09	---	590	---	---	---	---	---	---	---	<2.0
	08/05/09	---	600	---	---	---	---	---	---	---	---
	02/03/10	---	580	---	---	---	---	---	---	---	---
	05/06/10	960	600	67	22	88	5.6	96	220	170	1.2
	08/10/10	---	570	---	---	---	---	---	---	---	---
No. 133	03/28/90	970	605	50	20	112	5	120	131	235	3
8S/1W-7C	03/11/93	970	580	48	19	120	4	110	140	204	3
	06/06/95	---	---	---	---	---	---	---	---	---	2
	07/18/95	850	680	26	10	142	2	120	100	174	2
	06/23/97	---	---	---	---	---	---	---	---	---	3
	07/20/98	790	500	24	9	140	2	96	93	170	2
	08/02/00	---	---	---	---	---	---	---	---	---	3
	03/28/01	800	460	22	10	130	2	98	100	170	<2
	08/02/01	---	---	---	---	---	---	---	---	---	<2
	09/18/02	---	---	---	---	---	---	---	---	---	2
	09/16/03	---	---	---	---	---	---	---	---	---	2
	03/12/04	810	500	25	10	130	2.4	95	99	180	2
	03/07/07	820	500	26	9.7	140	2.4	94	98	160	2.3
	03/03/08	---	---	---	---	---	---	---	---	---	2.1
	03/07/08	---	480	---	---	---	---	---	---	---	---
	07/08/08	---	470	---	---	---	---	---	---	---	---
	01/07/09	---	540	---	---	---	---	---	---	---	---
	03/04/09	---	---	---	---	---	---	---	---	---	2.6
	04/02/09	---	460	---	---	---	---	---	---	---	---
	07/09/09	---	450	---	---	---	---	---	---	---	---
	01/06/10	---	490	---	---	---	---	---	---	---	---
	03/03/10	860	460	37	16	110	3.1	110	110	200	3
	04/08/10	---	490	---	---	---	---	---	---	---	---
	07/08/10	---	470	---	---	---	---	---	---	---	---

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 135	05/24/89	2450	1390	122	65	300	2	410	225	464	33
7S/3W-27M	06/06/90	1540	945	73	36	215	1	250	150	323	13
	12/11/90	4400	2670	270	109	480	4	1030	380	314	<1
	08/06/92	1800	810	63	33	170	1	200	160	281	---
	01/16/97	---	---	---	---	---	---	---	---	---	3.7 as N
	02/04/97	---	---	---	---	---	---	---	---	---	3.5 as N
	02/12/97	---	---	---	---	---	---	---	---	---	4.0 as N
	02/20/97	---	---	---	---	---	---	---	---	---	3.4 as N
	02/25/97	---	---	---	---	---	---	---	---	---	3.4 as N
	03/04/97	---	---	---	---	---	---	---	---	---	3.7 as N
	03/18/97	---	---	---	---	---	---	---	---	---	3.3 as N
	03/25/97	---	---	---	---	---	---	---	---	---	3.5 as N
	04/08/97	---	---	---	---	---	---	---	---	---	3.4 as N
	04/15/97	---	---	---	---	---	---	---	---	---	3.4 as N
	04/22/97	---	---	---	---	---	---	---	---	---	3.5 as N
	05/06/97	1930	1050	97	48	220	2	340	190	360	3.3 as N
	05/14/97	---	---	---	---	---	---	---	---	---	3.4 as N
	05/21/97	---	---	---	---	---	---	---	---	---	3.3 as N
	06/04/97	---	---	---	---	---	---	---	---	---	3.3 as N
	06/11/97	---	---	---	---	---	---	---	---	---	3.3 as N
	06/18/97	---	---	---	---	---	---	---	---	---	3.3 as N
	06/25/97	---	---	---	---	---	---	---	---	---	3.3 as N
	07/02/97	---	---	---	---	---	---	---	---	---	3.3 as N
	09/17/97	1960	1260	---	---	---	---	430	220	---	13
No. 138	10/30/90	460	240	19	2	74	2	71	13	113	18
8S/2W-6F	10/06/93	420	240	11	<1	70	1	56	10	92	14
	10/11/96	430	270	9	<1	78	1	55	8.9	100	15
	04/14/99	---	---	---	---	---	---	---	---	---	5
	06/03/99	---	---	---	---	---	---	---	---	---	3
	10/26/99	430	240	10	<1	76	1	60	11	100	19
	03/13/00	---	---	---	---	---	---	---	---	---	5
	03/22/01	---	---	---	---	---	---	---	---	---	17
	03/13/02	---	---	---	---	---	---	---	---	---	21
	06/20/02	---	---	---	---	---	---	---	---	---	16
	10/02/02	440	220	10	<1	75	1.2	58	7.8	96	17
	06/12/03	---	---	---	---	---	---	---	---	---	16
	12/30/04	---	---	---	---	---	---	---	---	---	5
	01/27/05	---	---	---	---	---	---	---	---	---	12
	10/18/05	430	280	11	<1	72	1.3	65	8.3	110	18
	01/06/06	---	---	---	---	---	---	---	---	---	17
	01/10/07	---	---	---	---	---	---	---	---	---	16
	01/08/08	---	---	---	---	---	---	---	---	---	16

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 138 (Cont)	10/08/08	430	220	12	59	82	1.1	59	11	32	18
8S/2W-6F	01/08/09	---	---	---	---	---	---	---	---	---	18
	01/12/09	---	280	---	---	---	---	---	---	---	---
	04/08/09	---	250	---	---	---	---	---	---	---	---
	07/06/09	---	240	---	---	---	---	---	---	---	---
	01/06/10	---	250	---	---	---	---	---	---	---	16
	04/08/10	---	270	---	---	---	---	---	---	---	---
	07/14/10	---	260	---	---	---	---	---	---	---	---
No. 139	12/29/87	460	295	24	7	65	1	60	11	104	7
7S/2W-32G	11/23/92	450	275	32	9	46	2	60	13	134	20
	12/19/95	500	298	36	12	50	2	72	12	156	2.8
	03/25/97	---	---	---	---	---	---	---	---	---	10
	03/13/00	---	---	---	---	---	---	---	---	---	9
	03/28/01	---	---	---	---	---	---	---	---	---	8
	03/11/02	530	280	29	10	57	2	73	13	140	9
	03/09/04	---	---	---	---	---	---	---	---	---	8
	03/09/05	520	310	21	7.7	72	1.3	78	13	150	6
	03/09/06	---	---	---	---	---	---	---	---	---	9.9
	03/07/07	---	---	---	---	---	---	---	---	---	6.9
	04/15/08	550	340	40	14	43	1.9	80	10	150	14
	07/17/08	---	330	---	---	---	---	---	---	---	---
	10/08/08	---	320	---	---	---	---	---	---	---	---
	01/13/09	---	390	---	---	---	---	---	---	---	---
	07/06/09	---	290	---	---	---	---	---	---	---	---
	04/08/09	---	310	---	---	---	---	---	---	---	5.8
	05/17/10	---	320	---	---	---	---	---	---	---	---
	08/09/10	---	340	---	---	---	---	---	---	---	---
No. 140	02/18/88	560	325	33	10	65	2	77	14	153	13
7S/2W-33F	01/15/92	450	235	11	2	88	1	68	18	107	2
	02/28/95	560	325	36	11	58	2	94	14	140	12
	03/25/97	---	---	---	---	---	---	---	---	---	8
	02/27/98	650	360	31	11	76	2	95	16	130	5
	09/17/98	---	---	---	---	---	---	---	---	---	8
	05/16/01	---	---	---	---	---	---	---	---	---	11
	02/01/01	650	370	31	12	72	2	110	21	150	4
	05/24/02	---	---	---	---	---	---	---	---	---	7
	04/05/05	680	390	37	16	69	2.3	140	18	150	4

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
				Chemical Constituents - mg/l							
No. 140 (Cont)	04/06/06	---	---	---	---	---	---	---	---	---	4.4
7S/2W-33F	04/24/07	---	---	---	---	---	---	---	---	---	3
	04/08/08	630	340	26	9.5	79	1.9	110	21	140	2.7
	04/08/08	---	350	---	---	---	---	---	---	---	2.7
	07/07/08	---	360	---	---	---	---	---	---	---	---
	01/07/09	---	400	---	---	---	---	---	---	---	---
	04/15/09	---	380	---	---	---	---	---	---	---	4.6
	07/06/09	---	360	---	---	---	---	---	---	---	---
	01/06/10	---	350	---	---	---	---	---	---	---	---
	04/08/10	---	350	---	---	---	---	---	---	---	2.1
	07/14/10	---	360	---	---	---	---	---	---	---	---
No. 141	01/06/88	780	440	64	11	82	3	65	91	217	13
8S/2W-11P	01/30/92	820	500	63	13	95	3	79	110	238	19
	03/30/95	840	490	58	11	100	3	70	97	241	14
	03/25/97	---	---	---	---	---	---	---	---	---	15
	03/26/98	760	480	62	12	90	3	69	86	230	16
	01/04/99	---	---	---	---	---	---	---	---	---	14
	02/12/99	---	---	---	---	---	---	---	---	---	19
	10/21/99	---	---	---	---	---	---	---	---	---	17
	11/03/99	---	---	---	---	---	---	---	---	---	14
	12/14/99	---	---	---	---	---	---	---	---	---	14
	06/20/00	---	---	---	---	---	---	---	---	---	15
	01/04/01	700	450	52	6	84	3	75	70	190	15
	09/28/01	---	---	---	---	---	---	---	---	---	18
	11/08/02	---	---	---	---	---	---	---	---	---	15
	09/16/03	---	---	---	---	---	---	---	---	---	19
	01/13/04	760	490	65	11	84	3.1	70	90	220	21
	01/06/05	---	---	---	---	---	---	---	---	---	18
	01/06/06	---	---	---	---	---	---	---	---	---	16
	06/04/08	---	410	---	---	---	---	---	---	---	11
	12/05/08	---	480	---	---	---	---	---	---	---	---
	03/04/09	---	440	---	---	---	---	---	---	---	---
	06/02/09	---	390	---	---	---	---	---	---	---	10
	01/05/10	760	450	62	8.1	84	3.5	77	68	200	16
	03/03/10	---	480	---	---	---	---	---	---	---	---
	06/02/10	---	400	---	---	---	---	---	---	---	13
	09/01/10	---	370	---	---	---	---	---	---	---	---

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 143	01/15/88	670	345	8	2	134	1	91	57	95	11
8S/2W-17J	10/17/90	660	345	25	4	112	2	89	62	140	12
	03/03/94	690	370	24	3	114	2	93	68	131	11
	03/30/95	---	---	---	---	---	---	---	---	---	11
	03/25/97	600	330	15	2	110	1	87	44	89	9
	07/18/97	---	---	---	---	---	---	---	---	---	2.0 as N
	07/23/97	---	---	---	---	---	---	---	---	---	2.0 as N
	08/20/97	---	---	---	---	---	---	---	---	---	2.3 as N
	09/03/97	---	---	---	---	---	---	---	---	---	2.2 as N
	09/17/97	---	---	---	---	---	---	---	---	---	2.0 as N
	09/17/98	---	350	---	---	---	---	---	---	---	2.3 as N
	10/21/99	---	---	---	---	---	---	---	---	---	13
	03/07/00	730	400	21	3	120	2	84	68	140	12
	10/13/00	---	---	---	---	---	---	---	---	---	8
	10/10/01	---	---	---	---	---	---	---	---	---	8
	11/19/02	---	---	---	---	---	---	---	---	---	10
	01/13/03	---	---	---	---	---	---	---	---	---	2.1 as N
	03/10/03	650	370	14	1.9	110	1	92	52	130	10
	01/07/04	---	---	---	---	---	---	---	---	---	12
	01/18/05	---	---	---	---	---	---	---	---	---	10
	01/06/06	---	---	---	---	---	---	---	---	---	8.7
	06/08/06	560	270	9.5	1.3	100	1	86	<0.5	100	7.2
	01/10/07	---	---	---	---	---	---	---	---	---	7.3
	01/04/08	---	---	---	---	---	---	---	---	---	7.1
	01/08/09	---	---	---	---	---	---	---	---	---	9
	02/04/09	---	300	---	---	---	---	---	---	---	---
	05/11/09	---	290	---	---	---	---	---	---	---	---
	08/05/09	---	300	---	---	---	---	---	---	---	---
	01/05/10	---	---	---	---	---	---	---	---	---	6.5
	02/04/10	---	320	---	---	---	---	---	---	---	---
	05/06/10	---	330	---	---	---	---	---	---	---	---
	08/13/10	---	280	---	---	---	---	---	---	---	---
No. 144	09/14/88	610	335	8	<1	114	1	95	33	92	<1
7S/3W-27D3	12/19/95	730	420	34	1	124	1	120	33	186	<1
	12/20/00	690	400	28	1	120	<1	120	35	170	<2
	05/22/01	---	---	---	---	---	---	---	---	---	<2
	08/20/02	---	---	---	---	---	---	---	---	---	<2
	08/27/03	---	---	---	---	---	---	---	---	---	<2

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 144 (Cont)	12/16/03	630	420	33	1.8	110	1	110	28	170	<2
7S/3W-27D3	08/12/04	---	---	---	---	---	---	---	---	---	<2
	10/11/05	---	---	---	---	---	---	---	---	---	2
	12/07/06	670	370	21	1	98	1.2	110	27	150	<1
	08/07/07	---	---	---	---	---	---	---	---	---	<2
	08/11/08	---	320	---	---	---	---	---	---	---	<2
	02/09/09	---	340	---	---	---	---	---	---	---	---
	05/08/09	---	360	---	---	---	---	---	---	---	---
	08/05/09	---	370	---	---	---	---	---	---	---	<2
	02/04/10	---	380	---	---	---	---	---	---	---	---
	05/06/10	---	410	---	---	---	---	---	---	---	---
	08/10/10	---	370	---	---	---	---	---	---	---	<2
No. 145	10/04/90	800	490	43	8	110	2	110	78	171	<1
7S/3W-28C	10/06/93	650	375	23	3	106	1	85	58	146	<1
	11/27/96	650	340	26	2	110	1	87	48	150	<2
	02/04/97	670	370	24	2	110	1	87	55	160	<2
	01/28/98	---	---	---	---	---	---	---	---	---	<2
	01/04/99	---	---	---	---	---	---	---	---	---	<2
	10/26/99	690	400	29	3	110	1	96	61	170	<2
	01/06/00	---	---	---	---	---	---	---	---	---	<2
	01/25/01	---	---	---	---	---	---	---	---	---	<2
	01/18/02	---	---	---	---	---	---	---	---	---	<2
	10/09/02	690	390	26	2.3	110	1.2	94	52	160	<2
	01/15/03	---	---	---	---	---	---	---	---	---	<2
	01/07/04	---	---	---	---	---	---	---	---	---	<2
	01/13/05	---	---	---	---	---	---	---	---	---	<2
	10/11/05	680	430	33	2.7	120	1.4	100	54	180	<1
	10/18/05	700	440	34	2.8	120	1.5	100	59	180	<1
	04/13/06	---	---	---	---	---	---	---	---	---	<1
	01/19/07	---	---	---	---	---	---	---	---	---	<1
	01/04/08	---	---	---	---	---	---	---	---	---	<2
	08/11/08	---	360	---	---	---	---	---	---	---	---
	10/08/08	720	400	37	3.2	100	1.3	95	56	150	ND
	01/06/09	---	---	---	---	---	---	---	---	---	ND
	02/03/09	---	390	---	---	---	---	---	---	---	---
	05/08/09	---	410	---	---	---	---	---	---	---	---
	08/05/09	---	400	---	---	---	---	---	---	---	---
	01/07/10	---	---	---	---	---	---	---	---	---	<2
	02/04/10	---	400	---	---	---	---	---	---	---	---
	05/07/10	---	470	---	---	---	---	---	---	---	---
	08/10/10	---	390	---	---	---	---	---	---	---	---

ND - None Detected

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 146	12/10/96	900	500	57	23	98	<1	100	64	280	15
7S/3W-28	03/02/00	---	---	---	---	---	---	---	---	---	4
No. 149	06/15/93	---	---	---	---	---	---	---	---	---	5
8S/1W-2C	10/10/01	---	---	---	---	---	---	---	---	---	4
	03/11/02	1040	610	61	23	120	4	100	170	250	4
	12/11/02	---	---	---	---	---	---	---	---	---	3.2
	01/23/03	---	---	---	---	---	---	---	---	---	4
	03/12/03	1000	600	59	22	120	3.7	100	170	230	3
	01/13/04	---	---	---	---	---	---	---	---	---	4
	01/11/06	---	---	---	---	---	---	---	---	---	2.5
	03/09/06	940	580	56	21	110	3.8	87	160	220	2.7
	01/24/07	---	---	---	---	---	---	---	---	---	2.4
	03/11/08	---	550	---	---	---	---	---	---	---	---
	07/08/08	---	590	---	---	---	---	---	---	---	---
	01/08/09	---	590	---	---	---	---	---	---	---	2.6
	03/04/09	900	590	52	20	100	3.6	93	170	210	2.5
	04/02/09	---	570	---	---	---	---	---	---	---	---
	07/13/09	---	560	---	---	---	---	---	---	---	---
	01/07/10	---	570	---	---	---	---	---	---	---	2.6
	04/08/10	---	570	---	---	---	---	---	---	---	---
No. 149A	08/26/88	950	540	71	211	96	1	115	47	302	18
7S/3W-28A	10/31/91	800	480	36	13	122	3	93	110	195	---
No. 150	09/29/88	1950	1235	134	29	225	2	290	220	390	15
7S/3W-27P	12/21/91	1000	590	74	17	108	4	130	110	207	---
No. 151	07/25/91	860	485	53	16	103	4	90	130	183	---
8S/2W-2G	07/28/91	730	400	39	12	100	3	91	58	177	---
	07/29/91	600	340	9	2	122	5	63	34	204	---
	10/17/91	510	295	3	<1	118	1	45	10	137	---
	08/10/94	550	340	3	<1	110	1	59	22	119	<1
	06/16/97	---	---	---	---	---	---	---	---	---	<2
	08/14/97	540	300	2	<1	110	<1	44	10	160	<2
	09/16/98	---	---	---	---	---	---	---	---	---	<2
	01/06/00	510	300	1	<1	110	<1	33	4.6	180	<2
	01/06/05	---	---	---	---	---	---	---	---	---	<2
	05/12/09	530	380	1.4	1	110	<1	36	7.7	140	<2.0
	05/05/10	---	---	---	---	---	---	---	---	---	<2

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
				Chemical Constituents - mg/l							
No. 151 7S/3W-34B	09/20/88 Abandoned	5780	3410	280	114	840	5	1660	670	369	<1
No. 152 8S/1W-5K2	01/11/02	860	550	64	20	77	6	75	190	160	<2
	01/08/03	---	---	---	---	---	---	---	---	---	<2
	01/07/04	---	---	---	---	---	---	---	---	---	<2
	01/24/05	850	510	71	25	77	4.6	85	190	160	<2
	01/04/06	---	---	---	---	---	---	---	---	---	1.1
	01/10/07	---	---	---	---	---	---	---	---	---	<1
	04/08/08	---	510	---	---	---	---	---	---	---	---
	01/02/09	---	580	---	---	---	---	---	---	---	ND
	04/06/09	---	620	---	---	---	---	---	---	---	---
	07/13/09	---	610	---	---	---	---	---	---	---	---
	01/06/10	---	740	---	---	---	---	---	---	---	1.7
	04/19/10	---	670	---	---	---	---	---	---	---	---
	07/08/10	---	620	---	---	---	---	---	---	---	---
No. 153 8S/1W-5K3	12/29/93	804	485	53	18	92	5	86	120	214	<1
	04/13/99	880	540	63	23	79	5	68	220	150	<2
	04/11/00	---	---	---	---	---	---	---	---	---	2
	06/14/01	---	---	---	---	---	---	---	---	---	<2
	04/02/02	820	500	63	22	75	4.2	80	190	140	<2
	04/14/05	700	410	44	17	65	3	76	110	140	3
	04/04/06	---	---	---	---	---	---	---	---	---	2.3
	04/04/07	---	---	---	---	---	---	---	---	---	<2
	04/08/08	920	560	62	23	79	4.3	100	170	170	1.9
	01/02/09	---	570	---	---	---	---	---	---	---	---
	04/06/09	---	610	---	---	---	---	---	---	---	<2.0
	07/13/09	---	590	---	---	---	---	---	---	---	---
	01/06/10	---	560	---	---	---	---	---	---	---	---
	04/08/10	---	610	---	---	---	---	---	---	---	1
	07/08/10	---	590	---	---	---	---	---	---	---	---
No. 154 8S/1W-5L2	01/28/94	930	530	46	20	106	6	89	130	214	3

ND - None Detected

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 155	09/16/93	680	355	22	2	108	1	90	64	104	<1
7S/3W-28C	02/23/95	760	445	30	3	126	1	120	82	140	4
	06/06/95	---	---	---	---	---	---	---	---	---	5
	08/14/97	---	---	---	---	---	---	---	---	---	4
	02/25/98	880	540	43	5	130	1	100	100	190	5
	07/27/98	---	---	---	---	---	---	---	---	---	3
	02/09/00	---	---	---	---	---	---	---	---	---	2
	09/13/00	690	410	23	2	120	<1	100	72	130	2
	02/14/01	---	---	---	---	---	---	---	---	---	5
	02/21/02	---	---	---	---	---	---	---	---	---	2
	02/28/03	---	---	---	---	---	---	---	---	---	<2
	01/07/04	600	360	10	<1	120	<1	100	60	100	<2
	02/23/04	---	---	---	---	---	---	---	---	---	6
	10/11/05	---	---	---	---	---	---	---	---	---	2
	02/16/05	---	---	---	---	---	---	---	---	---	5
	02/07/06	---	---	---	---	---	---	---	---	---	4.9
	02/07/07	---	---	---	---	---	---	---	---	---	2.5
No. 156	08/11/08	670	350	48	13	78	2.2	70	62	190	1.9
7S/3W-18	08/11/08	---	370	---	---	---	---	---	---	---	1.7
	05/08/09	---	400	---	---	---	---	---	---	---	---
	08/05/09	---	410	---	---	---	---	---	---	---	1.5
	02/03/10	---	370	---	---	---	---	---	---	---	---
	05/07/10	---	470	---	---	---	---	---	---	---	---
	08/10/10	---	390	---	---	---	---	---	---	---	<2
No. 157	04/13/99	930	600	59	21	110	7	95	150	240	<2
8S/1W-5L	04/11/00	---	---	---	---	---	---	---	---	---	2
	06/14/01	---	---	---	---	---	---	---	---	---	<2
	04/02/02	830	520	60	22	78	4.1	78	190	150	<2
	04/14/05	720	420	47	18	69	3.2	74	120	150	2
	04/04/07	---	---	---	---	---	---	---	---	---	<2
	04/08/08	1100	640	68	24	110	4.3	130	170	230	2.6
	07/08/08	---	580	---	---	---	---	---	---	---	---
	01/02/09	---	560	---	---	---	---	---	---	---	---
	04/06/09	---	640	---	---	---	---	---	---	---	<2.0
	07/13/09	---	590	---	---	---	---	---	---	---	---
	01/07/10	---	660	---	---	---	---	---	---	---	---
	04/08/10	---	620	---	---	---	---	---	---	---	<2
	07/08/10	---	610	---	---	---	---	---	---	---	---

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 158	06/21/94	1090	620	67	23	124	7	120	170	259	---
8S/1W-5K	04/14/99	1050	660	63	24	120	7	110	160	270	<2
	04/11/00	---	---	---	---	---	---	---	---	---	2
	06/14/01	---	---	---	---	---	---	---	---	---	2
	04/02/02	900	550	61	22	92	5.7	93	190	180	<2
	04/14/05	800	450	51	19	79	4.6	83	150	160	2
	04/04/06	---	---	---	---	---	---	---	---	---	3.9
	04/04/07	---	---	---	---	---	---	---	---	---	4.6
	04/08/08	1300	760	77	25	140	6.4	150	180	280	3.5
	07/08/08	---	750	---	---	---	---	---	---	---	---
	01/02/09	---	640	---	---	---	---	---	---	---	---
	04/06/09	---	650	---	---	---	---	---	---	---	<2.0
	07/13/09	---	670	---	---	---	---	---	---	---	---
	01/06/10	---	810	---	---	---	---	---	---	---	---
	04/08/10	---	800	---	---	---	---	---	---	---	1.5
	07/08/10	---	680	---	---	---	---	---	---	---	---
No. 201	03/28/91	530	315	19	6	83	2	83	16	110	2
7S/2W-27J	03/11/93	460	300	8	2	87	1	51	20	146	<1
No. 202	12/11/88	740	440	47	18	84	3	97	48	223	17
7S/2W-36J1											
No. 203	05/18/88	960	580	50	39	110	4	96	115	275	---
8S/1W-6P1	06/29/88	970	530	44	36	112	4	120	123	250	5
	06/12/91	800	415	21	17	108	3	91	90	174	2
	06/22/94	980	645	59	38	99	4	130	130	256	4
	06/07/95	---	---	---	---	---	---	---	---	---	5
	06/23/97	880	530	31	26	120	3	100	110	230	4
	08/14/97	---	---	---	---	---	---	---	---	---	3
	11/02/99	---	---	---	---	---	---	---	---	---	5
	06/22/00	820	580	94	18	58	<1	63	110	250	22
	07/12/00	880	570	43	33	120	3	100	130	240	7
	08/08/00	---	---	---	---	---	---	---	---	---	6
	11/22/00	---	---	---	---	---	---	---	---	---	5
	11/20/01	---	---	---	---	---	---	---	---	---	5
	11/08/02	---	---	---	---	---	---	---	---	---	4
	01/08/03	---	---	---	---	---	---	---	---	---	.90 as N

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 203 (Cont)	06/10/03	850	460	31	23	100	2.2	92	100	220	5
8S/1W-6P1	11/04/03	---	---	---	---	---	---	---	---	---	5
	11/18/04	---	---	---	---	---	---	---	---	---	7
	06/08/06	940	540	39	32	110	3	100	130	220	5.5
	06/01/07	---	---	---	---	---	---	---	---	---	5.1
	06/04/08	---	520	---	---	---	---	---	---	---	4.3
	09/16/08	---	450	---	---	---	---	---	---	---	---
	12/02/08	---	500	---	---	---	---	---	---	---	---
	03/04/09	---	470	---	---	---	---	---	---	---	---
	06/01/09	---	440	---	---	---	---	---	---	---	2.7
	03/03/10	---	460	---	---	---	---	---	---	---	---
	06/02/10	---	490	---	---	---	---	---	---	---	3.3
	09/01/10	---	440	---	---	---	---	---	---	---	---
No. 204	05/22/91	740	425	50	12	85	3	120	18	198	19
7S/2W-26G	05/13/94	690	375	37	7	85	3	130	19	125	19
No. 205	03/28/88	500	290	23	3	81	2	83	27	107	21
7S/3W-35A	03/13/91	490	275	22	3	75	2	62	23	113	21
	03/03/94	510	275	20	2	72	2	72	24	104	20
	04/26/95	---	---	---	---	---	---	---	---	---	22
	03/25/97	480	270	20	2	75	2	66	18	110	21
	05/09/01	410	270	21	3	67	1	60	17	120	23
	11/13/01	---	---	---	---	---	---	---	---	---	21
	02/19/02	---	---	---	---	---	---	---	---	---	20
	05/14/02	---	---	---	---	---	---	---	---	---	18
	08/27/02	---	---	---	---	---	---	---	---	---	20
	11/20/02	---	---	---	---	---	---	---	---	---	18
	01/08/03	---	---	---	---	---	---	---	---	---	4.5 as N
	03/31/03	---	---	---	---	---	---	---	---	---	18
	06/11/03	---	---	---	---	---	---	---	---	---	18
	09/16/03	---	---	---	---	---	---	---	---	---	21
	12/04/03	---	---	---	---	---	---	---	---	---	20
	03/09/04	---	---	---	---	---	---	---	---	---	18
	06/09/04	---	---	---	---	---	---	---	---	---	18
	09/01/04	---	---	---	---	---	---	---	---	---	19
	12/07/04	---	---	---	---	---	---	---	---	---	20
	03/08/05	---	---	---	---	---	---	---	---	---	21
	06/07/05	---	---	---	---	---	---	---	---	---	17
	09/13/05	---	---	---	---	---	---	---	---	---	16

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 205 (Cont)	12/05/05	---	---	---	---	---	---	---	---	---	15
7S/3W-35A	03/09/06	---	---	---	---	---	---	---	---	---	17
	06/07/06	---	---	---	---	---	---	---	---	---	17
	04/15/09	500	290	19	2	71	1.4	68	18	120	20
	07/14/09	---	270	---	---	---	---	---	---	---	20
	01/06/10	---	280	---	---	---	---	---	---	---	17
	04/08/10	---	---	---	---	---	---	---	---	---	14
	04/20/10	---	290	---	---	---	---	---	---	---	---
	07/20/10	---	260	---	---	---	---	---	---	---	16
No. 207	09/01/88	510	245	1	<1	108	<1	54	26	82	<1
8S/2W-14B	09/14/88	480	305	3	<1	106	<1	58	23	24	1
	08/14/91	480	245	1	<1	100	<1	52	28	55	<1
	08/10/94	440	285	2	<1	91	1	56	29	76	2
	08/15/97	510	280	2	<1	97	<1	52	25	98	<2
	07/27/98	---	---	---	---	---	---	---	---	---	2
	12/27/00	480	280	2	<1	100	<1	53	30	120	2
No. 208	09/01/88	680	415	44	15	77	3	119	14	186	18
7S/2W-35M	09/14/88	690	440	44	14	77	3	129	14	183	16
	08/14/91	600	340	23	7	89	2	85	18	162	4
	08/10/94	560	370	22	6	89	2	93	20	156	5
	06/06/95	---	---	---	---	---	---	---	---	---	4
	08/12/96	---	---	---	---	---	---	---	---	---	2
	07/27/99	---	---	---	---	---	---	---	---	---	15
	08/18/99	---	---	---	---	---	---	---	---	---	20
No. 209	05/22/91	790	435	40	14	105	2	150	35	162	8
7S/2W-28J	05/13/94	760	525	64	22	48	3	150	15	153	25
	06/20/95	---	---	---	---	---	---	---	---	---	5
	05/15/97	690	390	10	3	130	<1	110	56	130	1.3

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 210	04/15/59	1366	---	101	23	150	10	149	200	275	3
8S/2W-12K	01/18/63	400	926	99	30	17.5	4.5	145	255	329	4
	11/30/67	1415	890	136	5	152	10	146	230	305	3
	07/26/68	1250	825	96	22	144	8	130	190	290	5
	09/06/68	1310	840	82	26	132	5	142	222	276	12
	07/19/73	1200	579	84	21.4	149	6.8	122	237	301	19.7
	08/08/75	1140	695	84	14	150	6	101	190	287	15
	06/22/76	1240	675	76	26	142	7	101	205	278	36
	10/13/76	1120	640	92	22	100	6	110	170	262	5
	06/16/77	1130	610	84	18	114	6	110	170	259	11
	05/20/80	580	340	30	8	75	4	51	67	152	9
	04/03/86	800	540	65	17	86	4.5	75	112	235	3.5
	07/15/86	830	560	72	19	86	4	87	118	250	4
	03/28/88	1030	575	76	22	93	5	99	143	247	4
	09/25/91	1040	600	74	20	120	5	120	160	238	5
	09/19/94	645	460	52	14	79	4	70	100	198	2
	09/16/96	---	---	---	---	---	---	---	---	---	3
	09/16/98	---	---	---	---	---	---	---	---	---	3
	12/15/98	---	---	---	---	---	---	---	---	---	2
	01/04/99	---	---	---	---	---	---	---	---	---	2
	02/03/99	---	---	---	---	---	---	---	---	---	2
	04/08/99	---	---	---	---	---	---	---	---	---	3
	06/02/99	---	---	---	---	---	---	---	---	---	3
	09/07/99	---	---	---	---	---	---	---	---	---	4
	10/21/99	---	---	---	---	---	---	---	---	---	5
	12/15/99	---	---	---	---	---	---	---	---	---	5
	05/03/00	---	---	---	---	---	---	---	---	---	5
	09/13/00	830	560	64	17	100	4	74	190	180	4
	05/08/01	---	---	---	---	---	---	---	---	---	4
	05/13/02	---	---	---	---	---	---	---	---	---	3
	01/08/03	---	---	---	---	---	---	---	---	---	.52 as N
	08/20/03	---	---	---	---	---	---	---	---	---	2.2
	09/16/03	830	560	65	18	78	4.5	76	180	160	2
	08/10/04	---	---	---	---	---	---	---	---	---	3.2
	08/02/05	---	---	---	---	---	---	---	---	---	5.4
	08/15/06	---	---	---	---	---	---	---	---	---	6.7
	08/14/07	---	---	---	---	---	---	---	---	---	12
	08/12/08	---	590	---	---	---	---	---	---	---	7.6
	03/05/09	---	520	---	---	---	---	---	---	---	---

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 210 (Cont)	06/02/09	---	570	---	---	---	---	---	---	---	---
8S/2W-12K	08/05/09	---	---	---	---	---	---	---	---	---	4.9
	03/03/10	---	600	---	---	---	---	---	---	---	---
	06/02/10	---	600	---	---	---	---	---	---	---	---
	08/11/10	---	---	---	---	---	---	---	---	---	3.6
	09/08/10	---	600	---	---	---	---	---	---	---	---
No. 211	04/08/97	720	400	67	14	54	1	59	65	220	13
8S/2W-20R1	12/23/97	---	410	---	---	---	---	---	---	---	3.1 as N
	03/25/98	---	620	---	---	---	---	---	---	---	3.6 as N
	06/03/98	---	---	---	---	---	---	---	---	---	3.4 as N
	06/05/98	---	480	---	---	---	---	---	---	---	---
	09/17/98	---	---	---	---	---	---	---	---	---	3.3 as N
	12/17/98	---	430	---	---	---	---	56	66	---	16
	06/03/99	---	430	---	---	---	---	---	---	---	3.4 as N
	12/14/99	---	310	---	---	---	---	---	---	---	10
	04/04/00	700	430	71	14	52	1	57	66	220	17
	06/22/00	---	400	---	---	---	---	---	---	---	15
	12/13/00	---	---	---	---	---	---	---	---	---	4.5 as N
	03/27/01	---	---	---	---	---	---	---	---	---	4.5 as N
	06/20/01	---	---	---	---	---	---	---	---	---	2.7 as N
	09/13/01	---	---	---	---	---	---	---	---	---	4.7 as N
	11/13/01	---	450	---	---	---	---	---	---	---	---
	05/14/02	---	370	---	---	---	---	---	---	---	12
	07/15/03	630	370	61	11	46	1.2	46	51	220	11
	12/09/08	---	480	---	---	---	---	---	---	---	22
	03/09/09	---	560	---	---	---	---	---	---	---	17
	06/02/09	---	480	---	---	---	---	---	---	---	14
	01/12/10	---	360	---	---	---	---	---	---	---	6.3
	04/15/10	---	500	---	---	---	---	---	---	---	16
	07/21/10	---	510	---	---	---	---	---	---	---	15
No. 212	03/28/88	640	330	42	2	74	3	81	33	146	14
8S/2W-11N	09/25/91	600	320	41	2	82	4	86	35	146	14

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 215	08/15/90	650	380	40	13	71	3	100	14	162	11
7S/2W-34M	09/26/90	---	---	---	---	---	---	---	---	---	13
	06/22/94	630	400	41	13	67	2	110	16	159	11
	06/16/97	630	370	29	9	81	2	110	16	160	6
	08/15/97	---	---	---	---	---	---	---	---	---	7
	08/11/04	630	380	35	12	76	2.6	100	14	150	<2
	09/09/04	---	---	---	---	---	---	---	---	---	9
	06/26/06	---	---	---	---	---	---	---	---	---	6.6
	06/05/07	---	---	---	---	---	---	---	---	---	2.4
	08/14/07	590	320	22	7.3	85	2.2	88	16	150	2.2
	12/02/08	---	370	---	---	---	---	---	---	---	---
	03/09/09	---	380	---	---	---	---	---	---	---	---
	06/04/09	---	300	---	---	---	---	---	---	---	---
	03/04/10	---	340	---	---	---	---	---	---	---	---
	06/18/10	---	340	---	---	---	---	---	---	---	---
	08/18/10	580	330	20	6.5	79	1.9	82	16	150	2.5
	09/03/10	---	330	---	---	---	---	---	---	---	2.2
No. 216	06/01/88	480	280	25	4	65	2	71	11	134	---
8S/2W-7W	06/29/88	480	275	29	5	59	3	81	7	110	26
	06/12/91	500	285	30	5	59	2	76	9	113	23
	05/27/92	470	285	33	6	53	2	72	10	119	20
	04/25/01	490	300	28	4	55	2	74	13	120	12
	09/21/04	540	320	31	5.6	53	2.1	74	10	130	14
	10/26/04	---	---	---	---	---	---	---	---	---	15
	11/02/04	---	---	---	---	---	---	---	---	---	15
	11/10/04	---	---	---	---	---	---	---	---	---	16
	10/18/05	---	---	---	---	---	---	---	---	---	19
	10/12/06	---	---	---	---	---	---	---	---	---	19
	09/07/07	510	300	28	4.7	57	3.5	82	12	110	18
	10/03/07	---	---	---	---	---	---	---	---	---	17
	04/23/09	---	---	---	---	---	---	---	---	---	14
	03/18/10	---	370	---	---	---	---	---	---	---	---
	04/08/10	---	---	---	---	---	---	---	---	---	12
	06/10/10	---	380	---	---	---	---	---	---	---	---
	09/01/10	---	340	---	---	---	---	---	---	---	---
	09/01/10	570	320	41	6.9	58	2.3	86	16	130	16

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
				Chemical Constituents - mg/l							
No. 217	03/28/88	580	285	8	1	108	1	81	20	113	15
8S/2W-17M1	08/10/88	570	280	8	1	105	1	82	20	55	13
	08/14/91	570	305	17	2	99	2	74	28	134	16
	08/10/94	610	365	20	3	97	2	82	38	134	16
	08/15/97	660	370	20	3	107	1	80	41	130	13
	05/09/00	---	---	---	---	---	---	---	---	---	15
	10/12/00	650	380	19	2	110	1	81	49	150	16
	05/14/01	---	---	---	---	---	---	---	---	---	17
	05/14/02	---	---	---	---	---	---	---	---	---	12
	10/15/03	690	400	25	3.3	110	1.6	84	58	150	16
	05/06/04	---	---	---	---	---	---	---	---	---	17
	05/11/06	---	---	---	---	---	---	---	---	---	15
	05/15/07	---	---	---	---	---	---	---	---	---	16
	05/06/08	---	400	---	---	---	---	---	---	---	14
	08/12/08	---	430	---	---	---	---	---	---	---	---
	05/11/09	---	400	---	---	---	---	---	---	---	13
	08/05/09	---	400	---	---	---	---	---	---	---	---
	02/02/10	---	390	---	---	---	---	---	---	---	---
	05/06/10	---	480	---	---	---	---	---	---	---	17
	08/09/10	---	470	---	---	---	---	---	---	---	---
No. 231	08/15/90	1280	805	126	18	120	5	100	310	244	9
8S/2W-20B6	09/26/90	---	---	---	---	---	---	---	---	---	6
	03/04/92	1700	1270	180	51	160	6	140	510	332	5
	06/20/95	1640	1300	171	44	124	6	75	520	287	5.3
	02/27/98	---	---	---	---	---	---	---	---	---	3
	05/16/00	---	---	---	---	---	---	---	---	---	5
	05/24/01	1490	1080	140	35	120	5	120	340	330	3
	05/13/02	---	---	---	---	---	---	---	---	---	2
	07/12/05	---	---	---	---	---	---	---	---	---	2.2
	07/20/06	---	---	---	---	---	---	---	---	---	3.7
	05/02/07	1400	830	120	27	110	4	130	250	300	2.1
	03/07/08	---	900	---	---	---	---	---	---	---	2.4
No. 232	08/15/90	960	590	71	19	110	5	98	130	235	30
8S/2W-11J3	09/26/90	---	---	---	---	---	---	---	---	---	35
	09/25/91	980	565	74	19	106	5	98	120	244	37
	09/19/94	805	495	54	14	92	4	80	110	207	15
	09/13/96	---	---	---	---	---	---	---	---	---	22
	11/04/97	1000	660	76	20	110	4	97	130	230	29

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 232 (Cont)	07/27/98	---	---	---	---	---	---	---	---	---	38
8S/2W-11J3	12/10/98	---	---	---	---	---	---	---	---	---	22
	01/06/98	---	---	---	---	---	---	---	---	---	30
	01/29/99	---	---	---	---	---	---	---	---	---	10
	02/03/99	---	---	---	---	---	---	---	---	---	26
	02/24/99	---	---	---	---	---	---	---	---	---	37
	04/08/99	---	---	---	---	---	---	---	---	---	33
	04/21/99	---	---	---	---	---	---	---	---	---	34
	06/23/99	---	---	---	---	---	---	---	---	---	33
	07/08/99	---	---	---	---	---	---	---	---	---	36
	08/25/99	---	---	---	---	---	---	---	---	---	33
	09/21/99	---	---	---	---	---	---	---	---	---	31
	10/06/99	---	---	---	---	---	---	---	---	---	30
	11/17/99	---	---	---	---	---	---	---	---	---	32
	12/14/99	---	---	---	---	---	---	---	---	---	32
	01/18/00	---	---	---	---	---	---	---	---	---	31
	02/29/00	---	---	---	---	---	---	---	---	---	10
	03/21/00	---	---	---	---	---	---	---	---	---	25
	04/11/00	---	---	---	---	---	---	---	---	---	29
	05/25/00	---	---	---	---	---	---	---	---	---	26
	06/21/00	---	---	---	---	---	---	---	---	---	26
	07/11/00	---	---	---	---	---	---	---	---	---	25
	09/13/00	920	590	65	17	105	4	91	150	210	21
	10/06/00	---	---	---	---	---	---	---	---	---	18
	11/08/00	---	---	---	---	---	---	---	---	---	17
	12/13/00	---	---	---	---	---	---	---	---	---	20
	01/04/01	---	---	---	---	---	---	---	---	---	19
	02/28/01	---	---	---	---	---	---	---	---	---	10
	04/10/01	---	---	---	---	---	---	---	---	---	20
	10/10/01	---	---	---	---	---	---	---	---	---	26
	05/14/02	---	---	---	---	---	---	---	---	---	22
	08/06/02	---	---	---	---	---	---	---	---	---	4*
	01/08/03	---	---	---	---	---	---	---	---	---	6.0 as N
	03/31/03	---	---	---	---	---	---	---	---	---	11
	06/10/03	---	---	---	---	---	---	---	---	---	31
	07/08/03	---	---	---	---	---	---	---	---	---	30
	08/20/03	---	---	---	---	---	---	---	---	---	28
	09/16/03	1100	680	67	18	110	4.3	100	150	240	33

* Sample may have been switched with Well 233

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
				Chemical Constituents - mg/l							
No. 232 (Cont)	10/14/03	---	---	---	---	---	---	---	---	---	31
8S/2W-11J3	01/14/04	---	---	---	---	---	---	---	---	---	23
	02/10/04	---	---	---	---	---	---	---	---	---	21
	04/14/04	---	---	---	---	---	---	---	---	---	25
	05/06/04	---	---	---	---	---	---	---	---	---	26
	06/22/04	---	---	---	---	---	---	---	---	---	25
	07/14/04	---	---	---	---	---	---	---	---	---	25
	08/10/04	---	---	---	---	---	---	---	---	---	31
	09/08/04	---	---	---	---	---	---	---	---	---	26
	10/26/04	---	---	---	---	---	---	---	---	---	15
	11/18/04	---	---	---	---	---	---	---	---	---	26
	12/07/04	---	---	---	---	---	---	---	---	---	16
	01/10/05	---	---	---	---	---	---	---	---	---	20
	02/14/05	---	---	---	---	---	---	---	---	---	14
	03/11/05	---	---	---	---	---	---	---	---	---	11
	04/13/05	---	---	---	---	---	---	---	---	---	25
	06/08/05	---	---	---	---	---	---	---	---	---	24
	07/12/05	---	---	---	---	---	---	---	---	---	22
	08/02/05	---	---	---	---	---	---	---	---	---	18
	09/20/05	---	---	---	---	---	---	---	---	---	19
	10/18/05	---	---	---	---	---	---	---	---	---	18
	11/08/05	---	---	---	---	---	---	---	---	---	18
	12/06/05	---	---	---	---	---	---	---	---	---	19
	01/04/06	---	---	---	---	---	---	---	---	---	15
	02/14/06	---	---	---	---	---	---	---	---	---	18
	03/13/06	---	---	---	---	---	---	---	---	---	8.3
	04/18/06	---	---	---	---	---	---	---	---	---	12
	05/12/06	---	---	---	---	---	---	---	---	---	15
	06/22/06	---	---	---	---	---	---	---	---	---	11
	07/19/06	---	---	---	---	---	---	---	---	---	13
	08/15/06	---	---	---	---	---	---	---	---	---	14
	11/02/06	---	---	---	---	---	---	---	---	---	15
	01/10/07	---	---	---	---	---	---	---	---	---	13
	02/07/07	---	---	---	---	---	---	---	---	---	15
	03/14/07	---	---	---	---	---	---	---	---	---	15
	04/17/07	---	---	---	---	---	---	---	---	---	14
	05/01/07	---	---	---	---	---	---	---	---	---	13
	06/01/07	---	---	---	---	---	---	---	---	---	11
	07/05/07	---	---	---	---	---	---	---	---	---	12
	08/14/07	---	---	---	---	---	---	---	---	---	14

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 232 (Cont)	10/03/07	---	---	---	---	---	---	---	---	---	13
8S/2W-11J3	12/05/07	---	---	---	---	---	---	---	---	---	12
	01/08/08	---	---	---	---	---	---	---	---	---	11
	02/13/08	---	---	---	---	---	---	---	---	---	6.9
	03/04/08	---	---	---	---	---	---	---	---	---	9.7
	03/07/08	---	610	---	---	---	---	---	---	---	---
	04/08/08	---	---	---	---	---	---	---	---	---	13
	05/07/08	---	---	---	---	---	---	---	---	---	12
	07/10/08	---	580	---	---	---	---	---	---	---	---
	07/28/08	---	---	---	---	---	---	---	---	---	12
	08/12/08	---	---	---	---	---	---	---	---	---	13
	12/03/08	---	---	---	---	---	---	---	---	---	14
	01/13/09	---	660	---	---	---	---	---	---	---	14
	02/05/09	---	---	---	---	---	---	---	---	---	13
	03/04/09	---	---	---	---	---	---	---	---	---	12
	04/02/09	---	580	---	---	---	---	---	---	---	13
	05/11/09	---	---	---	---	---	---	---	---	---	11
	06/02/09	---	---	---	---	---	---	---	---	---	11
	07/13/09	---	580	---	---	---	---	---	---	---	12
	08/05/09	---	---	---	---	---	---	---	---	---	12
	01/06/10	---	590	---	---	---	---	---	---	---	12
	02/03/10	---	---	---	---	---	---	---	---	---	10
	03/10/10	---	---	---	---	---	---	---	---	---	8.5
	04/08/10	---	570	---	---	---	---	---	---	---	12
	05/07/10	---	---	---	---	---	---	---	---	---	13
	06/03/10	---	---	---	---	---	---	---	---	---	13
	07/08/10	---	570	---	---	---	---	---	---	---	13
	08/10/10	---	---	---	---	---	---	---	---	---	14
	09/02/10	---	---	---	---	---	---	---	---	---	3.6
No. 233 (Old 112)	06/15/88	900	535	71	21	100	5	96	136	247	4
8S/2W-12K2	03/27/91	1020	580	66	19	114	5	95	140	247	12
	03/03/94	740	425	50	14	75	4	71	100	186	2
	04/27/95	---	---	---	---	---	---	---	---	---	6
	03/27/97	880	510	57	15	100	4	81	120	220	4

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 233 (Old 112)	01/04/99	---	---	---	---	---	---	---	---	---	5
8S/2W-12K2	02/03/99	---	---	---	---	---	---	---	---	---	4
(Cont)	04/08/99	---	---	---	---	---	---	---	---	---	4
	06/03/99	---	---	---	---	---	---	---	---	---	4
	07/20/99	---	---	---	---	---	---	---	---	---	5
	08/11/99	---	---	---	---	---	---	---	---	---	4
	09/07/99	---	---	---	---	---	---	---	---	---	4
	10/21/99	---	---	---	---	---	---	---	---	---	5
	11/03/99	---	---	---	---	---	---	---	---	---	4
	04/11/00	970	570	64	18	110	4	85	150	230	4
	10/06/00	---	---	---	---	---	---	---	---	---	3
	10/10/01	---	---	---	---	---	---	---	---	---	4
	08/06/02	---	---	---	---	---	---	---	---	---	26*
	01/13/03	---	---	---	---	---	---	---	---	---	1 as N
	07/07/03	---	---	---	---	---	---	---	---	---	2.7
	07/13/04	---	---	---	---	---	---	---	---	---	3
	07/12/05	---	---	---	---	---	---	---	---	---	2.8
	04/04/06	960	600	75	20	87	4.5	93	180	180	7.3
	08/04/06	---	---	---	---	---	---	---	---	---	11
	08/14/07	---	---	---	---	---	---	---	---	---	8.1
	08/13/08	---	530	---	---	---	---	---	---	---	6.1
	02/05/09	---	570	---	---	---	---	---	---	---	---
	04/02/09	960	580	70	20	88	4.7	100	160	200	6.8
	05/11/09	---	610	---	---	---	---	---	---	---	---
	08/04/09	---	570	---	---	---	---	---	---	---	5
	02/02/10	---	560	---	---	---	---	---	---	---	---
	05/06/10	---	660	---	---	---	---	---	---	---	---
	08/10/10	---	580	---	---	---	---	---	---	---	5.1
No. 234 (Old 114)	03/31/88	840	480	54	15	100	4	61	109	241	18
8S/2W-11P	03/27/91	1020	605	69	19	114	5	77	138	256	37
	06/20/95	---	---	---	---	---	---	---	---	---	11
	09/26/96	---	---	---	---	---	---	---	---	---	9
	02/04/97	---	---	---	---	---	---	---	---	---	12
	04/25/97	840	500	56	15	95	4	77	120	230	8
	01/19/99	---	---	---	---	---	---	---	---	---	12
	02/12/99	---	---	---	---	---	---	---	---	---	16
	04/21/99	---	---	---	---	---	---	---	---	---	15

* Sample might have been switched with Well 232

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 234 (Old 114)	06/03/99	---	---	---	---	---	---	---	---	---	16
8S/2W-11P	07/27/99	---	---	---	---	---	---	---	---	---	18
(Cont)	08/19/99	---	---	---	---	---	---	---	---	---	17
	09/21/99	---	---	---	---	---	---	---	---	---	16
	10/26/99	---	---	---	---	---	---	---	---	---	13
	04/13/00	900	550	64	18	10	4	70	150	220	13
	07/06/00	---	---	---	---	---	---	---	---	---	12
	07/12/01	---	---	---	---	---	---	---	---	---	7
	08/02/01	---	---	---	---	---	---	---	---	---	<2
	11/20/02	---	---	---	---	---	---	---	---	---	3
	12/11/02	850	520	62	17	80	3.7	74	170	170	4
	11/04/03	---	---	---	---	---	---	---	---	---	10
	11/05/04	---	---	---	---	---	---	---	---	---	10
	11/03/05	---	---	---	---	---	---	---	---	---	12
	12/06/05	890	620	70	19	89	4.1	85	180	200	12
	11/08/06	---	---	---	---	---	---	---	---	---	14
	11/16/07	---	---	---	---	---	---	---	---	---	16
	08/12/08	---	610	---	---	---	---	---	---	---	---
	11/06/08	---	570	---	---	---	---	---	---	---	20
	12/03/08	960	660	83	21	89	4.9	87	160	230	20
	02/05/09	---	590	---	---	---	---	---	---	---	---
	05/07/09	---	620	---	---	---	---	---	---	---	---
	08/04/09	---	590	---	---	---	---	---	---	---	---
	02/03/10	---	610	---	---	---	---	---	---	---	---
	05/06/10	---	680	---	---	---	---	---	---	---	---
	08/10/10	---	610	---	---	---	---	---	---	---	---
	08/11/10	---	610	---	---	---	---	---	---	---	---
No. 235 (Old 137)	06/24/88	460	310	40	10	41	2	58	10	140	15
8S/3W-1Q1	06/20/90	420	230	22	4	56	2	50	6	128	18
	06/10/93	370	235	15	2	65	2	51	9	113	17
	07/16/96	410	230	16	2	60	1	48	8.9	110	20
	06/09/97	---	---	---	---	---	---	---	---	---	17
	06/03/99	390	240	13	1	63	1	46	6.7	98	17
	11/03/99	---	---	---	---	---	---	---	---	---	16
	11/09/00	---	---	---	---	---	---	---	---	---	15
	11/20/01	---	---	---	---	---	---	---	---	---	13
	06/11/02	380	210	10	<1	62	1.2	48	7.2	100	16
	11/05/02	---	---	---	---	---	---	---	---	---	17

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 235 (Old 137)	11/18/03	---	---	---	---	---	---	---	---	---	11
8S/3W-1Q1	11/18/05	---	---	---	---	---	---	---	---	---	18
(Cont)	06/22/05	380	230	9.4	<1	68	1.1	49	7.3	96	16
	11/08/05	---	---	---	---	---	---	---	---	---	17
	11/14/06	---	---	---	---	---	---	---	---	---	16
	06/11/08	400	210	11	1	72	1.4	48	8.4	100	15
	07/07/08	---	200	---	---	---	---	---	---	---	---
	01/13/09	---	260	---	---	---	---	---	---	---	---
	04/07/09	---	210	---	---	---	---	---	---	---	---
	07/13/09	---	200	---	---	---	---	---	---	---	---
	01/06/10	---	230	---	---	---	---	---	---	---	---
	04/08/10	---	220	---	---	---	---	---	---	---	---
	07/14/10	---	220	---	---	---	---	---	---	---	---
No. 301	07/29/92	500	290	20	6	80	1	45	56	143	<1
7S/3W-18Q1	02/27/97	580	350	45	16	48	2	49	54	200	4
	08/15/97	---	---	---	---	---	---	---	---	---	6
	12/27/00	570	360	49	15	53	2	55	57	180	7
	02/22/02	---	---	---	---	---	---	---	---	---	<2
	05/14/02	550	340	---	---	---	---	57	50	---	3
	12/11/02	580	350	---	---	---	---	---	---	---	2.5
No. 302	04/11/88	690	360	36	6	100	1	77	65	192	<1
7S/3W-18H	05/15/91	760	425	58	9	87	2	83	72	220	<1
	05/14/92	---	270	12	2	90	<1	48	48	---	---
	05/05/94	870	530	69	16	84	2	110	88	238	<1
	05/16/95	---	---	---	---	---	---	---	---	---	<1
	07/16/96	530	320	---	---	---	---	60	54	---	2
	05/13/97	560	500	73	14	94	2	110	86	240	<2
	07/27/99	---	---	---	---	---	---	---	---	---	<2
	05/17/00	520	320	11	1	99	<1	51	50	130	<2
	06/13/00	520	310	---	---	---	---	---	---	---	<2
	07/11/00	---	---	---	---	---	---	---	---	---	<2
	12/20/01	790	500	---	---	---	---	110	140	---	<2
	12/11/02	870	510	---	---	---	---	---	---	---	ND
	06/19/03	620	370	22	3.8	95	<1	77	63	140	<2
	03/17/04	830	510	---	---	---	---	110	85	---	<2
	06/22/04	---	---	---	---	---	---	---	---	---	<2
	09/21/04	900	550	---	---	---	---	110	82	---	<2

ND - None Detected

TABLE D-4 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS SAMPLED BY RANCHO CALIFORNIA WATER DISTRICT

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
No. 309	08/15/90	690	370	19	3	119	2	140	25	73	5
7S/3W-27H	04/11/91	---	---	---	---	---	---	---	---	---	<.001
	09/25/91	730	365	19	2	122	2	150	27	82	5
	08/11/94	730	430	20	2	120	2	160	30	73	5
	02/16/95	---	---	---	---	---	---	---	---	---	18
	07/16/97	---	---	---	---	---	---	---	---	---	1.1 as N
	07/23/97	---	---	---	---	---	---	---	---	---	1.2 as N
	08/20/97	---	---	---	---	---	---	---	---	---	1.1 as N
	09/03/97	---	---	---	---	---	---	---	---	---	1.1 as N
	09/18/97	---	---	---	---	---	---	---	---	---	1.1 as N
	10/03/97	790	520	21	2	130	2	170	33	85	6
	08/06/98	---	---	---	---	---	---	---	---	---	6
	09/16/98	---	460	---	---	---	---	---	---	---	1.4 as N
	07/20/99	---	---	---	---	---	---	---	---	---	6
	05/10/00	---	450	20	2	130	<1	---	---	85	---
	07/06/00	---	---	---	---	---	---	---	---	---	6
	08/02/00	740	450	21	2	140	1	180	38	87	7
	07/19/01	---	---	---	---	---	---	---	---	---	7
	11/19/02	---	---	---	---	---	---	---	---	---	5
	01/13/03	---	---	---	---	---	---	---	---	---	1.1 as N
	08/20/03	880	490	21	2.1	140	1.5	190	33	83	5
	01/07/04	---	---	---	---	---	---	---	---	---	6
	11/11/05	---	---	---	---	---	---	---	---	---	6
	01/04/06	---	---	---	---	---	---	---	---	---	5.4
	12/07/06	870	470	21	1.9	140	2	190	36	84	5.4
	01/10/07	---	---	---	---	---	---	---	---	---	5.3
	01/08/08	---	---	---	---	---	---	---	---	---	5.4
	08/12/08	---	470	---	---	---	---	---	---	---	---
	01/06/09	---	---	---	---	---	---	---	---	---	6.7
	02/03/09	---	450	---	---	---	---	---	---	---	---
	04/01/09	---	---	25	2.9	---	---	---	---	---	---
	05/11/09	---	460	---	---	---	---	---	---	---	---
	08/04/09	---	450	---	---	---	---	---	---	---	---
	01/07/10	---	---	---	---	---	---	---	---	---	5.7
	02/02/10	---	480	---	---	---	---	---	---	---	---
	05/06/10	---	500	---	---	---	---	---	---	---	---
	08/09/10	---	490	---	---	---	---	---	---	---	---

TABLE D-5

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON INDIAN RESERVATIONS

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3*	NO3
				Chemical Constituents - mg/l							
Pechanga Indian Reservation											
8S/2W-28M03	08/26/99	562	319	38	13	52	0.77	68	15	---	2.59 as N
	08/12/03	534	344	40.7	14.7	53.5	0.86	58.9	14.1	---	4.21 as N
	08/19/04	708	440	61.4	22.5	51	0.93	87.6	52	---	6.16 as N
	08/02/05	746	459	69.7	26.9	44.3	1.01	87.8	61.8	---	5.09 as N
	08/02/06	678	413	55.9	21	42.6	0.85	74.9	43.1	153	8.25 as N
	09/04/07	663	392	53.7	19.5	51.1	0.92	70.1	32.1	158	8.32 as N
8S/2W-28M05	09/01/09	457	253	10.7	0.483	77.7	0.53	65.6	17.4	91	0.08 as N
	07/26/10	---	261	11	0.942	83.3	0.53	78.3	17.1	---	E0.048
8S/2W-28Q02	10/05/89	629	378	48	19	49	0.7	76	14	169	4.2 as N
	07/26/90	613	383	48	18	47	0.6	75	12	171	3.9 as N
	07/18/91	618	379	49	18	49	0.7	83	14	172	3.0 as N
	07/28/93	620	400	51	20	47	0.7	63	15	174	9.6 as N
	08/17/94	641	396	51	21	50	0.8	60	17	179	11.0 as N
	08/31/95	653	396	53	21	48	0.7	60	19	184	12.0 as N
	08/28/96	---	---	---	---	---	---	---	---	---	11.0 as N
	08/12/97	614	411	47	19	47	0.7	63	15	176	8.9 as N
	08/19/98	625	402	47	20	47	0.7	60	14	---	9.85 as N
	08/21/02	598	394	47	19	46	0.7	64	15	---	8.5 as N
	08/12/03	604	405	48.8	19.8	47.8	0.69	69.1	14	---	7.1 as N
	08/18/04	615	386	51.6	20.2	45.6	0.86	78.8	16.5	---	4.03 as N
	08/02/05	822	514	76.8	30.2	54	0.84	93.7	30.9	---	14.7 as N

* - Alkalinity as CaC03
E - estimated

TABLE D-5 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON INDIAN RESERVATIONS

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3*	NO3
Pechanga Indian Reservation (Continued)											
8S/2W-28R01	08/03/89	495	286	41	4.0	60	0.9	37	13	177	1.1 as N
	07/26/90	525	296	48	4.8	54	1.0	45	14	191	1.5 as N
	07/17/91	462	261	31	3.2	66	0.8	44	12	155	.8 as N
	07/27/93	445	269	44	4.4	43	0.5	28	14	170	1.9 as N
	08/15/94	421	232	32	3.3	55	0.9	28	11	156	1.5 as N
	08/30/95	375	200	21	2.2	55	0.6	31	11	129	.7 as N
	08/27/96	---	---	---	---	---	---	---	---	---	1.5 as N
	08/13/97	398	241	20	2.1	59	0.62	37	11	130	.572 as N
	08/20/98	481	282	36	3.9	60	0.85	38	14	167	1.1 as N
	08/25/99	446	252	28	3.1	59	0.66	41	12	---	.758 as N
	08/22/00	456	265	29	3.3	61	0.73	39	14	---	.759 as N
	08/21/01	522	320	51	5.9	48	1.0	42	16	---	1.73 as N
	08/21/02	457	284	33	3.7	61	0.87	41	13	---	1.09 as N
	08/12/03	518	330	55	6.5	50.4	1.08	39.7	14.3	---	1.94 as N
	08/18/04	516	317	56.8	6.2	47.9	1.4	42.6	14.2	---	1.64 as N
	08/03/05	541	333	60.5	6.5	45.3	1.2	40.2	14.1	---	2.23 as N
	09/10/08	480	278	37.2	4.67	62.4	1.14	41.2	11.4	160	---
	08/04/09	543	329	50	5.49	55.5	1.12	38.7	18.4	194	1.78 as N
	07/26/10	564	335	58.3	6.57	49.9	1.12	41.9	18.7	203	9.89
8S/2W-29A01	08/02/89	346	207	31	11	24	0.4	18	7.0	131	2.0 as N
	07/24/90	354	193	32	11	25	0.4	24	6.7	133	2.0 as N
	07/18/91	361	194	32	10	26	0.4	25	6.0	134	1.8 as N
	08/15/94	363	216	33	12	25	0.5	24	7.7	132	2.6 as N
	08/31/95	363	208	32	11	23	0.4	21	8.1	137	2.6 as N
	08/28/96	---	---	---	---	---	---	---	---	---	2.9 as N
	08/12/97	368	238	32	12	24	0.44	22	7.4	138	3.05 as N
	08/19/98	411	246	36	11	31	0.45	25	8.2	153	2.94 as N
	08/25/99	375	222	33	12	23	0.39	20	6.7	---	3.81 as N
	08/22/00	374	237	33	12	24	0.42	18	7.3	---	3.48 as N
	08/21/01	374	236	34	12	24	0.46	20	7.3	---	3.56 as N
	08/02/05	382	243	38.7	11.6	27.1	0.53	27.6	7.7	---	2.79 as N
8S/2W-29A2	08/02/06	392	242	36.2	10.9	26.6	0.43	29.4	7.94	139	2.64 as N
	08/04/09	394	245	29.8	11.3	32.2	0.64	34.5	7.38	133	0.81 as N
	07/26/10	---	268	37.5	11.9	32.5	0.55	38.5	12.9	---	E10.8

* - Alkalinity as CaC03
E - estimated

TABLE D-5 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON INDIAN RESERVATIONS

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3*	NO3
Pechanga Indian Reservation (Continued)											
8S/2W-29B02	03/01/90	456	257	5.5	0.14	89	0.8	66	22	100	---
	03/06/90	456	256	5.9	0.13	90	0.7	66	20	99	<0.1 as N
8S/2W-29B03	03/06/90	478	275	14	1.9	84	0.8	65	16	123	<0.1 as N
8S/2W-29B05	03/02/90	397	229	29	9.5	43	1.2	35	4.9	141	1.8 as N
8S/2W-29B06	03/02/90	406	259	34	11	38	0.8	38	10	143	---
	03/06/90	427	240	32	11	40	1.0	40	8.1	148	1.2 as N
8S/2W-29B07	03/07/90	396	230	8.6	2.5	71	0.9	51	11	102	<0.1 as N
	08/16/90	371	199	8.4	1.8	69	0.8	50	14	106	<0.1 as N
8S/2W-29B08	03/07/90	464	272	31	9.4	52	1.2	58	12	134	0.45 as N
	08/16/90	458	261	34	9.1	48	1.1	59	17	135	0.4 as N
8S/2W-29B09	03/07/90	343	210	21	9.2	39	1.0	24	6.7	131	1.3 as N
	08/17/90	317	197	26	10	26	1.1	22	3.4	130	1.6 as N
8S/2W-29B10	08/19/98	367	223	12	0.64	75	0.62	50	10	121	<.05 as N
	08/26/99	393	219	12	0.72	68	0.56	46	11	---	<.05 as N
	08/22/00	393	228	12	0.76	69	0.58	43	11	---	<.05 as N
	08/21/01	398	231	11	0.62	72	0.57	49	15	---	.04 as N
	08/12/03	387	239	11.3	0.65	75.1	0.57	47.2	18.4	---	2.41as N
	08/18/04	390	232	11.2	0.64	72.6	0.64	48	20.8	---	<.06 as N
	08/02/05	404	242	12.5	0.67	69.9	0.65	47.2	23.2	---	<.06 as N
	08/03/06	381	222	12.3	0.77	62.8	0.54	40.3	17.3	110	<.06 as N
	09/04/07	430	237	12.1	0.70	78.3	0.65	47.2	27.5	107	<.06 as N
	09/15/08	420	242	11.2	0.664	77.3	0.59	45.3	29.6	106	E.03 as N
	08/04/09	381	217	12.1	0.76	66	0.64	39.9	23.7	108	E.03 as N
	07/26/10	394	220	11.4	0.67	71.6	0.64	42.2	26	107	E0.079
8S/2W-29B11	08/02/06	483	285	30.1	7.84	51.5	0.93	57.1	11.8	138	1.44 as N
	08/04/09	497	281	33	8.51	51	0.98	52.6	16.6	140	2.33 as N
	07/26/10	---	287	34.7	9.09	53.4	1.05	56.8	15.3	---	E10.3

* - Alkalinity as CaC03
E - estimated

TABLE D-5 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON INDIAN RESERVATIONS

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3*	NO3
Pechanga Indian Reservation (Continued)											
8S/2W-29F3	08/03/06	378	251	21.9	7.67	38.9	1.9	47.2	10.4	104	0.46 as N
8S/2W-29J02	08/26/99	565	329	39	15	47	1.6	66	14	---	2.67 as N
	08/22/00	562	337	39	15	47	1.5	65	14	---	2.70 as N
	08/21/01	574	351	40	15	50	1.6	70	15	---	2.63 as N
	08/21/02	554	345	41	16	50	1.8	68	14	---	2.93 as N
	08/12/03	592	372	45.4	16.6	54.2	1.65	78.2	15.4	---	2.41 as N
	08/19/04	598	362	48.8	16.9	---	1.88	80	17	---	3.06 as N
8S/2W-29J03	08/02/06	532	337	40.3	13.2	43.1	1.34	44.8	17.5	152	8.48 as N
8S/2W-34B04	10/05/89	617	371	51	8.2	67	1	58	30	192	.47 as N
	07/26/90	605	341	50	8	65	1	61	31	194	.50 as N
	07/18/91	564	339	46	7.4	67	1	53	27	185	.87 as N
	07/27/93	267	170	18	2.8	34	0.5	14	9.7	96	1.10 as N
8S/2W-35D01	08/03/89	660	358	43	5.5	87	1.2	78	35	169	.35 as N
	07/26/90	669	384	41	4.9	92	1.5	82	36	176	.40 as N
	07/17/91	641	371	40	4.4	98	1.7	81	36	175	.39 as N
	07/27/93	638	374	49	5.9	79	1.8	71	27	199	.34 as N
	08/16/94	601	334	30	3.2	95	1.5	71	29	163	.16 as N
	08/30/95	587	322	33	4	81	1.5	68	25	178	.11 as N
	08/27/96	596	352	28	3.3	92	1.4	72	29	167	.10 as N

* - Alkalinity as CaC03

TABLE D-5 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON INDIAN RESERVATIONS

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3*	NO3
Cahuilla Indian Reservation											
7S/2E14M01	12/14/83	1220	708	130	40	45	11	53	390	98	0.04 as N
7S/2E-23H01	05/18/06	428	288	39.6	5.7	33.7	3.08	31	14	---	8.26 as N
7S/2E-23Q01	05/18/06	245	160	15.6	2.55	26.6	2.45	29.5	5.4	---	1.07 as N
7S/2E-26B03	07/11/07	296	197	23.7	3.04	31	2.94	33.9	7.64	76	1.79 as N
7S/2E-33N1	08/02/89	355	206	16	2.1	53	3.5	48	15	78	.73 as N
7S/2E-36J01	02/03/84	---	252	43	4.4	36	4.8	32	5.4	---	3.40 as N
7S-3E-14P03	08/10/05	1080	741	113	42.4	70	9.7	66.8	296	---	.15 as N
7S-3E-20J05	08/23/07	753	466	49.4	7.09	89.2	3.19	87.9	83.6	110	6.88 as N
7S/3E-21L01	05/27/53	750	---	66	20	70		67	76	---	---
	08/02/89	1050	675	90	19	100	3.5	84	190	216	3.1 as N
	08/01/90	1020	610	87	18	100	3.4	85	180	217	3.0 as N
	07/17/91	995	636	93	18	100	3.7	95	180	206	2.5 as N
	08/23/07	1040	677	96.1	20.2	90.9	3.67	96.2	169	190	3.42 as N
7S/3E-31L02	02/03/84	---	184	23	4.8	24	2.9	24	0	---	2.0 as N
7S/3E-31N01	07/27/84	684	412	69	12	37	---	75	12	---	---
7S/3E-34E01	07/07/76	---	---	25	4.6	21	4.2	26	7.3	---	4.0 as N
	09/22/77	---	---	25	4.9	23	4.4	25	6.9	---	---
	07/19/78	---	---	26	5.1	22	4.5	24	6.5	---	3.7 as N
	06/28/79	---	190	26	5	22	4.3	24	6	---	---
	07/02/80	---	---	26	4.9	23	4.7	28	6.9	---	3.7 as N
	07/08/81	309	---	27	5	23	4.7	26	7.7	81	4.1 as N
	06/29/82	311	---	27	5.3	27	4.9	27	10	88	4.0 as N
	08/10/83	306	---	27	5	23	4.8	29	7.7	90	3.8 as N
	08/21/84	319	---	30	5.3	24	4.3	29	7.2	92	3.7 as N
	08/01/85	321	---	28	5.2	24	4.6	29	7.0	86	3.5 as N

* - Alkalinity as CaC03

TABLE D-5 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON INDIAN RESERVATIONS

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3*	NO3
Cahuilla Indian Reservation (Continued)											
7S/3E-34E01	08/14/87	332	207	29	5.6	25	4.8	28	8.0	96	3.5 as N
(Cont)	07/20/89	338	204	30	5.6	26	5.0	29	7.0	98	3.3 as N
	07/31/91	337	109	31	5.5	25	4.5	31	6.3	99	3.5 as N
	07/16/91	335	209	31	5.9	26	4.7	32	6.3	99	3.5 as N
8S/2E-4P01	01/21/86	1870	---	190	54	64	7.9	480	13	136	4.0 as N
	05/18/06	794	441	59.8	19.3	44.1	4.44	101	10.4	---	5.45 as N
8S/3E-2A01	02/05/86	591	---	54	11	43	3.2	93	21	103	3.4 as N
8S/3E-2D01	07/08/81	293	---	17	2.2	39	1.7	30	8.8	68	2.5 as N
	07/24/85	279	---	11	1.2	42	1.5	28	8	71	2.1 as N
8S/3E-2E01	12/07/50	---	---	30	10	53	---	50	14	---	---
	11/15/51	---	---	38	8	43	---	50	6	---	---
	05/27/76	---	---	39	9.4	32	2.2	49	12		4.9 as N
	09/22/77	---	280	39	9.6	33	2.6	42	8.4	---	---
	07/19/78	---	---	42	10	36	2.4	57	13		5.7 as N
	06/28/79	---	284	40	9	32	2.8	42	9	---	---
	07/02/80	---	---	34	6.5	22	2.4	27	7.4	---	0
	07/08/81	296	---	33	4.8	19	1.9	36	1	61	2.0as N
	06/29/82	494	---	43	9.7	41	3	54	14	127	5.7 as N
	07/26/83	427	---	40	9.6	32	3	42	9.7	131	4.8 as N
	08/21/84	428	---	42	9.3	32	2.9	39	9.6	129	4.7 as N
	08/13/87	428	276	39	9.4	32	3.2	37	9.6	129	4.6 as N
	08/10/05	424	283	42.4	10.2	33.6	3.4	39.9	9.14	---	4.88 as N
8S/3E-2K01	09/22/77	---	---	43	10	48	3.2	65	18	---	---
	07/19/78	---	---	42	9.8	48	3.4	68	17	---	3.7 as N
	06/28/79	---	342	46	10	46	3.1	69	19	---	---
	07/02/80	---	---	64	12	92	2.7	140	48	---	4.1 as N
	06/29/82	454	---	41	10	38	3.7	46	13	129	3.6 as N
	08/10/83	435	---	39	9.5	32	3.6	43	13	133	3.6 as N
	08/21/84	561	---	50	11	48	3.1	68	27	139	4.0 as N
	08/01/85	472	---	41	9.7	34	3.4	48	15	125	3.7 as N
	08/13/87	451	282	40	9.9	31	3.4	41	16	133	3.6 as N
	07/20/89	531	323	46	11	41	3.4	60	22	136	3.6 as N
	08/01/90	508	310	46	11	38	3.3	60	19	134	3.8 as N
	07/16/91	522	306	50	10	39	3.3	61	21	139	3.7 as N

* - Alkalinity as CaC03

TABLE D-6

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/5W-26C1)	10/60	1060	639	66.5	24.0	116.0	4.5	160	110.0	264.0	trace
(Bldg 220001)	06/62	1190	718	60.0	33.2	123.0	3.8	190	124.0	232.0	1.4
	07/64	1217	734	79.2	27.8	144.0	1.6	180	150.0	248.9	---
	05/65	1485	896	75.2	30.3	158.0	2.4	180	120.0	253.8	0
	01/66	---	808	76.8	33.2	157.0	3.4	170	180.0	292.8	0.62
	06/66	---	684	75.2	26.8	112.0	2.4	128	148.0	263.5	3.9
	01/67	---	856	81.6	26.3	138.0	3.5	162	140.0	310.0	3
	08/67	---	880	99.2	38.1	156.0	3.6	160	230.0	322.1	5.3
	02/68	---	768	65.6	25.4	156.0	3.4	160	164.0	236.7	0
	04/69	---	852	66.0	32.0	162.0	3.2	166	210.0	249.0	0
	11/69	---	844	87.0	31.0	140.0	3.6	164	180.0	262.0	0
	07/70	---	672	99.0	32.0	139.0	3.0	158	205.0	259.0	2.7
	12/70	1180	712	83.0	28.0	138.0	3.0	166	170.0	266.0	0
	09/71	1062	640	83.0	27.0	128.0	2.8	136	175.0	278.0	0.4
	05/72	1130	681	56.0	24.0	140.0	2.8	136	165.0	220.0	0
	10/72	1165	703	64.0	27.0	159.0	3.6	132	180.0	293.0	1.8
	10/73	1140	688	72.0	27.0	131.0	3.8	144	190.0	200.0	0.3 as N
	02/76	1140	688	70.4	28.3	143.0	3.1	132	182.0	273.3	1.8 as N
	09/76	1100	663	67.0	25.0	152.0	2.5	152	131.0	327.0	2.8 as N
	03/77	1080	651	67.0	28.0	173.0	3.1	128	160.0	254.0	4.4 as N
	10/78	1150	694	70.0	25.0	120.0	3.5	139	145.0	253.8	<1 as N
	06/79	1100	663	72.0	27.3	125.0	3.0	134	142.0	258.6	<1 as N
	10/80	1200	693	78.8	23.7	136.0	3.3	172	136.0	273.3	0.2 as N
	04/81	1160	737	82.4	22.4	126.0	3.6	140	134.0	268.4	<0.5 as N
	11/81	1300	863	97.6	31.5	169.0	2.2	204	209.0	248.9	0.8 as N
	11/81	950	573	74.0	18.3	120.0	2.1	144	130.0	224.5	0.3 as N
	05/82	1100	663	80.8	26.6	140.0	1.5	181	138.0	268.4	<0.5 as N
	03/83	1000	603	84.0	20.5	144.0	3.2	152	143.0	273.3	<0.5 as N
	05/84	1150	694	80.0	27.6	126.0	3.1	133	150.0	283.0	0.2 as N
	06/85	1100	680	89.0	26.0	140.0	3.0	150	64.0	440.0	<0.4
	09/85	1242	724	78.0	28.0	122.0	6.0	154	149.1	244.4	<0.4
	05/86	1387	750	85.2	29.1	130.7	4.3	166	130.8	242.6	<1
	06/89	1302	734	78.1	23.0	85.9	---	136	145.0	212.0	<0.4
	01/91	1271	---	81.0	36.1	152.0	---	166	---	---	<0.04
	06/91	1290	752	99.0	32.4	133.0	---	167	136.0	237.0	<0.4
	03/92	1210	792	91.0	29.8	146.0	---	159	135.0	279.0	<0.4

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
				Chemical Constituents - mg/l							
10S/5W-26C1	06/93	1290	764	68.3	27.5	149.0	---	168	130.0	265.0	<0.4
(Bldg 220001)	03/94	1210	783	100.0	37.1	100.0	---	145	167.0	---	2.2
(Continued)	08/94	1160	741	87.5	35.5	96.1	---	141	187.0	---	4.23
	06/95	1330	806	97.7	37.4	142.0	---	207	166.0	---	<0.04
	01/96	1300	764	91.0	33.0	140.0	---	177	142.0	363.0	<0.0
	06/96	1300	751	93.0	30.0	130.0	---	164	156.0	252.0	<0.0
	06/97	1215	758	88.0	29.0	130.0	<2.0	151	148.0	292.0	<2 as N
	12/97	1200	690	81.0	29.0	140.0	3.0	155	150.0	250.0	ND
	04/98	1200	790	83.0	31.0	101.0	3.0	165	156.0	240.0	ND
	06/98	1230	714	85.0	30.0	136.0	3.0	163	158.0	293.0	ND
	02/99	1250	731	84.0	29.0	127.0	3.0	160	140.0	281.0	ND
	04/99	1220	769	88.0	30.0	127.0	3.0	168	160.0	317.0	ND
	05/01	1300	794	98.0	36.0	130.0	3.0	173	179.0	317.0	ND
10S/4W-18M5	06/89	1156	688	74.6	24.4	67.9	---	130	138.0	197.0	8.9
(Bldg 230073)	01/90	1120	630	86.4	32.3	101.0	---	156	166.0	210.0	<0.05
(Previously	04/90	1160	720	98.8	34.8	107.0	---	152	146.0	218.0	1.4
reported as	01/91	1202	---	84.1	40.5	117.0	---	162	153.0	---	<0.04
10S/4W-18M4)	06/91	1180	736	102.0	37.1	106.0	---	163	138.0	197.0	<0.4
	03/94	1020	658	69.6	27.8	104.0	---	135	140.0	---	0.89
	08/94	1110	684	81.4	32.2	178.0	---	144	157.0	---	<0.44
	06/95	1170	679	95.3	35.2	113.0	---	145	116.0	---	13.8
	06/96	1100	682	86.0	32.0	95.0	---	155	261.0	210.0	<0.0
	02/97	1180	640	79.0	32.0	110.0	---	142	162.0	190.0	<2 as N
	06/97	1117	709	85.0	33.0	110.0	<5.0	150	164.0	223.0	<2 as N
	12/97	1100	700	82.0	33.0	110.0	3.0	141	157.0	220.0	ND
	03/98	1100	710	83.0	33.0	100.0	3.0	182	158.0	150.0	ND
	06/98	1200	720	85.0	34.0	119.0	4.0	159	154.0	281.0	ND
	02/99	1020	613	70.0	30.0	85.0	4.0	130	85.0	179.0	8
	05/00	1020	709	81.0	33.0	94.0	4.0	146	149.0	220.0	ND
	08/00	1160	728	83.0	33.0	89.0	4.0	161	178.0	232.0	ND
	02/01	1200	736	85.0	35.0	116.0	4.0	164	180.0	244.0	0.7
	04/01	1200	606	85.0	34.0	112.0	4.0	154	177.0	232.0	ND
	09/01	1250	761	90.0	37.0	115.0	4.0	166	188.0	232.0	ND

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/4W-18M5	11/01	1290	737	91.0	37.0	118.0	3.0	181	207.0	256.0	0
(Bldg 23073)	02/02	1260	781	89.0	36.0	123.0	4.6	170	189.0	255.0	1.3
Previously	04/02	1250	755	90.0	37.0	116.0	4.1	175	195.0	200.0	1
reported as	05/02	1290	750	92.0	38.0	110.0	4.0	157	194.0	180.0	0.6
10S/4W-18M4	07/02	1260	753	90.0	37.0	114.0	4.0	171	196.0	200.0	0
	01/03	1350	816	96.0	40.0	131.0	4.6	160	201.0	193.0	0
	04/03	1210	738	95.0	27.0	118.0	3.9	175	210.0	192.0	0
	10/03	1290	752	91.0	37.0	134.0	5.0	167	193.0	199.0	0
	01/04	1230	717	93.0	38.0	111.0	6.0	159	194.0	173.0	0
	04/04	1280	722	82.0	36.0	112.0	6.0	168	213.0	180.0	2.2
	07/04	1080	739	88.0	37.0	92.0	7.0	156	198.0	190.0	0
	11/04	1230	563	91.0	38.0	124.0	4.8	172	215.0	175.0	0
	01/05	1240	687	96.0	39.0	124.0	4.0	172	215.0	190.0	0
	04/07	1240	770	98.0	40.0	100.0	3.8	160	220.0	240.0	0
	04/08	1370	908	100	42	110	3.7	180	240	234	<2
	04/09	1300	800	97	39	120	3.7	140	200	220	8.7
	08/10	1300	780	97	39	110	3.6	180	220	220	<2
10S/5W-23J1	05/56	1090	685	61.5	24.3	142.0	---	142	110.0	293.0	0.06
(Bldg 230001)	12/56	1060	666	67.0	27.0	96.0	---	124	85.0	274.0	---
	12/57	---	780	66.3	23.9	159.0	---	138	155.0	308.0	10.6
	05/59	1100	691	75.2	25.3	112.0	---	136	152.0	297.7	---
	01/60	1120	704	72.7	27.3	116.5	---	112	144.0	291.0	---
	10/60	1045	657	63.2	21.4	99.0	3.6	140	112.0	242.0	0
	05/61	1280	770	76.0	36.5	136.0	3.0	124	195.0	299.6	0
	05/62	1133	712	68.8	30.3	136.0	2.0	128	175.0	275.7	---
	01/63	1111	698	72.0	35.1	127.0	2.8	128	199.0	268.4	---
	06/63	1108	696	78.4	25.4	118.0	2.9	148	130.0	258.6	0 as N
	07/64	1165	732	74.4	27.8	128.0	1.2	139	160.0	268.4	---
	05/65	1130	710	80.0	26.4	145.0	2.1	148	120.0	268.4	0.14
	01/66	---	736	88.0	18.1	142.0	2.8	124	155.0	263.5	1.8
	06/66	---	736	75.2	29.3	138.0	2.7	145	175.0	295.2	4.8
	01/67	---	744	76.8	25.9	118.0	3.0	136	125.0	287.9	2.2
	08/67	---	680	70.4	28.3	128.0	2.3	140	100.0	292.8	8.4
	02/68	---	660	48.0	19.5	130.0	2.8	124	119.0	234.0	6.1
	04/69	---	708	70.0	28.0	126.0	2.5	128	170.0	278.0	0

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/5W-23J1	11/69	---	684	73.0	28.0	126.0	2.8	138	165.0	273.0	0
(Bldg 230001)	05/70	---	716	74.0	25.0	122.0	0.1	134	170.0	210.0	4.4
(Continued)	12/70	1090	385	78.0	25.0	126.0	2.6	142	170.0	250.0	3.1
	09/71	1025	644	75.0	38.0	120.0	2.7	124	190.0	229.0	0.9
	05/72	1050	660	75.0	21.0	124.0	2.3	124	155.0	244.0	2.2
	10/73	1140	716	74.0	22.0	128.0	2.8	136	160.0	220.0	0.5 as N
	06/74	1060	680	74.0	13.0	131.0	2.9	158	138.0	220.0	0.01 as N
	02/76	1050	660	73.6	25.4	136.0	2.9	119	170.0	248.9	2.0 as N
	09/76	1100	691	58.0	32.0	146.0	2.6	140	148.0	321.8	2.6 as N
	03/77	1080	679	69.0	29.0	110.0	3.0	128	155.0	259.0	4.3 as N
	01/78	1100	691	70.0	23.0	147.0	3.0	140	135.0	259.0	4.4 as N
	10/78	1150	723	74.0	22.0	120.0	2.9	134	149.0	248.9	<1 as N
	04/79	1000	628	70.4	22.4	118.0	2.6	122	138.0	239.1	<1 as N
	10/80	1150	745	74.0	22.5	128.0	3.0	152	138.0	239.1	0.2 as N
	05/81	1020	580	67.2	17.3	116.0	3.1	132	111.0	205.0	<0.5 as N
	03/83	900	599	65.6	19.5	129.0	2.8	136	129.0	234.2	<0.5 as N
	12/83	1000	628	72.4	22.4	127.0	2.6	140	150.0	249.0	<0.1 as N
	05/84	1100	691	78.8	25.9	120.0	2.8	130	150.0	254.0	0.2 as N
	06/85	1100	691	59.0	26.0	130.0	3.0	140	70.0	440.0	3.5
	09/85	1203	705	66.0	26.0	110.0	6.0	150	144.0	226.6	<0.4
	06/89	1139	662	71.5	21.7	80.8	---	117	128.0	209.0	<0.4
	01/90	1150	632	90.6	32.4	102.0	---	160	170.0	214.0	<0.5
	01/91	1112	---	73.7	32.0	128.0	---	136	136.0	---	<0.04
	06/91	1090	662	87.4	29.7	117.0	---	140	121.0	204.0	<0.4
	03/92	1080	644	74.2	25.8	133.0	---	127	118.0	282.0	1.3
	03/93	1210	674	72.8	24.5	117.0	---	127	124.0	261.0	<0.4
	06/93	1090	670	63.9	25.7	119.0	---	117	128.0	237.0	<0.4
	03/94	1120	683	73.9	27.0	121.0	---	141	130.0	---	<0.4
	08/94	1160	707	78.9	28.2	129.0	---	139	153.0	---	<0.44
	06/95	1160	742	88.2	28.8	131.0	---	165	147.0	---	<0.04
	01/96	1300	690	79.0	29.0	140.0	---	147	131.0	292.0	<0.0
	06/96	1020	674	82.0	29.0	120.0	---	134	129.0	204.0	<0.0
	02/97	1100	650	74.0	27.0	150.0	---	126	172.0	245.0	<2 as N
	03/97	1073	630	77.0	28.0	130.0	---	142	134.0	254.0	<2 as N
	02/99	1180	647	75.0	27.0	125.0	3.0	150	130.0	272.0	ND
	04/99	1240	722	81.0	30.0	124.0	3.0	157	150.0	293.0	ND
	08/99	1180	735	79.0	29.0	120.0	3.0	190	183.0	281.0	ND

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/5W-23J1	12/99	1190	699	83.0	30.0	118.0	3.0	100	158.0	278.0	ND
(Bldg 230001)	02/00	1110	723	81.0	30.0	116.0	3.0	90	163.0	293.0	ND
(Continued)	05/00	1070	714	81.0	29.0	115.0	3.0	170	152.0	273.0	ND
	08/00	1200	735	80.0	29.0	117.0	3.0	150	118.0	275.0	ND
	02/01	1230	730	84.0	31.0	132.0	ND	158	158.0	293.0	ND
	04/01	1190	636	81.0	30.0	123.0	3.0	146	148.0	287.0	ND
	09/01	1300	751	88.0	32.0	132.0	3.0	155	160.0	293.0	ND
	10/01	1380	757	88.0	33.0	133.0	3.0	152	159.0	311.0	ND
	02/02	1220	724	86.0	31.0	124.0	2.6	146	156.0	293.0	ND
	04/02	1210	726	89.0	32.0	124.0	2.8	151	162.0	240.0	100 as N
	07/02	1280	735	85.0	31.0	129.0	3.1	155	165.0	236.0	ND
	10/02	1300	701	87.0	31.0	141.0	2.9	157	170.0	257.0	ND
	01/03	1260	760	88.0	32.0	139.0	3.5	146	162.0	239.0	ND
	02/03	---	---	68.0	32.0	139.0	3.5	---	---	---	---
	04/03	1200	708	87.0	32.0	127.0	2.8	158	175.0	245.0	ND
	10/03	1210	696	82.0	30.0	144.0	3.0	167	177.0	232.0	0 as N
	01/04	1170	678	87.0	31.0	121.0	4.0	151	175.0	227.0	0 as N
	04/04	1270	697	82.0	31.0	120.0	4.0	155	171.0	250.0	0 as N
	07/04	1030	702	87.0	31.0	98.0	5.0	138	151.0	245.0	0 as N
	10/04	1230	879	89.0	31.0	102.0	5.0	158	176.0	0.0	0 as N
	02/05	1170	704	88.0	31.0	134.0	3.1	157	171.0	235.0	0 as N
	04/05	1220	755	88.0	30.0	121.0	2.7	132	167.0	213.0	0 as N
	07/05	1190	725	83.0	29.0	117.0	2.8	153	ND	206.0	0 as N
	04/07	1200	708	89.0	32.0	120.0	2.6	150	170.0	270.0	0
	04/08	1210	718	90	32	100	2.5	150	170	274	<2
	04/09	1200	720	90	32	110	2.6	130	160	250	<2
	04/10	1200	740	92	33	120	2.6	150	180	260	<2
10S/4W-18E3	06/89	1166	758	80.5	28.1	67.4	---	132	157	198.0	9.5
(Bldg 230093)	01/90	1230	748	97.4	39.7	106.0	---	178	179	226.0	<0.05
	04/90	1190	733	99.6	37.5	112.0	---	159	156	207.0	2.5
	06/91	1130	680	97.6	37.6	100.0	---	139	142	166.0	2.7
	02/94	1180	731	83.3	35.5	104.0	---	142	159	---	11.1
	08/94	1150	725	84.3	35.2	102.0	---	147	164	---	1
	06/95	932	636	75.4	29.1	86.6	---	102	140	---	14
	06/96	1117	710	92.0	36.0	93.0	---	180	297	206.0	<0.0
	02/97	1100	686	89.0	38.0	110.0	---	157	166	220.0	<2 as N

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/4W-18E3	03/97	1116	673	87.0	36.0	110.0	---	147	113	213.0	<2 as N
(Bldg 230093)	06/97	1131	779	90.0	37.0	99.0	<5.0	151	177	199.0	<2 as N
(Continued)	09/98	1160	727	83.0	36.0	90.0	3.0	160	181	232.0	ND
	10/99	1200	325	88.0	39.0	117.0	4.0	130	180	268.0	ND
	02/00	1100	739	84.0	37.0	100.0	4.0	130	180	281.0	ND
	05/00	1030	717	80.0	35.0	96.0	4.0	168	183	229.0	2
	02/01	1360	798	97.0	44.0	111.0	4.0	184	212	244.0	ND
	04/01	1310	728	94.0	42.0	114.0	4.0	168	208	232.0	ND
	09/01	1330	791	96.0	42.0	115.0	4.0	173	209	224.0	1
	03/02	1320	778	102.0	44.0	123.0	4.4	196	229	242.0	1
	04/02	1300	808	101.0	44.0	117.0	4.0	183	220	200.0	1.1
	07/02	1390	778	96.0	42.0	114.0	3.7	180	214	209.0	ND
	10/02	1360	763	97.0	41.0	126.0	4.0	180	207	214.0	ND
	01/03	1290	749	96.0	40.0	116.0	3.7	172	200	200.0	ND
	04/03	1210	783	99.0	42.0	129.0	3.9	176	229	191.0	1.3
	10/03	1320	775	97.0	41.0	126.0	5.0	168	231	174.0	0
	01/04	1270	763	101.0	42.0	106.0	6.0	162	220	180.0	0
	04/04	1320	781	96.0	43.0	105.0	6.0	179	250	195.0	0
	07/04	1370	784	100.0	43.0	89.0	6.0	169	219	203.0	0
	10/04	1300	857	99.0	42.0	88.0	6.0	188	245	210.0	0
	01/05	1270	760	99.0	42.0	115.0	4.3	170	234	185.0	2.7
	07/05	1120	724	89.0	36.0	91.0	3.5	133	ND	203.0	0 as N
	11/05	1230	815	101.0	40.0	113.0	4.1	153	213	174.0	0 as N
	04/06	1350	832	110.0	44.0	120.0	3.8	180	250	220.0	0 as N
	04/07	1298	806	100.0	45.0	110.0	3.7	180	247	230.0	0
	04/08	1270	816	92	40	100	3.4	150	220	202	4.7
	04/09	1300	840	100	43	120	3.8	150	220	230	<2
	04/10	1200	700	83	36	99	3.4	140	200	190	2.8
10S/4W-7R2	06/89	1281	765	76.5	25.1	82.4	---	149	153	209.0	10.3
(Bldg 260003)	04/89	1270	788	104.0	36.5	126.0	---	173	161	215.0	2.6
	06/91	1400	836	111.0	41.1	130.0	---	195	155	215.0	0.04
	02/94	1260	738	83.3	32.0	131.0	---	169	155	---	<0.04
	08/94	1260	738	84.3	33.7	129.0	---	166	149	---	<0.44
	06/95	1290	897	93.6	35.2	129.0	---	202	164	---	0.69

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/4W-7R2	02/97	1200	720	84.0	36.0	130.0	---	150	152	240	<1 as N
(Bldg 260003)	03/97	1143	708	83.0	35.0	130.0	---	152	137	240	<2 as N
(Continued)	06/97	1227	831	94.0	34.0	120.0	<5.0	185	147	247	<2 as N
	12/97	1200	700	84.0	36.0	120.0	3.0	150	173	240	ND
	12/97	1200	700	84.0	36.0	120.0	3.0	150	173	240	ND
	03/98	1200	780	85.0	36.0	110.0	3.0	187	162	180	ND
	06/98	1190	734	83.0	35.0	110.0	3.0	160	167	275	ND
	02/99	1160	663	76.0	32.0	102.0	3.0	150	150	214	ND
	08/99	1120	727	76.0	33.0	99.0	3.0	156	230	281	ND
	10/99	1130	660	78.0	33.0	120.0	3.0	110	160	262	ND
	02/00	1030	592	79.0	35.0	95.9	3.0	120	160	244	ND
	05/00	1010	699	76.0	33.0	96.0	3.0	129	127	229	ND
	08/00	1140	720	77.0	33.0	87.0	3.0	ND	157	232	ND
	12/02	1120	617	73.0	32.0	102.0	3.6	132	164	174	0.4
	01/03	1150	689	76.0	34.0	113.0	3.6	135	165	185	ND
	04/03	1190	717	82.0	37.0	122.0	4.0	164	182	209	ND
	05/03	1190	---	---	---	---	---	156	182	---	---
	10/03	1250	737	81.0	37.0	130.0	5.0	163	201	192	0
	01/04	1240	694	86.0	39.0	107.0	6.0	153	182	185	0
	04/04	1320	750	84.0	40.0	108.0	6.0	170	210	220	0
	07/04	1100	761	92.0	41.0	88.0	7.0	172	204	205	0
	10/04	1280	893	93.0	41.0	88.0	6.0	179	222	ND	0
	02/05	1270	839	99.0	44.0	121.0	5.2	180	215	198	0
	04/05	1300	880	98.0	41.0	109.0	3.8	158	216	183	0 as N
	07/05	1380	870	101.0	43.0	109.0	4.0	430	540	176	0 as N
	11/05	1310	865	104.0	43.0	115.0	3.8	164	221	181	0 as N
	04/06	1220	810	100.0	43.0	110.0	3.8	170	240	206	0 as N
	04/07	1400	856	99.0	44.0	110.0	3.6	170	250	210	0
	04/08	1290	888	91	39	100	3.4	160	230	207	2.6
10S/4W-7R3	04/09	1300	830	100	45	110	4.5	170	240	220	<2
(Bldg 260002)	04/10	1300	800	100	43	100	3.6	160	240	200	<2

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/4W-7H2	08/56	1060	882	78.0	30.0	112.0	---	150	82	326.0	---
(Bldg 260071)	01/60	820	500	55.2	14.7	85.0	---	76	98	224.0	---
	10/60	1300	793	74.5	20.5	126.0	4.3	182	116	320.0	---
	05/61	1390	840	100.0	29.2	170.0	3.3	170	135	362.0	---
	05/62	1220	744	70.4	39.0	142.0	2.4	184	86	312.3	---
	01/63	1300	740	65.6	26.4	162.0	2.4	166	153	259.0	0.7
	07/63	1100	671	64.0	25.4	118.0	2.7	148	97	280.6	0.0 as N
	01/64	1020	622	70.4	33.2	117.0	2.7	172	98	302.6	3.3
	07/64	1400	854	83.2	27.3	134.0	1.4	164	98	322.1	---
	04/65	1490	909	97.6	23.4	152.0	4.7	196	110	346.5	0.9
	01/66	---	832	102.0	28.0	166.0	3.1	194	88	414.8	6.6
	06/66	---	768	86.4	26.3	150.0	3.1	184	110	331.8	6.9
	01/67	---	768	72.0	29.3	128.0	3.1	174	72	324.5	6.9
	08/67	---	608	57.6	24.4	116.0	2.4	132	70	251.3	10.2
	02/68	---	572	67.2	17.6	105.0	2.4	118	94	251.0	0
	09/68	---	636	74.0	19.0	112.0	3.0	144	96	268.0	0.4
	04/69	---	820	72.0	33.0	138.0	2.8	180	140	285.0	0.9
	11/69	---	604	66.0	24.0	116.0	2.8	140	110	259.0	1.8
	05/70	---	640	65.0	26.0	115.0	2.4	142	120	183.0	3.1
	09/71	1075	656	77.0	24.0	120.0	2.8	144	125	273.0	1.3
	05/72	1000	610	46.0	24.0	117.0	2.4	140	130	141.0	0
	10/72	1110	677	88.0	26.0	105.0	3.6	144	126	283.0	3.5
	10/73	1120	683	75.0	23.0	118.0	2.7 *	132	130	200.0	0.6 as N
	06/74	1210	712	72.0	19.0	150.0	3.1	208	112	195.0	0.01 as N
	01/75	850	519	61.0	21.0	93.0	2.4	102	95	212.0	2.3 as N
	02/76	1200	732	91.2	20.5	126.0	3.2	176	130	244.0	2.6 as N
	09/76	1200	732	48.0	29.0	180.0	2.4	192	123	336.7	4.2 as N
	03/77	1400	854	94.0	33.0	158.0	2.8	216	140	342.0	2.8 as N
	01/78	1000	610	66.0	23.0	100.0	2.7	128	123	205.0	4.4 as N
	10/78	1300	793	82.0	31.0	134.0	2.7	160	157	258.6	<1 as N
	04/79	1200	732	84.8	28.3	144.0	3.1	164	116	312.3	<1 as N
	01/80	1450	885	93.0	30.0	163.0	3.0	196	200	273.0	<1 as N
	10/80	1050	591	70.4	21.7	104.0	3.7	140	125	219.6	2.0 as N

* Reported as 27

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
				Chemical Constituents - mg/l							
10S/4W-7H2	05/81	1000	645	72.4	21.7	105.0	3.5	128	123	209.8	<0.5 as N
(Bldg 260071)	05/82	1330	811	100.8	35.9	176.0	1.6	269	198	263.5	<0.5 as N
(Continued)	03/83	890	669	77.2	23.7	95.0	3.4	132	136	209.8	0.65 as N
	12/83	1000	610	70.4	23.7	123.0	2.6	136	150	224.0	0.5 as N
	05/84	1100	671	77.2	24.6	116.0	2.7	133	155	244.0	0.2 as N
	09/84	1300	650	6.6	29.0	120.0	2.6	200	170	250.0	12
	11/84	1100	671	81.6	23.4	124.0	2.7	149	175	249.0	1.2 as N
	05/86	1592	994	104.7	39.7	167.3	4.4	232	167	301.8	<1 as N
	06/89	1137	826	79.1	28.5	85.5	---	157	158	246.0	12.6
	01/90	1290	772	96.3	38.6	116.0	---	184	179	252.0	0.9/1.2
	04/90	1320	817	109.0	42.1	128.0	---	177	167	249.0	5.4
	01/91	401	---	87.3	44.4	103.1	---	205	179	---	1.07
	03/93	1500	824	92.6	33.1	136.0	---	194	154	277.0	1.8
	03/94	1370	827	103.0	36.4	135.0	---	163	145	---	0.9
	08/94	1270	762	91.1	35.5	129.0	---	162	172	---	5.64
	06/95	1260	771	100.0	35.8	127.0	---	197	178	---	2.8
	06/96	1300	751	96.0	36.0	120.0	---	162	174	247.0	1.1
	02/97	1300	830	100.0	41.0	150.0	---	186	161	186.0	<2 as N
	06/97	1323	831	94.0	36.0	140.0	<5.0	158	149	271.0	2 as N
	12/97	1200	670	91.0	36.0	120.0	3.0	150	169	220.0	ND
	12/97	1200	710	87.0	35.0	120.0	2.0	152	182	220.0	1.5
	03/98	1200	810	89.0	36.0	120.0	3.0	201	168	240.0	ND
	06/98	1390	830	91.0	36.0	140.0	2.0	185	150	366.0	ND
	02/99	1130	663	75.0	31.0	106.0	3.0	150	150	238.0	5
	05/99	1170	711	75.0	32.0	85.0	4.0	ND	180	268.0	ND
	08/99	1040	692	74.0	30.0	94.0	2.0	100	400	207.0	ND
	10/99	1210	757	86.0	35.0	120.0	3.0	154	100	295.0	3
	08/00	1290	766	83.0	33.0	89.0	2.0	184	150	323.0	ND
	02/01	1140	707	85.0	35.0	107.0	2.0	152	179	232.0	4.9
	04/01	1190	718	88.0	37.0	112.0	3.0	153	193	218.0	5
	09/01	1200	729	89.0	38.0	106.0	3.0	158	192	201.0	4.6
	11/01	1210	693	90.0	38.0	106.0	3.0	169	209	214.0	5.4
	02/02	1190	726	94.0	39.0	106.0	2.7	147	184	218.0	5.9
	04/02	1190	724	91.0	38.0	107.0	2.9	153	204	173.0	6.6
	07/02	1200	755	88.0	37.0	107.0	3.1	162	201	180.0	6

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/4W-7H2	10/02	1250	722	91.0	38.0	99.0	2.6	150	197	177	6.2
(Bldg 260071)	01/03	1260	781	95.0	39.0	119.0	3.2	144	204	169	4.5
(Continued)	04/03	1310	776	93.0	38.0	125.0	3.0	178	217	185	4.1
	04/04	1660	890	112.0	47.0	143.0	4.0	208	162	370	ND
	07/04	1460	785	98.0	38.0	109.0	4.0	186	191	275	3.4
	05/06	1380	870	100.0	41.0	110.0	2.3	180	240	210	3.0
	04/07	1300	812	99.0	41.0	110.0	2.5	160	230	220	5.2
	04/09	1300	830	100	43	110	2.9	170	260	190	4.7
	04/10	1300	790	100	42	110	2.7	170	230	210	4.2
10S/4W-7A2	05/56	920	651	59.0	22.0	100.0	---	104	94	213.0	---
(Bldg 260073)	05/59	---	745	52.8	16.5	60.3	---	84	41	207.4	---
	01/60	---	840	51.2	17.6	95.0	---	98	92	210.0	---
	10/60	870	566	62.0	23.0	80.0	4.2	110	104	234.0	0
	05/61	1180	710	72.0	34.0	114.0	3.3	104	150	227.0	---
	05/62	797	518	63.2	23.4	75.0	2.0	100	96	214.7	---
	01/63	1195	730	64.0	24.9	157.0	3.1	162	183	220.0	0
	07/63	574	610	57.6	19.5	85.0	2.7	102	100	244.0	0.3 as N
	01/64	760	494	59.2	19.3	82.0	3.3	100	85	253.7	0.5 as N
	07/64	980	637	64.0	21.5	94.0	1.4	100	95	241.6	---
	04/65	1230	800	73.3	22.5	106.0	4.5	120	110	248.9	1.3
	01/66	---	448	---	---	86.0	2.5	82	75	190.3	9.7
	06/66	---	540	60.8	21.0	81.0	2.5	102	95	222.0	9.1
	01/67	---	544	60.8	19.5	88.0	2.9	106	69	229.4	6.9
	08/67	---	504	54.4	20.0	79.0	2.1	96	58	214.7	8
	02/68	---	456	60.8	17.6	86.0	2.7	94	78	222.0	0
	09/68	---	600	67.0	18.0	90.0	3.0	110	96	232.0	0
	04/69	---	428	46.0	18.0	73.0	20.0	76	90	183.0	3.1
	11/69	---	476	59.0	18.0	88.0	2.7	98	110	198.0	0.9
	05/70	---	416	54.0	18.0	79.0	2.6	92	90	151.0	2.9
	12/70	780	507	64.0	16.0	89.0	2.7	100	90	222.0	10.1
	05/72	990	644	77.0	24.0	86.0	2.8	116	135	207.0	0
	10/72	965	627	77.0	27.0	94.0	2.9	104	145	239.0	5.3
	10/73	960	624	72.0	19.0	105.0	2.8	112	140	195.0	0.9 as N
	06/74	950	548	68.0	19.0	101.0	3.1	138	102	207.0	0.35 as N
	01/75	840	546	58.0	22.0	87.0	2.7	98	95	217.0	2.2 as N

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
				Chemical Constituents - mg/l							
10S/4W-7A2	02/76	820	533	68.8	20.5	76.0	3.0	106	88	214.7	2.2 as N
(Bldg 260073)	09/76	900	585	48.0	45.0	98.0	2.3	116	112	258.6	3.0 as N
(Continued)(Continued)	03/77	900	585	70.0	23.0	76.0	2.8	123	113	195.0	2.6 as N
	01/78	950	618	64.0	24.0	100.0	2.7	124	108	200.0	4.3 as N
	10/78	1050	683	74.0	20.0	80.0	3.0	113	128	205.0	<1 as N
	04/79	950	618	65.6	19.5	98.0	3.1	109	118	190.3	<1 as N
	01/80	1000	650	67.0	23.0	99.0	3.1	128	111	187.0	<1 as N
	10/80	900	546	67.2	20.5	86.0	3.4	108	86	205.0	2.3 as N
	05/81	810	585	57.2	14.4	83.0	3.4	92	84	180.6	0.7 as N
	11/81	800	451	57.2	16.3	85.0	2.0	92	110	185.4	0.5 as N
	05/82	930	605	68.8	21.5	97.0	1.6	115	96	205.0	<0.5 as N
	03/83	900	663	78.8	23.7	95.0	3.4	132	135	209.8	0.7 as N
	09/84	1000	530	51.0	23.0	80.0	2.9	110	110	200.0	4.2
	11/84	850	553	67.2	28.3	73.0	2.9	111	137	190.0	1.7 as N
	09/85	1007	593	66.0	26.0	64.0	5.8	124	139	180.6	6
	05/86	1051	623	72.6	26.5	79.5	3.5	131	124	153.6	8.8
	06/89	1073	688	72.1	23.9	59.6	---	120	140	184	15.9
	01/89	1080	572	91.2	34.2	80.2	---	151	178	174	1.4
	04/90	1130	718	111.0	42.1	91.0	---	148	167	175	9.1
	06/91	1190	718	113.0	40.3	93.8	---	173	180	160	7.5
	03/93	1370	708	86.9	32.8	93.3	---	147	93.3	200	4.9
	03/94	1210	783	100.0	37.1	100.0	---	145	167	---	2.2
	08/94	1160	741	87.5	35.5	96.1	---	141	184	---	4.23
	06/95	1200	788	99.4	37.5	101.0	---	173	200	---	2.9
	06/96	1129	739	91.0	37.0	90.0	---	188	312	206	<0.0
	02/97	1100	690	82.0	35.0	140.0	---	127	131	180	<2 as N
	03/97	1109	695	91.0	39.0	93.0	---	137	191	166	2.2 as N
	06/97	1096	749	89.0	36.0	90.0	<5.0	138	178	187	2 as N
	12/97	1100	690	84.0	36.0	83.0	4.0	140	181	160	<.2 as N
	05/99	1050	648	78.0	32.0	111.0	3.0	171	0	207	ND
	08/99	1040	696	78.0	33.0	84.0	4.0	120	390	146	ND
	10/99	1070	663	78.0	34.0	90.0	4.0	132	120	195	6 as N
	02/00	1010	559	83.0	36.0	82.0	4.0	140	190	220	4 as N
	05/00	972	688	80.0	34.0	79.0	4.0	144	167	190	4 as N

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/4W-7A2	02/01	1200	753	92.0	40.0	100.0	3.0	164	212	195	ND
(Bldg 260073)	04/01	1210	736	91.0	40.0	103.0	5.0	159	217	183	4.2
(Continued)	09/01	1200	741	93.0	41.0	98.0	4.0	153	202	183	7.6
	11/01	1220	750	92.0	41.0	106.0	4.0	170	228	189	8.0
	02/02	1230	769	99.0	43.0	101.0	4.2	173	218	195	7.9
	04/02	1260	793	101.0	45.0	102.0	4.5	170	229	160	8.5
	07/02	1350	784	98.0	43.0	103.0	4.3	183	239	159	4.8
	10/02	1370	788	102.0	45.0	104.0	4.3	175	241	167	3.4
	01/03	1330	825	108.0	45.0	121.0	5.4	180	231	168	2.4
	04/03	1260	721	90.0	40.0	102.0	4.3	170	228	153	9.9
	10/03	1340	791	94.0	41.0	121.0	6.0	180	268	144	3
	01/04	1390	800	99.0	46.0	105.0	7.0	173	264	136	4.1
	04/04	1270	739	86.0	42.0	98.0	6.0	160	252	160	5.1
	07/04	1390	764	97.0	45.0	87.0	7.0	176	262	163	3.7
	10/04	1290	943	95.0	44.0	84.0	7.0	178	267	0	3.6
	01/05	1030	610	76.0	35.0	93.0	3.8	136	194	155	6.9
	04/05	1060	630	77.0	34.0	82.0	3.2	125	174	139	2.71
	07/05	1120	750	81.0	35.0	84.0	3.4	129	ND	129	0 as N
	11/05	1170	790	94.7	41.2	97.9	3.7	138	199	156	7.53
	04/06	1140	704	91.0	39.0	98.0	4.5	150	220	180	7.3
	04/07	1200	716	97	44	97	3.7	160	240	190	4.2
	04/08	1270	900	98	45	97	3.8	180	260	170	14
	04/09	1200	780	94	42	100	3.7	130	230	180	22
	04/10	1300	770	93	42	100	3.8	160	240	180	8.7
10S/5W-23G3	06/91	1160	684	83.4	28.3	125.0	---	145	124	223	<0.04
(Bldg 33926)	03/92	1060	674	75.9	24.1	127.0	---	139	111	269	<0.4
	03/93	1182	584	67.8	21.1	110.0	---	135	101	274	<0.4
	06/93	1020	623	60.5	22.4	116.0	---	125	107	225	<0.4
	03/94	1120	665	80.0	25.0	122.0	---	129	117	---	1.8
	08/94	1150	699	78.7	26.4	125.0	---	141	118	---	<0.44
	06/95	1060	673	75.9	23.1	118.0	---	158	114	---	<0.04
	01/96	1200	619	71.0	24.0	120.0	---	139	107	262	<0.0
	07/96	---	---	---	---	---	---	---	---	---	<0.0

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/5W-23K2	06/89	1207	698	75.6	22.8	84.0	---	138	137	231	<0.4
(Bldg 33924)	04/89	1240	728	100.0	32.9	129.0	---	158	148	245	1.3
	01/91	1193	---	80.6	35.2	131.0	---	21.3	146	---	<0.04
	06/91	1160	676	88.1	29.6	118.0	---	141	129	224	<0.04
	03/92	1130	705	76.7	26.0	126.0	---	149	125	279	<0.4
	06/92	1130	717	66.8	26.7	124.0	---	146	140	232	<0.4
	03/93	1285	331	72.1	23.8	115.0	---	131	122	273	<0.4
	02/97	1200	780	89.0	32.0	130.0	---	166	165	250	<2 as N
	03/97	1230	700	94.0	34.0	140.0	---	187	162	264	<2 as N
	06/97	1231	778	91.0	31.0	130.0	<2.0	171	165	264	<2 as N
	12/97	1200	710	82.0	30.0	130.0	2.0	156	162	230	ND
	03/98	1200	710	82.0	30.0	110.0	2.0	191	146	240	ND
	06/98	1170	658	79.0	28.0	123.0	2.0	157	151	293	ND
	02/99	1170	698	75.0	27.0	123.0	3.0	160	130	259	ND
	04/99	1210	667	76.0	27.0	118.0	3.0	148	140	268	ND
	08/99	1140	714	79.0	27.0	116.0	3.0	180	165	268	ND
	10/99	1150	721	80.0	28.0	131.0	3.0	110	150	281	ND
	02/00	1050	619	82.0	28.0	108.0	3.0	100	140	293	ND
	05/00	1060	716	80.0	29.0	112.0	3.0	173	141	268	ND
	08/00	1210	722	82.0	29.0	105.0	3.0	162	156	268	ND
	04/01	1210	705	85.0	30.0	130.0	3.0	163	157	281	ND
	09/01	1190	672	81.0	30.0	125.0	3.0	152	149	275	ND
	10/01	1200	680	81.0	29.0	143.0	3.0	162	159	281	ND
	02/02	1160	675	80.0	29.0	129.0	3.5	143	152	268	ND
	04/02	1180	682	84.0	31.0	124.0	2.9	151	155	230	ND
	07/02	1210	706	80.0	29.0	127.0	2.9	156	156	221	ND
	10/02	1210	669	83.0	30.0	122.0	2.9	151	162	206	8
	01/03	1320	801	97.0	34.0	140.0	2.8	154	180	245	ND
	04/03	1330	743	89.0	32.0	133.0	2.8	165	183	234	ND
	10/03	1210	712	87.0	31.0	135.0	4.0	155	177	204	ND
	04/04	1320	713	85.0	32.0	121.0	5.0	165	167	228	ND
	07/04	1070	703	89.0	32.0	101.0	5.0	147	173	230	ND
	10/04	1230	806	91.0	33.0	102.0	5.0	166	183	ND	ND
	02/05	1310	837	104.0	37.0	136.0	4.2	175	191	253	0 as N
	07/05	1170	750	83.0	29.0	114.0	2.7	139	ND	210	ND
	11/05	1260	750	91.9	29.6	119.0	3.1	144	171	225	ND
	04/06	1220	774	92.0	32.0	120.0	2.8	160	180	284	ND
	04/07	1010	706	86.0	29.0	120.0	2.7	150	170	260	0
	04/08	1270	792	91	30	110	2.6	160	190	175	<2
	04/09	1300	800	100	34	120	2.7	160	200	260	<2
	04/10	1200	740	95	34	120	2.8	150	180	260	<2

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/5W-13R2	01/90	1030	540	*96.0	26.6	94.8	---	141	130	200	0.7
(Bldg 230063)	06/91	1150	702	98.7	32.0	109.0	---	149	125	288	1.3
	06/93	1130	705	72.0	28.4	107.0	---	140	139	262	0.9
	03/94	1020	658	69.6	27.8	104.0	---	135	140	---	0.89
	06/95	1140	636	92.5	30.7	115.0	---	149	151	---	14.2
	06/96	1103	680	91.0	31.0	100.0	---	148	251	233	<0.0
	06/97	1082	708	85.0	29.0	110.0	<5.0	135	145	244	<2 as N
	12/97	1000	640	81.0	28.0	100.0	2.0	119	128	250	ND
	03/98	1100	620	85.0	31.0	110.0	2.0	161	144	220	ND
	06/98	1100	680	83.0	30.0	109.0	3.0	137	140	275	0.68
	09/98	1160	662	81.0	28.0	90.0	3.0	144	90	256	ND
	04/01	1100	612	83.0	29.0	106.0	3.0	131	146	238	3.5
	09/01	1150	679	89.0	31.0	103.0	2.0	142	156	241	3.2
	11/01	1130	658	87.0	30.0	104.0	2.0	148	169	262	3.4
	02/02	1120	674	85.0	30.0	112.0	3.2	140	160	257	3.1
	04/02	1120	682	89.0	32.0	106.0	2.7	142	167	205	2.8
	07/02	1150	676	83.0	30.0	111.0	2.7	145	64	205	2.3
	10/02	1220	711	87.0	31.0	110.0	2.7	149	175	203	ND
	01/03	1210	713	91.0	33.0	106.0	2.7	138	165	197	2
	05/03	1230	728	93.0	33.0	112.0	2.9	155	183	181	2.2
	10/03	1190	741	93.0	33.0	123.0	3.0	188	212	179	0 as N
	04/04	1270	701	87.0	32.0	103.0	4.0	163	186	220	ND
	07/04	1270	701	220.0	32.0	103.0	4.0	163	186	220	0 as N

ND - None Detected
* - Reported as .96

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/4W-7D1	03/99	1280	765	91.0	34.0	127.0	2.0	190	160	272	ND
(Previously	06/99	1080	706	76.0	31.0	88.0	2.2	163	118	220	ND
reported as	08/99	1080	690	76.0	32.0	93.0	3.0	160	191	244	ND
10S/4W-7A3)	10/99	1070	660	76.0	32.0	100.0	3.0	131	120	232	4
(Bldg 260072)	05/00	1010	702	79.0	34.0	94.0	3.0	177	164	254	ND
	08/00	1170	732	84.0	36.0	89.0	3.0	155	188	201	5
	02/01	1230	753	89.0	39.0	113.0	2.0	170	198	220	2.7
	04/01	1230	726	89.0	39.0	115.0	4.0	160	191	243	2.9
	09/01	1210	735	89.0	39.0	107.0	4.0	153	185	217	5.3
	11/01	1240	725	89.0	39.0	117.0	3.0	168	205	220	5.6
	02/02	1250	765	97.0	43.0	109.0	3.4	155	198	234	4.7
	04/02	1290	790	98.0	44.0	109.0	3.4	158	208	200	3.9
	07/02	1320	809	96.0	43.0	117.0	3.7	182	217	200	ND
	10/02	1380	787	99.0	43.0	113.0	3.7	170	216	203	2.8
	01/03	1370	810	101.0	44.0	134.0	4.0	155	194	217	ND
	04/03	1440	789	93.0	40.0	125.0	3.6	177	205	216	2.1
	10/03	1370	820	91.0	40.0	130.0	4.0	175	235	180	4.3
	01/04	1350	747	97.0	42.0	114.0	6.0	168	226	184	2.1
	04/04	1400	766	92.0	42.0	112.0	6.0	162	228	198	2
	07/04	1410	784	98.0	43.0	92.0	6.0	171	231	200	3.8
	11/04	1290	831	100.0	43.0	134.0	4.2	176	224	203	ND
	01/05	1310	804	102.0	44.0	125.0	3.7	184	241	200	2.7
	04/05	1100	690	78.0	34.0	84.0	3.2	128	177	162	2.6
	07/05	1160	716	84.0	35.0	96.0	3.0	136	ND	166	0 as N
	11/05	1180	785	92.5	40.4	97.1	3.8	138	202	174	5.93 as N
	04/06	1280	786	98.0	43.0	110.0	3.3	160	220	233	7.1
	04/07	1400	784	98.0	43.0	110.0	3.4	165	230	230	5
	04/08	1230	840	88	40	98	3.4	160	250	169	7.1
	11/09	---	---	---	---	---	---	---	---	---	<2
	04/10	1300	820	96	42	120	3.5	170	240	220	4.5

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
				Chemical Constituents - mg/l							
10S/5W-23G4	06/99	1070	668	69.0	23.0	106.0	1.7	163	144	305	ND
(Bldg 330925)	08/99	1090	657	72.0	25.0	115.0	2.0	180	153	317	ND
	10/99	1150	716	79.0	27.0	140.0	2.0	120	140	305	ND
	02/00	956	522	67.0	23.0	117.0	2.0	90	120	268	ND
	05/00	1040	686	77.0	27.0	116.0	2.0	181	141	307	ND
	08/00	1180	722	80.0	28.0	105.0	2.0	155	143	232	ND
	02/01	1100	706	73.0	25.0	125.0	2.0	149	164	268	ND
	04/01	1170	701	81.0	29.0	128.0	2.0	154	149	282	ND
	09/01	1180	671	80.0	28.0	126.0	2.0	149	142	271	ND
	10/01	1180	678	81.0	28.0	132.0	2.0	161	156	281	ND
	02/02	1170	685	80.0	28.0	134.0	2.8	143	144	279	ND
	04/02	1200	711	87.0	31.0	127.0	2.3	150	204	235	ND
	07/02	1180	730	83.0	29.0	130.0	2.5	158	151	230	ND
	10/02	1180	649	78.0	27.0	115.0	2.1	135	138	217	ND
	01/03	1210	740	87.0	30.0	129.0	2.2	145	154	225	ND
	04/03	1200	681	79.0	27.0	128.0	2.5	150	152	215	ND
	10/03	1160	647	80.0	27.0	136.0	3.0	152	155	216	ND
	04/04	1140	604	66.0	24.0	117.0	3.0	147	133	215	ND
	08/04	1180	657	68.0	24.0	99.0	4.0	140	114	245	ND
	10/04	1170	712	85.0	29.0	97.0	5.0	160	172	ND	ND
	02/05	1070	661	84.0	29.0	125.0	3.3	154	148	185	ND
	07/05	1050	655	72.0	23.0	118.0	2.0	127	ND	202	ND
	11/05	1080	665	75.9	23.2	121.0	2.0	135	125	227	ND
	05/06	1110	650	71.0	24.0	120.0	1.9	140	130	217	ND
	04/07	950	632	72.0	25.0	120.0	1.9	140	130	260	0
	04/08	1150	672	73	25	120	1.8	150	130	250	<2
	04/09	1100	670	76	26	120	2.1	150	140	250	<2
	04/10	1100	660	71	24	120	1.8	140	120	250	<2
10S/5W-23K3	06/99	1150	700	75.0	27.0	106.0	2.2	163	155	317	ND
(Bldg 330923)	08/99	1170	722	79.0	28.0	114.0	3.0	330	161	342	ND
	10/99	1170	723	78.0	28.0	140.0	3.0	120	140	293	ND
	02/00	1120	712	83.0	30.0	117.0	3.0	120	157	293	ND
	02/01	1240	758	85.0	31.0	136.0	3.0	167	152	305	ND
	04/01	1220	735	85.0	31.0	135.0	3.0	162	154	293	ND
	09/01	1240	682	81.0	29.0	132.0	3.0	162	144	281	ND

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
				Chemical Constituents - mg/l							
10S/5W-23K3	10/01	1330	746	87.0	32.0	134.0	3.0	166	156	293	ND
(Bldg 330923)	02/02	1190	720	83.0	29.0	140.0	3.5	150	155	281	ND
(Continued)	04/02	1210	691	82.0	29.0	127.0	2.7	145	142	231	ND
	07/02	1230	738	81.0	29.0	134.0	3.1	167	151	240	ND
	10/02	1270	716	85.0	30.0	137.0	2.9	150	162	221	ND
	01/03	1340	826	100.0	35.0	141.0	2.6	156	185	252	0.4
	04/03	1350	733	85.0	30.0	129.0	2.6	162	171	235	ND
	10/03	887	800	84.0	30.0	141.0	3.0	160	173	224	ND
	02/04	1250	698	83.0	29.0	120.0	4.0	154	172	233	ND
	04/04	1240	706	78.0	28.0	121.0	4.0	163	170	220	ND
	07/04	1040	729	84.0	30.0	99.0	5.0	158	169	240	ND
	10/04	1180	857	86.0	30.0	97.0	5.0	159	172	235	ND
	02/05	1160	685	87.0	31.0	125.0	3.7	159	168	210	ND
	04/05	1230	760	91.0	30.0	122.0	2.6	149	148	213	ND
	07/05	1170	755	83.0	29.0	115.0	2.6	135	ND	210	ND
	11/05	1230	735	92.8	29.5	123.0	3.0	141	165	332	ND
	04/06	1190	720	89.0	31.0	120.0	2.7	160	170	233	ND
	04/07	1010	718	87.0	30.0	120.0	2.6	160	170	250	0
	04/08	1250	754	91	32	110	2.5	160	180	184	ND
	04/09	1200	760	92	33	120	2.7	160	180	250	<2
	04/10	1200	760	98	34	120	2.6	160	180	240	<2
10S/5W-26C3	09/01	1410	819	101.0	38.0	138.0	3.0	173	175	296	ND
(Bldg 220002)	10/01	1370	814	104.0	38.0	131.0	3.0	199	198	317	ND
	02/02	1380	834	99.0	36.0	128.0	3.0	172	183	318	ND
	04/02	1370	808	104.0	39.0	124.0	3.2	180	184	258	ND
	07/02	1450	829	101.0	37.0	137.0	3.3	187	193	260	ND
	10/02	1400	793	98.0	35.0	143.0	3.4	179	195	248	ND
	01/03	1300	806	94.0	33.0	144.0	2.0	163	180	235	ND
	04/03	1290	759	94.0	33.0	137.0	3.1	182	198	230	ND

ND - None Detected

TABLE D-6 (cont'd)

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

WELLS ON CAMP PENDLETON

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
10S/5W-26C3	04/03	1290	759	94.0	32.0	137.0	3.1	182	198	230	ND
(Bldg 220002)	10/03	1340	761	90.0	31.0	146.0	4.0	162	188	210	ND
(Continued)	01/04	1320	743	94.0	32.0	124.0	5.0	182	212	203	ND
	04/04	1350	731	90.0	32.0	127.0	5.0	184	197	235	ND
	07/04	1100	773	91.0	32.0	98.0	5.0	167	197	215	ND
	10/04	1290	826	93.0	32.0	106.0	5.0	187	185	ND	ND
	02/05	1260	735	101.0	35.0	127.0	3.7	175	188	215	ND
	04/05	1300	760	98.0	33.0	122.0	2.8	160	184	200	ND
	07/05	1450	1260	97.0	33.0	119.0	2.9	154	ND	200	ND
	11/05	1240	795	99.0	32.0	122.0	2.9	159	169	202	ND
	06/06	1300	796	95.0	34.0	140.0	2.9	180	170	250	ND
	04/07	1080	764	91.0	31.0	130.0	2.9	190	190	250	0
	04/08	1260	694	80	29	140	2.7	180	150	286	<2
10S/5W-18B1 (Bldg 260018)	04/10	1400	840	100	42	110	3.6	170	230	240	<2

ND - None Detected

TABLE D-12

SANTA MARGARITA RIVER WATERSHED
WATER QUALITY DATA

SURFACE STREAMS SAMPLED BY USGS ON CAHUILLA CREEK

Site Location	Date Tested	Specific Conductance umhos	Total Dissolved Solids (mg/l)	Chemical Constituents - mg/l							
				Ca	Mg	Na	K	Cl	SO4	HCO3	NO3
Cahuilla Creek	02/28/05	644	446	41.90	11.20	76.90	10.10	---	---	---	.23 @N
Cahuilla Creek Below Highway 371	02/28/05	476	337	34.20	10.10	51.90	3.69	36.9	---	---	.64 @N
Unnamed Tributary to Cahuilla Creek	02/14/05	783	529	64.00	17.50	80.70	8.94	35.2	---	---	3.05@N

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

APPENDIX E.1

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS CALENDAR YEAR 2010

September 2011

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

JANUARY 2010 - VERY WET YEAR

DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2	Climatic Credits Earned /2	CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF
1	9.5	9.5				9.4	18.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
2	9.6	9.6				9.5	18.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
3	9.6	9.6				9.4	18.6	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
4	9.6	9.6				9.3	18.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
5	9.5	9.5				9.3	18.4	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
6	9.6	9.6				9.5	18.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
7	9.8	9.8				9.7	19.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
8	9.1	9.1				9.1	18.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
9	8.8	8.8				8.8	17.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
10	9.0	9.0				9.0	17.8	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
11	8.9	8.9	9.4	8.9	0.4	8.9	17.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
12	8.9	8.9	9.3	8.9	0.4	8.9	17.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
13	8.9	8.9	9.2	8.9	0.3	8.9	17.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
14	8.9	8.9	9.1	8.9	0.2	8.9	17.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
15	8.9	8.9	9.1	8.9	0.2	8.9	17.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
16	8.9	8.9	9.0	8.9	0.1	8.9	17.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
17	8.9	8.9	8.9	8.9	0.0	8.9	17.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
18	871.0	736.0	81.6	8.9	72.7	5.3	10.6	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
19	680.0	659.0	146.6	8.9	137.7	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
20	689.0	689.0	214.6	8.9	205.7	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
21	2,990.0	2560.0	469.7	8.9	460.8	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
22	1,180.0	1180.0	586.9	8.9	578.0	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
23	266.0	266.0	612.6	8.9	603.7	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
24	68.0	68.0	618.5	8.9	609.6	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
25	36.0	36.0	621.2	8.9	612.3	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
26	23.0	23.0	622.6	8.9	613.7	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
27	31.0	31.0	624.8	8.9	615.9	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
28	14.0	14.0	552.6	8.9	543.7	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
29	8.6	8.6	487.6	8.9	478.7	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
30	9.6	9.6	419.6	8.9	410.7	3.5	6.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
31	10.0	10.0	164.6	8.9	155.7	5.9	11.8	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
TOTAL SFD	7,032.6	6,446.6	6,287.5	186.9	6,100.6	170.3		0.0		390.6		0.0		
TOTAL AF	13,949.0	12,786.6	12,471.0	370.7	12100.3	337.8	337.8		0.0		774.7		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.
1 - Minimum Flow Maintenance Requirement equals 11.5 cfs less 0.9 cfs CAP Credit carried over from 2008, less 1.7 CAP Credit from 2009.
2 - Climatic Credits equal the WR-34 Discharge less the Actual Flow Maintenance Requirement which is the flow indicated in Section 5 of the CWRMA less applicable credits, but not less than 3.0 cfs.
No Climatic Credits can be earned during a Very Wet Year
3 - Art. 17 - Camp Pendleton rights to groundwater equal the Flow indicated in Section 5 of the CWRMA minus the Actual Flow Maintenance Requirement which cannot be less than 3.0 cfs.
Input to groundwater account shown but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

FEBRUARY 2010 - VERY WET YEAR

										CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE				
DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2	Climatic Credits Earned /2	Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF
1	9.1	9.1	47.5	8.9	38.6	6.6	13.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
2	8.9	8.9	21.8	8.9	12.9	7.1	14.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
3	9.0	9.0	15.9	8.9	7.0	7.7	15.2	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
4	8.8	8.8	13.2	8.9	4.3	7.9	15.6	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
5	9.1	9.1	11.8	8.9	2.9	8.3	16.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
6	1400.0	1390.0	147.7	8.9	138.8	2.4	4.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
7	252.0	282.0	174.5	8.9	165.6	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
8	62.0	62.0	179.9	8.9	171.0	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
9	100.0	100.0	188.9	8.9	180.0	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
10	107.0	107.0	198.6	8.9	189.7	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
11	33.0	33.0	201.0	8.9	192.1	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
12	18.0	18.0	201.9	8.9	193.0	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
13	12.0	12.0	202.2	8.9	193.3	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
14	9.6	9.6	202.3	8.9	193.4	1.0	1.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
15	9.3	9.3	202.3	8.9	193.4	2.8	5.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
16	8.8	8.8	64.2	8.9	55.3	3.4	6.8	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
17	9.6	9.6	36.9	8.9	28.0	3.2	6.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
18	8.8	8.8	31.6	8.9	22.7	5.3	10.6	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
19	9.1	9.1	22.5	8.9	13.6	5.1	10.1	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
20	34.0	34.0	15.2	8.9	6.3	1.4	2.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
21	14.0	14.0	13.3	8.9	4.4	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
22	27.0	27.0	14.2	8.9	5.3	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
23	8.4	8.4	13.9	8.9	5.0	1.2	2.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
24	8.2	8.2	13.7	8.9	4.8	5.3	10.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
25	9.1	9.1	13.7	8.9	4.8	7.3	14.4	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
26	8.9	8.9	13.7	8.9	4.8	7.4	14.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
27	326.0	326.0	45.4	8.9	36.5	2.5	4.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
28	118.0	118.0	56.3	8.9	47.4	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
29	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL SFD	2,637.7	2,657.7	2,364.1	249.2	2,114.9	85.6		0.0		352.8		0.0		
TOTAL AF	5,231.8	5,271.5	4,689.0	494.3	4,194.7	169.7	169.7		0.0		699.8		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.

1 - Minimum Flow Maintenance Requirement equals 11.5 cfs less 0.9 cfs CAP Credit carried over from 2008, less 1.7 CAP Credit from 2009.

2 - Climatic Credits equal the WR-34 Discharge less the Actual Flow Maintenance Requirement which is the flow indicated in Section 5 of the CWRMA less applicable credits, but not less than 3.0 cfs.
No Climatic Credits can be earned during a Very Wet Year

3 - Art. 17 - Camp Pendleton rights to groundwater equal the Flow indicated in Section 5 of the CWRMA minus the Actual Flow Maintenance Requirement which cannot be less than 3.0 cfs.
Input to groundwater account shown but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

MARCH 2010 - VERY WET YEAR

										CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE				
DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2		Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF
1	30.0	30.0	58.4	8.9	49.5	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
2	15.0	15.0	56.5	8.9	47.6	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
3	9.2	9.2	56.0	8.9	47.1	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
4	7.8	7.8	54.1	8.9	45.2	0.9	1.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
5	7.5	7.5	54.0	8.9	45.1	2.9	5.8	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
6	4.1	4.1	53.6	8.9	44.7	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
7	15.0	15.0	54.2	8.9	45.3	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
8	8.9	8.9	54.2	8.9	45.3	0.6	1.2	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
9	8.7	8.7	22.4	8.9	13.5	4.3	8.6	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
10	8.9	8.9	11.5	8.9	2.6	5.9	11.8	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
11	9.6	9.6	9.5	8.9	0.6	6.8	13.4	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
12	9.4	9.4	8.9	8.9	0.0	7.1	14.1	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
13	9.6	9.6	9.0	8.9	0.0	6.8	13.4	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
14	8.9	8.9	9.1	8.9	0.2	7.1	14.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
15	9.0	9.0	9.2	8.9	0.3	8.0	15.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
16	9.1	8.9	9.7	8.9	0.8	8.1	16.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
17	9.4	9.0	9.1	8.9	0.2	8.2	16.2	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
18	9.4	9.0	9.1	8.9	0.2	8.2	16.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
19	9.5	9.1	9.1	8.9	0.2	8.2	16.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
20	9.3	8.9	9.1	8.9	0.2	8.2	16.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
21	9.3	8.9	9.1	8.9	0.2	8.3	16.4	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
22	9.3	8.9	9.0	8.9	0.1	8.4	16.6	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
23	9.2	8.8	8.9	8.9	0.0	8.3	16.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
24	9.3	8.9	8.9	8.9	0.0	8.5	16.8	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
25	9.3	8.9	8.9	8.9	0.0	8.5	16.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
26	9.3	8.9	8.9	8.9	0.0	8.5	16.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
27	9.3	8.9	8.9	8.9	0.0	8.5	16.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
28	9.3	8.9	8.9	8.9	0.0	8.6	17.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
29	9.2	8.8	8.9	8.9	(0.0)	8.6	17.1	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
30	9.3	8.9	8.9	8.9	(0.0)	8.7	17.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
31	9.3	8.9	8.9	8.9	(0.0)	8.7	17.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
TOTAL SFD	310.4	304.2	664.7	275.9	388.8	184.9		0.0		390.6		0.0		
TOTAL AF	615.7	603.4	1,318.4	547.2	771.1	366.7	366.7		0.0		774.7		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.

1 - Minimum Flow Maintenance Requirement equals 11.5 cfs less 0.9 cfs CAP Credit carried over from 2008, less 1.7 CAP Credit from 2009.

2 - Climatic Credits equal the WR-34 Discharge less the Actual Flow Maintenance Requirement which is the flow indicated in Section 5 of the CWRMA less applicable credits, but not less than 3.0 cfs.
No Climatic Credits can be earned during a Very Wet Year

3 - Art. 17 - Camp Pendleton rights to groundwater equal the Flow indicated in Section 5 of the CWRMA minus the Actual Flow Maintenance Requirement which cannot be less than 3.0 cfs.
Input to groundwater account shown but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

APRIL 2010 - VERY WET YEAR

DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2	Climatic Credits Earned /2	CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE: Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF
1	8.9	8.9	8.9	8.9	(0.0)	8.4	16.6	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
2	8.8	8.8	8.9	8.9	(0.0)	8.3	16.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
3	8.9	8.9	8.9	8.9	(0.0)	8.4	16.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
4	8.9	8.9	8.9	8.9	(0.0)	8.4	16.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
5	8.7	8.9	8.9	8.9	(0.0)	8.3	16.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
6	8.5	8.9	8.9	8.9	(0.0)	8.3	16.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
7	8.5	8.9	8.9	8.9	(0.0)	8.5	16.8	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
8	8.4	8.8	8.9	8.9	(0.0)	8.4	16.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
9	8.5	8.9	8.9	8.9	(0.0)	8.5	16.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
10	8.6	9.0	8.9	8.9	(0.0)	8.5	16.8	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
11	8.5	8.9	8.9	8.9	(0.0)	8.4	16.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
12	93.0	93.0	17.3	8.9	8.4	2.0	4.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
13	30.0	31.0	19.5	8.9	10.6	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
14	8.2	8.6	19.5	8.9	10.6	4.6	9.2	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
15	8.6	9.0	19.5	8.9	10.6	8.0	15.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
16	8.7	9.1	19.5	8.9	10.6	8.3	16.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
17	8.3	9.1	19.5	8.9	10.6	8.3	16.5	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
18	8.1	8.9	19.6	8.9	10.7	8.2	16.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
19	8.1	8.9	19.6	8.9	10.7	8.2	16.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
20	8.3	9.0	19.6	8.9	10.7	8.2	16.3	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
21	8.2	8.9	19.6	8.9	10.7	8.0	15.9	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
22	47.0	49.0	15.2	8.9	6.3	1.7	3.4	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
23	15.0	16.0	13.7	8.9	4.8	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
24	4.4	4.9	13.3	8.9	4.4	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
25	1.1	1.3	12.5	8.9	3.6	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
26	1.6	1.8	11.8	8.9	2.9	1.4	2.7	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
27	1.1	1.3	11.0	8.9	2.1	0.7	1.4	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
28	0.4	0.5	10.2	8.9	1.3	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
29	0.4	0.5	9.3	8.9	0.4	0.0	0.0	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
30	5.6	6.4	9.1	8.9	0.2	5.3	10.6	0.0	0.0	12.6	25.0	0.0	0.0	5,000.0
31	—	—	—		—	—	—	—	—	—	—	—	—	—
TOTAL SFD	361.3	375.0	396.7	267.0	129.7	165.6		0.0		378.0		0.0		
TOTAL AF	716.6	743.8	786.8	529.6	257.2	328.4	328.4		0.0		749.8		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.
1 - Minimum Flow Maintenance Requirement equals 11.5 cfs less 0.9 cfs CAP Credit carried over from 2008, less 1.7 CAP Credit from 2009.
2 - Climatic Credits equal the WR-34 Discharge less the Actual Flow Maintenance Requirement which is the flow indicated in Section 5 of the CWRMA less applicable credits, but not less than 3.0 cfs.
No Climatic Credits can be earned during a Very Wet Year
3 - Art. 17 - Camp Pendleton rights to groundwater equal the Flow indicated in Section 5 of the CWRMA minus the Actual Flow Maintenance Requirement which cannot be less than 3.0 cfs.
Input to groundwater account shown but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

MAY 2010 - VERY WET YEAR

										CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE				
DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2	Climatic Credits Earned /2	Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF
1	10.0	12.0				9.4	18.7	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
2	10.0	12.0				9.4	18.7	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
3	10.0	12.0				9.4	18.7	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
4	9.7	11.0				9.1	18.1	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
5	8.7	9.1				8.4	16.7	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
6	5.7	5.7				5.5	11.0	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
7	4.9	4.9				4.9	9.8	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
8	4.9	4.9				5.0	10.0	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
9	4.9	4.9				5.0	10.0	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
10	5.0	5.0				5.1	10.1	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
11	5.0	5.0	7.5	5.0	2.5	5.1	10.2	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
12	4.9	4.9	6.7	5.0	1.7	5.1	10.2	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
13	5.0	5.0	6.0	5.0	1.0	5.1	10.2	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
14	5.0	5.0	5.4	5.0	0.4	5.1	10.2	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
15	5.0	5.0	5.0	5.0	0.0	5.1	10.2	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
16	4.9	4.9	5.0	5.0	(0.0)	5.1	10.2	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
17	4.9	4.9	5.0	5.0	(0.0)	5.1	10.2	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
18	5.0	5.0	5.0	5.0	(0.0)	5.2	10.4	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
19	5.0	5.0	5.0	5.0	(0.0)	5.3	10.6	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
20	5.1	5.1	5.0	5.0	(0.0)	5.4	10.8	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
21	5.1	5.1	5.0	5.0	(0.0)	5.4	10.8	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
22	5.0	5.0	5.0	5.0	0.0	5.4	10.7	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
23	5.1	5.0	5.0	5.0	0.0	5.4	10.8	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
24	5.3	5.0	5.0	5.0	0.0	5.4	10.8	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
25	5.3	5.0	5.0	5.0	0.0	5.4	10.8	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
26	5.2	5.0	5.0	5.0	0.0	5.4	10.8	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
27	8.3	7.9	5.3	9.0	(3.7)	8.4	16.6	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
28	11.0	10.0	5.8	11.5	(5.7)	10.6	21.0	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
29	12.0	12.0	6.5	11.5	(5.0)	11.7	23.3	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
30	12.0	12.0	7.2	11.5	(4.3)	11.7	23.2	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
31	12.0	12.0	7.9	11.5	(3.6)	11.7	23.2	0.0	0.0	4.2	8.3	0.0	0.0	5,000.0
TOTAL SFD	209.9	215.3	118.2	135.0	(16.8)	210.2			0.0	130.2		0.0		
TOTAL AF	416.3	427.0	234.5	267.8	(33.3)	417.0	417.0	0.0			258.2		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.

1 - Minimum flow maintenance requirement was reduced from 11.5 cfs to 5.0 cfs. An intermediate flow of 9.0 cfs was applied for May 1 - 5. Flow requirements were reduced to 5.0 for May 6-26; an intermediate flow requirement of 9.0 was applied on May 27; and flow reqirements were increased to 11.5 for May 28-31.

2 - Art. 7(b) not applicable for months of May through December.

3 - Art. 17 - Camp Pendleton rights to groundwater equal the Flow indicated in Section 5 of the CWRMA minus the Actual Flow Maintenance Requirement which cannot be less than 3.0 cfs. Input to groundwater account shown but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

JUNE 2010 - VERY WET YEAR

											CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE				
DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /1	Climatic Credits Earned /1		Input /2	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF		cfs	AF	cfs	AF	AF
1	12.0	12.0				11.7	23.2	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
2	12.0	12.0				11.7	23.2	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
3	12.0	12.0				11.7	23.2	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
4	12.0	12.0				11.6	23.1	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
5	12.0	12.0				11.4	22.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
6	12.0	12.0				10.9	21.7	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
7	11.0	11.0				10.9	21.7	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
8	11.0	11.0				10.9	21.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
9	11.0	11.0				10.9	21.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
10	11.0	11.0				10.9	21.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
11	11.0	11.0	11.5	11.5	0.0	10.9	21.7	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
12	12.0	12.0	11.5	11.5	0.0	11.4	22.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
13	12.0	12.0	11.5	11.5	0.0	11.4	22.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
14	12.0	12.0	11.5	11.5	0.0	11.4	22.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
15	12.0	12.0	11.5	11.5	0.0	11.4	22.7	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
16	12.0	12.0	11.5	11.5	0.0	11.4	22.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
17	11.0	11.0	11.5	11.5	0.0	10.9	21.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
18	11.0	11.0	11.5	11.5	0.0	10.9	21.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
19	11.0	11.0	11.5	11.5	0.0	10.9	21.7	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
20	11.0	11.0	11.5	11.5	0.0	10.9	21.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
21	11.0	11.0	11.5	11.5	0.0	10.9	21.7	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
22	12.0	12.0	11.5	11.5	0.0	11.5	22.9	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
23	12.0	12.0	11.5	11.5	0.0	11.6	23.0	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
24	12.0	12.0	11.5	11.5	0.0	11.6	23.0	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
25	12.0	12.0	11.5	11.5	0.0	11.6	23.0	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
26	12.0	12.0	11.5	11.5	0.0	11.6	23.0	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
27	11.0	11.0	11.5	11.5	0.0	10.9	21.7	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
28	11.0	11.0	11.5	11.5	0.0	10.9	21.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
29	11.0	11.0	11.5	11.5	0.0	10.9	21.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
30	11.0	11.0	11.5	11.5	0.0	10.9	21.6	0.0	0.0		0.7	1.4	0.0	0.0	5,000.0
31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL SFD	346.0	346.0	230.0	230.0	0.0	336.7			0.0		21.0		0.0		
TOTAL AF	686.3	686.3	456.2	456.2	0.0	667.9	667.9	0.0		0.0		41.7		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.
1 - Art. 7(b) not applicable for months of May through December.
2 - Foregone make-up water credited to groundwater account but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

JULY 2010 - VERY WET YEAR

DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2	Climatic Credits Earned /2	CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF
1	11.0	11.0				10.9	21.7	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
2	12.0	12.0				11.8	23.5	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
3	12.0	12.0				11.9	23.6	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
4	12.0	12.0				11.7	23.2	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
5	12.0	12.0				11.8	23.4	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
6	12.0	12.0				11.8	23.4	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
7	11.0	11.0				10.9	21.6	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
8	11.0	11.0				10.9	21.7	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
9	11.0	11.0				10.9	21.6	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
10	11.0	11.0				10.9	21.6	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
11	11.0	11.0	11.5	11.5	0.0	10.9	21.7	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
12	12.0	12.0	11.5	11.5	0.0	11.8	23.4	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
13	9.6	9.6	11.3	7.9	3.4	9.6	19.1	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
14	7.9	7.9	10.9	7.9	3.0	8.3	16.4	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
15	8.0	8.0	10.5	7.9	2.6	8.4	16.7	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
16	8.0	8.0	10.1	7.9	2.2	8.4	16.7	0.0	0.0	0.0	0.0	0.0	0.0	5,000.0
17	6.1	5.9	9.5	4.3	5.2	6.3	12.5	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
18	4.7	4.2	8.9	4.3	4.6	4.9	9.7	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
19	4.8	4.3	8.2	4.3	3.9	4.9	9.7	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
20	4.8	4.3	7.5	4.3	3.2	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
21	4.8	4.3	6.9	4.3	2.6	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
22	4.8	4.3	6.1	4.3	1.8	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
23	4.8	4.3	5.6	4.3	1.3	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
24	4.8	4.3	5.2	4.3	0.9	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
25	4.8	4.3	4.8	4.3	0.5	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
26	4.8	4.3	4.5	4.3	0.2	4.9	9.7	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
27	4.8	4.3	4.3	4.3	(0.0)	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
28	4.8	4.3	4.3	4.3	0.0	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
29	4.8	4.3	4.3	4.3	0.0	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
30	4.8	4.3	4.3	4.3	0.0	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
31	4.8	4.3	4.3	4.3	0.0	4.9	9.8	0.0	0.0	5.4	10.7	0.0	0.0	5,000.0
TOTAL SFD	244.7	237.5	154.2	119.1	35.1	246.4			0.0	81.0		0.0		
TOTAL AF	485.4	471.1	305.8	236.2	69.5	488.7	488.7	0.0			160.7		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.

1 - Flow was increased from 9.7 cfs to 11.5 cfs for July 1 - 16 in order to assist Camp Pendleton with habitat studies and facilities operations. At the request of Camp Pendleton in order to forego Make-Up water for the rest of the year, the flow was subsequently reduced in two steps to 7.9 cfs for for 4 days from July 13 - 16 and to 4.3 cfs for July 17 - 31.

2 - Art. 7(b) not applicable for months of May through December.

3 - Foregone make-up water credited to groundwater account but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

AUGUST 2010 - VERY WET YEAR

DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2	Climatic Credits Earned /2	CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF
1	5.0	4.5				5.1	10.1	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
2	4.5	4.5				4.7	9.3	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
3	4.3	4.3				4.5	9.0	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
4	4.4	4.4				4.6	9.1	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
5	4.6	4.6				4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
6	4.5	4.5				4.5	8.9	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
7	4.2	4.2				4.4	8.8	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
8	4.3	4.3				4.4	8.8	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
9	4.4	4.4				4.6	9.1	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
10	4.4	4.4				4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
11	4.5	4.5	4.4	4.4	0.0	4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
12	4.4	4.4	4.4	4.4	0.0	4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
13	4.4	4.4	4.4	4.4	0.0	4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
14	4.4	4.4	4.4	4.4	0.0	4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
15	4.4	4.4	4.4	4.4	0.0	4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
16	4.4	4.4	4.4	4.4	0.0	4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
17	4.4	4.4	4.4	4.4	0.0	4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
18	4.4	4.4	4.4	4.4	0.0	4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
19	4.4	4.4	4.4	4.4	0.0	4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
20	4.3	4.3	4.4	4.4	0.0	4.6	9.2	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
21	4.4	4.4	4.4	4.4	0.0	4.7	9.3	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
22	4.4	4.4	4.4	4.4	0.0	4.7	9.4	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
23	4.3	4.3	4.4	4.4	0.0	4.8	9.5	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
24	4.4	4.4	4.4	4.4	0.0	4.9	9.7	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
25	4.4	4.4	4.4	4.4	0.0	4.9	9.8	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
26	4.4	4.4	4.4	4.4	0.0	4.9	9.8	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
27	4.4	4.4	4.4	4.4	0.0	5.0	10.0	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
28	4.4	4.4	4.4	4.4	0.0	5.0	10.0	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
29	4.5	4.5	4.4	4.4	0.0	5.0	9.9	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
30	4.4	4.4	4.4	4.4	0.0	4.9	9.7	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
31	4.4	4.4	4.4	4.4	0.0	4.9	9.7	0.0	0.0	4.8	9.5	0.0	0.0	5,000.0
TOTAL SFD	137.0	136.5	92.3	92.4	(0.1)	146.4			0.0	148.8		0.0		
TOTAL AF	271.7	270.7	183.0	183.3	(0.3)	290.3	290.3				295.1		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.
1 - Flow was decreased at the request of Camp Pendleton to Below Normal Flow Requirements to minimize future CAP credits.
2 - Art. 7(b) not applicable for months of May through December.
3 - Foregone make-up water credited to groundwater account but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

SEPTEMBER 2010 - VERY WET YEAR

DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2	Climatic Credits Earned /2		CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF		cfs	AF	cfs	AF	AF
1	4.1	4.1				4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
2	4.1	4.1				4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
3	4.1	4.1				4.7	9.4	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
4	4.1	4.1				4.7	9.4	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
5	4.1	4.1				4.7	9.4	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
6	4.1	4.1				4.7	9.4	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
7	4.2	4.2				4.7	9.4	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
8	4.1	4.1				4.6	9.2	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
9	4.1	4.1				4.6	9.2	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
10	4.1	4.1				4.6	9.1	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
11	4.1	4.1	4.1	4.1	0.0	4.6	9.2	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
12	4.1	4.1	4.1	4.1	0.0	4.6	9.2	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
13	4.1	4.1	4.1	4.1	0.0	4.6	9.2	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
14	4.1	4.1	4.1	4.1	0.0	4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
15	4.1	4.1	4.1	4.1	0.0	4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
16	4.1	4.1	4.1	4.1	0.0	4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
17	4.1	4.1	4.1	4.1	0.0	4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
18	4.1	4.1	4.1	4.1	0.0	4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
19	4.1	4.1	4.1	4.1	0.0	4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
20	4.1	4.1	4.1	4.1	0.0	4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
21	4.1	4.1	4.1	4.1	0.0	4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
22	4.2	4.2	4.1	4.1	0.0	4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
23	4.1	4.1	4.1	4.1	0.0	4.6	9.2	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
24	4.1	4.1	4.1	4.1	0.0	4.6	9.2	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
25	4.1	4.1	4.1	4.1	0.0	4.6	9.2	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
26	4.1	4.1	4.1	4.1	0.0	4.7	9.3	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
27	4.1	4.1	4.1	4.1	0.0	4.7	9.4	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
28	4.1	4.1	4.1	4.1	0.0	4.7	9.4	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
29	4.1	4.1	4.1	4.1	0.0	4.7	9.4	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
30	4.1	4.1	4.1	4.1	0.0	4.6	9.2	0.0	0.0		5.3	10.5	0.0	0.0	5,000.0
31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL SFD	123.2	123.2	82.2	82.0	0.2	140.5			0.0		159.0		0.0		
TOTAL AF	244.4	244.4	162.9	162.6	0.3	278.7	278.7	0.0		0.0		315.4		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.
1 - Flow was decreased at the request of Camp Pendleton to Below Normal Flow Requirements to minimize future CAP credits.
2 - Art. 7(b) not applicable for months of May through December.
3 - Foregone make-up water credited to groundwater account but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

OCTOBER 2010 - VERY WET YEAR

											CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE				
DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2	Climatic Credits Earned /2		Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF		cfs	AF	cfs	AF	AF
1	3.9	3.9				4.4	8.8	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
2	3.9	3.9				4.4	8.7	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
3	3.9	3.9				4.4	8.8	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
4	3.9	3.9				4.4	8.8	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
5	3.9	3.9				4.4	8.7	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
6	3.9	3.9				4.4	8.7	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
7	3.9	3.9				4.4	8.7	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
8	3.9	3.9				4.4	8.7	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
9	3.9	3.9				4.4	8.7	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
10	3.8	3.8				4.4	8.7	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
11	3.9	3.9	3.9	3.9	(0.0)	4.5	8.9	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
12	3.9	3.9	3.9	3.9	(0.0)	4.5	8.9	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
13	3.9	3.9	3.9	3.9	(0.0)	4.5	8.9	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
14	4.0	4	3.9	3.9	0.0	4.5	8.9	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
15	4.0	4.0	3.9	3.9	0.0	4.5	8.9	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
16	4.0	4.0	3.9	3.9	0.0	4.4	8.8	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
17	4.0	4.0	3.9	3.9	0.0	4.4	8.7	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
18	3.8	3.8	3.9	3.9	0.0	4.3	8.6	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
19	89.0	89.0	12.4	3.9	8.5	1.5	2.9	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
20	42.0	42.0	16.3	3.9	12.4	0.1	0.1	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
21	16.0	16.0	17.5	3.9	13.6	0.0	0.0	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
22	3.6	3.6	17.4	3.9	13.5	2.8	5.6	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
23	4.9	4.9	17.5	3.9	13.6	4.9	9.8	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
24	4.6	4.6	17.6	3.9	13.7	4.7	9.3	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
25	4.3	4.3	17.6	3.9	13.7	4.5	9.0	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
26	4.1	4.1	17.6	3.9	13.7	4.4	8.8	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
27	4.0	4	17.6	3.9	13.7	4.4	8.7	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
28	3.6	3.6	17.6	3.9	13.7	4.0	8.0	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
29	3.5	3.5	9.1	3.9	5.2	3.9	7.8	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
30	3.5	3.5	5.2	3.9	1.3	3.8	7.6	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
31	3.4	3.4	4.0	3.9	0.1	3.8	7.5	0.0	0.0		6.2	12.3	0.0	0.0	5,000.0
TOTAL SFD	256.9	256.9	218.7	81.9	136.8	122.5			0.0		192.2		0.0		
TOTAL AF	509.6	509.6	433.7	162.4	271.2	243.0	243.0	0.0		0.0		381.2		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.
1 - Flow was decreased at the request of Camp Pendleton to Below Normal Flow Requirements to minimize future CAP credits.
2 - Art. 7(b) not applicable for months of May through December.
3 - Foregone make-up water credited to groundwater account but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

NOVEMBER 2010 - VERY WET YEAR

										CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE				
DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2	Climatic Credits Earned /2	Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF
1	4.6	4.6				4.9	9.8	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
2	4.5	4.5				4.9	9.8	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
3	4.4	4.4				4.9	9.8	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
4	4.5	4.5				5.0	9.9	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
5	4.5	4.5				5.0	10.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
6	4.5	4.5				5.0	10.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
7	4.5	4.5				5.0	10.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
8	4.7	4.7				5.2	10.3	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
9	4.1	4.1				4.6	9.1	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
10	4.6	4.6				5.1	10.2	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
11	4.6	4.6	4.5	4.5	(0.0)	5.1	10.2	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
12	4.5	4.5	4.5	4.5	(0.0)	5.0	10.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
13	4.6	4.6	4.5	4.5	0.0	5.1	10.1	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
14	4.5	4.5	4.5	4.5	0.0	5.0	10.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
15	4.5	4.5	4.5	4.5	0.0	5.0	10.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
16	4.5	4.5	4.5	4.5	0.0	5.0	10.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
17	4.6	4.6	4.5	4.5	0.0	5.0	10.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
18	4.5	4.5	4.5	4.5	0.0	5.0	10.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
19	4.5	4.5	4.5	4.5	0.0	4.9	9.8	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
20	18.0	18.0	5.9	4.5	1.4	3.4	6.7	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
21	109.0	109.0	16.3	4.5	11.8	0.0	0.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
22	29.0	29.0	18.8	4.5	14.3	0.0	0.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
23	3.8	3.8	18.7	4.5	14.2	0.0	0.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
24	0.5	0.5	18.3	4.5	13.8	0.0	0.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
25	0.3	0.3	17.9	4.5	13.4	0.0	0.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
26	0.4	0.4	17.5	4.5	13.0	0.0	0.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
27	0.3	0.3	17.0	4.5	12.5	0.0	0.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
28	0.3	0.3	16.6	4.5	12.1	0.0	0.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
29	0.2	0.2	16.2	4.5	11.7	0.0	0.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
30	0.2	0.2	14.4	4.5	9.9	0.0	0.0	0.0	0.0	7.0	13.9	0.0	0.0	5,000.0
31	---	---	---	---	---	---	---			---	---	---	---	---
TOTAL SFD	247.6	247.6	218.0	90.0	128.0	98.7			0.0	210.0		0.0		
TOTAL AF	491.0	491.0	432.4	178.5	253.9	195.7	195.7	0.0		0.0	416.5		0.0	

Monthly totals are rounded to the nearest tenth of an acre foot.
1 - Flow was decreased at the request of Camp Pendleton to Below Normal Flow Requirements to minimize future CAP credits.
2 - Art. 7(b) not applicable for months of May through December.
3 - Foregone make-up water credited to groundwater account but cumulative balance did not increase due to account balance maximum of 5,000 AF.

APPENDIX E.1

SANTA MARGARITA RIVER WATERSHED

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT REQUIRED FLOWS AND ACCOUNTS
SANTA MARGARITA RIVER NEAR TEMECULA

DECEMBER 2010 - VERY WET YEAR

DAY	USGS Official Discharge	USGS Daily Website Discharge	10-Day Running Average of Website Discharge	Minimum Flow Maintenance Requirement /1	Running Average Less Required Flow	WR-34 Make-Up Discharge MWD	WR-34 Make-Up Discharge MWD	Climatic Credits Earned /2	Climatic Credits Earned /2	CAMP PENDLETON GROUNDWATER ACCOUNT BALANCE Input /3	Input	Output	Output	Cumulative GW Account Balance
	cfs	cfs	cfs	cfs	cfs	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF
1	5.4	5.4				5.6	11.2	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
2	5.3	5.3				5.6	11.1	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
3	5.2	5.2				5.6	11.1	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
4	5.6	5.6				5.6	11.2	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
5	5.6	5.6				5.4	10.7	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
6	5.1	5.1				5.3	10.6	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
7	5.2	5.2				5.5	10.9	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
8	5.3	5.3				5.6	11.2	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
9	5.3	5.3				5.6	11.2	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
10	5.4	5.4				5.6	11.2	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
11	5.3	5.3	5.3	5.3	0.0	5.6	11.1	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
12	5.2	5.2	5.3	5.3	0.0	5.5	11.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
13	5.4	5.4	5.3	5.3	0.0	5.7	11.3	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
14	5.3	5.3	5.3	5.3	0.0	5.6	11.1	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
15	5.3	5.3	5.3	5.3	0.0	5.6	11.1	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
16	5.3	5.3	5.3	5.3	0.0	5.5	10.9	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
17	5.4	5.4	5.3	5.3	0.0	5.5	10.9	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
18	55.0	55.0	10.3	5.3	5.0	1.6	3.2	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
19	214.0	214.0	31.2	5.3	25.9	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
20	1970.0	1970.0	227.6	5.3	222.3	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
21	2640.0	2640.0	491.1	5.3	485.8	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
22	5890.0	5890.0	1079.6	5.3	1074.3	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
23	473.0	474.0	1126.4	5.3	1121.1	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
24	108.0	112.0	1137.1	5.3	1131.8	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
25	53.0	59.0	1142.5	5.3	1137.2	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
26	123.0	130.0	1154.9	5.3	1149.6	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
27	43.0	49.0	1159.3	5.3	1154.0	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
28	29.0	35.0	1157.3	5.3	1152.0	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
29	269.0	274.0	1163.3	5.3	1158.0	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
30	120.0	127.0	979.0	5.3	973.7	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
31	38.0	44.0	719.4	5.3	714.1	0.0	0.0	0.0	0.0	8.2	16.3	0.0	0.0	5,000.0
TOTAL SFD	12,115.6	12,163.6	11,616.2	111.3	11,504.9	96.3				254.2				
TOTAL AF	24,030.9	24,126.1	23,040.3	220.8	22,819.6	191.0	191.0	0.0			504.2			

Monthly totals are rounded to the nearest tenth of an acre foot.
1 - Flow was decreased at the request of Camp Pendleton to Below Normal Flow Requirements to minimize future CAP credits.
2 - Art. 7(b) not applicable for months of May through December.
3 - Foregone make-up water credited to groundwater account but cumulative balance did not increase due to account balance maximum of 5,000 AF.

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

APPENDIX E.2

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT

PALA PARK GROUNDWATER MONITORING WELL

September 2011

Site Description
Pala Park Groundwater Monitoring Well
(8S/2W-19A1-6)

LOCATION: Latitude 33° 28' 19.67", longitude 117° 07' 06.86" (NAD83) in Riverside County, California. Wells are located off Temecula Lane just south of Pala Community Park in Temecula, California.

SITE INFORMATION: Land-surface altitude is 1017 feet above mean sea level (NGVD29) from 24000 scale topographic map.

INSTRUMENTATION: In_Situ transducers, In_Situ barometer, with a Design Analysis logger and GOES transmitter. Water levels are logged at 15-minute intervals. A 12-volt rechargeable battery provides power.

WATER-LEVEL RECORD: The period of record for intermittent and daily water-level measurements is listed below.

State well number	USGS station number	Intermittent water-level	Daily water-level
8S/2W-19A1	332819117070601	09/30/2006 to present	12/27/2006 to present
8S/2W-19A2	332819117070602	09/30/2006 to present	12/27/2006 to present
8S/2W-19A3	332819117070603	09/30/2006 to present	12/27/2006 to present
8S/2W-19A4	332819117070604	09/30/2006 to present	12/27/2006 to present
8S/2W-19A5	332819117070605	09/30/2006 to present	12/27/2006 to present
8S/2W-19A6	332819117070606	12/1/2008 to present	2/19/2009 to present

WATER-LEVEL MEASUREMENTS: Water levels are measured manually each month by means of a calibrated electric tape. Electric tape is used to avoid entangling the sensor and cable. Correction factors (comparison to a steel tape) are applied when necessary. Water-level corrections, for example to compensate for gage height, are calculated after each measurement and applied to the recorded values. In the annual data report daily values are reported as the measurement at 1200 hours in feet below land surface.

MEASURING POINT: Measuring point #1 is at an even level with the top of the vault. Measuring point #2 is a black mark on the top of the PVC casing.

TOPOGRAPHIC MAP: USGS Pechanga, California, 7.5 minute series.

WELL SUMMARY INFORMATION:

State well number	USGS station number	Hole depth (ft)	Perforation depth (ft)	Casing size and type	Date drilled
8S/2W-19A1	332819117070601	1499	1430-1470	3" PVC	9/30/06
8S/2W-19A2	332819117070602	1499	1110-1130	2" PVC	9/30/06
8S/2W-19A3	332819117070603	1499	750-770	2" PVC	9/30/06
8S/2W-19A4	332819117070604	1499	380-400	2" PVC	9/30/06
8S/2W-19A5	332819117070605	1499	120-140	2" PVC	9/30/06
8S/2W-19A6	332819117070606	1499	15-35	2" PVC	9/30/06

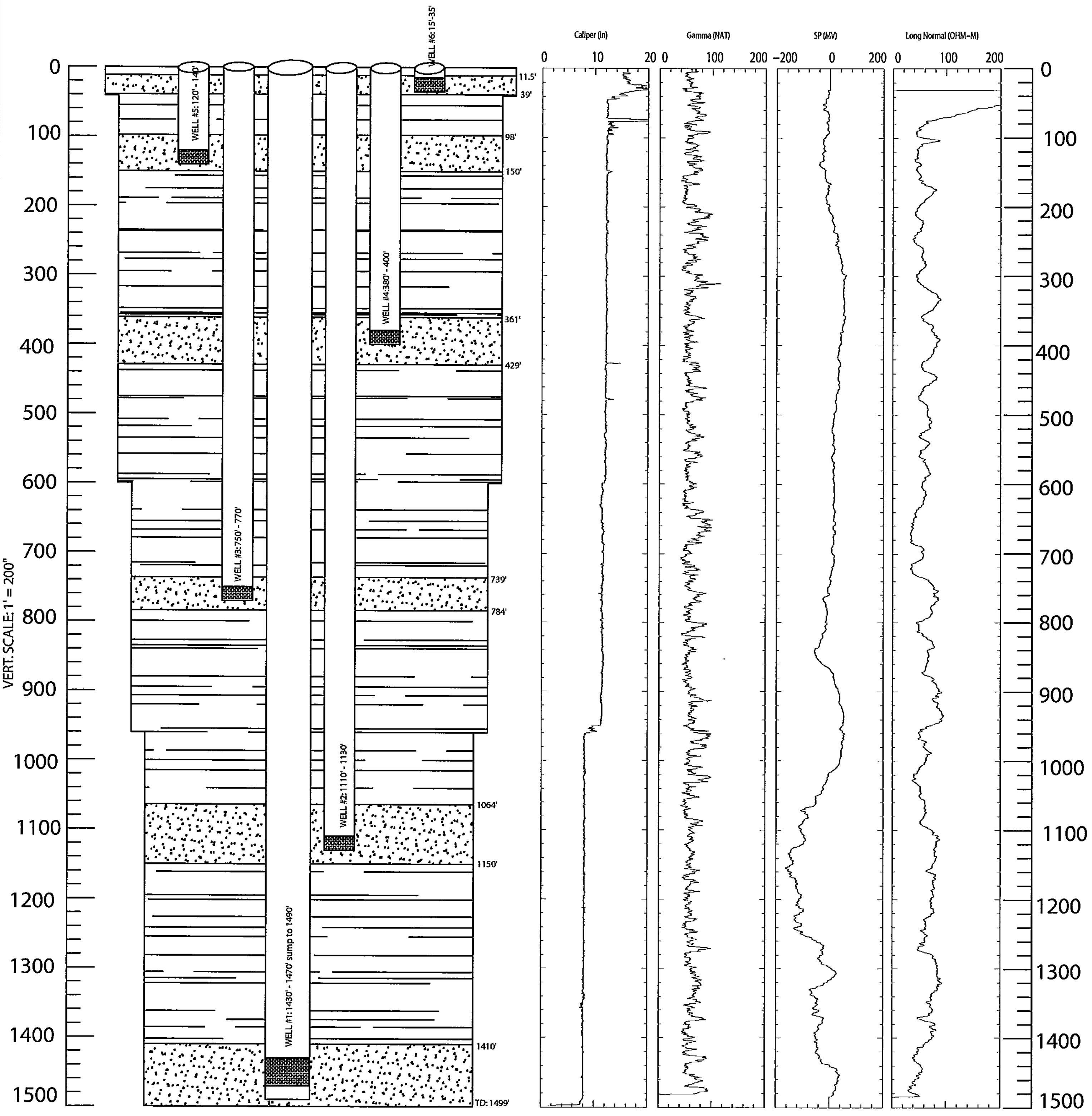
ROAD LOG: Key intersection is the intersection of CA-79 and Interstate Highway 15. Directions given are from Interstate Highway 15 North.

Mileage	Description
0.0	From I-15 North take the CA-79 South exit onto a local road toward Temecula / Indio.
0.3	Turn right on CA-79 South.
1.0	Turn right on Pechanga Parkway.
1.7	Turn left on Muirfield Dr.
1.9	Turn right on Canterfield Dr.
1.9	Turn right on Temecula Ln. Vault is located at end of Temecula Ln in a dirt/gravel lot adjacent to the parking lot for Pala Park. Vault is accessible from parking lot.

ADDITIONAL INFORMATION:

Additional information for Pala Park Groundwater Monitoring Well can be found in Santa Margarita River Watershed 2007 Annual Watermaster Report including geophysical logs; core, shaker, and sieve lithological logs; and well completion reports. Information can also be found at the following web site: http://ca.water.usgs.gov/temecula/.

SITE I.D.:	3328191170706 01-06	COMPLETION DATE:	9/30/06
STATION NAME:	08S/02W-19A 01-06	TOTAL DEPTH:	1499'
USGS SITE:	TMPP- Temecula Pala Park	WELL FINISH:	VAULT
OWNER:	Rancho California Water Agency		

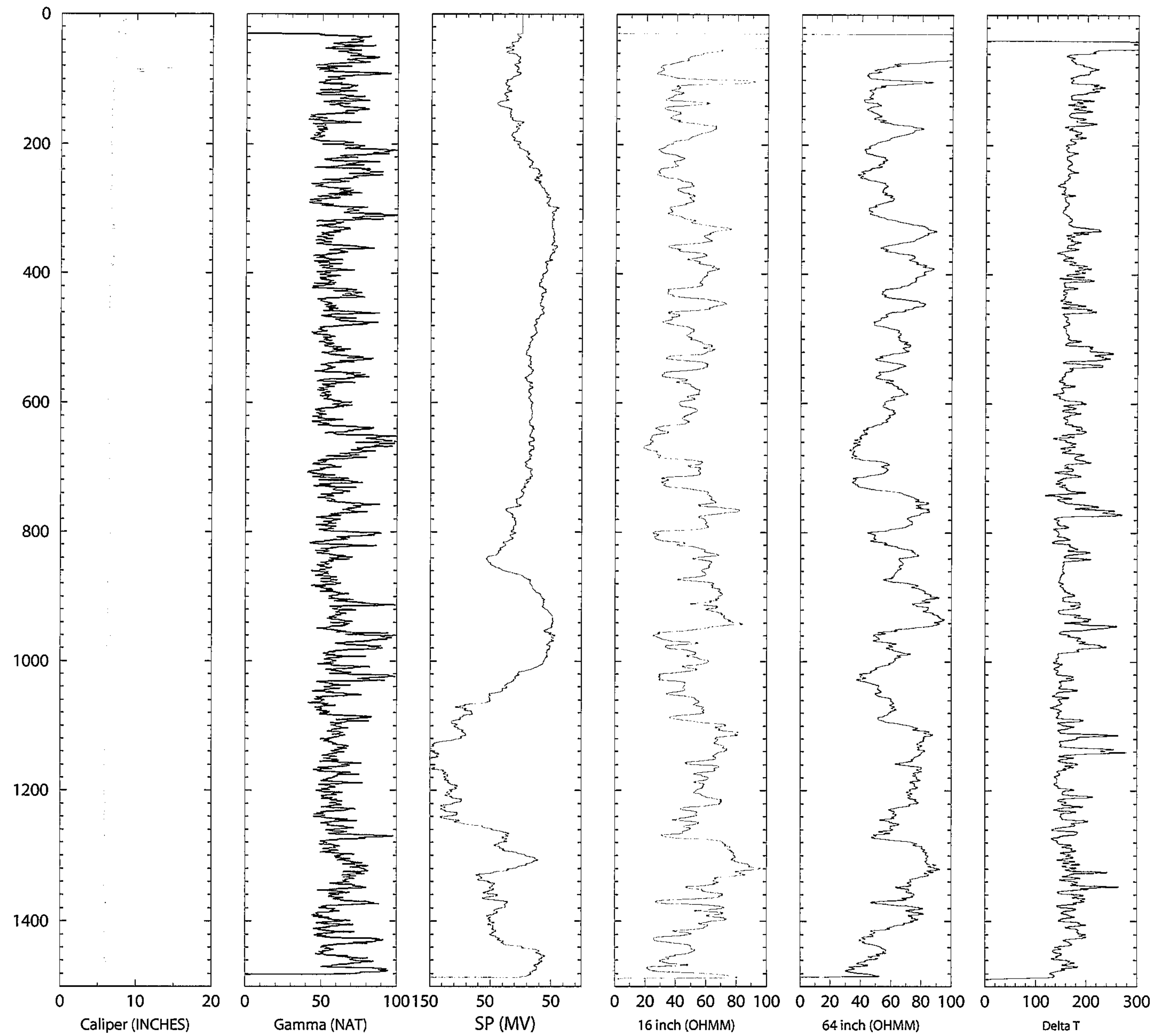


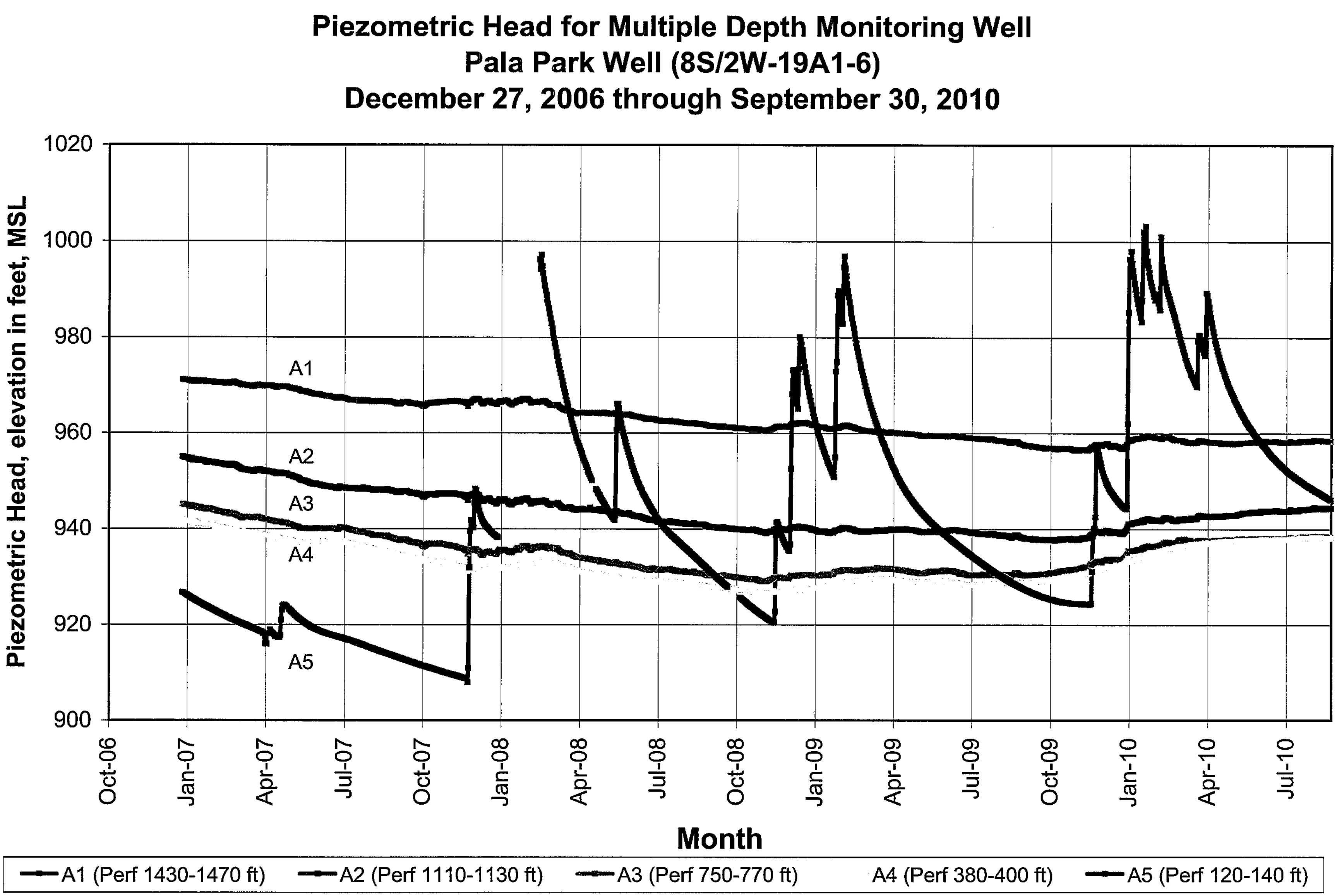
DRILL TYPE:	HYDRAULIC MUD ROTARY	DRILLER:	USGS WESTERN REGION CREW
CASING TYPE:	SCHD. 80 PVC 20' SEC.	SCREEN TYPE:	SCHD. 80 1.5"x0.02"SLOTS
GROUT:	PUREGOLD GROUT @ 30% SOLIDS	SAND:	RMC LONESTAR #3
BOREHOLE DIA:	15": 0'- 41'; 12.25": 41'-600'; 10.5": 600'-960'; 8.5": 960'-1499'		

E2-3

TMPP

Pacific Surveys Logs




Piezometric Head for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
December 27, 2006 through September 30, 2010
Piezometric Head, elevation in feet, MSL
1020
1000
980
960
940
920
900
A1
A2
A3
A4
A5
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Jul-09
Oct-09
Jan-10
Apr-10
Jul-10
Month
A1 (Perf 1430-1470 ft)
A2 (Perf 1110-1130 ft)
A3 (Perf 750-770 ft)
A4 (Perf 380-400 ft)
A5 (Perf 120-140 ft)

End-of Month Piezometric Head for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
(elevation in feet, MSL)

October 2006 through September 2010

Month	Well A1	Well A2	Well A3	Well A4	Well A5
Oct 06	---	---	---	---	---
Nov	---	---	---	---	---
Dec	970.97	954.73	944.95	941.54	926.31
Jan 07	970.65	953.83	944.07	940.76	923.21
Feb	970.44	953.11	942.93	939.65	920.77
Mar	969.80	952.02	942.11	938.73	918.47
Apr	969.60	951.37	941.13	937.61	923.65
May	968.13	949.31	940.04	937.16	919.28
Jun	967.32	948.40	940.02	937.29	917.41
Jul	966.80	948.38	939.25	936.23	915.60
Aug	966.44	947.88	938.13	934.93	913.66
Sep	966.15	947.37	937.16	933.84	911.87
Oct	966.47	947.27	936.82	932.97	910.16
Nov	965.56	945.91	934.77	931.17	907.93
Dec	966.19	945.53	934.87	931.51	938.87
Jan 08	966.58	945.57	935.68	932.18	---
Feb	966.64	945.74	936.34	932.92	990.70
Mar	964.54	944.35	934.79	931.71	963.22
Apr	964.15	943.91	933.45	930.56	948.24
May	963.78	943.12	932.52	929.58	960.88
Jun	962.96	942.00	931.55	929.03	945.64
Jul	962.35	941.37	931.37	928.83	938.27
Aug	961.88	940.86	930.74	928.18	933.20
Sep	961.24	940.12	930.21	927.64	928.37
Oct	960.73	939.62	929.45	926.74	923.70
Nov	961.37	940.01	929.91	926.84	941.33
Dec	962.17	940.36	930.44	927.41	976.14
Jan 09	960.88	939.14	930.34	928.01	953.31
Feb	961.24	939.84	931.38	929.02	982.94
Mar	960.34	939.64	931.76	929.53	960.46
Apr	959.98	939.92	931.39	929.10	948.52
May	959.61	939.56	931.25	929.11	941.61
Jun	959.46	939.83	931.20	928.82	937.06
Jul	958.83	938.98	930.43	928.39	932.94
Aug	958.24	938.57	930.50	928.68	929.33
Sep	957.20	937.87	930.43	928.81	926.62
Oct	956.70	937.76	931.13	929.61	924.85
Nov	956.46	938.03	932.03	930.61	924.30
Dec	957.20	939.13	933.39	931.84	947.91
Jan 10	958.88	941.38	935.64	933.74	988.09
Feb	959.06	941.92	936.75	935.29	1000.96
Mar	958.15	941.99	937.70	936.54	974.72
Apr	958.07	942.58	937.54	937.13	982.19
May	957.89	943.06	937.98	937.57	965.27
Jun	958.32	943.72	938.07	937.78	957.29
Jul	958.14	943.80	938.11	937.88	951.58
Aug	958.44	944.26	938.41	938.15	947.87
Sep	958.55	944.51	938.57	938.20	944.92

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
November 2006

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		11/8/2006	11/2/2006	11/1/2006	11/6/2006	11/8/2006
3	Sampling depth, feet						
10	Temperature, water, degrees Celsius		22.3	20.5	21.4	22.9	20.8
28	Agency analyzing sample, code		80020	80020	80020	80020	80020
59	Flow rate, instantaneous, gallons per minute						
95	Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius		665	821	750	831	687
191	Hydrogen ion, water, unfiltered, calculated, milligrams per liter		M	M	M	M	0.00002
300	Dissolved oxygen, water, unfiltered, milligrams per liter		0.40	0.29	0.30	0.53	6.2
400	pH, water, unfiltered, field, standard units		9.4	9.7	9.4	8.6	7.8
403	pH, water, unfiltered, laboratory, standard units		9.5	9.7	9.4	8.6	8
602	Total nitrogen, water, filtered, milligrams per liter				0.14 E	0.14 E	2.7
607	Organic nitrogen, water, filtered, milligrams per liter			0.08	0.04 E	0.05 E	
608	Ammonia, water, filtered, milligrams per liter as nitrogen		0.028	0.041	0.046	0.041	< 0.020
613	Nitrite, water, filtered, milligrams per liter as nitrogen	1 (a)		0.010	0.011	0.008	0.004
618	Nitrate, water, filtered, milligrams per liter as nitrogen				0.04 E	0.04 E	2.59
623	Ammonia plus organic nitrogen, water, filtered, milligrams per liter as nitrogen			0.12	0.09 E	0.09 E	0.13
631	Nitrate plus nitrite, water, filtered, milligrams per liter as nitrogen			< 0.06	0.05 E	0.05 E	2.60
660	Orthophosphate, water, filtered, milligrams per liter			2.41	3.33	1.88	0.741
666	Phosphorus, water, filtered, milligrams per liter			1.02	1.32	0.67	0.33
671	Orthophosphate, water, filtered, milligrams per liter as phosphorus			0.785	1.08	0.614	0.242
900	Hardness, water, milligrams per liter as calcium carbonate		8	9	8	57	160
904	Noncarb hardness, water filtered field, milligrams per liter as calcium carbonate						
915	Calcium, water, filtered, milligrams per liter		3.14	3.32	2.62	18.7	44.9
925	Magnesium, water, filtered, milligrams per liter		0.106	0.058	0.288	2.45	12.1
930	Sodium, water, filtered, milligrams per liter		127	152	138	145	81.4
931	Sodium adsorption ratio, water, number		19	23	22	8.4	2.8
932	Sodium fraction of cations, water, percent in equivalents of major cations		97	97	97	84	52
935	Potassium, water, filtered, milligrams per liter		0.62	0.96	1.26	2.39	2.10
940	Chloride, water, filtered, milligrams per liter	600	138	131	112	87.1	40.1
945	Sulfate, water, filtered, milligrams per liter	600	34.1	95.3	84.7	102	110
950	Fluoride, water, filtered, milligrams per liter	2 (b)	4.56	4.18	1.09	0.38	0.42
955	Silica, water, filtered, milligrams per liter		17.3	19.0	14.6	17.2	28.3
1000	Arsenic, water, filtered, micrograms per liter	10 (c)	25.7	20.4	17.1	6.0	2.4
1005	Barium, water, filtered, micrograms per liter	1000 (d)	2.9	2.6	2.3	10.4	31.9
1010	Beryllium, micrograms per liter	4 (e)					
1020	Boron, water, filtered, micrograms per liter		128	138	97	120	150
1025	Cadmium, micrograms per liter	5 (f)					
1030	Chromium, micrograms per liter	50 (g)					
1035	Cobalt, micrograms per liter						
1040	Copper, micrograms per liter	1000 (h)					
1046	Iron, water, filtered, micrograms per liter	300	< 6	3 E	3 E	< 6	< 6
1049	Lead, micrograms per liter						
1056	Manganese, water, filtered, micrograms per liter	50	0.5 E	0.7	1.6	7.6	1.7
1057	Thallium, micrograms per liter	2 (i)					
1060	Molybdenum, micrograms per liter						
1065	Nickel, micrograms per liter	100 (j)					
1075	Silver, micrograms per liter	100 (k)					
1080	Strontium, water, filtered, micrograms per liter		23.0	16.8	17.8	161	202
1085	Vanadium, micrograms per liter						
1090	Zinc, micrograms per liter	5000 (l)					
1095	Antimony, micrograms per liter	6 (m)					
1106	Aluminum, water, filtered, micrograms per liter	1000 (n)	95.3	127	82.4	54.3	4.1
1130	Lithium, water, filtered, micrograms per liter		4	5	4	7	6
1145	Selenium, micrograms per liter	50 (o)					
4022	Terbuthylazine, water, filtered, recoverable, micrograms per liter					< 0.01	< 0.01

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
November 2006

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		11/8/2006	11/2/2006	11/1/2006	11/6/2006	11/8/2006
4025	Hexazinone, water, filtered, recoverable, micrograms per liter					< 0.026	< 0.026
4029	Bromacil, water, filtered, recoverable, micrograms per liter						
4035	Simazine, water, filtered, recoverable, micrograms per liter					< 0.006	0.036
4036	Prometryn, water, filtered, recoverable, micrograms per liter					< 0.006	< 0.006
4037	Prometon, water, filtered, recoverable, micrograms per liter					< 0.01	< 0.01
4040	2-Chloro-4-isopropylamino-6-amino-s-triazine, water, filtered, recoverable, micrograms per liter					< 0.014	< 0.014
4095	Fonofos, water, filtered, recoverable, micrograms per liter					< 0.006	< 0.006
7000	Tritium, water, unfiltered, picocuries per liter		-0.19	0.35	0.45	0.58	11.14
22703	Uranium, natural, micrograms per liter						
29801	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, milligrams per liter as calcium carbonate		50	65	74	165	168
30217	Dibromomethane, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
32101	Bromodichloromethane, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
32102	Tetrachloromethane, water, unfiltered, recoverable, micrograms per liter	0.5				< 0.08	< 0.08
32103	1,2-Dichloroethane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
32104	Tribromomethane, water, unfiltered, recoverable, micrograms per liter					< 0.08	< 0.08
32105	Dibromochloromethane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
32106	Trichloromethane, water, unfiltered, recoverable, micrograms per liter					< 0.04	0.03 E
34010	Toluene, water, unfiltered, recoverable, micrograms per liter	150				< 0.02	< 0.02
34030	Benzene, water, unfiltered, recoverable, micrograms per liter	1				< 0.02	< 0.02
34215	Acrylonitrile, water, unfiltered, recoverable, micrograms per liter					< 0.4	< 0.4
34221	Anthracene, water, filtered, recoverable, micrograms per liter						
34248	Benzo[a]pyrene, water, filtered, recoverable, micrograms per liter	0.2 (p)					
34288	Tribromomethane, water, filtered, recoverable, micrograms per liter						
34301	Chlorobenzene, water, unfiltered, recoverable, micrograms per liter	70				< 0.02	< 0.02
34311	Chloroethane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
34371	Ethylbenzene, water, unfiltered, recoverable, micrograms per liter	300				< 0.02	< 0.02
34377	Fluoranthene, water, filtered, recoverable, micrograms per liter						
34396	Hexachloroethane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
34409	Isophorone, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
34413	Bromomethane, water, unfiltered, recoverable, micrograms per liter					< 0.4	< 0.4
34418	Chloromethane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
34423	Dichloromethane, water, unfiltered, recoverable, micrograms per liter	5				< 0.04	< 0.04
34443	Naphthalene, water, filtered, recoverable, micrograms per liter						
34462	Phenanthrene, water, filtered, recoverable, micrograms per liter						
34466	Phenol, water, filtered, recoverable, micrograms per liter						
34470	Pyrene, water, filtered, recoverable, micrograms per liter						
34475	Tetrachloroethene, water, unfiltered, recoverable, micrograms per liter	5				< 0.04	< 0.04
34476	Tetrachloroethene, water, filtered, recoverable, micrograms per liter						
34488	Trichlorofluoromethane, water, unfiltered, recoverable, micrograms per liter	150				< 0.08	< 0.08
34496	1,1-Dichloroethane, water, unfiltered, recoverable, micrograms per liter	5				< 0.06	< 0.06
34501	1,1-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6				< 0.02	< 0.02
34506	1,1,1-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	200				< 0.04	< 0.04
34511	1,1,2-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	5				< 0.04	< 0.04
34516	1,1,2,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter	1				< 0.10	< 0.10
34536	1,2-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	600				< 0.04	< 0.04
34541	1,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter	5				< 0.02	< 0.02
34546	trans-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	10				< 0.02	< 0.02
34551	1,2,4-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5				< 0.1	< 0.1
34566	1,3-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
34571	1,4-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5				< 0.04	< 0.04
34572	1,4-Dichlorobenzene, water, filtered, recoverable, micrograms per liter						
34668	Dichlorodifluoromethane, water, unfiltered, recoverable, micrograms per liter					< 0.14	< 0.14
34696	Naphthalene, water, unfiltered, recoverable, micrograms per liter					< 0.4	< 0.4
34699	trans-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5				< 0.1	< 0.1

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
November 2006

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		11/8/2006	11/2/2006	11/1/2006	11/6/2006	11/8/2006
34704	cis-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5				< 0.06	< 0.06
38454	Dicrotophos, water, filtered, recoverable, micrograms per liter					< 0.08	< 0.08
38775	Dichlorvos, water, filtered, recoverable, micrograms per liter					< 0.01	< 0.01
38933	Chlorpyrifos, water, filtered, recoverable, micrograms per liter					< 0.005	< 0.005
39086	Alkalinity, water, filtered, incremental titration, field, milligrams per liter as calcium carbonate			61			
39175	Vinyl chloride, water, unfiltered, recoverable, micrograms per liter	0.5				< 0.1	< 0.1
39180	Trichloroethene, water, unfiltered, recoverable, micrograms per liter	5				< 0.02	< 0.02
39381	Dieldrin, water, filtered, recoverable, micrograms per liter					< 0.009	< 0.009
39415	Metolachlor, water, filtered, recoverable, micrograms per liter					< 0.010	< 0.010
39532	Malathion, water, filtered, recoverable, micrograms per liter					< 0.016	< 0.016
39572	Diazinon, water, filtered, recoverable, micrograms per liter					< 0.005	< 0.005
39632	Atrazine, water, filtered, recoverable, micrograms per liter					< 0.007	< 0.007
39702	Hexachlorobutadiene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
46342	Alachlor, water, filtered, recoverable, micrograms per liter					< 0.005	< 0.005
49260	Acetochlor, water, filtered, recoverable, micrograms per liter					< 0.006	< 0.006
49295	1-Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.09	< 0.09
49933	C-14, water, filtered, percent modern			17.27	13.56	63.16	
49934	C-14, counting error, water, filtered, percent modern						
49991	Methyl acrylate, water, unfiltered, recoverable, micrograms per liter					< 0.4	< 0.4
49999	1,2,3,4-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
50000	1,2,3,5-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
50002	Bromoethene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
50004	tert-Butyl ethyl ether, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
50005	Methyl tert-pentyl ether, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
50305	Caffeine, water, filtered, recoverable, micrograms per liter						
50359	Metalaxyl, water, filtered, recoverable, micrograms per liter						
61209	Perchlorate, water, unfiltered, recoverable, micrograms per liter	6					
61585	Cyfluthrin, water, filtered, recoverable, micrograms per liter					< 0.053	< 0.053
61586	Cypermethrin, water, filtered, recoverable, micrograms per liter					< 0.046	< 0.046
61591	Fenamiphos, water, filtered, recoverable, micrograms per liter					< 0.03	< 0.03
61593	Iprodione, water, filtered, recoverable, micrograms per liter					< 0.026	< 0.026
61594	Isofenphos, water, filtered, recoverable, micrograms per liter					< 0.011	< 0.011
61596	Metalaxyl, water, filtered, recoverable, micrograms per liter					< 0.007	< 0.007
61598	Methidathion, water, filtered, recoverable, micrograms per liter					< 0.009	< 0.009
61599	Myclobutanil, water, filtered, recoverable, micrograms per liter					< 0.033	< 0.033
61601	Phosmet, water, filtered, recoverable, micrograms per liter					< 0.008	< 0.008
61610	Tribuphos, water, filtered, recoverable, micrograms per liter					< 0.035	< 0.035
61618	2-Chloro-2',6'-diethylacetanilide, water, filtered, recoverable, micrograms per liter					< 0.006	< 0.006
61620	2-Ethyl-6-methylaniline, water, filtered, recoverable, micrograms per liter					< 0.01	< 0.01
61625	3,4-Dichloroaniline, water, filtered, recoverable, micrograms per liter					< 0.004	< 0.004
61633	4-Chloro-2-methylphenol, water, filtered, recoverable, micrograms per liter					< 0.005	< 0.005
61635	Azinphos-methyl oxygen analog, water, filtered, recoverable, micrograms per liter					< 0.04	< 0.04
61636	Chlorpyrifos oxygen analog, water, filtered, recoverable, micrograms per liter					< 0.06	< 0.06
61644	Ethion monoxon, water, filtered, recoverable, micrograms per liter					< 0.02	< 0.02
61645	Fenamiphos sulfone, water, filtered, recoverable, micrograms per liter					< 0.053	< 0.053
61646	Fenamiphos sulfoxide, water, filtered, recoverable, micrograms per liter					< 0.04	< 0.04
61652	Malaoxon, water, filtered, recoverable, micrograms per liter					< 0.039	< 0.039
61664	Methyl paraoxon, water, filtered, recoverable, micrograms per liter					< 0.02	< 0.02
61666	Phorate oxygen analog, water, filtered, recoverable, micrograms per liter					< 0.03	< 0.03
61668	Phosmet oxygen analog, water, filtered, recoverable, micrograms per liter					< 0.05	< 0.05
61674	Terbufos oxygen analog sulfone, water, filtered, recoverable, micrograms per liter					< 0.04	< 0.04
61705	Diethoxyoctylphenol, water, filtered, recoverable, micrograms per liter						
61706	Monoethoxyoctylphenol, water, filtered, recoverable, micrograms per liter						
62005	Cotinine, water, filtered, recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
November 2006

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		11/8/2006	11/2/2006	11/1/2006	11/6/2006	11/8/2006
62054	1-Methylnaphthalene, water, filtered, recoverable, micrograms per liter						
62055	2,6-Dimethylnaphthalene, water, filtered, recoverable, micrograms per liter						
62056	2-Methylnaphthalene, water, filtered, recoverable, micrograms per liter						
62057	3-beta-Coprostanol, water, filtered, recoverable, micrograms per liter						
62058	3-Methyl-1H-indole, water, filtered, recoverable, micrograms per liter						
62059	3-tert-Butyl-4-hydroxyanisole, water, filtered, recoverable, micrograms per liter						
62060	4-Cumylphenol, water, filtered, recoverable, micrograms per liter						
62061	4-Octylphenol, water, filtered, recoverable, micrograms per liter						
62062	4-tert-Octylphenol, water, filtered, recoverable, micrograms per liter						
62063	5-Methyl-1H-benzotriazole, water, filtered, recoverable, micrograms per liter						
62064	Acetophenone, water, filtered, recoverable, micrograms per liter						
62065	Acetyl hexamethyl tetrahydro naphthalene, water, filtered, recoverable, micrograms per liter						
62066	9,10-Anthraquinone, water, filtered, recoverable, micrograms per liter						
62067	Benzophenone, water, filtered, recoverable, micrograms per liter						
62068	beta-Sitosterol, water, filtered, recoverable, micrograms per liter						
62070	Camphor, water, filtered, recoverable, micrograms per liter						
62071	Carbazole, water, filtered, recoverable, micrograms per liter						
62072	Cholesterol, water, filtered, recoverable, micrograms per liter						
62073	D-Limonene, water, filtered, recoverable, micrograms per liter						
62075	Hexahydrohexamethyl cyclopentabenzopyran, water, filtered, recoverable, micrograms per liter						
62076	Indole, water, filtered, recoverable, micrograms per liter						
62077	Isoborneol, water, filtered, recoverable, micrograms per liter						
62078	Isopropylbenzene, water, filtered, recoverable, micrograms per liter						
62079	Isoquinoline, water, filtered, recoverable, micrograms per liter						
62080	Menthol, water, filtered, recoverable, micrograms per liter						
62081	Methyl salicylate, water, filtered, recoverable, micrograms per liter						
62082	DEET, water, filtered, recoverable, micrograms per liter						
62083	Diethoxynonylphenol, water, filtered, recoverable, micrograms per liter						
62084	p-Cresol, water, filtered, recoverable, micrograms per liter						
62085	4-Nonylphenol, water, filtered, recoverable, micrograms per liter						
62086	beta-Stigmastanol, water, filtered, recoverable, micrograms per liter						
62087	Tris(2-chloroethyl) phosphate, water, filtered, recoverable, micrograms per liter						
62088	Tris(dichloroisopropyl) phosphate, water, filtered, recoverable, micrograms per liter						
62089	Tributyl phosphate, water, filtered, recoverable, micrograms per liter						
62090	Triclosan, water, filtered, recoverable, micrograms per liter						
62091	Triethyl citrate, water, filtered, recoverable, micrograms per liter						
62092	Triphenyl phosphate, water, filtered, recoverable, micrograms per liter						
62093	Tris(2-butoxyethyl) phosphate, water, filtered, recoverable, micrograms per liter						
62166	Fipronil, water, filtered, recoverable, micrograms per liter					< 0.016	< 0.016
62167	Fipronil sulfide, water, filtered, recoverable, micrograms per liter					< 0.013	< 0.013
62168	Fipronil sulfone, water, filtered, recoverable, micrograms per liter					< 0.024	< 0.024
62169	Desulfinylfipronil amide, water, filtered, recoverable, micrograms per liter					< 0.029	0.008 E
62170	Desulfinylfipronil, water, filtered, recoverable, micrograms per liter					< 0.012	< 0.012
62854	Total nitrogen, (NH3+NO2+NO3+Organic), filtered, milligrams per liter						
63790	Perchlorate, water, filtered, recoverable, micrograms per liter	6					
70300	Residue on evaporation, dried at 180 degrees Celsius, water, filtered, milligrams per liter	1500	360	473	416	493	433
70301	Residue, water, filtered, sum of constituents, milligrams per liter		356 E	446 E	404 E	477 E	433
70303	Residue, water, filtered, tons per acre-foot						
71846	Ammonia, water, filtered, milligrams per liter as NH4		0.04	0.05	0.06	0.05	
71851	Nitrate, water, filtered, milligrams per liter	45 (q)			0.184 E	0.174 E	11.5
71856	Nitrite, water, filtered, milligrams per liter			0.032	0.038	0.025	0.012
71865	Iodide, water, filtered, milligrams per liter		0.310	0.517	0.390	0.025	0.003
71870	Bromide, water, filtered, milligrams per liter		0.31	0.42	0.37	0.28	0.06
72019	Depth to water level, feet below land surface		46.61	60.97	70.00	73.36	83.74

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
November 2006

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		11/8/2006	11/2/2006	11/1/2006	11/6/2006	11/8/2006
73547	trans-1,4-Dichloro-2-butene, water, unfiltered, recoverable, micrograms per liter					< 0.6	< 0.6
73570	Ethyl methacrylate, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
75985	Tritium 2-sigma combined uncertainty, water, unfiltered, picocuries per liter		0.58	0.58	0.58	0.58	0.70
76002	Rn-222, 2-sigma combined uncertainty, water, unfiltered, picocuries per liter						
77041	Carbon disulfide, water, unfiltered, micrograms per liter					0.10	< 0.06
77093	cis-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6				< 0.02	< 0.02
77103	n-Butyl methyl ketone, water, unfiltered, recoverable, micrograms per liter					< 0.4	< 0.4
77128	Styrene, water, unfiltered, recoverable, micrograms per liter	100				< 0.04	< 0.04
77135	o-Xylene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77168	1,1-Dichloropropene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77170	2,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter					< 0.06	< 0.06
77173	1,3-Dichloropropane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
77220	2-Ethyltoluene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77221	1,2,3-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
77222	1,2,4-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77223	Isopropylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77224	n-Propylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77226	1,3,5-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77275	2-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77277	4-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77297	Bromochloromethane, water, unfiltered, recoverable, micrograms per liter					< 0.06	< 0.06
77342	n-Butylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
77350	sec-Butylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77353	tert-Butylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.08	< 0.08
77356	4-Isopropyltoluene, water, unfiltered, recoverable, micrograms per liter					< 0.08	< 0.08
77424	Iodomethane, water, unfiltered, recoverable, micrograms per liter					< 0.40	< 0.40
77443	1,2,3-Trichloropropane, water, unfiltered, recoverable, micrograms per liter					< 0.12	< 0.12
77562	1,1,1,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77613	1,2,3-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
77651	1,2-Dibromoethane, water, unfiltered, recoverable, micrograms per liter	0.05				< 0.04	< 0.04
77652	1,1,2-Trichloro-1,2,2-trifluoroethane, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
78032	Methyl tert-butyl ether, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
78109	3-Chloropropene, water, unfiltered, recoverable, micrograms per liter					< 0.08	< 0.08
78133	Isobutyl methyl ketone, water, unfiltered, recoverable, micrograms per liter					< 0.2	< 0.2
81552	Acetone, water, unfiltered, recoverable, micrograms per liter					< 6	< 6
81555	Bromobenzene, water, unfiltered, recoverable, micrograms per liter					< 0.02	< 0.02
81576	Diethyl ether, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
81577	Diisopropyl ether, water, unfiltered, recoverable, micrograms per liter					< 0.06	< 0.06
81593	Methyl acrylonitrile, water, unfiltered, recoverable, micrograms per liter					< 0.4	< 0.4
81595	Ethyl methyl ketone, water, unfiltered, recoverable, micrograms per liter					< 1.6	< 1.6
81597	Methyl methacrylate, water, unfiltered, recoverable, micrograms per liter					< 0.2	< 0.2
81607	Tetrahydrofuran, water, unfiltered, recoverable, micrograms per liter					< 1	< 1
82081	C-13/C-12 ratio, water, unfiltered, per mil			-16.29	-16.37	-10.71	
82082	Deuterium/Protium ratio, water, unfiltered, per mil		-53.60	-52.80	-52.90	-46.00	-44.10
82085	Oxygen-18/Oxygen-16 ratio, water, unfiltered, per mil		-8.28	-8.15	-8.02	-6.93	-6.81
82303	Rn-222, water, unfiltered, picocuries per liter						
82346	Ethion, water, filtered, recoverable, micrograms per liter					< 0.016	< 0.016
82625	1,2-Dibromo-3-chloropropane, water, unfiltered, recoverable, micrograms per liter					< 0.5	< 0.5
82630	Metribuzin, water, filtered, recoverable, micrograms per liter					< 0.012	< 0.012
82660	2,6-Diethylaniline, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.006	< 0.006
82661	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.009	< 0.009
82662	Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.006	< 0.006
82664	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.02	< 0.02
82667	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.008	< 0.008

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
November 2006

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		11/8/2006	11/2/2006	11/1/2006	11/6/2006	11/8/2006
82670	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.02	< 0.02
82673	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.01	< 0.01
82675	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.01	< 0.01
82676	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.004	< 0.004
82680	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.06	< 0.06
82682	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.003	< 0.003
82683	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.02	< 0.02
82686	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.08	< 0.08
82687	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 0.01	< 0.01
85795	m-Xylene plus p-xylene, water, unfiltered, recoverable, micrograms per liter					< 0.08	< 0.08
90095	Specific conductance, water, unfiltered, laboratory, microsiemens per centimeter at 25 degrees Celsius		647	820	727	810	674
90851	Triholomehtanes, water, unfiltered, calcd, micrograms per liter						M
99583	Bisphenol A-d3, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99584	Caffeine-13C, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99585	Decafluorobiphenyl, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99586	Fluoranthene-d10, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99832	1,2-Dichloroethane-d4, surrogate, Schedule 2090, water, unfiltered, percent recovery					126	136
99833	Toluene-d8, surrogate, Schedule 2090, water, unfiltered, percent recovery					89.8	92.5
99834	1-Bromo-4-fluorobenzene, surrogate, VOC schedules, water, unfiltered, percent recovery					62.5	62.3
99994	Diazinon-d10, surrogate, Schedule 2003, water, filtered, percent recovery					120	119
99995	alpha-HCH-d6, surrogate, Schedule 2003, water, filtered, percent recovery					93.5	99.1

Notes: U.S. EPA STORET numbers for MCLs correspond to the same as the USGS NWIS data parameter number except as follows:

(a) MCL shown for U.S EPA STORET No. 620.
(b) MCL shown for U.S. EPASTORET No. 951.
(c) MCL shown for U.S. EPA STORET No. 1002.
(d) MCL shown for U.S. EPA STORET No. 1007.
(e) MCL shown for U.S. EPA STORET No. 1012.
(f) MCL shown for U.S. EPA STORET No. 1027.
(g) MCL shown for U.S. EPA STORET No. 1034.
(h) MCL shown for U.S. EPA STORET No. 1042.
(i) MCL shown for U.S. EPA STORET No. 1059.
(j) MCL shown for U.S EPA STORET No. 1067.
(k) MCL shown for U.S. EPASTORET No. 1077.
(l) MCL shown for U.S. EPA STORET No. 1092.
(m) MCL shown for U.S. EPA STORET No. 1097.
(n) MCL shown for U.S. EPA STORET No. 1105.
(o) MCL shown for U.S. EPA STORET No. 1147.
(p) MCL shown for U.S. EPA STORET No. 34247.
(q) MCL shown for U.S. EPA STORET No. 71850.

Code--Data parameter number used in USGS National Water Information System (NWIS).
E--Estimated.
M--Presence verifed but not quantified.
MCL--Maximum Contaminant Level reported by California DHS (May 25, 2007 Database) for U.S. EPA STORET number.
V--Biased results from contamination.

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
September 2007

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		9/27/2007	9/20/2007	9/25/2007	9/25/2007	9/20/2007
3	Sampling depth, feet						
10	Temperature, water, degrees Celsius		25.5	21.0	21.1	21.1	21.0
28	Agency analyzing sample, code		80020	80020	80020	80020	80020
59	Flow rate, instantaneous, gallons per minute						
95	Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius		653	789	786	686	685
191	Hydrogen ion, water, unfiltered, calculated, milligrams per liter		M	M	M	0.00001	0.00001
300	Dissolved oxygen, water, unfiltered, milligrams per liter		< 0.2	< 0.2	0.1	0.1	5.7
400	pH, water, unfiltered, field, standard units		9.5	9.4	9.1	8.3	7.9
403	pH, water, unfiltered, laboratory, standard units		9.6	9.4	9.2	8.3	7.9
602	Total nitrogen, water, filtered, milligrams per liter						
607	Organic nitrogen, water, filtered, milligrams per liter						
608	Ammonia, water, filtered, milligrams per liter as nitrogen		0.026	0.021	0.051	0.031	< 0.020
613	Nitrite, water, filtered, milligrams per liter as nitrogen	1 (a)	< 0.002	< 0.002	< 0.002	< 0.002	0.002
618	Nitrate, water, filtered, milligrams per liter as nitrogen						2.12
623	Ammonia plus organic nitrogen, water, filtered, milligrams per liter as nitrogen						
631	Nitrate plus nitrite, water, filtered, milligrams per liter as nitrogen		< 0.06	< 0.06	< 0.06	< 0.06	2.12
660	Orthophosphate, water, filtered, milligrams per liter		0.066	1.41	6.03	1.02	3.07
666	Phosphorus, water, filtered, milligrams per liter						
671	Orthophosphate, water, filtered, milligrams per liter as phosphorus		0.021	0.459	1.97	0.332	1.00
900	Hardness, water, milligrams per liter as calcium carbonate		10	8	10	89	130
904	Noncarb hardness, water filtered field, milligrams per liter as calcium carbonate						
915	Calcium, water, filtered, milligrams per liter		3.87	2.87	3.64	29.5	38.0
925	Magnesium, water, filtered, milligrams per liter		0.029	0.078	0.337	3.56	9.29
930	Sodium, water, filtered, milligrams per liter		132	151	169	116	90.7
931	Sodium adsorption ratio, water, number		18	24	23	5.3	3.4
932	Sodium fraction of cations, water, percent in equivalents of major cations		97	97	97	73	59
935	Potassium, water, filtered, milligrams per liter		0.33	0.76	1.39	2.32	2.58
940	Chloride, water, filtered, milligrams per liter	600	133	131	121	80.8	44.1
945	Sulfate, water, filtered, milligrams per liter	600	33.3	95.2	101	79.9	108
950	Fluoride, water, filtered, milligrams per liter	2 (b)	4.42	3.44	0.92	0.28	0.31
955	Silica, water, filtered, milligrams per liter		18.2	17.6	14.8	17.7	24.3
1000	Arsenic, water, filtered, micrograms per liter	10 (c)	31.3	18.7	13.1	4.5	4.0
1005	Barium, water, filtered, micrograms per liter	1000 (d)	4	3	3	14	22
1010	Beryllium, micrograms per liter	4 (e)	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
1020	Boron, water, filtered, micrograms per liter		102	158	147	153	143
1025	Cadmium, micrograms per liter	5 (f)	0.35	0.49	0.31	0.03 E	0.02 E
1030	Chromium, micrograms per liter	50 (g)	0.09 E	0.31	0.2	0.21	1.10
1035	Cobalt, micrograms per liter		< 0.04	< 0.04	0.04 E	0.03 E	0.08
1040	Copper, micrograms per liter	1000 (h)	< 0.4	0.22 E	0.70	0.87	1.70
1046	Iron, water, filtered, micrograms per liter	300	3 E	< 6	10	4 E	< 6
1049	Lead, micrograms per liter		< 0.12	< 0.12	0.08 E	< 0.12	< 0.12
1056	Manganese, water, filtered, micrograms per liter	50	0.4	0.9	2.8	12.4	0.7
1057	Thallium, micrograms per liter	2 (i)	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
1060	Molybdenum, micrograms per liter		208	251	208	11.5	6.8
1065	Nickel, micrograms per liter	100 (j)	0.07	0.19	0.46	0.26	0.73
1075	Silver, micrograms per liter	100 (k)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1080	Strontium, water, filtered, micrograms per liter		28.1	17.3	20.3	257	201
1085	Vanadium, micrograms per liter		78.6	32.2	7.3	1.1	21.5
1090	Zinc, micrograms per liter	5000 (l)	< 0.6	0.70	0.70	1.0	2.8
1095	Antimony, micrograms per liter	6 (m)	0.06 E	0.11	0.17	0.04 E	0.07
1106	Aluminum, water, filtered, micrograms per liter	1000 (n)	43.1	100	139	27.0	3.3
1130	Lithium, water, filtered, micrograms per liter		2.0	4.0	2.7	6.8	5.1
1145	Selenium, micrograms per liter	50 (o)	< 0.08	0.08	0.09	0.05 E	7.5
4022	Terbuthylazine, water, filtered, recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
September 2007

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		9/27/2007	9/20/2007	9/25/2007	9/25/2007	9/20/2007
4025	Hexazinone, water, filtered, recoverable, micrograms per liter						
4029	Bromacil, water, filtered, recoverable, micrograms per liter						
4035	Simazine, water, filtered, recoverable, micrograms per liter						
4036	Prometryn, water, filtered, recoverable, micrograms per liter						
4037	Prometon, water, filtered, recoverable, micrograms per liter						
4040	2-Chloro-4-isopropylamino-6-amino-s-triazine, water, filtered, recoverable, micrograms per liter						
4095	Fonofos, water, filtered, recoverable, micrograms per liter						
7000	Tritium, water, unfiltered, picocuries per liter		0.6	0.3	-0.6	0.3	8.3
22703	Uranium, natural, micrograms per liter		0.06	0.13	0.43	2.17	2.16
29801	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, milligrams per liter as calcium carbonate		46	58	92	132	158
30217	Dibromomethane, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
32101	Bromodichloromethane, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
32102	Tetrachloromethane, water, unfiltered, recoverable, micrograms per liter	0.5	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
32103	1,2-Dichloroethane, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
32104	Tribromomethane, water, unfiltered, recoverable, micrograms per liter		< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
32105	Dibromochloromethane, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
32106	Trichloromethane, water, unfiltered, recoverable, micrograms per liter		< 0.02	< 0.04	< 0.04	< 0.04	0.04 V
34010	Toluene, water, unfiltered, recoverable, micrograms per liter	150	< 0.02	0.02 V	0.04 E	< 0.02	< 0.02
34030	Benzene, water, unfiltered, recoverable, micrograms per liter	1	< 0.02	0.03 E	0.02 E	< 0.02	< 0.02
34215	Acrylonitrile, water, unfiltered, recoverable, micrograms per liter		< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
34221	Anthracene, water, filtered, recoverable, micrograms per liter						
34248	Benzo[a]pyrene, water, filtered, recoverable, micrograms per liter	0.2 (p)					
34288	Tribromomethane, water, filtered, recoverable, micrograms per liter						
34301	Chlorobenzene, water, unfiltered, recoverable, micrograms per liter	70	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
34311	Chloroethane, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	0.1 E	< 0.1	< 0.1
34371	Ethylbenzene, water, unfiltered, recoverable, micrograms per liter	300	< 0.04	< 0.02	< 0.02	< 0.02	< 0.02
34377	Fluoranthene, water, filtered, recoverable, micrograms per liter						
34396	Hexachloroethane, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
34409	Isophorone, water, filtered, recoverable, micrograms per liter						
34413	Bromomethane, water, unfiltered, recoverable, micrograms per liter		< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
34418	Chloromethane, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	0.6 E	< 0.1	< 0.1
34423	Dichloromethane, water, unfiltered, recoverable, micrograms per liter	5	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
34443	Naphthalene, water, filtered, recoverable, micrograms per liter						
34462	Phenanthrene, water, filtered, recoverable, micrograms per liter						
34466	Phenol, water, filtered, recoverable, micrograms per liter						
34470	Pyrene, water, filtered, recoverable, micrograms per liter						
34475	Tetrachloroethene, water, unfiltered, recoverable, micrograms per liter	5	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
34476	Tetrachloroethene, water, filtered, recoverable, micrograms per liter						
34488	Trichlorofluoromethane, water, unfiltered, recoverable, micrograms per liter	150	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
34496	1,1-Dichloroethane, water, unfiltered, recoverable, micrograms per liter	5	< 0.04	< 0.06	< 0.06	< 0.06	< 0.06
34501	1,1-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
34506	1,1,1-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	200	< 0.02	< 0.04	< 0.04	< 0.04	< 0.04
34511	1,1,2-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	5	< 0.06	< 0.04	< 0.04	< 0.04	< 0.04
34516	1,1,2,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
34536	1,2-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	600	< 0.02	< 0.04	< 0.04	< 0.04	< 0.04
34541	1,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter	5	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
34546	trans-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	10	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
34551	1,2,4-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
34566	1,3-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
34571	1,4-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5	< 0.02	< 0.04	< 0.04	< 0.04	< 0.04
34572	1,4-Dichlorobenzene, water, filtered, recoverable, micrograms per liter						
34668	Dichlorodifluoromethane, water, unfiltered, recoverable, micrograms per liter		< 0.14	< 0.14	< 0.14	< 0.14	< 0.14
34696	Naphthalene, water, unfiltered, recoverable, micrograms per liter		< 0.2	< 0.4	< 0.4	< 0.4	< 0.4
34699	trans-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
September 2007

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		9/27/2007	9/20/2007	9/25/2007	9/25/2007	9/20/2007
34704	cis-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5	< 0.10	< 0.06	< 0.06	< 0.06	< 0.06
38454	Dicrotophos, water, filtered, recoverable, micrograms per liter						
38775	Dichlorvos, water, filtered, recoverable, micrograms per liter						
38933	Chlorpyrifos, water, filtered, recoverable, micrograms per liter						
39086	Alkalinity, water, filtered, incremental titration, field, milligrams per liter as calcium carbonate						
39175	Vinyl chloride, water, unfiltered, recoverable, micrograms per liter	0.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
39180	Trichloroethene, water, unfiltered, recoverable, micrograms per liter	5	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
39381	Dieldrin, water, filtered, recoverable, micrograms per liter						
39415	Metolachlor, water, filtered, recoverable, micrograms per liter						
39532	Malathion, water, filtered, recoverable, micrograms per liter						
39572	Diazinon, water, filtered, recoverable, micrograms per liter						
39632	Atrazine, water, filtered, recoverable, micrograms per liter						
39702	Hexachlorobutadiene, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
46342	Alachlor, water, filtered, recoverable, micrograms per liter						
49260	Acetochlor, water, filtered, recoverable, micrograms per liter						
49295	1-Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
49933	C-14, water, filtered, percent modern		3.44		17.52	67.68	88.09
49934	C-14, counting error, water, filtered, percent modern		0.12		0.22	0.31	0.37
49991	Methyl acrylate, water, unfiltered, recoverable, micrograms per liter		< 0.6	< 0.4	< 0.4	< 0.4	< 0.4
49999	1,2,3,4-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
50000	1,2,3,5-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
50002	Bromoethene, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
50004	tert-Butyl ethyl ether, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
50005	Methyl tert-pentyl ether, water, unfiltered, recoverable, micrograms per liter		< 0.06	< 0.04	< 0.04	< 0.04	< 0.04
50305	Caffeine, water, filtered, recoverable, micrograms per liter						
50359	Metalaxyl, water, filtered, recoverable, micrograms per liter						
61209	Perchlorate, water, unfiltered, recoverable, micrograms per liter	6	< 0.5	< 0.5	< 1	< 1	< 0.5
61585	Cyfluthrin, water, filtered, recoverable, micrograms per liter						
61586	Cypermethrin, water, filtered, recoverable, micrograms per liter						
61591	Fenamiphos, water, filtered, recoverable, micrograms per liter						
61593	Iprodione, water, filtered, recoverable, micrograms per liter						
61594	Isofenphos, water, filtered, recoverable, micrograms per liter						
61596	Metalaxyl, water, filtered, recoverable, micrograms per liter						
61598	Methidathion, water, filtered, recoverable, micrograms per liter						
61599	Myclobutanil, water, filtered, recoverable, micrograms per liter						
61601	Phosmet, water, filtered, recoverable, micrograms per liter						
61610	Tribuphos, water, filtered, recoverable, micrograms per liter						
61618	2-Chloro-2',6'-diethylacetanilide, water, filtered, recoverable, micrograms per liter						
61620	2-Ethyl-6-methylaniline, water, filtered, recoverable, micrograms per liter						
61625	3,4-Dichloroaniline, water, filtered, recoverable, micrograms per liter						
61633	4-Chloro-2-methylphenol, water, filtered, recoverable, micrograms per liter						
61635	Azinphos-methyl oxygen analog, water, filtered, recoverable, micrograms per liter						
61636	Chlorpyrifos oxygen analog, water, filtered, recoverable, micrograms per liter						
61644	Ethion monoxon, water, filtered, recoverable, micrograms per liter						
61645	Fenamiphos sulfone, water, filtered, recoverable, micrograms per liter						
61646	Fenamiphos sulfoxide, water, filtered, recoverable, micrograms per liter						
61652	Malaoxon, water, filtered, recoverable, micrograms per liter						
61664	Methyl paraoxon, water, filtered, recoverable, micrograms per liter						
61666	Phorate oxygen analog, water, filtered, recoverable, micrograms per liter						
61668	Phosmet oxygen analog, water, filtered, recoverable, micrograms per liter						
61674	Terbufos oxygen analog sulfone, water, filtered, recoverable, micrograms per liter						
61705	Diethoxyoctylphenol, water, filtered, recoverable, micrograms per liter						
61706	Monoethoxyoctylphenol, water, filtered, recoverable, micrograms per liter						
62005	Cotinine, water, filtered, recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
September 2007

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		9/27/2007	9/20/2007	9/25/2007	9/25/2007	9/20/2007
62054	1-Methylnaphthalene, water, filtered, recoverable, micrograms per liter						
62055	2,6-Dimethylnaphthalene, water, filtered, recoverable, micrograms per liter						
62056	2-Methylnaphthalene, water, filtered, recoverable, micrograms per liter						
62057	3-beta-Coprostanol, water, filtered, recoverable, micrograms per liter						
62058	3-Methyl-1H-indole, water, filtered, recoverable, micrograms per liter						
62059	3-tert-Butyl-4-hydroxyanisole, water, filtered, recoverable, micrograms per liter						
62060	4-Cumylphenol, water, filtered, recoverable, micrograms per liter						
62061	4-Octylphenol, water, filtered, recoverable, micrograms per liter						
62062	4-tert-Octylphenol, water, filtered, recoverable, micrograms per liter						
62063	5-Methyl-1H-benzotriazole, water, filtered, recoverable, micrograms per liter						
62064	Acetophenone, water, filtered, recoverable, micrograms per liter						
62065	Acetyl hexamethyl tetrahydro naphthalene, water, filtered, recoverable, micrograms per liter						
62066	9,10-Anthraquinone, water, filtered, recoverable, micrograms per liter						
62067	Benzophenone, water, filtered, recoverable, micrograms per liter						
62068	beta-Sitosterol, water, filtered, recoverable, micrograms per liter						
62070	Camphor, water, filtered, recoverable, micrograms per liter						
62071	Carbazole, water, filtered, recoverable, micrograms per liter						
62072	Cholesterol, water, filtered, recoverable, micrograms per liter						
62073	D-Limonene, water, filtered, recoverable, micrograms per liter						
62075	Hexahydrohexamethyl cyclopentabenzopyran, water, filtered, recoverable, micrograms per liter						
62076	Indole, water, filtered, recoverable, micrograms per liter						
62077	Isoborneol, water, filtered, recoverable, micrograms per liter						
62078	Isopropylbenzene, water, filtered, recoverable, micrograms per liter						
62079	Isoquinoline, water, filtered, recoverable, micrograms per liter						
62080	Menthol, water, filtered, recoverable, micrograms per liter						
62081	Methyl salicylate, water, filtered, recoverable, micrograms per liter						
62082	DEET, water, filtered, recoverable, micrograms per liter						
62083	Diethoxynonylphenol, water, filtered, recoverable, micrograms per liter						
62084	p-Cresol, water, filtered, recoverable, micrograms per liter						
62085	4-Nonylphenol, water, filtered, recoverable, micrograms per liter						
62086	beta-Stigmastanol, water, filtered, recoverable, micrograms per liter						
62087	Tris(2-chloroethyl) phosphate, water, filtered, recoverable, micrograms per liter						
62088	Tris(dichloroisopropyl) phosphate, water, filtered, recoverable, micrograms per liter						
62089	Tributyl phosphate, water, filtered, recoverable, micrograms per liter						
62090	Triclosan, water, filtered, recoverable, micrograms per liter						
62091	Triethyl citrate, water, filtered, recoverable, micrograms per liter						
62092	Triphenyl phosphate, water, filtered, recoverable, micrograms per liter						
62093	Tris(2-butoxyethyl) phosphate, water, filtered, recoverable, micrograms per liter						
62166	Fipronil, water, filtered, recoverable, micrograms per liter						
62167	Fipronil sulfide, water, filtered, recoverable, micrograms per liter						
62168	Fipronil sulfone, water, filtered, recoverable, micrograms per liter						
62169	Desulfinylfipronil amide, water, filtered, recoverable, micrograms per liter						
62170	Desulfinylfipronil, water, filtered, recoverable, micrograms per liter						
62854	Total nitrogen, (NH3+NO2+NO3+Organic), filtered, milligrams per liter		0.04 E	0.06	0.11	0.04 E	2.21
63790	Perchlorate, water, filtered, recoverable, micrograms per liter	6	< 0.1	0.7	0.26	< 0.1	0.23
70300	Residue on evaporation, dried at 180 degrees Celsius, water, filtered, milligrams per liter	1500	358	460	471	397	429
70301	Residue, water, filtered, sum of constituents, milligrams per liter		354 E	439 E	475 E	410 E	425 E
70303	Residue, water, filtered, tons per acre-foot						
71846	Ammonia, water, filtered, milligrams per liter as NH4		0.03	0.03	0.07	0.04	
71851	Nitrate, water, filtered, milligrams per liter	45 (g)					9.37
71856	Nitrite, water, filtered, milligrams per liter						0.008
71865	Iodide, water, filtered, milligrams per liter						
71870	Bromide, water, filtered, milligrams per liter		0.31	0.40	0.36	0.26	0.12
72019	Depth to water level, feet below land surface						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
September 2007

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		9/27/2007	9/20/2007	9/25/2007	9/25/2007	9/20/2007
73547	trans-1,4-Dichloro-2-butene, water, unfiltered, recoverable, micrograms per liter		< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
73570	Ethyl methacrylate, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
75985	Tritium 2-sigma combined uncertainty, water, unfiltered, picocuries per liter		1.0	1.0	1.0	1.0	1.0
76002	Rn-222, 2-sigma combined uncertainty, water, unfiltered, picocuries per liter		20	21	18	19	21
77041	Carbon disulfide, water, unfiltered, micrograms per liter		< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
77093	cis-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
77103	n-Butyl methyl ketone, water, unfiltered, recoverable, micrograms per liter		< 0.6	< 0.4	< 0.4	< 0.4	< 0.4
77128	Styrene, water, unfiltered, recoverable, micrograms per liter	100	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77135	o-Xylene, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77168	1,1-Dichloropropene, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77170	2,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter		< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
77173	1,3-Dichloropropane, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
77220	2-Ethyltoluene, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77221	1,2,3-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
77222	1,2,4-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04	0.02 E	0.02 E	< 0.04	0.03 E
77223	Isopropylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77224	n-Propylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77226	1,3,5-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77275	2-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77277	4-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77297	Bromochloromethane, water, unfiltered, recoverable, micrograms per liter		< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
77342	n-Butylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
77350	sec-Butylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77353	tert-Butylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.06	< 0.08	< 0.08	< 0.08	< 0.08
77356	4-Isopropyltoluene, water, unfiltered, recoverable, micrograms per liter		< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
77424	Iodomethane, water, unfiltered, recoverable, micrograms per liter		< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
77443	1,2,3-Trichloropropane, water, unfiltered, recoverable, micrograms per liter		< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
77562	1,1,1,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77613	1,2,3-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
77651	1,2-Dibromoethane, water, unfiltered, recoverable, micrograms per liter	0.05	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
77652	1,1,2-Trichloro-1,2,2-trifluoroethane, water, unfiltered, recoverable, micrograms per liter		< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
78032	Methyl tert-butyl ether, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
78109	3-Chloropropene, water, unfiltered, recoverable, micrograms per liter		< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
78133	Isobutyl methyl ketone, water, unfiltered, recoverable, micrograms per liter		< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
81552	Acetone, water, unfiltered, recoverable, micrograms per liter		< 4	< 6	< 6	< 6	< 6
81555	Bromobenzene, water, unfiltered, recoverable, micrograms per liter		< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
81576	Diethyl ether, water, unfiltered, recoverable, micrograms per liter		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
81577	Diisopropyl ether, water, unfiltered, recoverable, micrograms per liter		< 0.06	< 0.06	< 0.77	< 0.06	< 0.06
81593	Methyl acrylonitrile, water, unfiltered, recoverable, micrograms per liter		< 0.2	< 0.4	< 0.4	< 0.4	< 0.4
81595	Ethyl methyl ketone, water, unfiltered, recoverable, micrograms per liter		< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
81597	Methyl methacrylate, water, unfiltered, recoverable, micrograms per liter		< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
81607	Tetrahydrofuran, water, unfiltered, recoverable, micrograms per liter		< 1	< 1	< 1	< 1	< 1
82081	C-13/C-12 ratio, water, unfiltered, per mil		-19.11		-14.90	-14.87	-15.57
82082	Deuterium/Protium ratio, water, unfiltered, per mil		-53.70	-53.00	-52.90	-45.20	-42.30
82085	Oxygen-18/Oxygen-16 ratio, water, unfiltered, per mil		-8.27	-8.18	-7.93	-6.91	-6.65
82303	Rn-222, water, unfiltered, picocuries per liter		320	270	200	210	280
82346	Ethion, water, filtered, recoverable, micrograms per liter						
82625	1,2-Dibromo-3-chloropropane, water, unfiltered, recoverable, micrograms per liter		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
82630	Metribuzin, water, filtered, recoverable, micrograms per liter						
82660	2,6-Diethylaniline, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82661	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82662	Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82664	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82667	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
September 2007

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		9/27/2007	9/20/2007	9/25/2007	9/25/2007	9/20/2007
82670	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82673	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82675	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82676	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82680	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82682	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82683	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82686	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82687	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
85795	m-Xylene plus p-xylene, water, unfiltered, recoverable, micrograms per liter		< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
90095	Specific conductance, water, unfiltered, laboratory, microsiemens per centimeter at 25 degrees Celsius		667	794	805	694	686
90851	Triholomehtanes, water, unfiltered, calcd, micrograms per liter						M
99583	Bisphenol A-d3, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99584	Caffeine-13C, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99585	Decafluorobiphenyl, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99586	Fluoranthene-d10, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99832	1,2-Dichloroethane-d4, surrogate, Schedule 2090, water, unfiltered, percent recovery		127	130	134	133	131
99833	Toluene-d8, surrogate, Schedule 2090, water, unfiltered, percent recovery		93.6	95.0	96.8	97.6	93.6
99834	1-Bromo-4-fluorobenzene, surrogate, VOC schedules, water, unfiltered, percent recovery		71.0	72.1	73.4	73.9	73.8
99994	Diazinon-d10, surrogate, Schedule 2003, water, filtered, percent recovery						
99995	alpha-HCH-d6, surrogate, Schedule 2003, water, filtered, percent recovery						

Notes: U.S. EPA STORET numbers for MCLs correspond to the same as the USGS NWIS data parameter number except as follows:

(a) MCL shown for U.S EPA STORET No. 620.
(b) MCL shown for U.S. EPASTORET No. 951.
(c) MCL shown for U.S. EPA STORET No. 1002.
(d) MCL shown for U.S. EPA STORET No. 1007.
(e) MCL shown for U.S. EPA STORET No. 1012.
(f) MCL shown for U.S. EPA STORET No. 1027.
(g) MCL shown for U.S. EPA STORET No. 1034.
(h) MCL shown for U.S. EPA STORET No. 1042.
(i) MCL shown for U.S. EPA STORET No. 1059.
(j) MCL shown for U.S EPA STORET No. 1067.
(k) MCL shown for U.S. EPASTORET No. 1077.
(l) MCL shown for U.S. EPA STORET No. 1092.
(m) MCL shown for U.S. EPA STORET No. 1097.
(n) MCL shown for U.S. EPA STORET No. 1105.
(o) MCL shown for U.S. EPA STORET No. 1147.
(p) MCL shown for U.S. EPA STORET No. 34247.
(q) MCL shown for U.S. EPA STORET No. 71850.

Code--Data parameter number used in USGS National Water Information System (NWIS).
E--Estimated.
M--Presence verifed but not quantified.
MCL--Maximum Contaminant Level reported by California DHS (May 25, 2007 Database) for U.S. EPA STORET number.
V--Biased results from contamination.

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
April 2008

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		4/22/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008
3	Sampling depth, feet						
10	Temperature, water, degrees Celsius		22.4	24.9	24.4	22.5	20.1
28	Agency analyzing sample, code		80020	80020	80020	80020	80020
59	Flow rate, instantaneous, gallons per minute						
95	Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius		656	772	756	670	642
191	Hydrogen ion, water, unfiltered, calculated, milligrams per liter		M	M	M	0.00001	0.00003 E
300	Dissolved oxygen, water, unfiltered, milligrams per liter						
400	pH, water, unfiltered, field, standard units		9.2	9.3	9.3	8.1	7.6
403	pH, water, unfiltered, laboratory, standard units		9.6	9.5	9.3	8.2	7.7
602	Total nitrogen, water, filtered, milligrams per liter						2.5 E
607	Organic nitrogen, water, filtered, milligrams per liter				0.05 E		
608	Ammonia, water, filtered, milligrams per liter as nitrogen		0.027	0.029	0.045	0.023	< 0.020
613	Nitrite, water, filtered, milligrams per liter as nitrogen	1 (a)	< 0.002	< 0.002	0.002 E	< 0.002	< 0.002
618	Nitrate, water, filtered, milligrams per liter as nitrogen						
623	Ammonia plus organic nitrogen, water, filtered, milligrams per liter as nitrogen		< 0.14	< 0.14	0.09 E	< 0.14	0.08 E
631	Nitrate plus nitrite, water, filtered, milligrams per liter as nitrogen		< 0.04	< 0.04	< 0.04	< 0.04	2.41
660	Orthophosphate, water, filtered, milligrams per liter		0.044	0.771	1.78	1.29	0.533
666	Phosphorus, water, filtered, milligrams per liter		< 0.04	0.24	0.56	0.41	0.17
671	Orthophosphate, water, filtered, milligrams per liter as phosphorus		0.014	0.251	0.579	0.420	0.174
900	Hardness, water, milligrams per liter as calcium carbonate		9 E	7	7	100	160
904	Noncarb hardness, water filtered field, milligrams per liter as calcium carbonate						61
915	Calcium, water, filtered, milligrams per liter		3.48	2.60	2.58	33.0	44.2
925	Magnesium, water, filtered, milligrams per liter		0.014 E	0.079	0.180	4.13	13.1
930	Sodium, water, filtered, milligrams per liter		119	144	141	94.0	61.8
931	Sodium adsorption ratio, water, number		18 E	24	23	4.1	2.1
932	Sodium fraction of cations, water, percent in equivalents of major cations		97 E	98	97	67	45
935	Potassium, water, filtered, milligrams per liter		0.33	0.72	0.99	2.17	1.99
940	Chloride, water, filtered, milligrams per liter	600	140	130	118	79.8	36.9
945	Sulfate, water, filtered, milligrams per liter	600	33.3	86.5	90.5	76.4	141
950	Fluoride, water, filtered, milligrams per liter	2 (b)	4.62	3.39	0.94	0.29	0.39
955	Silica, water, filtered, milligrams per liter		19.3	18.4	14.1	18.1	28.6
1000	Arsenic, water, filtered, micrograms per liter	10 (c)	31.2	19.3	13.1	4.7	1.1
1005	Barium, water, filtered, micrograms per liter	1000 (d)	4.7	4.0	2.3	14.9	40.8
1010	Beryllium, micrograms per liter	4 (e)					
1020	Boron, water, filtered, micrograms per liter		125	130	91	98	120
1025	Cadmium, micrograms per liter	5 (f)					
1030	Chromium, micrograms per liter	50 (g)					
1035	Cobalt, micrograms per liter						
1040	Copper, micrograms per liter	1000 (h)					
1046	Iron, water, filtered, micrograms per liter	300	< 8	9	< 8	5 E	< 8
1049	Lead, micrograms per liter						
1056	Manganese, water, filtered, micrograms per liter	50	0.4	1.5	1.0	16.4	0.5
1057	Thallium, micrograms per liter	2 (i)					
1060	Molybdenum, micrograms per liter						
1065	Nickel, micrograms per liter	100 (j)					
1075	Silver, micrograms per liter	100 (k)					
1080	Strontium, water, filtered, micrograms per liter		27.3	18.1	19.4	299	226
1085	Vanadium, micrograms per liter						
1090	Zinc, micrograms per liter	5000 (l)					
1095	Antimony, micrograms per liter	6 (m)					
1106	Aluminum, water, filtered, micrograms per liter	1000 (n)	35.6	115	87.8	10.8	1.4 E
1130	Lithium, water, filtered, micrograms per liter		5	5	4	8	6
1145	Selenium, micrograms per liter	50 (o)					
4022	Terbuthylazine, water, filtered, recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
April 2008

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		4/22/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008
4025	Hexazinone, water, filtered, recoverable, micrograms per liter						
4029	Bromacil, water, filtered, recoverable, micrograms per liter					< 0.4	< 0.4
4035	Simazine, water, filtered, recoverable, micrograms per liter						
4036	Prometryn, water, filtered, recoverable, micrograms per liter						
4037	Prometon, water, filtered, recoverable, micrograms per liter					< 0.2	< 0.2
4040	2-Chloro-4-isopropylamino-6-amino-s-triazine, water, filtered, recoverable, micrograms per liter						
4095	Fonofos, water, filtered, recoverable, micrograms per liter						
7000	Tritium, water, unfiltered, picocuries per liter		-0.35	-0.13	0.32	0.26	10.78
22703	Uranium, natural, micrograms per liter						
29801	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, milligrams per liter as calcium carbonate		46	56	68	129	108
30217	Dibromomethane, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
32101	Bromodichloromethane, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
32102	Tetrachloromethane, water, unfiltered, recoverable, micrograms per liter	0.5				< 0.08	< 0.08
32103	1,2-Dichloroethane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
32104	Tribromomethane, water, unfiltered, recoverable, micrograms per liter					< 0.08	< 0.08
32105	Dibromochloromethane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
32106	Trichloromethane, water, unfiltered, recoverable, micrograms per liter					< 0.02	0.04 E
34010	Toluene, water, unfiltered, recoverable, micrograms per liter	150				< 0.02	< 0.02
34030	Benzene, water, unfiltered, recoverable, micrograms per liter	1				< 0.02	< 0.02
34215	Acrylonitrile, water, unfiltered, recoverable, micrograms per liter					< 0.4	< 0.4
34221	Anthracene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
34248	Benzo[a]pyrene, water, filtered, recoverable, micrograms per liter	0.2 (p)				< 0.1	< 0.1
34288	Tribromomethane, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
34301	Chlorobenzene, water, unfiltered, recoverable, micrograms per liter	70				< 0.02	< 0.02
34311	Chloroethane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
34371	Ethylbenzene, water, unfiltered, recoverable, micrograms per liter	300				< 0.04	< 0.04
34377	Fluoranthene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
34396	Hexachloroethane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
34409	Isophorone, water, filtered, recoverable, micrograms per liter					M	M
34413	Bromomethane, water, unfiltered, recoverable, micrograms per liter					< 0.4	< 0.4
34418	Chloromethane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
34423	Dichloromethane, water, unfiltered, recoverable, micrograms per liter	5				< 0.04	< 0.04
34443	Naphthalene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
34462	Phenanthrene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
34466	Phenol, water, filtered, recoverable, micrograms per liter					< 0.2	< 0.2
34470	Pyrene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
34475	Tetrachloroethene, water, unfiltered, recoverable, micrograms per liter	5				< 0.04	< 0.04
34476	Tetrachloroethene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
34488	Trichlorofluoromethane, water, unfiltered, recoverable, micrograms per liter	150				< 0.08	< 0.08
34496	1,1-Dichloroethane, water, unfiltered, recoverable, micrograms per liter	5				< 0.04	< 0.04
34501	1,1-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6				< 0.02	< 0.02
34506	1,1,1-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	200				< 0.02	< 0.02
34511	1,1,2-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	5				< 0.06	< 0.06
34516	1,1,2,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter	1				< 0.10	< 0.10
34536	1,2-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	600				< 0.02	< 0.02
34541	1,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter	5				< 0.02	< 0.02
34546	trans-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	10				< 0.02	< 0.02
34551	1,2,4-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5				< 0.1	< 0.1
34566	1,3-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
34571	1,4-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5				< 0.02	< 0.02
34572	1,4-Dichlorobenzene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
34668	Dichlorodifluoromethane, water, unfiltered, recoverable, micrograms per liter					< 0.14	< 0.14
34696	Naphthalene, water, unfiltered, recoverable, micrograms per liter					< 0.2	< 0.2
34699	trans-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5				< 0.10	< 0.10

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
April 2008

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		4/22/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008
34704	cis-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5				< 0.10	< 0.10
38454	Dicrotophos, water, filtered, recoverable, micrograms per liter						
38775	Dichlorvos, water, filtered, recoverable, micrograms per liter						
38933	Chlorpyrifos, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
39086	Alkalinity, water, filtered, incremental titration, field, milligrams per liter as calcium carbonate		43	52	68	122	104
39175	Vinyl chloride, water, unfiltered, recoverable, micrograms per liter	0.5				< 0.1	< 0.1
39180	Trichloroethene, water, unfiltered, recoverable, micrograms per liter	5				< 0.02	< 0.02
39381	Dieldrin, water, filtered, recoverable, micrograms per liter						
39415	Metolachlor, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
39532	Malathion, water, filtered, recoverable, micrograms per liter						
39572	Diazinon, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
39632	Atrazine, water, filtered, recoverable, micrograms per liter						
39702	Hexachlorobutadiene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
46342	Alachlor, water, filtered, recoverable, micrograms per liter						
49260	Acetochlor, water, filtered, recoverable, micrograms per liter						
49295	1-Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
49933	C-14, water, filtered, percent modern		2.91	14.29		69.32	88.12
49934	C-14, counting error, water, filtered, percent modern		0.11	0.21		0.35	0.41
49991	Methyl acrylate, water, unfiltered, recoverable, micrograms per liter					< 0.6	< 0.6
49999	1,2,3,4-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
50000	1,2,3,5-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
50002	Bromoethene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
50004	tert-Butyl ethyl ether, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
50005	Methyl tert-pentyl ether, water, unfiltered, recoverable, micrograms per liter					< 0.06	< 0.06
50305	Caffeine, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
50359	Metalaxyl, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
61209	Perchlorate, water, unfiltered, recoverable, micrograms per liter	6					
61585	Cyfluthrin, water, filtered, recoverable, micrograms per liter						
61586	Cypermethrin, water, filtered, recoverable, micrograms per liter						
61591	Fenamiphos, water, filtered, recoverable, micrograms per liter						
61593	Iprodione, water, filtered, recoverable, micrograms per liter						
61594	Isofenphos, water, filtered, recoverable, micrograms per liter						
61596	Metalaxyl, water, filtered, recoverable, micrograms per liter						
61598	Methidathion, water, filtered, recoverable, micrograms per liter						
61599	Myclobutanil, water, filtered, recoverable, micrograms per liter						
61601	Phosmet, water, filtered, recoverable, micrograms per liter						
61610	Tribuphos, water, filtered, recoverable, micrograms per liter						
61618	2-Chloro-2',6'-diethylacetanilide, water, filtered, recoverable, micrograms per liter						
61620	2-Ethyl-6-methylaniline, water, filtered, recoverable, micrograms per liter						
61625	3,4-Dichloroaniline, water, filtered, recoverable, micrograms per liter						
61633	4-Chloro-2-methylphenol, water, filtered, recoverable, micrograms per liter						
61635	Azinphos-methyl oxygen analog, water, filtered, recoverable, micrograms per liter						
61636	Chlorpyrifos oxygen analog, water, filtered, recoverable, micrograms per liter						
61644	Ethion monoxon, water, filtered, recoverable, micrograms per liter						
61645	Fenamiphos sulfone, water, filtered, recoverable, micrograms per liter						
61646	Fenamiphos sulfoxide, water, filtered, recoverable, micrograms per liter						
61652	Malaoxon, water, filtered, recoverable, micrograms per liter						
61664	Methyl paraoxon, water, filtered, recoverable, micrograms per liter						
61666	Phorate oxygen analog, water, filtered, recoverable, micrograms per liter						
61668	Phosmet oxygen analog, water, filtered, recoverable, micrograms per liter						
61674	Terbufos oxygen analog sulfone, water, filtered, recoverable, micrograms per liter						
61705	Diethoxyoctylphenol, water, filtered, recoverable, micrograms per liter					< 1	< 1
61706	Monoethoxyoctylphenol, water, filtered, recoverable, micrograms per liter					< 1	< 1
62005	Cotinine, water, filtered, recoverable, micrograms per liter					< 0.400	< 0.400

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
April 2008

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		4/22/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008
62054	1-Methylnaphthalene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62055	2,6-Dimethylnaphthalene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62056	2-Methylnaphthalene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62057	3-beta-Coprostanol, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62058	3-Methyl-1H-indole, water, filtered, recoverable, micrograms per liter					< 0.08	< 0.08
62059	3-tert-Butyl-4-hydroxyanisole, water, filtered, recoverable, micrograms per liter					< 0.6	< 0.6
62060	4-Cumylphenol, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62061	4-Octylphenol, water, filtered, recoverable, micrograms per liter					< 0.16	< 0.16
62062	4-tert-Octylphenol, water, filtered, recoverable, micrograms per liter					< 1	< 1
62063	5-Methyl-1H-benzotriazole, water, filtered, recoverable, micrograms per liter					< 0.08	< 0.08
62064	Acetophenone, water, filtered, recoverable, micrograms per liter					< 0.4	< 0.4
62065	Acetyl hexamethyl tetrahydro naphthalene, water, filtered, recoverable, micrograms per liter						
62066	9,10-Anthraquinone, water, filtered, recoverable, micrograms per liter					< 0.2	< 0.2
62067	Benzophenone, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62068	beta-Sitosterol, water, filtered, recoverable, micrograms per liter					< 2	< 2
62070	Camphor, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62071	Carbazole, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62072	Cholesterol, water, filtered, recoverable, micrograms per liter					< 1	< 1
62073	D-Limonene, water, filtered, recoverable, micrograms per liter					< 0.04	< 0.04
62075	Hexahydrohexamethyl cyclopentabenzopyran, water, filtered, recoverable, micrograms per liter					< 0.5	< 0.5
62076	Indole, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62077	Isoborneol, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62078	Isopropylbenzene, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62079	Isoquinoline, water, filtered, recoverable, micrograms per liter					< 0.2	< 0.2
62080	Menthol, water, filtered, recoverable, micrograms per liter					< 0.2	< 0.2
62081	Methyl salicylate, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62082	DEET, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62083	Diethoxynonylphenol, water, filtered, recoverable, micrograms per liter					< 5	< 5
62084	p-Cresol, water, filtered, recoverable, micrograms per liter					< 0.18	< 0.18
62085	4-Nonylphenol, water, filtered, recoverable, micrograms per liter					< 1	< 1
62086	beta-Stigmastanol, water, filtered, recoverable, micrograms per liter					< 1	< 1
62087	Tris(2-chloroethyl) phosphate, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62088	Tris(dichloroisopropyl) phosphate, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62089	Tributyl phosphate, water, filtered, recoverable, micrograms per liter					< 0.2	< 0.2
62090	Triclosan, water, filtered, recoverable, micrograms per liter					< 0.2	< 0.2
62091	Triethyl citrate, water, filtered, recoverable, micrograms per liter					< 0.2	< 0.2
62092	Triphenyl phosphate, water, filtered, recoverable, micrograms per liter					< 0.1	< 0.1
62093	Tris(2-butoxyethyl) phosphate, water, filtered, recoverable, micrograms per liter					< 0.4	< 0.4
62166	Fipronil, water, filtered, recoverable, micrograms per liter						
62167	Fipronil sulfide, water, filtered, recoverable, micrograms per liter						
62168	Fipronil sulfone, water, filtered, recoverable, micrograms per liter						
62169	Desulfinylfipronil amide, water, filtered, recoverable, micrograms per liter						
62170	Desulfinylfipronil, water, filtered, recoverable, micrograms per liter						
62854	Total nitrogen, (NH3+NO2+NO3+Organic), filtered, milligrams per liter						
63790	Perchlorate, water, filtered, recoverable, micrograms per liter	6					
70300	Residue on evaporation, dried at 180 degrees Celsius, water, filtered, milligrams per liter	1500	356	437	430	407	429
70301	Residue, water, filtered, sum of constituents, milligrams per liter		347 E	419	412 E	383 E	402 E
70303	Residue, water, filtered, tons per acre-foot						
71846	Ammonia, water, filtered, milligrams per liter as NH4		0.04	0.04	0.06	0.03	
71851	Nitrate, water, filtered, milligrams per liter	45 (g)					
71856	Nitrite, water, filtered, milligrams per liter				0.006 E		
71865	Iodide, water, filtered, milligrams per liter		0.399	0.666	0.489	0.025	0.005
71870	Bromide, water, filtered, milligrams per liter		0.33	0.40	0.38	0.27	0.06
72019	Depth to water level, feet below land surface		53.42	72.96	83.30	86.32	66.09

Source: USGS California Water Science Center.

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Pala Park Well (8S/2W-19A1-6)
April 2008

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		4/22/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008
73547	trans-1,4-Dichloro-2-butene, water, unfiltered, recoverable, micrograms per liter					< 0.6	< 0.6
73570	Ethyl methacrylate, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
75985	Tritium 2-sigma combined uncertainty, water, unfiltered, picocuries per liter		0.58	0.58	0.58	0.58	0.64
76002	Rn-222, 2-sigma combined uncertainty, water, unfiltered, picocuries per liter						
77041	Carbon disulfide, water, unfiltered, micrograms per liter					< 0.06	< 0.06
77093	cis-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6				< 0.02	< 0.02
77103	n-Butyl methyl ketone, water, unfiltered, recoverable, micrograms per liter					< 0.6	< 0.6
77128	Styrene, water, unfiltered, recoverable, micrograms per liter	100				< 0.04	< 0.04
77135	o-Xylene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77168	1,1-Dichloropropene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77170	2,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter					< 0.06	< 0.06
77173	1,3-Dichloropropane, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
77220	2-Ethyltoluene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77221	1,2,3-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
77222	1,2,4-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77223	Isopropylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77224	n-Propylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77226	1,3,5-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77275	2-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77277	4-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77297	Bromochloromethane, water, unfiltered, recoverable, micrograms per liter					< 0.06	< 0.06
77342	n-Butylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
77350	sec-Butylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77353	tert-Butylbenzene, water, unfiltered, recoverable, micrograms per liter					< 0.06	< 0.06
77356	4-Isopropyltoluene, water, unfiltered, recoverable, micrograms per liter					< 0.08	< 0.08
77424	Iodomethane, water, unfiltered, recoverable, micrograms per liter					< 0.4	< 0.4
77443	1,2,3-Trichloropropane, water, unfiltered, recoverable, micrograms per liter					< 0.12	< 0.12
77562	1,1,1,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
77613	1,2,3-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
77651	1,2-Dibromoethane, water, unfiltered, recoverable, micrograms per liter	0.05				< 0.04	< 0.04
77652	1,1,2-Trichloro-1,2,2-trifluoroethane, water, unfiltered, recoverable, micrograms per liter					< 0.04	< 0.04
78032	Methyl tert-butyl ether, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
78109	3-Chloropropene, water, unfiltered, recoverable, micrograms per liter					< 0.08	< 0.08
78133	Isobutyl methyl ketone, water, unfiltered, recoverable, micrograms per liter					< 0.4	< 0.4
81552	Acetone, water, unfiltered, recoverable, micrograms per liter					< 4	< 4
81555	Bromobenzene, water, unfiltered, recoverable, micrograms per liter					< 0.02	< 0.02
81576	Diethyl ether, water, unfiltered, recoverable, micrograms per liter					< 0.1	< 0.1
81577	Diisopropyl ether, water, unfiltered, recoverable, micrograms per liter					< 0.06	< 0.06
81593	Methyl acrylonitrile, water, unfiltered, recoverable, micrograms per liter					< 0.2	< 0.2
81595	Ethyl methyl ketone, water, unfiltered, recoverable, micrograms per liter					< 1.6	< 1.6
81597	Methyl methacrylate, water, unfiltered, recoverable, micrograms per liter					< 0.2	< 0.2
81607	Tetrahydrofuran, water, unfiltered, recoverable, micrograms per liter					< 1	< 1
82081	C-13/C-12 ratio, water, unfiltered, per mil		-19.70	-16.90		-14.89	-16.88
82082	Deuterium/Protium ratio, water, unfiltered, per mil		-53.80	-53.60	-52.40	-45.70	-58.00
82085	Oxygen-18/Oxygen-16 ratio, water, unfiltered, per mil		-8.34	-8.15	-7.99	-6.89	-8.16
82303	Rn-222, water, unfiltered, picocuries per liter						
82346	Ethion, water, filtered, recoverable, micrograms per liter						
82625	1,2-Dibromo-3-chloropropane, water, unfiltered, recoverable, micrograms per liter					< 0.5	< 0.5
82630	Metribuzin, water, filtered, recoverable, micrograms per liter						
82660	2,6-Diethylaniline, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82661	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82662	Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82664	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82667	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
April 2008

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date		4/22/2008	4/23/2008	4/23/2008	4/23/2008	4/23/2008
82670	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82673	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82675	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82676	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82680	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					< 1	< 1
82682	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82683	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82686	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82687	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
85795	m-Xylene plus p-xylene, water, unfiltered, recoverable, micrograms per liter					< 0.08	< 0.08
90095	Specific conductance, water, unfiltered, laboratory, microsiemens per centimeter at 25 degrees Celsius		645	757	732	668	631
90851	Triholomehtanes, water, unfiltered, calcd, micrograms per liter						M
99583	Bisphenol A-d3, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99584	Caffeine-13C, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99585	Decafluorobiphenyl, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99586	Fluoranthene-d10, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99832	1,2-Dichloroethane-d4, surrogate, Schedule 2090, water, unfiltered, percent recovery					129	130
99833	Toluene-d8, surrogate, Schedule 2090, water, unfiltered, percent recovery					90.9	91.5
99834	1-Bromo-4-fluorobenzene, surrogate, VOC schedules, water, unfiltered, percent recovery					78.9	75.6
99994	Diazinon-d10, surrogate, Schedule 2003, water, filtered, percent recovery						
99995	alpha-HCH-d6, surrogate, Schedule 2003, water, filtered, percent recovery						

Notes: U.S. EPA STORET numbers for MCLs correspond to the same as the USGS NWIS data parameter number except as follows:

(a) MCL shown for U.S EPA STORET No. 620.
(b) MCL shown for U.S. EPASTORET No. 951.
(c) MCL shown for U.S. EPA STORET No. 1002.
(d) MCL shown for U.S. EPA STORET No. 1007.
(e) MCL shown for U.S. EPA STORET No. 1012.
(f) MCL shown for U.S. EPA STORET No. 1027.
(g) MCL shown for U.S. EPA STORET No. 1034.
(h) MCL shown for U.S. EPA STORET No. 1042.
(i) MCL shown for U.S. EPA STORET No. 1059.
(j) MCL shown for U.S EPA STORET No. 1067.
(k) MCL shown for U.S. EPASTORET No. 1077.
(l) MCL shown for U.S. EPA STORET No. 1092.
(m) MCL shown for U.S. EPA STORET No. 1097.
(n) MCL shown for U.S. EPA STORET No. 1105.
(o) MCL shown for U.S. EPA STORET No. 1147.
(p) MCL shown for U.S. EPA STORET No. 34247.
(q) MCL shown for U.S. EPA STORET No. 71850.

Code--Data parameter number used in USGS National Water Information System (NWIS).
E--Estimated.
M--Presence verifed but not quantified.
MCL--Maximum Contaminant Level reported by California DHS (May 25, 2007 Database) for U.S. EPA STORET number.
V--Biased results from contamination.

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
August 2009

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					**8/4/2009**	**8/4/2009**
3	Sampling depth, feet						
10	Temperature, water, degrees Celsius					20.8	19
28	Agency analyzing sample, code					80020	80020
59	Flow rate, instantaneous, gallons per minute						
95	Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius					660	601
191	Hydrogen ion, water, unfiltered, calculated, milligrams per liter					0.00001	0.00002
300	Dissolved oxygen, water, unfiltered, milligrams per liter						
400	pH, water, unfiltered, field, standard units					8.1	7.7
403	pH, water, unfiltered, laboratory, standard units					8.2	7.7
453	Bicarbonate, water, filtered, incremental titration, field, milligrams per liter					151	148
602	Total nitrogen, water, filtered, milligrams per liter						2.9 E
607	Organic nitrogen, water, filtered, milligrams per liter						0.07 E
608	Ammonia, water, filtered, milligrams per liter as nitrogen					0.024	0.01 E
613	Nitrite, water, filtered, milligrams per liter as nitrogen	1 (a)				< 0.002	< 0.002
618	Nitrate, water, filtered, milligrams per liter as nitrogen						
623	Ammonia plus organic nitrogen, water, filtered, milligrams per liter as nitrogen					< 0.1	0.08 E
631	Nitrate plus nitrite, water, filtered, milligrams per liter as nitrogen					< 0.04	2.86
660	Orthophosphate, water, filtered, milligrams per liter					1.28	0.870
666	Phosphorus, water, filtered, milligrams per liter					0.41	0.29
671	Orthophosphate, water, filtered, milligrams per liter as phosphorus					0.419	0.284
900	Hardness, water, milligrams per liter as calcium carbonate					110	170
904	Noncarb hardness, water filtered field, milligrams per liter as calcium carbonate						44
905	Noncarb hardness, water filtered lab, milligrams per liter as calcium carbonate						38
915	Calcium, water, filtered, milligrams per liter					38.4	48.3
925	Magnesium, water, filtered, milligrams per liter					4.54	10.8
930	Sodium, water, filtered, milligrams per liter					86.2	55.0
931	Sodium adsorption ratio, water, number					3.5	1.9
932	Sodium fraction of cations, water, percent in equivalents of major cations					62	42
935	Potassium, water, filtered, milligrams per liter					1.98	1.86
940	Chloride, water, filtered, milligrams per liter	600				78.5	35.1
945	Sulfate, water, filtered, milligrams per liter	600				76.3	103
950	Fluoride, water, filtered, milligrams per liter	2 (b)				0.23	0.21
955	Silica, water, filtered, milligrams per liter					18.5	26.6
1000	Arsenic, water, filtered, micrograms per liter	10 (c)				4.7	1.4
1005	Barium, water, filtered, micrograms per liter	1000 (d)				21.0	49.7
1010	Beryllium, micrograms per liter	4 (e)					
1020	Boron, water, filtered, micrograms per liter					105	128
1025	Cadmium, micrograms per liter	5 (f)					
1030	Chromium, micrograms per liter	50 (g)					
1035	Cobalt, micrograms per liter						
1040	Copper, micrograms per liter	1000 (h)					
1046	Iron, water, filtered, micrograms per liter	300				5	< 4
1049	Lead, micrograms per liter						
1056	Manganese, water, filtered, micrograms per liter	50				20.3	< 0.2
1057	Thallium, micrograms per liter	2 (i)					
1060	Molybdenum, micrograms per liter						
1065	Nickel, micrograms per liter	100 (j)					
1075	Silver, micrograms per liter	100 (k)					
1080	Strontium, water, filtered, micrograms per liter					343	257
1085	Vanadium, micrograms per liter						
1090	Zinc, micrograms per liter	5000 (l)					
1095	Antimony, micrograms per liter	6 (m)					
1106	Aluminum, water, filtered, micrograms per liter	1000 (n)				6.6	< 4
1130	Lithium, water, filtered, micrograms per liter					7	7

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
August 2009

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					8/4/2009	8/4/2009
1145	Selenium, micrograms per liter	50 (o)					
4022	Terbuthylazine, water, filtered, recoverable, micrograms per liter						
4025	Hexazinone, water, filtered, recoverable, micrograms per liter						
4029	Bromacil, water, filtered, recoverable, micrograms per liter						
4035	Simazine, water, filtered, recoverable, micrograms per liter						
4036	Prometryn, water, filtered, recoverable, micrograms per liter						
4037	Prometon, water, filtered, recoverable, micrograms per liter						
4040	2-Chloro-4-isopropylamino-6-amino-s-triazine, water, filtered, recoverable, micrograms per liter						
4095	Fonofos, water, filtered, recoverable, micrograms per liter						
7000	Tritium, water, unfiltered, picocuries per liter						
22703	Uranium, natural, micrograms per liter						
29801	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, milligrams per liter as calcium carbonate					129	127
30217	Dibromomethane, water, unfiltered, recoverable, micrograms per liter						
32101	Bromodichloromethane, water, unfiltered, recoverable, micrograms per liter						
32102	Tetrachloromethane, water, unfiltered, recoverable, micrograms per liter	0.5					
32103	1,2-Dichloroethane, water, unfiltered, recoverable, micrograms per liter						
32104	Tribromomethane, water, unfiltered, recoverable, micrograms per liter						
32105	Dibromochloromethane, water, unfiltered, recoverable, micrograms per liter						
32106	Trichloromethane, water, unfiltered, recoverable, micrograms per liter						
34010	Toluene, water, unfiltered, recoverable, micrograms per liter	150					
34030	Benzene, water, unfiltered, recoverable, micrograms per liter	1					
34215	Acrylonitrile, water, unfiltered, recoverable, micrograms per liter						
34221	Anthracene, water, filtered, recoverable, micrograms per liter						
34248	Benzo[a]pyrene, water, filtered, recoverable, micrograms per liter	0.2 (p)					
34288	Tribromomethane, water, filtered, recoverable, micrograms per liter						
34301	Chlorobenzene, water, unfiltered, recoverable, micrograms per liter	70					
34311	Chloroethane, water, unfiltered, recoverable, micrograms per liter						
34371	Ethylbenzene, water, unfiltered, recoverable, micrograms per liter	300					
34377	Fluoranthene, water, filtered, recoverable, micrograms per liter						
34396	Hexachloroethane, water, unfiltered, recoverable, micrograms per liter						
34409	Isophorone, water, filtered, recoverable, micrograms per liter						
34413	Bromomethane, water, unfiltered, recoverable, micrograms per liter						
34418	Chloromethane, water, unfiltered, recoverable, micrograms per liter						
34423	Dichloromethane, water, unfiltered, recoverable, micrograms per liter	5					
34443	Naphthalene, water, filtered, recoverable, micrograms per liter						
34462	Phenanthrene, water, filtered, recoverable, micrograms per liter						
34466	Phenol, water, filtered, recoverable, micrograms per liter						
34470	Pyrene, water, filtered, recoverable, micrograms per liter						
34475	Tetrachloroethene, water, unfiltered, recoverable, micrograms per liter	5					
34476	Tetrachloroethene, water, filtered, recoverable, micrograms per liter						
34488	Trichlorofluoromethane, water, unfiltered, recoverable, micrograms per liter	150					
34496	1,1-Dichloroethane, water, unfiltered, recoverable, micrograms per liter	5					
34501	1,1-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6					
34506	1,1,1-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	200					
34511	1,1,2-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	5					
34516	1,1,2,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter	1					
34536	1,2-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	600					
34541	1,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter	5					
34546	trans-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	10					
34551	1,2,4-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5					
34566	1,3-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter						
34571	1,4-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5					
34572	1,4-Dichlorobenzene, water, filtered, recoverable, micrograms per liter						
34668	Dichlorodifluoromethane, water, unfiltered, recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
August 2009

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					8/4/2009	8/4/2009
34696	Naphthalene, water, unfiltered, recoverable, micrograms per liter						
34699	trans-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5					
34704	cis-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5					
38454	Dicrotophos, water, filtered, recoverable, micrograms per liter						
38775	Dichlorvos, water, filtered, recoverable, micrograms per liter						
38933	Chlorpyrifos, water, filtered, recoverable, micrograms per liter						
39086	Alkalinity, water, filtered, incremental titration, field, milligrams per liter as calcium carbonate					124	121
39175	Vinyl chloride, water, unfiltered, recoverable, micrograms per liter	0.5					
39180	Trichloroethene, water, unfiltered, recoverable, micrograms per liter	5					
39381	Dieldrin, water, filtered, recoverable, micrograms per liter						
39415	Metolachlor, water, filtered, recoverable, micrograms per liter						
39532	Malathion, water, filtered, recoverable, micrograms per liter						
39572	Diazinon, water, filtered, recoverable, micrograms per liter						
39632	Atrazine, water, filtered, recoverable, micrograms per liter						
39702	Hexachlorobutadiene, water, unfiltered, recoverable, micrograms per liter						
46342	Alachlor, water, filtered, recoverable, micrograms per liter						
49260	Acetochlor, water, filtered, recoverable, micrograms per liter						
49295	1-Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
49933	C-14, water, filtered, percent modern						
49934	C-14, counting error, water, filtered, percent modern						
49991	Methyl acrylate, water, unfiltered, recoverable, micrograms per liter						
49999	1,2,3,4-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter						
50000	1,2,3,5-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter						
50002	Bromoethene, water, unfiltered, recoverable, micrograms per liter						
50004	tert-Butyl ethyl ether, water, unfiltered, recoverable, micrograms per liter						
50005	Methyl tert-pentyl ether, water, unfiltered, recoverable, micrograms per liter						
50305	Caffeine, water, filtered, recoverable, micrograms per liter						
50359	Metalaxyl, water, filtered, recoverable, micrograms per liter						
61209	Perchlorate, water, unfiltered, recoverable, micrograms per liter	6					
61585	Cyfluthrin, water, filtered, recoverable, micrograms per liter						
61586	Cypermethrin, water, filtered, recoverable, micrograms per liter						
61591	Fenamiphos, water, filtered, recoverable, micrograms per liter						
61593	Iprodione, water, filtered, recoverable, micrograms per liter						
61594	Isofenphos, water, filtered, recoverable, micrograms per liter						
61596	Metalaxyl, water, filtered, recoverable, micrograms per liter						
61598	Methidathion, water, filtered, recoverable, micrograms per liter						
61599	Myclobutanil, water, filtered, recoverable, micrograms per liter						
61601	Phosmet, water, filtered, recoverable, micrograms per liter						
61610	Tribuphos, water, filtered, recoverable, micrograms per liter						
61618	2-Chloro-2',6'-diethylacetanilide, water, filtered, recoverable, micrograms per liter						
61620	2-Ethyl-6-methylaniline, water, filtered, recoverable, micrograms per liter						
61625	3,4-Dichloroaniline, water, filtered, recoverable, micrograms per liter						
61633	4-Chloro-2-methylphenol, water, filtered, recoverable, micrograms per liter						
61635	Azinphos-methyl oxygen analog, water, filtered, recoverable, micrograms per liter						
61636	Chlorpyrifos oxygen analog, water, filtered, recoverable, micrograms per liter						
61644	Ethion monoxon, water, filtered, recoverable, micrograms per liter						
61645	Fenamiphos sulfone, water, filtered, recoverable, micrograms per liter						
61646	Fenamiphos sulfoxide, water, filtered, recoverable, micrograms per liter						
61652	Malaoxon, water, filtered, recoverable, micrograms per liter						
61664	Methyl paraoxon, water, filtered, recoverable, micrograms per liter						
61666	Phorate oxygen analog, water, filtered, recoverable, micrograms per liter						
61668	Phosmet oxygen analog, water, filtered, recoverable, micrograms per liter						
61674	Terbufos oxygen analog sulfone, water, filtered, recoverable, micrograms per liter						
61705	Diethoxyoctylphenol, water, filtered, recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
August 2009

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					8/4/2009	8/4/2009
61706	Monoethoxyoctylphenol, water, filtered, recoverable, micrograms per liter						
62005	Cotinine, water, filtered, recoverable, micrograms per liter						
62054	1-Methylnaphthalene, water, filtered, recoverable, micrograms per liter						
62055	2,6-Dimethylnaphthalene, water, filtered, recoverable, micrograms per liter						
62056	2-Methylnaphthalene, water, filtered, recoverable, micrograms per liter						
62057	3-beta-Coprostanol, water, filtered, recoverable, micrograms per liter						
62058	3-Methyl-1H-indole, water, filtered, recoverable, micrograms per liter						
62059	3-tert-Butyl-4-hydroxyanisole, water, filtered, recoverable, micrograms per liter						
62060	4-Cumylphenol, water, filtered, recoverable, micrograms per liter						
62061	4-Octylphenol, water, filtered, recoverable, micrograms per liter						
62062	4-tert-Octylphenol, water, filtered, recoverable, micrograms per liter						
62063	5-Methyl-1H-benzotriazole, water, filtered, recoverable, micrograms per liter						
62064	Acetophenone, water, filtered, recoverable, micrograms per liter						
62065	Acetyl hexamethyl tetrahydro naphthalene, water, filtered, recoverable, micrograms per liter						
62066	9,10-Anthraquinone, water, filtered, recoverable, micrograms per liter						
62067	Benzophenone, water, filtered, recoverable, micrograms per liter						
62068	beta-Sitosterol, water, filtered, recoverable, micrograms per liter						
62070	Camphor, water, filtered, recoverable, micrograms per liter						
62071	Carbazole, water, filtered, recoverable, micrograms per liter						
62072	Cholesterol, water, filtered, recoverable, micrograms per liter						
62073	D-Limonene, water, filtered, recoverable, micrograms per liter						
62075	Hexahydrohexamethyl cyclopentabenzopyran, water, filtered, recoverable, micrograms per liter						
62076	Indole, water, filtered, recoverable, micrograms per liter						
62077	Isoborneol, water, filtered, recoverable, micrograms per liter						
62078	Isopropylbenzene, water, filtered, recoverable, micrograms per liter						
62079	Isoquinoline, water, filtered, recoverable, micrograms per liter						
62080	Menthol, water, filtered, recoverable, micrograms per liter						
62081	Methyl salicylate, water, filtered, recoverable, micrograms per liter						
62082	DEET, water, filtered, recoverable, micrograms per liter						
62083	Diethoxynonylphenol, water, filtered, recoverable, micrograms per liter						
62084	p-Cresol, water, filtered, recoverable, micrograms per liter						
62085	4-Nonylphenol, water, filtered, recoverable, micrograms per liter						
62086	beta-Stigmastanol, water, filtered, recoverable, micrograms per liter						
62087	Tris(2-chloroethyl) phosphate, water, filtered, recoverable, micrograms per liter						
62088	Tris(dichloroisopropyl) phosphate, water, filtered, recoverable, micrograms per liter						
62089	Tributyl phosphate, water, filtered, recoverable, micrograms per liter						
62090	Triclosan, water, filtered, recoverable, micrograms per liter						
62091	Triethyl citrate, water, filtered, recoverable, micrograms per liter						
62092	Triphenyl phosphate, water, filtered, recoverable, micrograms per liter						
62093	Tris(2-butoxyethyl) phosphate, water, filtered, recoverable, micrograms per liter						
62166	Fipronil, water, filtered, recoverable, micrograms per liter						
62167	Fipronil sulfide, water, filtered, recoverable, micrograms per liter						
62168	Fipronil sulfone, water, filtered, recoverable, micrograms per liter						
62169	Desulfinylfipronil amide, water, filtered, recoverable, micrograms per liter						
62170	Desulfinylfipronil, water, filtered, recoverable, micrograms per liter						
62854	Total nitrogen, (NH3+NO2+NO3+Organic), filtered, milligrams per liter						
63790	Perchlorate, water, filtered, recoverable, micrograms per liter	6					
70300	Residue on evaporation, dried at 180 degrees Celsius, water, filtered, milligrams per liter	1500				389	396
70301	Residue, water, filtered, sum of constituents, milligrams per liter					381	368 E
70303	Residue, water, filtered, tons per acre-foot						
71846	Ammonia, water, filtered, milligrams per liter as NH4					0.03	0.01 E
71851	Nitrate, water, filtered, milligrams per liter	45 (g)					
71856	Nitrite, water, filtered, milligrams per liter						
71865	Iodide, water, filtered, milligrams per liter					0.035	0.004

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
August 2009

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					8/4/2009	8/4/2009
71870	Bromide, water, filtered, milligrams per liter					0.27	0.06
72019	Depth to water level, feet below land surface						
73547	trans-1,4-Dichloro-2-butene, water, unfiltered, recoverable, micrograms per liter						
73570	Ethyl methacrylate, water, unfiltered, recoverable, micrograms per liter						
75985	Tritium 2-sigma combined uncertainty, water, unfiltered, picocuries per liter						
76002	Rn-222, 2-sigma combined uncertainty, water, unfiltered, picocuries per liter						
77041	Carbon disulfide, water, unfiltered, micrograms per liter						
77093	cis-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6					
77103	n-Butyl methyl ketone, water, unfiltered, recoverable, micrograms per liter						
77128	Styrene, water, unfiltered, recoverable, micrograms per liter	100					
77135	o-Xylene, water, unfiltered, recoverable, micrograms per liter						
77168	1,1-Dichloropropene, water, unfiltered, recoverable, micrograms per liter						
77170	2,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter						
77173	1,3-Dichloropropane, water, unfiltered, recoverable, micrograms per liter						
77220	2-Ethyltoluene, water, unfiltered, recoverable, micrograms per liter						
77221	1,2,3-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter						
77222	1,2,4-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter						
77223	Isopropylbenzene, water, unfiltered, recoverable, micrograms per liter						
77224	n-Propylbenzene, water, unfiltered, recoverable, micrograms per liter						
77226	1,3,5-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter						
77275	2-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter						
77277	4-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter						
77297	Bromochloromethane, water, unfiltered, recoverable, micrograms per liter						
77342	n-Butylbenzene, water, unfiltered, recoverable, micrograms per liter						
77350	sec-Butylbenzene, water, unfiltered, recoverable, micrograms per liter						
77353	tert-Butylbenzene, water, unfiltered, recoverable, micrograms per liter						
77356	4-Isopropyltoluene, water, unfiltered, recoverable, micrograms per liter						
77424	Iodomethane, water, unfiltered, recoverable, micrograms per liter						
77443	1,2,3-Trichloropropane, water, unfiltered, recoverable, micrograms per liter						
77562	1,1,1,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter						
77613	1,2,3-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter						
77651	1,2-Dibromoethane, water, unfiltered, recoverable, micrograms per liter	0.05					
77652	1,1,2-Trichloro-1,2,2-trifluoroethane, water, unfiltered, recoverable, micrograms per liter						
78032	Methyl tert-butyl ether, water, unfiltered, recoverable, micrograms per liter						
78109	3-Chloropropene, water, unfiltered, recoverable, micrograms per liter						
78133	Isobutyl methyl ketone, water, unfiltered, recoverable, micrograms per liter						
81552	Acetone, water, unfiltered, recoverable, micrograms per liter						
81555	Bromobenzene, water, unfiltered, recoverable, micrograms per liter						
81576	Diethyl ether, water, unfiltered, recoverable, micrograms per liter						
81577	Diisopropyl ether, water, unfiltered, recoverable, micrograms per liter						
81593	Methyl acrylonitrile, water, unfiltered, recoverable, micrograms per liter						
81595	Ethyl methyl ketone, water, unfiltered, recoverable, micrograms per liter						
81597	Methyl methacrylate, water, unfiltered, recoverable, micrograms per liter						
81607	Tetrahydrofuran, water, unfiltered, recoverable, micrograms per liter						
82081	C-13/C-12 ratio, water, unfiltered, per mil						
82082	Deuterium/Protium ratio, water, unfiltered, per mil					-45.30	-37.70
82085	Oxygen-18/Oxygen-16 ratio, water, unfiltered, per mil					-6.88	-6.00
82303	Rn-222, water, unfiltered, picocuries per liter						
82346	Ethion, water, filtered, recoverable, micrograms per liter						
82625	1,2-Dibromo-3-chloropropane, water, unfiltered, recoverable, micrograms per liter						
82630	Metribuzin, water, filtered, recoverable, micrograms per liter						
82660	2,6-Diethylaniline, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82661	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82662	Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
August 2009

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					8/4/2009	8/4/2009
82664	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82667	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82670	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82673	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82675	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82676	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82680	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82682	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82683	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82686	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82687	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
85795	m-Xylene plus p-xylene, water, unfiltered, recoverable, micrograms per liter						
90095	Specific conductance, water, unfiltered, laboratory, microsiemens per centimeter at 25 degrees Celsius					676	611
90851	Triholomehtanes, water, unfiltered, calcd, micrograms per liter						
99583	Bisphenol A-d3, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99584	Caffeine-13C, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99585	Decafluorobiphenyl, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99586	Fluoranthene-d10, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99832	1,2-Dichloroethane-d4, surrogate, Schedule 2090, water, unfiltered, percent recovery						
99833	Toluene-d8, surrogate, Schedule 2090, water, unfiltered, percent recovery						
99834	1-Bromo-4-fluorobenzene, surrogate, VOC schedules, water, unfiltered, percent recovery						
99994	Diazinon-d10, surrogate, Schedule 2003, water, filtered, percent recovery						
99995	alpha-HCH-d6, surrogate, Schedule 2003, water, filtered, percent recovery						

Notes: U.S. EPA STORET numbers for MCLs correspond to the same as the USGS NWIS data parameter number except as follows:

(a) MCL shown for U.S EPA STORET No. 620.
(b) MCL shown for U.S. EPASTORET No. 951.
(c) MCL shown for U.S. EPA STORET No. 1002.
(d) MCL shown for U.S. EPA STORET No. 1007.
(e) MCL shown for U.S. EPA STORET No. 1012.
(f) MCL shown for U.S. EPA STORET No. 1027.
(g) MCL shown for U.S. EPA STORET No. 1034.
(h) MCL shown for U.S. EPA STORET No. 1042.
(i) MCL shown for U.S. EPA STORET No. 1059.
(j) MCL shown for U.S EPA STORET No. 1067.
(k) MCL shown for U.S. EPASTORET No. 1077.
(l) MCL shown for U.S. EPA STORET No. 1092.
(m) MCL shown for U.S. EPA STORET No. 1097.
(n) MCL shown for U.S. EPA STORET No. 1105.
(o) MCL shown for U.S. EPA STORET No. 1147.
(p) MCL shown for U.S. EPA STORET No. 34247.
(q) MCL shown for U.S. EPA STORET No. 71850.

Code--Data parameter number used in USGS National Water Information System (NWIS).
E--Estimated.
M--Presence verifed but not quantified.
MCL--Maximum Contaminant Level reported by California DHS (May 25, 2007 Database) for U.S. EPA STORET number.
V--Biased results from contamination.

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
July 2010

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					7/26/2010	7/26/2010
3	Sampling depth, feet						
10	Temperature, water, degrees Celsius					22.5	19.5
28	Agency analyzing sample, code					80020	80020
59	Flow rate, instantaneous, gallons per minute						
95	Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius					670	720
191	Hydrogen ion, water, unfiltered, calculated, milligrams per liter					0.00001	0.00003
300	Dissolved oxygen, water, unfiltered, milligrams per liter						
400	pH, water, unfiltered, field, standard units					8.0	7.6
403	pH, water, unfiltered, laboratory, standard units					8.2	7.6
405	Carbon dioxide, water, unfiltered, milligrams per liter					2.2	9.1
453	Bicarbonate, water, filtered, incremental titration, field, milligrams per liter					149	224
602	Total nitrogen, water, filtered, milligrams per liter					< 0.14	3.8 E
607	Organic nitrogen, water, filtered, milligrams per liter					< 0.08	< 0.09
608	Ammonia, water, filtered, milligrams per liter as nitrogen					0.025	< 0.020
613	Nitrite, water, filtered, milligrams per liter as nitrogen	1 (a)				0.001 E	0.001 E
618	Nitrate, water, filtered, milligrams per liter as nitrogen					< 0.039	3.66 E
623	Ammonia plus organic nitrogen, water, filtered, milligrams per liter as nitrogen					< 0.10	0.09 E
631	Nitrate plus nitrite, water, filtered, milligrams per liter as nitrogen					< 0.04	3.66
660	Orthophosphate, water, filtered, milligrams per liter					1.10	4.36
666	Phosphorus, water, filtered, milligrams per liter					0.35	1.40
671	Orthophosphate, water, filtered, milligrams per liter as phosphorus					0.359	1.42
900	Hardness, water, milligrams per liter as calcium carbonate					104	211
904	Noncarb hardness, water filtered field, milligrams per liter as calcium carbonate						27
905	Noncarb hardness, water filtered lab, milligrams per liter as calcium carbonate						22
915	Calcium, water, filtered, milligrams per liter					34.5	61.4
925	Magnesium, water, filtered, milligrams per liter					4.18	14.0
930	Sodium, water, filtered, milligrams per liter					96.8	74.3
931	Sodium adsorption ratio, water, number					4.14	2.23
932	Sodium fraction of cations, water, percent in equivalents of major cations					67	43
935	Potassium, water, filtered, milligrams per liter					2.03	2.34
940	Chloride, water, filtered, milligrams per liter	600				83.9	39.5
945	Sulfate, water, filtered, milligrams per liter	600				79.9	114
950	Fluoride, water, filtered, milligrams per liter	2 (b)				0.26	0.12
955	Silica, water, filtered, milligrams per liter					16.9	28.4
1000	Arsenic, water, filtered, micrograms per liter	10 (c)				4.6	2.8
1005	Barium, water, filtered, micrograms per liter	1000 (d)				19.4	54.0
1010	Beryllium, micrograms per liter	4 (e)					
1020	Boron, water, filtered, micrograms per liter					106	145
1025	Cadmium, micrograms per liter	5 (f)					
1030	Chromium, micrograms per liter	50 (g)					
1035	Cobalt, micrograms per liter						
1040	Copper, micrograms per liter	1000 (h)					
1046	Iron, water, filtered, micrograms per liter	300				6 E	< 6
1049	Lead, micrograms per liter						
1056	Manganese, water, filtered, micrograms per liter	50				20.0	< 0.2
1057	Thallium, micrograms per liter	2 (i)					
1060	Molybdenum, micrograms per liter						
1065	Nickel, micrograms per liter	100 (j)					
1075	Silver, micrograms per liter	100 (k)					
1080	Strontium, water, filtered, micrograms per liter					309	344
1085	Vanadium, micrograms per liter						
1090	Zinc, micrograms per liter	5000 (l)					
1095	Antimony, micrograms per liter	6 (m)					
1106	Aluminum, water, filtered, micrograms per liter	1000 (n)				12.5	2.4

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
July 2010

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					7/26/2010	7/26/2010
1130	Lithium, water, filtered, micrograms per liter					7	7
1145	Selenium, micrograms per liter	50 (o)					
4022	Terbuthylazine, water, filtered, recoverable, micrograms per liter						
4025	Hexazinone, water, filtered, recoverable, micrograms per liter						
4029	Bromacil, water, filtered, recoverable, micrograms per liter						
4035	Simazine, water, filtered, recoverable, micrograms per liter						
4036	Prometryn, water, filtered, recoverable, micrograms per liter						
4037	Prometon, water, filtered, recoverable, micrograms per liter						
4040	2-Chloro-4-isopropylamino-6-amino-s-triazine, water, filtered, recoverable, micrograms per liter						
4095	Fonofos, water, filtered, recoverable, micrograms per liter						
7000	Tritium, water, unfiltered, picocuries per liter						
22703	Uranium, natural, micrograms per liter						
29801	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, milligrams per liter as calcium carbonate					128	190
30217	Dibromomethane, water, unfiltered, recoverable, micrograms per liter						
32101	Bromodichloromethane, water, unfiltered, recoverable, micrograms per liter						
32102	Tetrachloromethane, water, unfiltered, recoverable, micrograms per liter	0.5					
32103	1,2-Dichloroethane, water, unfiltered, recoverable, micrograms per liter						
32104	Tribromomethane, water, unfiltered, recoverable, micrograms per liter						
32105	Dibromochloromethane, water, unfiltered, recoverable, micrograms per liter						
32106	Trichloromethane, water, unfiltered, recoverable, micrograms per liter						
34010	Toluene, water, unfiltered, recoverable, micrograms per liter	150					
34030	Benzene, water, unfiltered, recoverable, micrograms per liter	1					
34215	Acrylonitrile, water, unfiltered, recoverable, micrograms per liter						
34221	Anthracene, water, filtered, recoverable, micrograms per liter						
34248	Benzo[a]pyrene, water, filtered, recoverable, micrograms per liter	0.2 (p)					
34288	Tribromomethane, water, filtered, recoverable, micrograms per liter						
34301	Chlorobenzene, water, unfiltered, recoverable, micrograms per liter	70					
34311	Chloroethane, water, unfiltered, recoverable, micrograms per liter						
34371	Ethylbenzene, water, unfiltered, recoverable, micrograms per liter	300					
34377	Fluoranthene, water, filtered, recoverable, micrograms per liter						
34396	Hexachloroethane, water, unfiltered, recoverable, micrograms per liter						
34409	Isophorone, water, filtered, recoverable, micrograms per liter						
34413	Bromomethane, water, unfiltered, recoverable, micrograms per liter						
34418	Chloromethane, water, unfiltered, recoverable, micrograms per liter						
34423	Dichloromethane, water, unfiltered, recoverable, micrograms per liter	5					
34443	Naphthalene, water, filtered, recoverable, micrograms per liter						
34462	Phenanthrene, water, filtered, recoverable, micrograms per liter						
34466	Phenol, water, filtered, recoverable, micrograms per liter						
34470	Pyrene, water, filtered, recoverable, micrograms per liter						
34475	Tetrachloroethene, water, unfiltered, recoverable, micrograms per liter	5					
34476	Tetrachloroethene, water, filtered, recoverable, micrograms per liter						
34488	Trichlorofluoromethane, water, unfiltered, recoverable, micrograms per liter	150					
34496	1,1-Dichloroethane, water, unfiltered, recoverable, micrograms per liter	5					
34501	1,1-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6					
34506	1,1,1-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	200					
34511	1,1,2-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	5					
34516	1,1,2,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter	1					
34536	1,2-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	600					
34541	1,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter	5					
34546	trans-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	10					
34551	1,2,4-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5					
34566	1,3-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter						
34571	1,4-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5					
34572	1,4-Dichlorobenzene, water, filtered, recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
July 2010

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					7/26/2010	7/26/2010
34668	Dichlorodifluoromethane, water, unfiltered, recoverable, micrograms per liter						
34696	Naphthalene, water, unfiltered, recoverable, micrograms per liter						
34699	trans-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5					
34704	cis-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5					
38454	Dicrotophos, water, filtered, recoverable, micrograms per liter						
38775	Dichlorvos, water, filtered, recoverable, micrograms per liter						
38933	Chlorpyrifos, water, filtered, recoverable, micrograms per liter						
39086	Alkalinity, water, filtered, incremental titration, field, milligrams per liter as calcium carbonate					124	185
39175	Vinyl chloride, water, unfiltered, recoverable, micrograms per liter	0.5					
39180	Trichloroethene, water, unfiltered, recoverable, micrograms per liter	5					
39381	Dieldrin, water, filtered, recoverable, micrograms per liter						
39415	Metolachlor, water, filtered, recoverable, micrograms per liter						
39532	Malathion, water, filtered, recoverable, micrograms per liter						
39572	Diazinon, water, filtered, recoverable, micrograms per liter						
39632	Atrazine, water, filtered, recoverable, micrograms per liter						
39702	Hexachlorobutadiene, water, unfiltered, recoverable, micrograms per liter						
46342	Alachlor, water, filtered, recoverable, micrograms per liter						
49260	Acetochlor, water, filtered, recoverable, micrograms per liter						
49295	1-Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
49933	C-14, water, filtered, percent modern						
49934	C-14, counting error, water, filtered, percent modern						
49991	Methyl acrylate, water, unfiltered, recoverable, micrograms per liter						
49999	1,2,3,4-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter						
50000	1,2,3,5-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter						
50002	Bromoethene, water, unfiltered, recoverable, micrograms per liter						
50004	tert-Butyl ethyl ether, water, unfiltered, recoverable, micrograms per liter						
50005	Methyl tert-pentyl ether, water, unfiltered, recoverable, micrograms per liter						
50305	Caffeine, water, filtered, recoverable, micrograms per liter						
50359	Metalaxyl, water, filtered, recoverable, micrograms per liter						
61209	Perchlorate, water, unfiltered, recoverable, micrograms per liter	6					
61585	Cyfluthrin, water, filtered, recoverable, micrograms per liter						
61586	Cypermethrin, water, filtered, recoverable, micrograms per liter						
61591	Fenamiphos, water, filtered, recoverable, micrograms per liter						
61593	Iprodione, water, filtered, recoverable, micrograms per liter						
61594	Isofenphos, water, filtered, recoverable, micrograms per liter						
61596	Metalaxyl, water, filtered, recoverable, micrograms per liter						
61598	Methidathion, water, filtered, recoverable, micrograms per liter						
61599	Myclobutanil, water, filtered, recoverable, micrograms per liter						
61601	Phosmet, water, filtered, recoverable, micrograms per liter						
61610	Tribuphos, water, filtered, recoverable, micrograms per liter						
61618	2-Chloro-2',6'-diethylacetanilide, water, filtered, recoverable, micrograms per liter						
61620	2-Ethyl-6-methylaniline, water, filtered, recoverable, micrograms per liter						
61625	3,4-Dichloroaniline, water, filtered, recoverable, micrograms per liter						
61633	4-Chloro-2-methylphenol, water, filtered, recoverable, micrograms per liter						
61635	Azinphos-methyl oxygen analog, water, filtered, recoverable, micrograms per liter						
61636	Chlorpyrifos oxygen analog, water, filtered, recoverable, micrograms per liter						
61644	Ethion monoxon, water, filtered, recoverable, micrograms per liter						
61645	Fenamiphos sulfone, water, filtered, recoverable, micrograms per liter						
61646	Fenamiphos sulfoxide, water, filtered, recoverable, micrograms per liter						
61652	Malaoxon, water, filtered, recoverable, micrograms per liter						
61664	Methyl paraoxon, water, filtered, recoverable, micrograms per liter						
61666	Phorate oxygen analog, water, filtered, recoverable, micrograms per liter						
61668	Phosmet oxygen analog, water, filtered, recoverable, micrograms per liter						
61674	Terbufos oxygen analog sulfone, water, filtered, recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
July 2010

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					7/26/2010	7/26/2010
61705	Diethoxyoctylphenol, water, filtered, recoverable, micrograms per liter						
61706	Monoethoxyoctylphenol, water, filtered, recoverable, micrograms per liter						
62005	Cotinine, water, filtered, recoverable, micrograms per liter						
62054	1-Methylnaphthalene, water, filtered, recoverable, micrograms per liter						
62055	2,6-Dimethylnaphthalene, water, filtered, recoverable, micrograms per liter						
62056	2-Methylnaphthalene, water, filtered, recoverable, micrograms per liter						
62057	3-beta-Coprostanol, water, filtered, recoverable, micrograms per liter						
62058	3-Methyl-1H-indole, water, filtered, recoverable, micrograms per liter						
62059	3-tert-Butyl-4-hydroxyanisole, water, filtered, recoverable, micrograms per liter						
62060	4-Cumylphenol, water, filtered, recoverable, micrograms per liter						
62061	4-Octylphenol, water, filtered, recoverable, micrograms per liter						
62062	4-tert-Octylphenol, water, filtered, recoverable, micrograms per liter						
62063	5-Methyl-1H-benzotriazole, water, filtered, recoverable, micrograms per liter						
62064	Acetophenone, water, filtered, recoverable, micrograms per liter						
62065	Acetyl hexamethyl tetrahydro naphthalene, water, filtered, recoverable, micrograms per liter						
62066	9,10-Anthraquinone, water, filtered, recoverable, micrograms per liter						
62067	Benzophenone, water, filtered, recoverable, micrograms per liter						
62068	beta-Sitosterol, water, filtered, recoverable, micrograms per liter						
62070	Camphor, water, filtered, recoverable, micrograms per liter						
62071	Carbazole, water, filtered, recoverable, micrograms per liter						
62072	Cholesterol, water, filtered, recoverable, micrograms per liter						
62073	D-Limonene, water, filtered, recoverable, micrograms per liter						
62075	Hexahydrohexamethyl cyclopentabenzopyran, water, filtered, recoverable, micrograms per liter						
62076	Indole, water, filtered, recoverable, micrograms per liter						
62077	Isoborneol, water, filtered, recoverable, micrograms per liter						
62078	Isopropylbenzene, water, filtered, recoverable, micrograms per liter						
62079	Isoquinoline, water, filtered, recoverable, micrograms per liter						
62080	Menthol, water, filtered, recoverable, micrograms per liter						
62081	Methyl salicylate, water, filtered, recoverable, micrograms per liter						
62082	DEET, water, filtered, recoverable, micrograms per liter						
62083	Diethoxynonylphenol, water, filtered, recoverable, micrograms per liter						
62084	p-Cresol, water, filtered, recoverable, micrograms per liter						
62085	4-Nonylphenol, water, filtered, recoverable, micrograms per liter						
62086	beta-Stigmastanol, water, filtered, recoverable, micrograms per liter						
62087	Tris(2-chloroethyl) phosphate, water, filtered, recoverable, micrograms per liter						
62088	Tris(dichloroisopropyl) phosphate, water, filtered, recoverable, micrograms per liter						
62089	Tributyl phosphate, water, filtered, recoverable, micrograms per liter						
62090	Triclosan, water, filtered, recoverable, micrograms per liter						
62091	Triethyl citrate, water, filtered, recoverable, micrograms per liter						
62092	Triphenyl phosphate, water, filtered, recoverable, micrograms per liter						
62093	Tris(2-butoxyethyl) phosphate, water, filtered, recoverable, micrograms per liter						
62166	Fipronil, water, filtered, recoverable, micrograms per liter						
62167	Fipronil sulfide, water, filtered, recoverable, micrograms per liter						
62168	Fipronil sulfone, water, filtered, recoverable, micrograms per liter						
62169	Desulfinylfipronil amide, water, filtered, recoverable, micrograms per liter						
62170	Desulfinylfipronil, water, filtered, recoverable, micrograms per liter						
62854	Total nitrogen, (NH3+NO2+NO3+Organic), filtered, milligrams per liter						
63790	Perchlorate, water, filtered, recoverable, micrograms per liter	6					
70300	Residue on evaporation, dried at 180 degrees Celsius, water, filtered, milligrams per liter	1500				379	465
70301	Residue, water, filtered, sum of constituents, milligrams per liter					395 E	466 E
70303	Residue, water, filtered, tons per acre-foot						
71846	Ammonia, water, filtered, milligrams per liter as NH4					0.032	< 0.026
71851	Nitrate, water, filtered, milligrams per liter	45 (q)				< 0.173	16.2 E
71856	Nitrite, water, filtered, milligrams per liter					0.003 E	0.003 E

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
July 2010

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					7/26/2010	7/26/2010
71865	Iodide, water, filtered, milligrams per liter					0.025	0.002
71870	Bromide, water, filtered, milligrams per liter					0.26	0.09
72019	Depth to water level, feet below land surface						
73547	trans-1,4-Dichloro-2-butene, water, unfiltered, recoverable, micrograms per liter						
73570	Ethyl methacrylate, water, unfiltered, recoverable, micrograms per liter						
75985	Tritium 2-sigma combined uncertainty, water, unfiltered, picocuries per liter						
76002	Rn-222, 2-sigma combined uncertainty, water, unfiltered, picocuries per liter						
77041	Carbon disulfide, water, unfiltered, micrograms per liter						
77093	cis-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6					
77103	n-Butyl methyl ketone, water, unfiltered, recoverable, micrograms per liter						
77128	Styrene, water, unfiltered, recoverable, micrograms per liter	100					
77135	o-Xylene, water, unfiltered, recoverable, micrograms per liter						
77168	1,1-Dichloropropene, water, unfiltered, recoverable, micrograms per liter						
77170	2,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter						
77173	1,3-Dichloropropane, water, unfiltered, recoverable, micrograms per liter						
77220	2-Ethyltoluene, water, unfiltered, recoverable, micrograms per liter						
77221	1,2,3-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter						
77222	1,2,4-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter						
77223	Isopropylbenzene, water, unfiltered, recoverable, micrograms per liter						
77224	n-Propylbenzene, water, unfiltered, recoverable, micrograms per liter						
77226	1,3,5-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter						
77275	2-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter						
77277	4-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter						
77297	Bromochloromethane, water, unfiltered, recoverable, micrograms per liter						
77342	n-Butylbenzene, water, unfiltered, recoverable, micrograms per liter						
77350	sec-Butylbenzene, water, unfiltered, recoverable, micrograms per liter						
77353	tert-Butylbenzene, water, unfiltered, recoverable, micrograms per liter						
77356	4-Isopropyltoluene, water, unfiltered, recoverable, micrograms per liter						
77424	Iodomethane, water, unfiltered, recoverable, micrograms per liter						
77443	1,2,3-Trichloropropane, water, unfiltered, recoverable, micrograms per liter						
77562	1,1,1,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter						
77613	1,2,3-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter						
77651	1,2-Dibromoethane, water, unfiltered, recoverable, micrograms per liter	0.05					
77652	1,1,2-Trichloro-1,2,2-trifluoroethane, water, unfiltered, recoverable, micrograms per liter						
78032	Methyl tert-butyl ether, water, unfiltered, recoverable, micrograms per liter						
78109	3-Chloropropene, water, unfiltered, recoverable, micrograms per liter						
78133	Isobutyl methyl ketone, water, unfiltered, recoverable, micrograms per liter						
81552	Acetone, water, unfiltered, recoverable, micrograms per liter						
81555	Bromobenzene, water, unfiltered, recoverable, micrograms per liter						
81576	Diethyl ether, water, unfiltered, recoverable, micrograms per liter						
81577	Diisopropyl ether, water, unfiltered, recoverable, micrograms per liter						
81593	Methyl acrylonitrile, water, unfiltered, recoverable, micrograms per liter						
81595	Ethyl methyl ketone, water, unfiltered, recoverable, micrograms per liter						
81597	Methyl methacrylate, water, unfiltered, recoverable, micrograms per liter						
81607	Tetrahydrofuran, water, unfiltered, recoverable, micrograms per liter						
82081	C-13/C-12 ratio, water, unfiltered, per mil						
82082	Deuterium/Protium ratio, water, unfiltered, per mil					-44.90	-41.20
82085	Oxygen-18/Oxygen-16 ratio, water, unfiltered, per mil					-6.86	-6.76
82303	Rn-222, water, unfiltered, picocuries per liter						
82346	Ethion, water, filtered, recoverable, micrograms per liter						
82625	1,2-Dibromo-3-chloropropane, water, unfiltered, recoverable, micrograms per liter						
82630	Metribuzin, water, filtered, recoverable, micrograms per liter						
82660	2,6-Diethylaniline, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82661	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Pala Park Well (8S/2W-19A1-6)
July 2010

Code	Parameter	MCL	Well A1	Well A2	Well A3	Well A4	Well A5
	Sampling date					7/26/2010	7/26/2010
82662	Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82664	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82667	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82670	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82673	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82675	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82676	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82680	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82682	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82683	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82686	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82687	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
85795	m-Xylene plus p-xylene, water, unfiltered, recoverable, micrograms per liter						
90095	Specific conductance, water, unfiltered, laboratory, microsiemens per centimeter at 25 degrees Celsius					679	737
90851	Triholomehtanes, water, unfiltered, calcd, micrograms per liter						
99583	Bisphenol A-d3, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99584	Caffeine-13C, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99585	Decafluorobiphenyl, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99586	Fluoranthene-d10, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99832	1,2-Dichloroethane-d4, surrogate, Schedule 2090, water, unfiltered, percent recovery						
99833	Toluene-d8, surrogate, Schedule 2090, water, unfiltered, percent recovery						
99834	1-Bromo-4-fluorobenzene, surrogate, VOC schedules, water, unfiltered, percent recovery						
99994	Diazinon-d10, surrogate, Schedule 2003, water, filtered, percent recovery						
99995	alpha-HCH-d6, surrogate, Schedule 2003, water, filtered, percent recovery						

Notes: U.S. EPA STORET numbers for MCLs correspond to the same as the USGS NWIS data parameter number except as follows:

(a) MCL shown for U.S EPA STORET No. 620.
(b) MCL shown for U.S. EPASTORET No. 951.
(c) MCL shown for U.S. EPA STORET No. 1002.
(d) MCL shown for U.S. EPA STORET No. 1007.
(e) MCL shown for U.S. EPA STORET No. 1012.
(f) MCL shown for U.S. EPA STORET No. 1027.
(g) MCL shown for U.S. EPA STORET No. 1034.
(h) MCL shown for U.S. EPA STORET No. 1042.
(i) MCL shown for U.S. EPA STORET No. 1059.
(j) MCL shown for U.S EPA STORET No. 1067.
(k) MCL shown for U.S. EPASTORET No. 1077.
(l) MCL shown for U.S. EPA STORET No. 1092.
(m) MCL shown for U.S. EPA STORET No. 1097.
(n) MCL shown for U.S. EPA STORET No. 1105.
(o) MCL shown for U.S. EPA STORET No. 1147.
(p) MCL shown for U.S. EPA STORET No. 34247.
(q) MCL shown for U.S. EPA STORET No. 71850.

Code--Data parameter number used in USGS National Water Information System (NWIS).
E--Estimated.
M--Presence verifed but not quantified.
MCL--Maximum Contaminant Level reported by California DHS (May 25, 2007 Database) for U.S. EPA STORET number.
V--Biased results from contamination.

Source: USGS California Water Science Center.

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

APPENDIX E.3

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT

WOLF VALLEY GROUNDWATER MONITORING WELL

September 2011

Site Description
Wolf Valley Groundwater Monitoring Well
(8S/2W-20J1-2)

LOCATION: Latitude 33° 27' 47", longitude 117° 06' 11", in Riverside County, California. Well is located in a residential neighborhood along the north side of Wolf Valley Road approximately 130 feet northeast of the intersection with Nightingale Road.

SITE INFORMATION: Land-surface altitude is 1076.23 feet above mean sea level from 24000 scale topographic map.

INSTRUMENTATION: None

WATER-LEVEL RECORD:

State well number	USGS station number	Intermittent water-level	Daily water-level
8S/2W-20J1	332747117061101	03/05/1990 to present	no data
8S/2W-20J2	332747117061102	03/05/1990 to present	no data

WATER-LEVEL MEASUREMENTS: Water levels are measured manually each month by means of a calibrated electric tape. Electric tape is used to avoid entangling the sensor and cable. Correction factors (comparison to a steel tape) are applied when necessary. Water-level corrections, for example to compensate for gage height, are calculated after each measurement and applied to the recorded values.

MEASURING POINT: The measuring point of water levels measured manually is from the top of the PVC casing.

TOPOGRAPHIC MAP: USGS Pechanga, California, 7.5 minute series.

WELL SUMMARY INFORMATION:

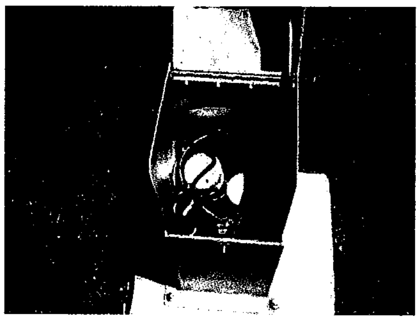
State well number	USGS station number	Hole depth (ft)	Perforation depth (ft)	Casing size and type	Date drilled
8S/2W-20J1	332747117061101	590	555-575	2" PVC	2/17/1990
8S/2W-20J2	332747117061102	590	160-180	2" PVC	2/18/1990

ADDITIONAL INFORMATION:

Additional information can be found at the following web site: http://ca.water.usgs.gov/temecula/.

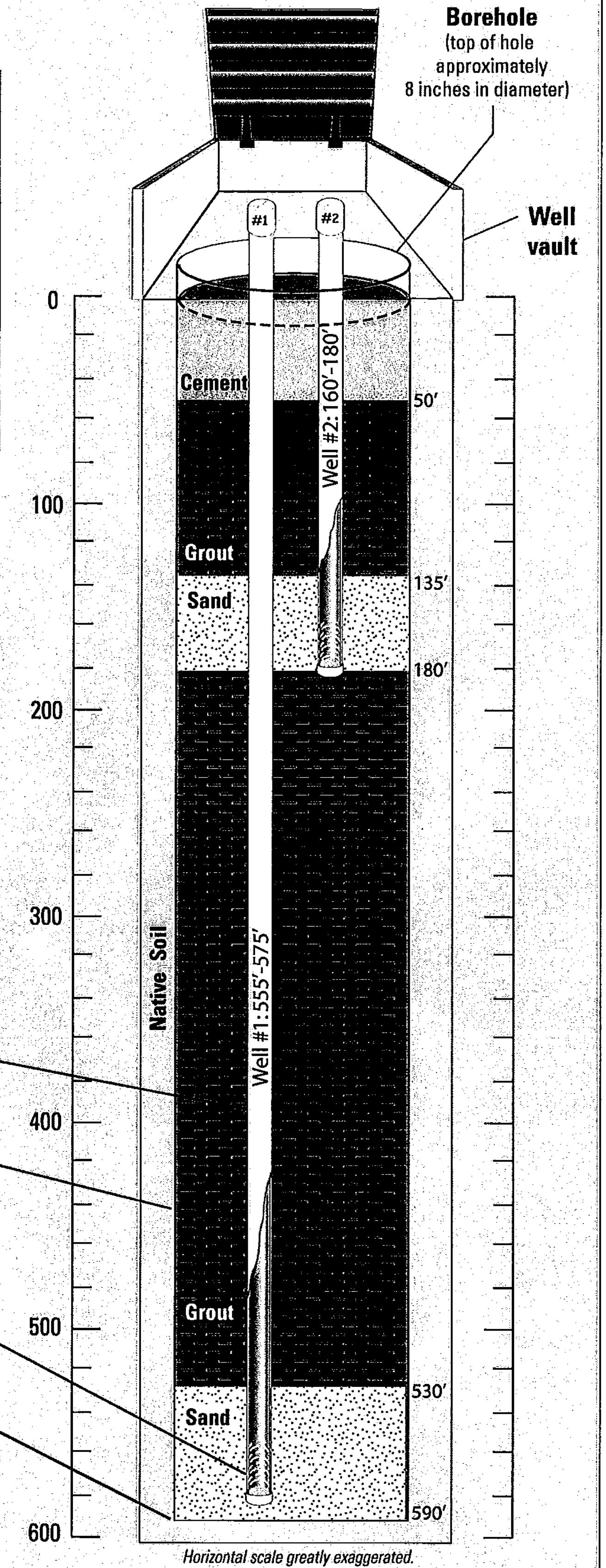
WELL CONSTRUCTION
MONITOTING WELLS VW5-20J1 and 2VW5-0J2

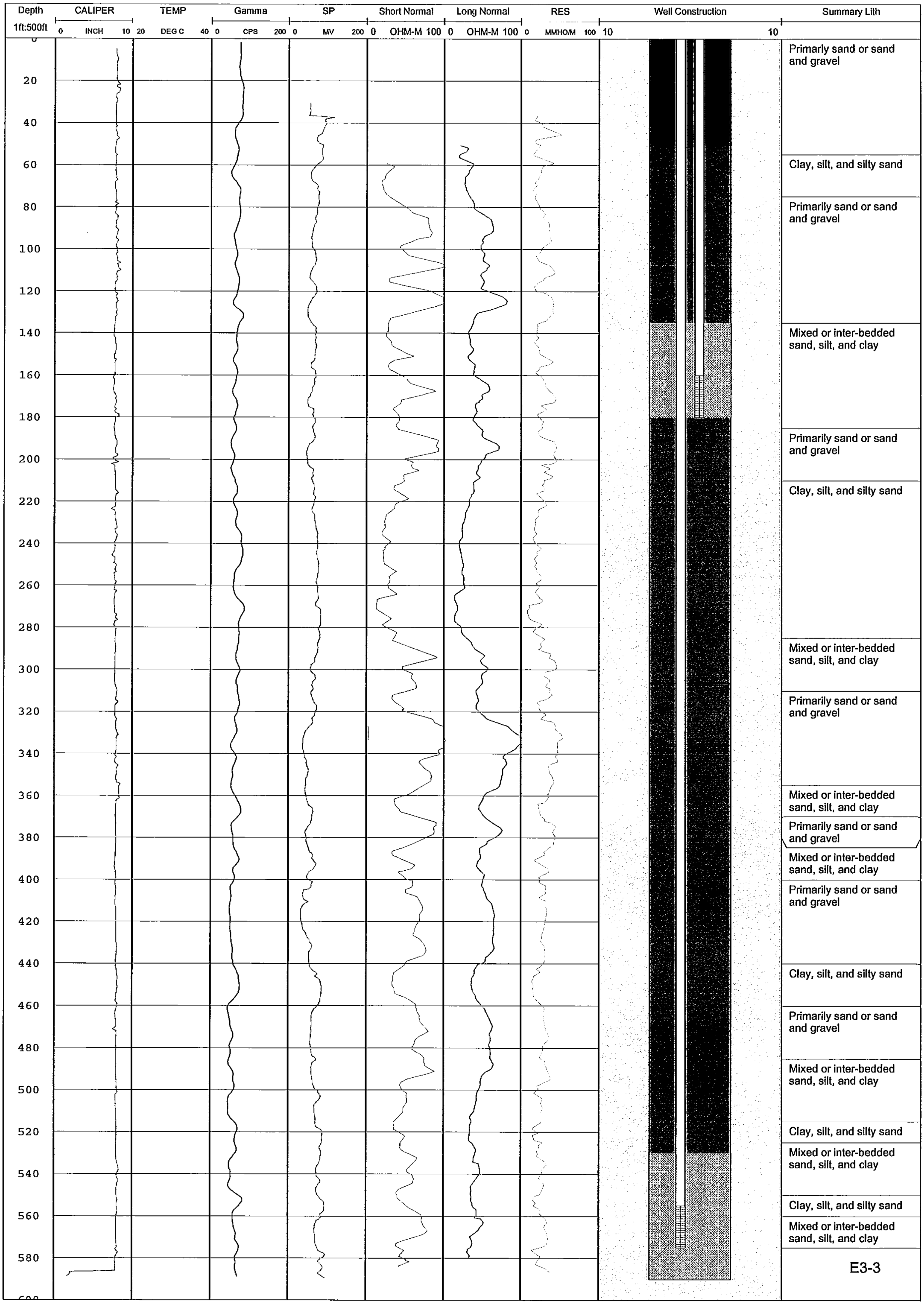
View of vault located in grass, looking West.



View of wells inside vault.

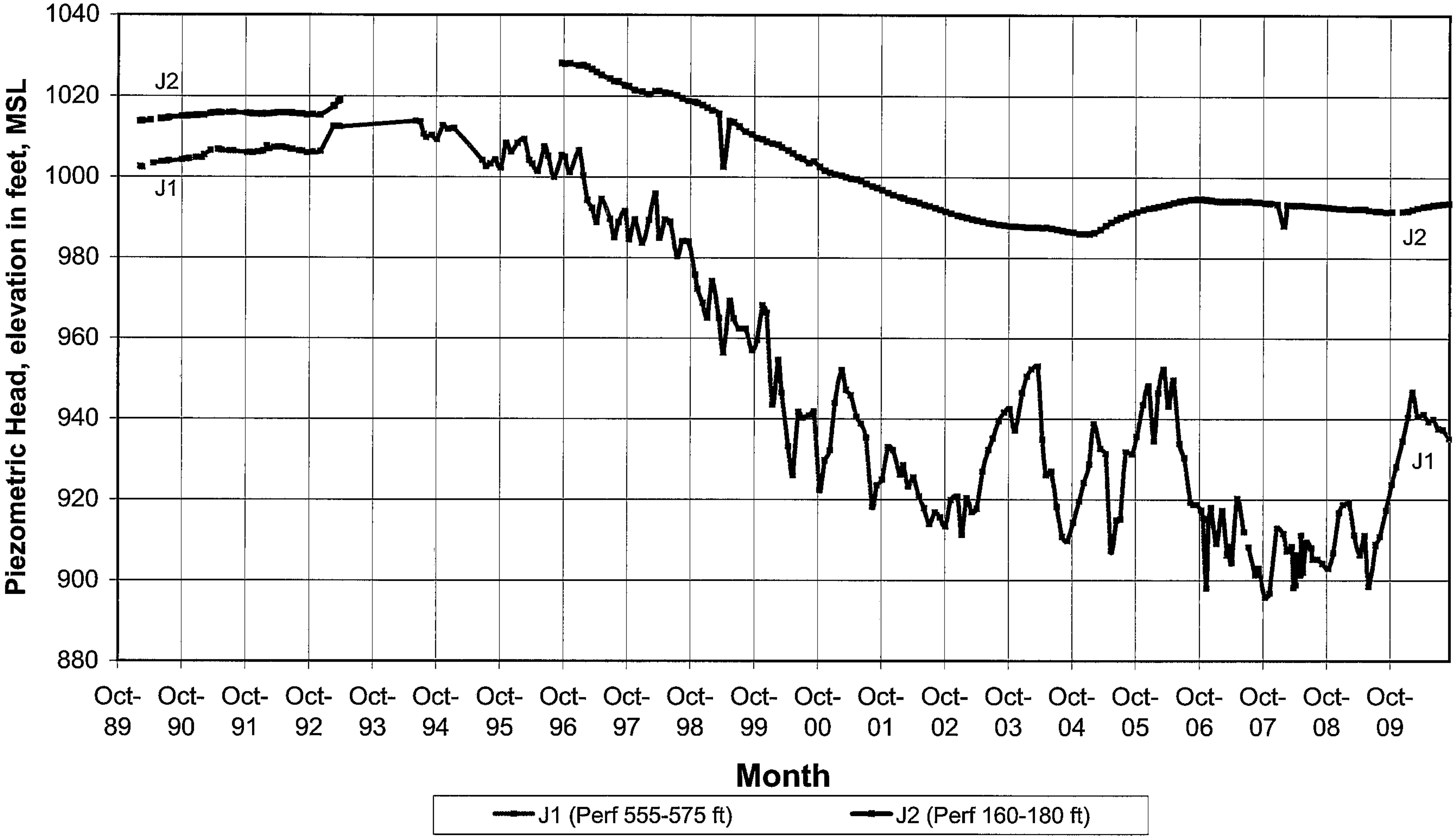
Drill method: hydraulic mud rotary



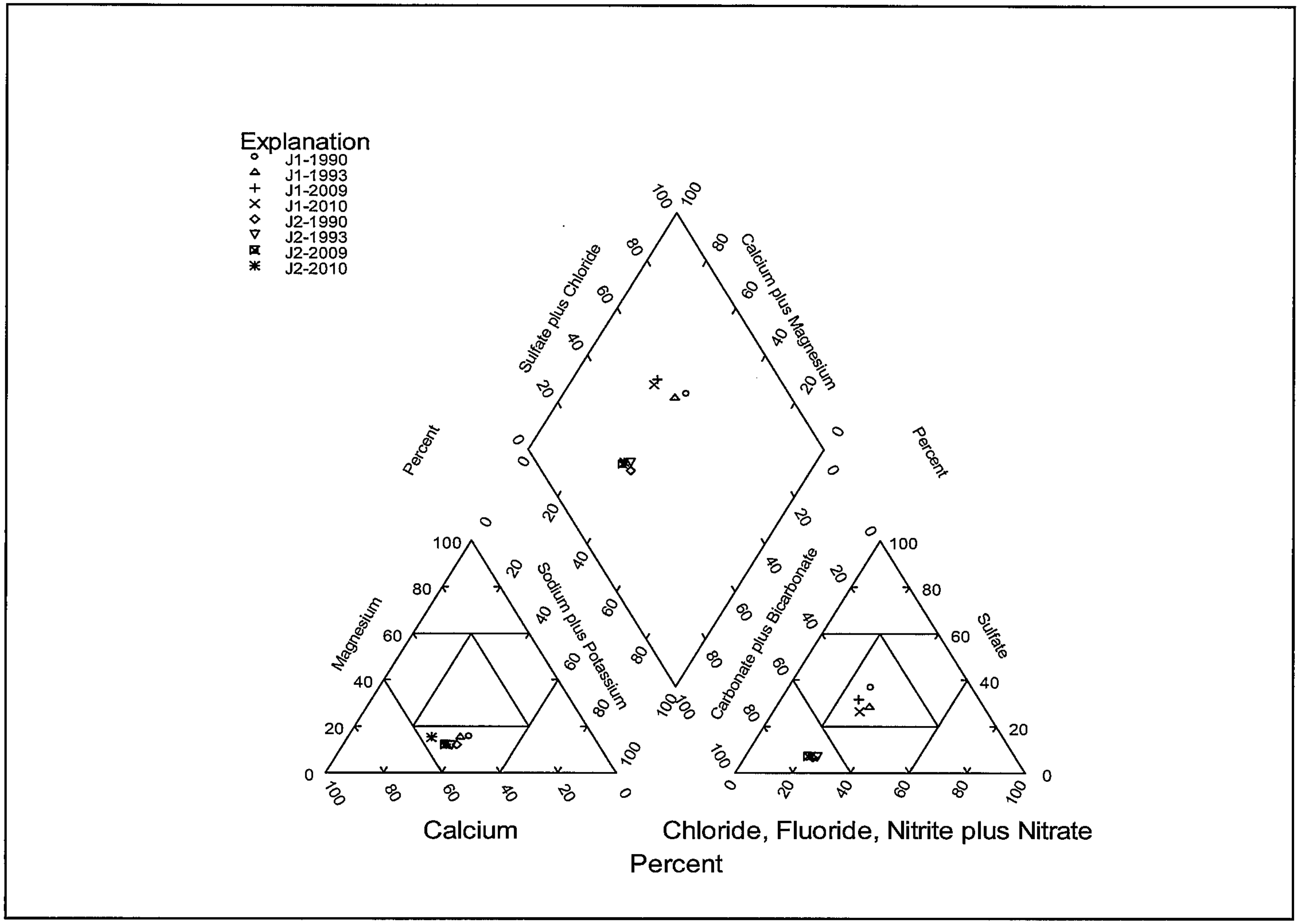


Depth
1ft:500ft
CALIPER
0 INCH 10
TEMP
20 DEG C 40
Gamma
0 CPS 200
SP
0 MV 200
Short Normal
0 OHM-M 100
Long Normal
0 OHM-M 100
RES
0 MMHO/M 100
Well Construction
10 10
Summary Lith
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500
520
540
560
580
Primarily sand or sand and gravel
Clay, silt, and silty sand
Primarily sand or sand and gravel
Mixed or inter-bedded sand, silt, and clay
Primarily sand or sand and gravel
Clay, silt, and silty sand
Mixed or inter-bedded sand, silt, and clay
Primarily sand or sand and gravel
Mixed or inter-bedded sand, silt, and clay
Primarily sand or sand and gravel
Mixed or inter-bedded sand, silt, and clay
Primarily sand or sand and gravel
Clay, silt, and silty sand
Primarily sand or sand and gravel
Mixed or inter-bedded sand, silt, and clay
Clay, silt, and silty sand
Mixed or inter-bedded sand, silt, and clay
Clay, silt, and silty sand
Mixed or inter-bedded sand, silt, and clay
E3-3

Piezometric Head for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J1-2)
March 5, 1990 through September 30, 2010

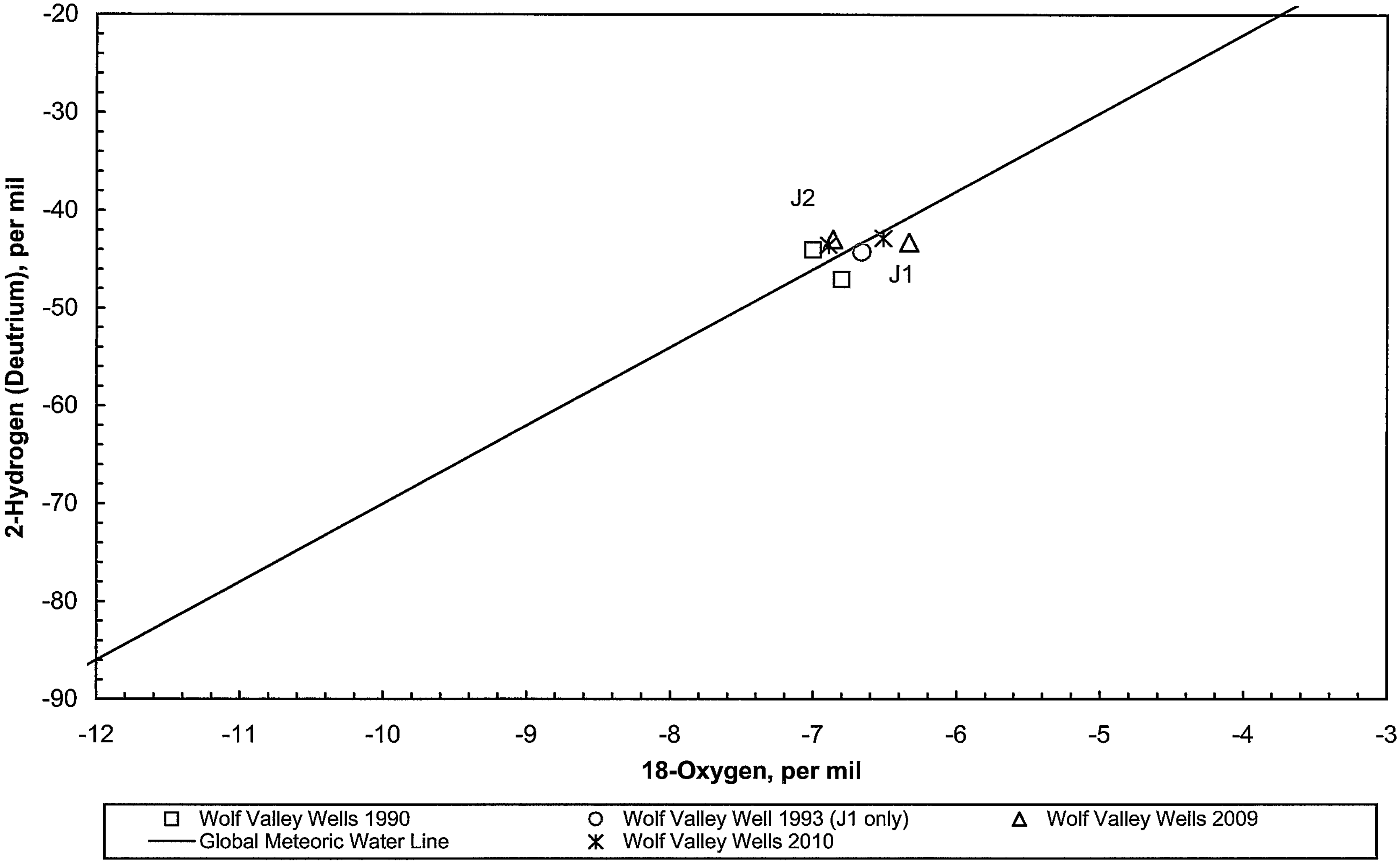


Tri-Linear Diagram
Wolf Valley Well (8S/2W-20J1-2)



Source: USGS California Water Science Center, see following website for more information: http://ca.water.usgs.gov/temecula.

Stable Isotope Diagram
Wolf Valley Well (8S/2W-20J1-2)



Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J1)

Code	Parameter	MCL	Well J1			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
3	Sampling depth, feet					
10	Temperature, water, degrees Celsius		20.5	20	21.8	21.7
28	Agency analyzing sample, code		80020	80020	80020	80020
59	Flow rate, instantaneous, gallons per minute					
95	Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius		1150	863	898	775
191	Hydrogen ion, water, unfiltered, calculated, milligrams per liter		0.00002	0.00002		0.00003
300	Dissolved oxygen, water, unfiltered, milligrams per liter					
400	pH, water, unfiltered, field, standard units		7.8	7.8	7.5	7.5
403	pH, water, unfiltered, laboratory, standard units		8.1	7.7	7.6	7.6
405	Carbon dioxide, water, unfiltered, milligrams per liter		7.2			12
453	Bicarbonate, water, filtered, incremental titration, field, milligrams per liter				253	223
602	Total nitrogen, water, filtered, milligrams per liter		1.5			< 4.1
607	Organic nitrogen, water, filtered, milligrams per liter					< 0.10
608	Ammonia, water, filtered, milligrams per liter as nitrogen		< 0.01	< 0.01	< 0.020	< 0.020
613	Nitrite, water, filtered, milligrams per liter as nitrogen	1 (a)		< 0.01	< 0.002	0.001 E
618	Nitrate, water, filtered, milligrams per liter as nitrogen					4.05 E
623	Ammonia plus organic nitrogen, water, filtered, milligrams per liter as nitrogen		0.2		< 0.01	< 0.10
631	Nitrate plus nitrite, water, filtered, milligrams per liter as nitrogen		1.3	3.6	3.42	4.05
660	Orthophosphate, water, filtered, milligrams per liter		0.123	0.092		0.114
666	Phosphorus, water, filtered, milligrams per liter		0.04		0.03 E	0.03 E
671	Orthophosphate, water, filtered, milligrams per liter as phosphorus		0.04	0.03	0.029	0.037
900	Hardness, water, milligrams per liter as calcium carbonate		340	270		282
904	Noncarb hardness, water filtered field, milligrams per liter as calcium carbonate		110	71		99
905	Noncarb hardness, water filtered lab, milligrams per liter as calcium carbonate					94
915	Calcium, water, filtered, milligrams per liter		100	80	102	88.8
925	Magnesium, water, filtered, milligrams per liter		22	16	17.1	14.60
930	Sodium, water, filtered, milligrams per liter		110	76	59.2	51.5
931	Sodium adsorption ratio, water, number		2.6	2		1.34
932	Sodium fraction of cations, water, percent in equivalents of major cations		41	38		28
935	Potassium, water, filtered, milligrams per liter		2.3	1.4	1.51	1.35
940	Chloride, water, filtered, milligrams per liter	600	110	86	71.9	64.4
945	Sulfate, water, filtered, milligrams per liter	600	200	112	129	89.5
950	Fluoride, water, filtered, milligrams per liter	2 (b)	0.5		0.08 E	0.12
955	Silica, water, filtered, milligrams per liter		25	23	29.0	26.7
1000	Arsenic, water, filtered, micrograms per liter	10 (c)		2	1.2	1.1
1005	Barium, water, filtered, micrograms per liter	1000 (d)		61	65.9	56.6
1010	Beryllium, micrograms per liter	4 (e)		< 0.5		
1020	Boron, water, filtered, micrograms per liter		110	70	59	55
1025	Cadmium, micrograms per liter	5 (f)		< 1		
1030	Chromium, micrograms per liter	50 (g)		< 5		
1035	Cobalt, micrograms per liter			< 3		
1040	Copper, micrograms per liter	1000 (h)		< 10		
1046	Iron, water, filtered, micrograms per liter	300	< 3	< 3	2 E	< 6
1049	Lead, micrograms per liter			< 10		
1056	Manganese, water, filtered, micrograms per liter	50	51	5	< 0.2	< 0.2
1057	Thallium, micrograms per liter	2 (i)				
1060	Molybdenum, micrograms per liter			< 10		
1065	Nickel, micrograms per liter	100 (j)		< 10		
1075	Silver, micrograms per liter	100 (k)		1		
1080	Strontium, water, filtered, micrograms per liter			310	479	413
1085	Vanadium, micrograms per liter			18		
1090	Zinc, micrograms per liter	5000 (l)		< 3		
1095	Antimony, micrograms per liter	6 (m)				
1106	Aluminum, water, filtered, micrograms per liter	1000 (n)			< 4.0	4.1
1130	Lithium, water, filtered, micrograms per liter			7	8	8

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J1)

Code	Parameter	MCL	Well J1			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
1145	Selenium, micrograms per liter	50 (o)		< 1		
4022	Terbuthylazine, water, filtered, recoverable, micrograms per liter					
4025	Hexazinone, water, filtered, recoverable, micrograms per liter					
4029	Bromacil, water, filtered, recoverable, micrograms per liter					
4035	Simazine, water, filtered, recoverable, micrograms per liter					
4036	Prometryn, water, filtered, recoverable, micrograms per liter					
4037	Prometon, water, filtered, recoverable, micrograms per liter					
4040	2-Chloro-4-isopropylamino-6-amino-s-triazine, water, filtered, recoverable, micrograms per liter					
4095	Fonofos, water, filtered, recoverable, micrograms per liter					
7000	Tritium, water, unfiltered, picocuries per liter				4.0	3.9
22703	Uranium, natural, micrograms per liter					
29801	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, lab, milligrams per liter as calcium carbonate				215	189
30217	Dibromomethane, water, unfiltered, recoverable, micrograms per liter				< 0.04	
32101	Bromodichloromethane, water, unfiltered, recoverable, micrograms per liter				< 0.04	
32102	Tetrachloromethane, water, unfiltered, recoverable, micrograms per liter	0.5			< 0.06	
32103	1,2-Dichloroethane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
32104	Tribromomethane, water, unfiltered, recoverable, micrograms per liter				< 0.10	
32105	Dibromochloromethane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
32106	Trichloromethane, water, unfiltered, recoverable, micrograms per liter				< 0.04	
34010	Toluene, water, unfiltered, recoverable, micrograms per liter	150			< 0.02	
34030	Benzene, water, unfiltered, recoverable, micrograms per liter	1			< 0.02	
34215	Acrylonitrile, water, unfiltered, recoverable, micrograms per liter				< 0.4	
34221	Anthracene, water, filtered, recoverable, micrograms per liter					
34248	Benzo[a]pyrene, water, filtered, recoverable, micrograms per liter	0.2 (p)				
34288	Tribromomethane, water, filtered, recoverable, micrograms per liter					
34301	Chlorobenzene, water, unfiltered, recoverable, micrograms per liter	70			< 0.02	
34311	Chloroethane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
34371	Ethylbenzene, water, unfiltered, recoverable, micrograms per liter	300			< 0.04	
34377	Fluoranthene, water, filtered, recoverable, micrograms per liter					
34396	Hexachloroethane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
34409	Isophorone, water, filtered, recoverable, micrograms per liter					
34413	Bromomethane, water, unfiltered, recoverable, micrograms per liter				< 0.4	
34418	Chloromethane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
34423	Dichloromethane, water, unfiltered, recoverable, micrograms per liter	5			< 0.04	
34443	Naphthalene, water, filtered, recoverable, micrograms per liter					
34462	Phenanthrene, water, filtered, recoverable, micrograms per liter					
34466	Phenol, water, filtered, recoverable, micrograms per liter					
34470	Pyrene, water, filtered, recoverable, micrograms per liter					
34475	Tetrachloroethene, water, unfiltered, recoverable, micrograms per liter	5			< 0.04	
34476	Tetrachloroethene, water, filtered, recoverable, micrograms per liter					
34488	Trichlorofluoromethane, water, unfiltered, recoverable, micrograms per liter	150			0.05 E	
34496	1,1-Dichloroethane, water, unfiltered, recoverable, micrograms per liter	5			< 0.04	
34501	1,1-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6			< 0.02	
34506	1,1,1-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	200			< 0.02	
34511	1,1,2-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	5			< 0.06	
34516	1,1,2,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter	1			< 0.10	
34536	1,2-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	600			< 0.02	
34541	1,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter	5			< 0.02	
34546	trans-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	10			< 0.02	
34551	1,2,4-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5			< 0.04	
34566	1,3-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
34571	1,4-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5			< 0.02	
34572	1,4-Dichlorobenzene, water, filtered, recoverable, micrograms per liter					
34668	Dichlorodifluoromethane, water, unfiltered, recoverable, micrograms per liter				< 0.10	
34696	Naphthalene, water, unfiltered, recoverable, micrograms per liter				< 0.2	

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J1)

Code	Parameter	MCL	Well J1			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
34699	trans-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5			< 0.10	
34704	cis-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5			< 0.10	
38454	Dicrotophos, water, filtered, recoverable, micrograms per liter					
38775	Dichlorvos, water, filtered, recoverable, micrograms per liter					
38933	Chlorpyrifos, water, filtered, recoverable, micrograms per liter					
39036	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, milligrams per liter as calcium carbonate		240	200		
39086	Alkalinity, water, filtered, incremental titration, field, milligrams per liter as calcium carbonate				207	184
39175	Vinyl chloride, water, unfiltered, recoverable, micrograms per liter	0.5			< 0.1	
39180	Trichloroethene, water, unfiltered, recoverable, micrograms per liter	5			< 0.02	
39381	Dieldrin, water, filtered, recoverable, micrograms per liter					
39415	Metolachlor, water, filtered, recoverable, micrograms per liter					
39532	Malathion, water, filtered, recoverable, micrograms per liter					
39572	Diazinon, water, filtered, recoverable, micrograms per liter					
39632	Atrazine, water, filtered, recoverable, micrograms per liter					
39702	Hexachlorobutadiene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
46342	Alachlor, water, filtered, recoverable, micrograms per liter					
49260	Acetochlor, water, filtered, recoverable, micrograms per liter					
49295	1-Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
49933	C-14, water, filtered, percent modern				96.47	98.33
49934	C-14, counting error, water, filtered, percent modern				0.320	0.320
49991	Methyl acrylate, water, unfiltered, recoverable, micrograms per liter				< 0.6	
49999	1,2,3,4-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
50000	1,2,3,5-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
50002	Bromoethene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
50004	tert-Butyl ethyl ether, water, unfiltered, recoverable, micrograms per liter				< 0.04	
50005	Methyl tert-pentyl ether, water, unfiltered, recoverable, micrograms per liter				< 0.06	
50305	Caffeine, water, filtered, recoverable, micrograms per liter					
50359	Metalaxyl, water, filtered, recoverable, micrograms per liter					
61209	Perchlorate, water, unfiltered, recoverable, micrograms per liter	6				
61585	Cyfluthrin, water, filtered, recoverable, micrograms per liter					
61586	Cypermethrin, water, filtered, recoverable, micrograms per liter					
61591	Fenamiphos, water, filtered, recoverable, micrograms per liter					
61593	Iprodione, water, filtered, recoverable, micrograms per liter					
61594	Isofenphos, water, filtered, recoverable, micrograms per liter					
61596	Metalaxyl, water, filtered, recoverable, micrograms per liter					
61598	Methidathion, water, filtered, recoverable, micrograms per liter					
61599	Myclobutanil, water, filtered, recoverable, micrograms per liter					
61601	Phosmet, water, filtered, recoverable, micrograms per liter					
61610	Tribuphos, water, filtered, recoverable, micrograms per liter					
61618	2-Chloro-2',6'-diethylacetanilide, water, filtered, recoverable, micrograms per liter					
61620	2-Ethyl-6-methylaniline, water, filtered, recoverable, micrograms per liter					
61625	3,4-Dichloroaniline, water, filtered, recoverable, micrograms per liter					
61633	4-Chloro-2-methylphenol, water, filtered, recoverable, micrograms per liter					
61635	Azinphos-methyl oxygen analog, water, filtered, recoverable, micrograms per liter					
61636	Chlorpyrifos oxygen analog, water, filtered, recoverable, micrograms per liter					
61644	Ethion monoxon, water, filtered, recoverable, micrograms per liter					
61645	Fenamiphos sulfone, water, filtered, recoverable, micrograms per liter					
61646	Fenamiphos sulfoxide, water, filtered, recoverable, micrograms per liter					
61652	Malaoxon, water, filtered, recoverable, micrograms per liter					
61664	Methyl paraoxon, water, filtered, recoverable, micrograms per liter					
61666	Phorate oxygen analog, water, filtered, recoverable, micrograms per liter					
61668	Phosmet oxygen analog, water, filtered, recoverable, micrograms per liter					
61674	Terbufos oxygen analog sulfone, water, filtered, recoverable, micrograms per liter					
61705	Diethoxyoctylphenol, water, filtered, recoverable, micrograms per liter					
61706	Monoethoxyoctylphenol, water, filtered, recoverable, micrograms per liter					

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J1)

Code	Parameter	MCL	Well J1			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
62005	Cotinine, water, filtered, recoverable, micrograms per liter					
62054	1-Methylnaphthalene, water, filtered, recoverable, micrograms per liter					
62055	2,6-Dimethylnaphthalene, water, filtered, recoverable, micrograms per liter					
62056	2-Methylnaphthalene, water, filtered, recoverable, micrograms per liter					
62057	3-beta-Coprostanol, water, filtered, recoverable, micrograms per liter					
62058	3-Methyl-1H-indole, water, filtered, recoverable, micrograms per liter					
62059	3-tert-Butyl-4-hydroxyanisole, water, filtered, recoverable, micrograms per liter					
62060	4-Cumylphenol, water, filtered, recoverable, micrograms per liter					
62061	4-Octylphenol, water, filtered, recoverable, micrograms per liter					
62062	4-tert-Octylphenol, water, filtered, recoverable, micrograms per liter					
62063	5-Methyl-1H-benzotriazole, water, filtered, recoverable, micrograms per liter					
62064	Acetophenone, water, filtered, recoverable, micrograms per liter					
62065	Acetyl hexamethyl tetrahydro naphthalene, water, filtered, recoverable, micrograms per liter					
62066	9,10-Anthraquinone, water, filtered, recoverable, micrograms per liter					
62067	Benzophenone, water, filtered, recoverable, micrograms per liter					
62068	beta-Sitosterol, water, filtered, recoverable, micrograms per liter					
62070	Camphor, water, filtered, recoverable, micrograms per liter					
62071	Carbazole, water, filtered, recoverable, micrograms per liter					
62072	Cholesterol, water, filtered, recoverable, micrograms per liter					
62073	D-Limonene, water, filtered, recoverable, micrograms per liter					
62075	Hexahydrohexamethyl cyclopentabenzopyran, water, filtered, recoverable, micrograms per liter					
62076	Indole, water, filtered, recoverable, micrograms per liter					
62077	Isoborneol, water, filtered, recoverable, micrograms per liter					
62078	Isopropylbenzene, water, filtered, recoverable, micrograms per liter					
62079	Isoquinoline, water, filtered, recoverable, micrograms per liter					
62080	Menthol, water, filtered, recoverable, micrograms per liter					
62081	Methyl salicylate, water, filtered, recoverable, micrograms per liter					
62082	DEET, water, filtered, recoverable, micrograms per liter					
62083	Diethoxynonylphenol, water, filtered, recoverable, micrograms per liter					
62084	p-Cresol, water, filtered, recoverable, micrograms per liter					
62085	4-Nonylphenol, water, filtered, recoverable, micrograms per liter					
62086	beta-Stigmastanol, water, filtered, recoverable, micrograms per liter					
62087	Tris(2-chloroethyl) phosphate, water, filtered, recoverable, micrograms per liter					
62088	Tris(dichloroisopropyl) phosphate, water, filtered, recoverable, micrograms per liter					
62089	Tributyl phosphate, water, filtered, recoverable, micrograms per liter					
62090	Triclosan, water, filtered, recoverable, micrograms per liter					
62091	Triethyl citrate, water, filtered, recoverable, micrograms per liter					
62092	Triphenyl phosphate, water, filtered, recoverable, micrograms per liter					
62093	Tris(2-butoxyethyl) phosphate, water, filtered, recoverable, micrograms per liter					
62166	Fipronil, water, filtered, recoverable, micrograms per liter					
62167	Fipronil sulfide, water, filtered, recoverable, micrograms per liter					
62168	Fipronil sulfone, water, filtered, recoverable, micrograms per liter					
62169	Desulfinylfipronil amide, water, filtered, recoverable, micrograms per liter					
62170	Desulfinylfipronil, water, filtered, recoverable, micrograms per liter					
62854	Total nitrogen, (NH3+NO2+NO3+Organic), filtered, milligrams per liter					
63790	Perchlorate, water, filtered, recoverable, micrograms per liter	6				
70300	Residue on evaporation, dried at 180 degrees Celsius, water, filtered, milligrams per liter	1500	596		531	482
70301	Residue, water, filtered, sum of constituents, milligrams per liter		717	528		466 E
70303	Residue, water, filtered, tons per acre-foot					
71846	Ammonia, water, filtered, milligrams per liter as NH4					< 0.026
71851	Nitrate, water, filtered, milligrams per liter	45 (g)				17.9 E
71856	Nitrite, water, filtered, milligrams per liter					0.004 E
71865	Iodide, water, filtered, milligrams per liter				0.003	0.001 E
71870	Bromide, water, filtered, milligrams per liter				0.36	0.35
72019	Depth to water level, feet below land surface		72.28			

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J1)

Code	Parameter	MCL	Well J1			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
73547	trans-1,4-Dichloro-2-butene, water, unfiltered, recoverable, micrograms per liter				< 0.4	
73570	Ethyl methacrylate, water, unfiltered, recoverable, micrograms per liter				< 0.1	
75985	Tritium 2-sigma combined uncertainty, water, unfiltered, picocuries per liter					
76002	Rn-222, 2-sigma combined uncertainty, water, unfiltered, picocuries per liter					
77041	Carbon disulfide, water, unfiltered, micrograms per liter				< 0.04	
77093	cis-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6			< 0.02	
77103	n-Butyl methyl ketone, water, unfiltered, recoverable, micrograms per liter				< 0.6	
77128	Styrene, water, unfiltered, recoverable, micrograms per liter	100			< 0.04	
77135	o-Xylene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77168	1,1-Dichloropropene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77170	2,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter				< 0.06	
77173	1,3-Dichloropropane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
77220	2-Ethyltoluene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
77221	1,2,3-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
77222	1,2,4-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77223	Isopropylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77224	n-Propylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77226	1,3,5-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77275	2-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
77277	4-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
77297	Bromochloromethane, water, unfiltered, recoverable, micrograms per liter				< 0.06	
77342	n-Butylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
77350	sec-Butylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
77353	tert-Butylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.06	
77356	4-Isopropyltoluene, water, unfiltered, recoverable, micrograms per liter				< 0.06	
77424	Iodomethane, water, unfiltered, recoverable, micrograms per liter				< 0.80	
77443	1,2,3-Trichloropropane, water, unfiltered, recoverable, micrograms per liter				< 0.12	
77562	1,1,1,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77613	1,2,3-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
77651	1,2-Dibromoethane, water, unfiltered, recoverable, micrograms per liter	0.05			< 0.04	
77652	1,1,2-Trichloro-1,2,2-trifluoroethane, water, unfiltered, recoverable, micrograms per liter				< 0.04	
78032	Methyl tert-butyl ether, water, unfiltered, recoverable, micrograms per liter				< 0.1	
78109	3-Chloropropene, water, unfiltered, recoverable, micrograms per liter				< 0.08	
78133	Isobutyl methyl ketone, water, unfiltered, recoverable, micrograms per liter				< 0.4	
81552	Acetone, water, unfiltered, recoverable, micrograms per liter				< 4	
81555	Bromobenzene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
81576	Diethyl ether, water, unfiltered, recoverable, micrograms per liter				< 0.1	
81577	Diisopropyl ether, water, unfiltered, recoverable, micrograms per liter				< 0.06	
81593	Methyl acrylonitrile, water, unfiltered, recoverable, micrograms per liter				< 0.2	
81595	Ethyl methyl ketone, water, unfiltered, recoverable, micrograms per liter				< 1.6	
81597	Methyl methacrylate, water, unfiltered, recoverable, micrograms per liter				< 0.2	
81607	Tetrahydrofuran, water, unfiltered, recoverable, micrograms per liter				< 1	
82081	C-13/C-12 ratio, water, unfiltered, per mil				-15.29	-15.56
82082	Deuterium/Protium ratio, water, unfiltered, per mil		-47	-44.2	-43.20	-42.80
82085	Oxygen-18/Oxygen-16 ratio, water, unfiltered, per mil		-6.8	-6.66	-6.33	-6.51
82303	Rn-222, water, unfiltered, picocuries per liter					
82346	Ethion, water, filtered, recoverable, micrograms per liter					
82625	1,2-Dibromo-3-chloropropane, water, unfiltered, recoverable, micrograms per liter				< 1.0	
82630	Metribuzin, water, filtered, recoverable, micrograms per liter					
82660	2,6-Diethylaniline, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82661	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82662	Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82664	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82667	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82670	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J1)

Code	Parameter	MCL	Well J1			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
82673	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82675	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82676	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82680	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82682	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82683	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82686	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82687	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
85795	m-Xylene plus p-xylene, water, unfiltered, recoverable, micrograms per liter				< 0.08	
90095	Specific conductance, water, unfiltered, laboratory, microsiemens per centimeter at 25 degrees Celsius		1130	868	911	787
90851	Triholomehtanes, water, unfiltered, calcd, micrograms per liter					
99583	Bisphenol A-d3, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery					
99584	Caffeine-13C, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery					
99585	Decafluorobiphenyl, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery					
99586	Fluoranthene-d10, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery					
99832	1,2-Dichloroethane-d4, surrogate, Schedule 2090, water, unfiltered, percent recovery				131	
99833	Toluene-d8, surrogate, Schedule 2090, water, unfiltered, percent recovery				86.4	
99834	1-Bromo-4-fluorobenzene, surrogate, VOC schedules, water, unfiltered, percent recovery				85.9	
99994	Diazinon-d10, surrogate, Schedule 2003, water, filtered, percent recovery					
99995	alpha-HCH-d6, surrogate, Schedule 2003, water, filtered, percent recovery					

Notes: U.S. EPA STORET numbers for MCLs correspond to the same as the USGS NWIS data parameter number except as follows:
(a) MCL shown for U.S EPA STORET No. 620.
(b) MCL shown for U.S. EPASTORET No. 951.
(c) MCL shown for U.S. EPA STORET No. 1002.
(d) MCL shown for U.S. EPA STORET No. 1007.
(e) MCL shown for U.S. EPA STORET No. 1012.
(f) MCL shown for U.S. EPA STORET No. 1027.
(g) MCL shown for U.S. EPA STORET No. 1034.
(h) MCL shown for U.S. EPA STORET No. 1042.
(i) MCL shown for U.S. EPA STORET No. 1059.
(j) MCL shown for U.S EPA STORET No. 1067.
(k) MCL shown for U.S. EPASTORET No. 1077.
(l) MCL shown for U.S. EPA STORET No. 1092.
(m) MCL shown for U.S. EPA STORET No. 1097.
(n) MCL shown for U.S. EPA STORET No. 1105.
(o) MCL shown for U.S. EPA STORET No. 1147.
(p) MCL shown for U.S. EPA STORET No. 34247.
(q) MCL shown for U.S. EPA STORET No. 71850.

Code--Data parameter number used in USGS National Water Information System (NWIS).
E--Estimated.
M--Presence verifed but not quantified.
MCL--Maximum Contaminant Level reported by California DHS (May 25, 2007 Database) for U.S. EPA STORET number.
V--Biased results from contamination.

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J2)

Code	Parameter	MCL	Well J2			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
3	Sampling depth, feet					
10	Temperature, water, degrees Celsius		19	19	20.8	20.8
28	Agency analyzing sample, code		80020	80020	80020	80020
59	Flow rate, instantaneous, gallons per minute					
95	Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius			400	423	422
191	Hydrogen ion, water, unfiltered, calculated, milligrams per liter		0.00003	0.00003		0.00003
300	Dissolved oxygen, water, unfiltered, milligrams per liter					
400	pH, water, unfiltered, field, standard units		7.6	7.6	7.5	7.5
403	pH, water, unfiltered, laboratory, standard units		8.6	7.6	7.5	7.6
405	Carbon dioxide, water, unfiltered, milligrams per liter		7.7			9.7
453	Bicarbonate, water, filtered, incremental titration, field, milligrams per liter				193	193
602	Total nitrogen, water, filtered, milligrams per liter		1.7			< 1.7
607	Organic nitrogen, water, filtered, milligrams per liter					< 0.10
608	Ammonia, water, filtered, milligrams per liter as nitrogen		< 0.01	< 0.01	0.012 E	< 0.020
613	Nitrite, water, filtered, milligrams per liter as nitrogen	1 (a)		< 0.01	< 0.002	0.001 E
618	Nitrate, water, filtered, milligrams per liter as nitrogen					1.57 E
623	Ammonia plus organic nitrogen, water, filtered, milligrams per liter as nitrogen		0.5		< 0.01	< 0.10
631	Nitrate plus nitrite, water, filtered, milligrams per liter as nitrogen		1.2	1.2	1.58	1.57
660	Orthophosphate, water, filtered, milligrams per liter		0.675	0.307		0.306
666	Phosphorus, water, filtered, milligrams per liter		0.23		0.09	0.09
671	Orthophosphate, water, filtered, milligrams per liter as phosphorus		0.22	0.1	0.096	0.100
900	Hardness, water, milligrams per liter as calcium carbonate		130	130		141
904	Noncarb hardness, water filtered field, milligrams per liter as calcium carbonate					
905	Noncarb hardness, water filtered lab, milligrams per liter as calcium carbonate					
915	Calcium, water, filtered, milligrams per liter		42	42	43.5	45.6
925	Magnesium, water, filtered, milligrams per liter		6.3	6	6.02	6.42
930	Sodium, water, filtered, milligrams per liter		38	35	32.6	34.7
931	Sodium adsorption ratio, water, number		1.4	1.3		1.27
932	Sodium fraction of cations, water, percent in equivalents of major cations		39	37		35
935	Potassium, water, filtered, milligrams per liter		0.8	0.8	0.84	0.83
940	Chloride, water, filtered, milligrams per liter	600	27	29	24.4	25.9
945	Sulfate, water, filtered, milligrams per liter	600	12	12	13.0	13.2
950	Fluoride, water, filtered, milligrams per liter	2 (b)	0.7		0.28	0.31
955	Silica, water, filtered, milligrams per liter		28	25	28.3	25.7
1000	Arsenic, water, filtered, micrograms per liter	10 (c)		1	1.0	0.96
1005	Barium, water, filtered, micrograms per liter	1000 (d)		40	42.8	42.5
1010	Beryllium, micrograms per liter	4 (e)		< 0.5		
1020	Boron, water, filtered, micrograms per liter		60	50	37	37
1025	Cadmium, micrograms per liter	5 (f)		< 1		
1030	Chromium, micrograms per liter	50 (g)		< 5		
1035	Cobalt, micrograms per liter			< 3		
1040	Copper, micrograms per liter	1000 (h)		< 10		
1046	Iron, water, filtered, micrograms per liter	300	< 3	< 3	< 4	< 6
1049	Lead, micrograms per liter			< 10		
1056	Manganese, water, filtered, micrograms per liter	50	< 1	< 1	0.2 E	0.1 E
1057	Thallium, micrograms per liter	2 (i)				
1060	Molybdenum, micrograms per liter			< 10		
1065	Nickel, micrograms per liter	100 (j)		< 10		
1075	Silver, micrograms per liter	100 (k)		< 1		
1080	Strontium, water, filtered, micrograms per liter			170	175	183
1085	Vanadium, micrograms per liter			15		
1090	Zinc, micrograms per liter	5000 (l)		4		
1095	Antimony, micrograms per liter	6 (m)				
1106	Aluminum, water, filtered, micrograms per liter	1000 (n)			< 4.0	6.3
1130	Lithium, water, filtered, micrograms per liter			5	5	6

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J2)

Code	Parameter	MCL	Well J2			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
1145	Selenium, micrograms per liter	50 (o)		< 1		
4022	Terbuthylazine, water, filtered, recoverable, micrograms per liter					
4025	Hexazinone, water, filtered, recoverable, micrograms per liter					
4029	Bromacil, water, filtered, recoverable, micrograms per liter					
4035	Simazine, water, filtered, recoverable, micrograms per liter					
4036	Prometryn, water, filtered, recoverable, micrograms per liter					
4037	Prometon, water, filtered, recoverable, micrograms per liter					
4040	2-Chloro-4-isopropylamino-6-amino-s-triazine, water, filtered, recoverable, micrograms per liter					
4095	Fonofos, water, filtered, recoverable, micrograms per liter					
7000	Tritium, water, unfiltered, picocuries per liter				5.5	5.2
22703	Uranium, natural, micrograms per liter					
29801	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, lab, milligrams per liter as calcium carbonate				163	162
30217	Dibromomethane, water, unfiltered, recoverable, micrograms per liter				< 0.04	
32101	Bromodichloromethane, water, unfiltered, recoverable, micrograms per liter				< 0.04	
32102	Tetrachloromethane, water, unfiltered, recoverable, micrograms per liter	0.5			< 0.06	
32103	1,2-Dichloroethane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
32104	Tribromomethane, water, unfiltered, recoverable, micrograms per liter				< 0.10	
32105	Dibromochloromethane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
32106	Trichloromethane, water, unfiltered, recoverable, micrograms per liter				< 0.04	
34010	Toluene, water, unfiltered, recoverable, micrograms per liter	150			< 0.02	
34030	Benzene, water, unfiltered, recoverable, micrograms per liter	1			< 0.02	
34215	Acrylonitrile, water, unfiltered, recoverable, micrograms per liter				< 0.4	
34221	Anthracene, water, filtered, recoverable, micrograms per liter					
34248	Benzo[a]pyrene, water, filtered, recoverable, micrograms per liter	0.2 (p)				
34288	Tribromomethane, water, filtered, recoverable, micrograms per liter					
34301	Chlorobenzene, water, unfiltered, recoverable, micrograms per liter	70			< 0.02	
34311	Chloroethane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
34371	Ethylbenzene, water, unfiltered, recoverable, micrograms per liter	300			< 0.04	
34377	Fluoranthene, water, filtered, recoverable, micrograms per liter					
34396	Hexachloroethane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
34409	Isophorone, water, filtered, recoverable, micrograms per liter					
34413	Bromomethane, water, unfiltered, recoverable, micrograms per liter				< 0.4	
34418	Chloromethane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
34423	Dichloromethane, water, unfiltered, recoverable, micrograms per liter	5			< 0.04	
34443	Naphthalene, water, filtered, recoverable, micrograms per liter					
34462	Phenanthrene, water, filtered, recoverable, micrograms per liter					
34466	Phenol, water, filtered, recoverable, micrograms per liter					
34470	Pyrene, water, filtered, recoverable, micrograms per liter					
34475	Tetrachloroethene, water, unfiltered, recoverable, micrograms per liter	5			< 0.04	
34476	Tetrachloroethene, water, filtered, recoverable, micrograms per liter					
34488	Trichlorofluoromethane, water, unfiltered, recoverable, micrograms per liter	150			0.15	
34496	1,1-Dichloroethane, water, unfiltered, recoverable, micrograms per liter	5			< 0.04	
34501	1,1-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6			< 0.02	
34506	1,1,1-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	200			< 0.02	
34511	1,1,2-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	5			< 0.06	
34516	1,1,2,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter	1			< 0.10	
34536	1,2-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	600			< 0.02	
34541	1,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter	5			< 0.02	
34546	trans-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	10			< 0.02	
34551	1,2,4-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5			< 0.04	
34566	1,3-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
34571	1,4-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5			< 0.02	
34572	1,4-Dichlorobenzene, water, filtered, recoverable, micrograms per liter					
34668	Dichlorodifluoromethane, water, unfiltered, recoverable, micrograms per liter				< 0.10	
34696	Naphthalene, water, unfiltered, recoverable, micrograms per liter				< 0.2	

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J2)

Code	Parameter	MCL	Well J2			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
34699	trans-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5			< 0.10	
34704	cis-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5			< 0.10	
38454	Dicrotophos, water, filtered, recoverable, micrograms per liter					
38775	Dichlorvos, water, filtered, recoverable, micrograms per liter					
38933	Chlorpyrifos, water, filtered, recoverable, micrograms per liter					
39036	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, milligrams per liter as calcium carbonate		160	150		
39086	Alkalinity, water, filtered, incremental titration, field, milligrams per liter as calcium carbonate				158	159
39175	Vinyl chloride, water, unfiltered, recoverable, micrograms per liter	0.5			< 0.1	
39180	Trichloroethene, water, unfiltered, recoverable, micrograms per liter	5			< 0.02	
39381	Dieldrin, water, filtered, recoverable, micrograms per liter					
39415	Metolachlor, water, filtered, recoverable, micrograms per liter					
39532	Malathion, water, filtered, recoverable, micrograms per liter					
39572	Diazinon, water, filtered, recoverable, micrograms per liter					
39632	Atrazine, water, filtered, recoverable, micrograms per liter					
39702	Hexachlorobutadiene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
46342	Alachlor, water, filtered, recoverable, micrograms per liter					
49260	Acetochlor, water, filtered, recoverable, micrograms per liter					
49295	1-Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
49933	C-14, water, filtered, percent modern				103.4	103.3
49934	C-14, counting error, water, filtered, percent modern				0.360	0.400
49991	Methyl acrylate, water, unfiltered, recoverable, micrograms per liter				< 0.6	
49999	1,2,3,4-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
50000	1,2,3,5-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
50002	Bromoethene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
50004	tert-Butyl ethyl ether, water, unfiltered, recoverable, micrograms per liter				< 0.04	
50005	Methyl tert-pentyl ether, water, unfiltered, recoverable, micrograms per liter				< 0.06	
50305	Caffeine, water, filtered, recoverable, micrograms per liter					
50359	Metalaxyl, water, filtered, recoverable, micrograms per liter					
61209	Perchlorate, water, unfiltered, recoverable, micrograms per liter	6				
61585	Cyfluthrin, water, filtered, recoverable, micrograms per liter					
61586	Cypermethrin, water, filtered, recoverable, micrograms per liter					
61591	Fenamiphos, water, filtered, recoverable, micrograms per liter					
61593	Iprodione, water, filtered, recoverable, micrograms per liter					
61594	Isofenphos, water, filtered, recoverable, micrograms per liter					
61596	Metalaxyl, water, filtered, recoverable, micrograms per liter					
61598	Methidathion, water, filtered, recoverable, micrograms per liter					
61599	Myclobutanil, water, filtered, recoverable, micrograms per liter					
61601	Phosmet, water, filtered, recoverable, micrograms per liter					
61610	Tribuphos, water, filtered, recoverable, micrograms per liter					
61618	2-Chloro-2',6'-diethylacetanilide, water, filtered, recoverable, micrograms per liter					
61620	2-Ethyl-6-methylaniline, water, filtered, recoverable, micrograms per liter					
61625	3,4-Dichloroaniline, water, filtered, recoverable, micrograms per liter					
61633	4-Chloro-2-methylphenol, water, filtered, recoverable, micrograms per liter					
61635	Azinphos-methyl oxygen analog, water, filtered, recoverable, micrograms per liter					
61636	Chlorpyrifos oxygen analog, water, filtered, recoverable, micrograms per liter					
61644	Ethion monoxon, water, filtered, recoverable, micrograms per liter					
61645	Fenamiphos sulfone, water, filtered, recoverable, micrograms per liter					
61646	Fenamiphos sulfoxide, water, filtered, recoverable, micrograms per liter					
61652	Malaoxon, water, filtered, recoverable, micrograms per liter					
61664	Methyl paraoxon, water, filtered, recoverable, micrograms per liter					
61666	Phorate oxygen analog, water, filtered, recoverable, micrograms per liter					
61668	Phosmet oxygen analog, water, filtered, recoverable, micrograms per liter					
61674	Terbufos oxygen analog sulfone, water, filtered, recoverable, micrograms per liter					
61705	Diethoxyoctylphenol, water, filtered, recoverable, micrograms per liter					
61706	Monoethoxyoctylphenol, water, filtered, recoverable, micrograms per liter					

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J2)

Code	Parameter	MCL	Well J2			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
62005	Cotinine, water, filtered, recoverable, micrograms per liter					
62054	1-Methylnaphthalene, water, filtered, recoverable, micrograms per liter					
62055	2,6-Dimethylnaphthalene, water, filtered, recoverable, micrograms per liter					
62056	2-Methylnaphthalene, water, filtered, recoverable, micrograms per liter					
62057	3-beta-Coprostanol, water, filtered, recoverable, micrograms per liter					
62058	3-Methyl-1H-indole, water, filtered, recoverable, micrograms per liter					
62059	3-tert-Butyl-4-hydroxyanisole, water, filtered, recoverable, micrograms per liter					
62060	4-Cumylphenol, water, filtered, recoverable, micrograms per liter					
62061	4-Octylphenol, water, filtered, recoverable, micrograms per liter					
62062	4-tert-Octylphenol, water, filtered, recoverable, micrograms per liter					
62063	5-Methyl-1H-benzotriazole, water, filtered, recoverable, micrograms per liter					
62064	Acetophenone, water, filtered, recoverable, micrograms per liter					
62065	Acetyl hexamethyl tetrahydro naphthalene, water, filtered, recoverable, micrograms per liter					
62066	9,10-Anthraquinone, water, filtered, recoverable, micrograms per liter					
62067	Benzophenone, water, filtered, recoverable, micrograms per liter					
62068	beta-Sitosterol, water, filtered, recoverable, micrograms per liter					
62070	Camphor, water, filtered, recoverable, micrograms per liter					
62071	Carbazole, water, filtered, recoverable, micrograms per liter					
62072	Cholesterol, water, filtered, recoverable, micrograms per liter					
62073	D-Limonene, water, filtered, recoverable, micrograms per liter					
62075	Hexahydrohexamethyl cyclopentabenzopyran, water, filtered, recoverable, micrograms per liter					
62076	Indole, water, filtered, recoverable, micrograms per liter					
62077	Isoborneol, water, filtered, recoverable, micrograms per liter					
62078	Isopropylbenzene, water, filtered, recoverable, micrograms per liter					
62079	Isoquinoline, water, filtered, recoverable, micrograms per liter					
62080	Menthol, water, filtered, recoverable, micrograms per liter					
62081	Methyl salicylate, water, filtered, recoverable, micrograms per liter					
62082	DEET, water, filtered, recoverable, micrograms per liter					
62083	Diethoxynonylphenol, water, filtered, recoverable, micrograms per liter					
62084	p-Cresol, water, filtered, recoverable, micrograms per liter					
62085	4-Nonylphenol, water, filtered, recoverable, micrograms per liter					
62086	beta-Stigmastanol, water, filtered, recoverable, micrograms per liter					
62087	Tris(2-chloroethyl) phosphate, water, filtered, recoverable, micrograms per liter					
62088	Tris(dichloroisopropyl) phosphate, water, filtered, recoverable, micrograms per liter					
62089	Tributyl phosphate, water, filtered, recoverable, micrograms per liter					
62090	Triclosan, water, filtered, recoverable, micrograms per liter					
62091	Triethyl citrate, water, filtered, recoverable, micrograms per liter					
62092	Triphenyl phosphate, water, filtered, recoverable, micrograms per liter					
62093	Tris(2-butoxyethyl) phosphate, water, filtered, recoverable, micrograms per liter					
62166	Fipronil, water, filtered, recoverable, micrograms per liter					
62167	Fipronil sulfide, water, filtered, recoverable, micrograms per liter					
62168	Fipronil sulfone, water, filtered, recoverable, micrograms per liter					
62169	Desulfinylfipronil amide, water, filtered, recoverable, micrograms per liter					
62170	Desulfinylfipronil, water, filtered, recoverable, micrograms per liter					
62854	Total nitrogen, (NH3+NO2+NO3+Organic), filtered, milligrams per liter					
63790	Perchlorate, water, filtered, recoverable, micrograms per liter	6				
70300	Residue on evaporation, dried at 180 degrees Celsius, water, filtered, milligrams per liter	1500	216		265	250
70301	Residue, water, filtered, sum of constituents, milligrams per liter		255	247		256 E
70303	Residue, water, filtered, tons per acre-foot					
71846	Ammonia, water, filtered, milligrams per liter as NH4					< 0.026
71851	Nitrate, water, filtered, milligrams per liter	45 (q)				6.94 E
71856	Nitrite, water, filtered, milligrams per liter					0.003 E
71865	Iodide, water, filtered, milligrams per liter				0.001 E	< 0.002
71870	Bromide, water, filtered, milligrams per liter				0.09	0.09
72019	Depth to water level, feet below land surface		61.65			

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J2)

Code	Parameter	MCL	Well J2			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
73547	trans-1,4-Dichloro-2-butene, water, unfiltered, recoverable, micrograms per liter				< 0.4	
73570	Ethyl methacrylate, water, unfiltered, recoverable, micrograms per liter				< 0.1	
75985	Tritium 2-sigma combined uncertainty, water, unfiltered, picocuries per liter					
76002	Rn-222, 2-sigma combined uncertainty, water, unfiltered, picocuries per liter					
77041	Carbon disulfide, water, unfiltered, micrograms per liter				< 0.04	
77093	cis-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6			< 0.02	
77103	n-Butyl methyl ketone, water, unfiltered, recoverable, micrograms per liter				< 0.6	
77128	Styrene, water, unfiltered, recoverable, micrograms per liter	100			< 0.04	
77135	o-Xylene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77168	1,1-Dichloropropene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77170	2,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter				< 0.06	
77173	1,3-Dichloropropane, water, unfiltered, recoverable, micrograms per liter				< 0.1	
77220	2-Ethyltoluene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
77221	1,2,3-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
77222	1,2,4-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77223	Isopropylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77224	n-Propylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77226	1,3,5-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77275	2-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
77277	4-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
77297	Bromochloromethane, water, unfiltered, recoverable, micrograms per liter				< 0.06	
77342	n-Butylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
77350	sec-Butylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
77353	tert-Butylbenzene, water, unfiltered, recoverable, micrograms per liter				< 0.06	
77356	4-Isopropyltoluene, water, unfiltered, recoverable, micrograms per liter				< 0.06	
77424	Iodomethane, water, unfiltered, recoverable, micrograms per liter				< 0.80	
77443	1,2,3-Trichloropropane, water, unfiltered, recoverable, micrograms per liter				< 0.12	
77562	1,1,1,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter				< 0.04	
77613	1,2,3-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter				< 0.1	
77651	1,2-Dibromoethane, water, unfiltered, recoverable, micrograms per liter	0.05			< 0.04	
77652	1,1,2-Trichloro-1,2,2-trifluoroethane, water, unfiltered, recoverable, micrograms per liter				< 0.04	
78032	Methyl tert-butyl ether, water, unfiltered, recoverable, micrograms per liter				< 0.1	
78109	3-Chloropropene, water, unfiltered, recoverable, micrograms per liter				< 0.08	
78133	Isobutyl methyl ketone, water, unfiltered, recoverable, micrograms per liter				< 0.4	
81552	Acetone, water, unfiltered, recoverable, micrograms per liter				< 4	
81555	Bromobenzene, water, unfiltered, recoverable, micrograms per liter				< 0.02	
81576	Diethyl ether, water, unfiltered, recoverable, micrograms per liter				< 0.1	
81577	Diisopropyl ether, water, unfiltered, recoverable, micrograms per liter				< 0.06	
81593	Methyl acrylonitrile, water, unfiltered, recoverable, micrograms per liter				< 0.2	
81595	Ethyl methyl ketone, water, unfiltered, recoverable, micrograms per liter				< 1.6	
81597	Methyl methacrylate, water, unfiltered, recoverable, micrograms per liter				< 0.2	
81607	Tetrahydrofuran, water, unfiltered, recoverable, micrograms per liter				< 1	
82081	C-13/C-12 ratio, water, unfiltered, per mil				-14.99	-15.11
82082	Deuterium/Protium ratio, water, unfiltered, per mil		-44		-42.90	-43.50
82085	Oxygen-18/Oxygen-16 ratio, water, unfiltered, per mil		-7		-6.86	-6.89
82303	Rn-222, water, unfiltered, picocuries per liter					
82346	Ethion, water, filtered, recoverable, micrograms per liter					
82625	1,2-Dibromo-3-chloropropane, water, unfiltered, recoverable, micrograms per liter				< 1.0	
82630	Metribuzin, water, filtered, recoverable, micrograms per liter					
82660	2,6-Diethylaniline, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82661	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82662	Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82664	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82667	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82670	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					

Source: USGS California Water Science Center.

Water Quality Data for Multiple Depth Monitoring Well
Wolf Valley Well (8S/2W-20J2)

Code	Parameter	MCL	Well J2			
	Sampling date		8/15/1990	12/20/1993	8/4/2009	7/26/2010
82673	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82675	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82676	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82680	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82682	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82683	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82686	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
82687	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter					
85795	m-Xylene plus p-xylene, water, unfiltered, recoverable, micrograms per liter				< 0.08	
90095	Specific conductance, water, unfiltered, laboratory, microsiemens per centimeter at 25 degrees Celsius		404	408	433	422
90851	Triholomehtanes, water, unfiltered, calcd, micrograms per liter					
99583	Bisphenol A-d3, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery					
99584	Caffeine-13C, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery					
99585	Decafluorobiphenyl, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery					
99586	Fluoranthene-d10, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery					
99832	1,2-Dichloroethane-d4, surrogate, Schedule 2090, water, unfiltered, percent recovery				133	
99833	Toluene-d8, surrogate, Schedule 2090, water, unfiltered, percent recovery				85.7	
99834	1-Bromo-4-fluorobenzene, surrogate, VOC schedules, water, unfiltered, percent recovery				87.2	
99994	Diazinon-d10, surrogate, Schedule 2003, water, filtered, percent recovery					
99995	alpha-HCH-d6, surrogate, Schedule 2003, water, filtered, percent recovery					

Notes: U.S. EPA STORET numbers for MCLs correspond to the same as the USGS NWIS data parameter number except as follows:

(a) MCL shown for U.S EPA STORET No. 620.
(b) MCL shown for U.S. EPASTORET No. 951.
(c) MCL shown for U.S. EPA STORET No. 1002.
(d) MCL shown for U.S. EPA STORET No. 1007.
(e) MCL shown for U.S. EPA STORET No. 1012.
(f) MCL shown for U.S. EPA STORET No. 1027.
(g) MCL shown for U.S. EPA STORET No. 1034.
(h) MCL shown for U.S. EPA STORET No. 1042.
(i) MCL shown for U.S. EPA STORET No. 1059.
(j) MCL shown for U.S EPA STORET No. 1067.
(k) MCL shown for U.S. EPASTORET No. 1077.
(l) MCL shown for U.S. EPA STORET No. 1092.
(m) MCL shown for U.S. EPA STORET No. 1097.
(n) MCL shown for U.S. EPA STORET No. 1105.
(o) MCL shown for U.S. EPA STORET No. 1147.
(p) MCL shown for U.S. EPA STORET No. 34247.
(q) MCL shown for U.S. EPA STORET No. 71850.

Code--Data parameter number used in USGS National Water Information System (NWIS).
E--Estimated.
M--Presence verifed but not quantified.
MCL--Maximum Contaminant Level reported by California DHS (May 25, 2007 Database) for U.S. EPA STORET number.
V--Biased results from contamination.

Source: USGS California Water Science Center.

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

APPENDIX E.4

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT

WATER QUALITY DATA FOR IMPORTED WATER DELIVERED TO RCWD UPPER VDC RECHARGE BASIN

September 2011

Water Quality Data for Imported Water Delivered to RCWD Upper VDC Recharge Basin
Upper Pond 5 in Pauba Valley
USGS Site No. 333024117005501

Code	Parameter	MCL	Pond 5	Pond 5			
	Sampling date		9/17/2007	7/28/2010			
3	Sampling depth, feet						
10	Temperature, water, degrees Celsius		24.5	25.4			
28	Agency analyzing sample, code		80020	80020			
59	Flow rate, instantaneous, gallons per minute						
95	Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius		847	875			
191	Hydrogen ion, water, unfiltered, calculated, milligrams per liter		0.00001	0.00001			
300	Dissolved oxygen, water, unfiltered, milligrams per liter		6.1				
400	pH, water, unfiltered, field, standard units		7.9	8.1			
403	pH, water, unfiltered, laboratory, standard units		8.0	8.1			
405	Carbon dioxide, water, unfiltered, milligrams per liter		2.5	1.8			
453	Bicarbonate, water, filtered, incremental titration, field, milligrams per liter			138			
602	Total nitrogen, water, filtered, milligrams per liter			0.3			
607	Organic nitrogen, water, filtered, milligrams per liter		< 0.18	0.14			
608	Ammonia, water, filtered, milligrams per liter as nitrogen		< 0.020	0.022			
613	Nitrite, water, filtered, milligrams per liter as nitrogen	1 (a)	< 0.002	0.003			
618	Nitrate, water, filtered, milligrams per liter as nitrogen		< 0.227	0.141			
623	Ammonia plus organic nitrogen, water, filtered, milligrams per liter as nitrogen			0.16			
631	Nitrate plus nitrite, water, filtered, milligrams per liter as nitrogen		0.23	0.14			
660	Orthophosphate, water, filtered, milligrams per liter		0.068	0.034			
666	Phosphorus, water, filtered, milligrams per liter			< 0.04			
671	Orthophosphate, water, filtered, milligrams per liter as phosphorus		0.022	0.011			
900	Hardness, water, milligrams per liter as calcium carbonate		232	256			
904	Noncarb hardness, water filtered field, milligrams per liter as calcium carbonate			141			
905	Noncarb hardness, water filtered lab, milligrams per liter as calcium carbonate		120	138			
915	Calcium, water, filtered, milligrams per liter		55.4	62.0			
925	Magnesium, water, filtered, milligrams per liter		22.4	24.3			
930	Sodium, water, filtered, milligrams per liter		81.4	85.3			
931	Sodium adsorption ratio, water, number		2.33	2.33			
932	Sodium fraction of cations, water, percent in equivalents of major cations		43	42			
935	Potassium, water, filtered, milligrams per liter		4.49	4.36			
940	Chloride, water, filtered, milligrams per liter	600	84.9	87.8			
945	Sulfate, water, filtered, milligrams per liter	600	177	195			
950	Fluoride, water, filtered, milligrams per liter	2 (b)	0.26	0.3			
955	Silica, water, filtered, milligrams per liter		8.95	6.8			
1000	Arsenic, water, filtered, micrograms per liter	10 (c)	2.5	2.5			
1005	Barium, water, filtered, micrograms per liter	1000 (d)	107	96.1			
1010	Beryllium, micrograms per liter	4 (e)	< 0.06				
1020	Boron, water, filtered, micrograms per liter		138	147			
1025	Cadmium, micrograms per liter	5 (f)	< 0.04				
1030	Chromium, micrograms per liter	50 (g)	0.11 E				
1035	Cobalt, micrograms per liter		0.04 E				
1040	Copper, micrograms per liter	1000 (h)	4.9				
1046	Iron, water, filtered, micrograms per liter	300	6	4 E			
1049	Lead, micrograms per liter		0.62				
1056	Manganese, water, filtered, micrograms per liter	50	1.1	0.4			
1057	Thallium, micrograms per liter	2 (i)	< 0.04				
1060	Molybdenum, micrograms per liter		4.7				
1065	Nickel, micrograms per liter	100 (j)	1.2				
1075	Silver, micrograms per liter	100 (k)	< 0.10				
1080	Strontium, water, filtered, micrograms per liter		820	871			
1085	Vanadium, micrograms per liter		3				
1090	Zinc, micrograms per liter	5000 (l)	5				
1095	Antimony, micrograms per liter	6 (m)	0.29				
1106	Aluminum, water, filtered, micrograms per liter	1000 (n)	1.3 E	< 3.4			

Source: USGS California Water Science Center.

Water Quality Data for Imported Water Delivered to RCWD Upper VDC Recharge Basin
Upper Pond 5 in Pauba Valley
USGS Site No. 333024117005501

Code	Parameter	MCL	Pond 5	Pond 5			
	Sampling date		9/17/2007	7/28/2010			
1130	Lithium, water, filtered, micrograms per liter		33.1	48			
1145	Selenium, micrograms per liter	50 (o)	1.4				
4022	Terbuthylazine, water, filtered, recoverable, micrograms per liter						
4025	Hexazinone, water, filtered, recoverable, micrograms per liter						
4029	Bromacil, water, filtered, recoverable, micrograms per liter						
4035	Simazine, water, filtered, recoverable, micrograms per liter						
4036	Prometryn, water, filtered, recoverable, micrograms per liter						
4037	Prometon, water, filtered, recoverable, micrograms per liter						
4040	2-Chloro-4-isopropylamino-6-amino-s-triazine, water, filtered, recoverable, micrograms per liter						
4095	Fonofos, water, filtered, recoverable, micrograms per liter						
7000	Tritium, water, unfiltered, picocuries per liter		19.8				
22703	Uranium, natural, micrograms per liter		3.81				
29801	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, milligrams per liter as calcium carbonate		111	118			
30217	Dibromomethane, water, unfiltered, recoverable, micrograms per liter		0.12				
32101	Bromodichloromethane, water, unfiltered, recoverable, micrograms per liter		17.2				
32102	Tetrachloromethane, water, unfiltered, recoverable, micrograms per liter	0.5	< 0.08				
32103	1,2-Dichloroethane, water, unfiltered, recoverable, micrograms per liter		< 0.1				
32104	Tribromomethane, water, unfiltered, recoverable, micrograms per liter		7.28				
32105	Dibromochloromethane, water, unfiltered, recoverable, micrograms per liter		16.1				
32106	Trichloromethane, water, unfiltered, recoverable, micrograms per liter		9.69				
34010	Toluene, water, unfiltered, recoverable, micrograms per liter	150	0.06 E				
34030	Benzene, water, unfiltered, recoverable, micrograms per liter	1	< 0.02				
34215	Acrylonitrile, water, unfiltered, recoverable, micrograms per liter		< 0.4				
34221	Anthracene, water, filtered, recoverable, micrograms per liter						
34248	Benzo[a]pyrene, water, filtered, recoverable, micrograms per liter	0.2 (p)					
34288	Tribromomethane, water, filtered, recoverable, micrograms per liter						
34301	Chlorobenzene, water, unfiltered, recoverable, micrograms per liter	70	< 0.02				
34311	Chloroethane, water, unfiltered, recoverable, micrograms per liter		< 0.1				
34371	Ethylbenzene, water, unfiltered, recoverable, micrograms per liter	300	< 0.02				
34377	Fluoranthene, water, filtered, recoverable, micrograms per liter						
34396	Hexachloroethane, water, unfiltered, recoverable, micrograms per liter		< 0.1				
34409	Isophorone, water, filtered, recoverable, micrograms per liter						
34413	Bromomethane, water, unfiltered, recoverable, micrograms per liter		< 0.4				
34418	Chloromethane, water, unfiltered, recoverable, micrograms per liter		< 0.1				
34423	Dichloromethane, water, unfiltered, recoverable, micrograms per liter	5	0.1 E				
34443	Naphthalene, water, filtered, recoverable, micrograms per liter						
34462	Phenanthrene, water, filtered, recoverable, micrograms per liter						
34466	Phenol, water, filtered, recoverable, micrograms per liter						
34470	Pyrene, water, filtered, recoverable, micrograms per liter						
34475	Tetrachloroethene, water, unfiltered, recoverable, micrograms per liter	5	< 0.04				
34476	Tetrachloroethene, water, filtered, recoverable, micrograms per liter						
34488	Trichlorofluoromethane, water, unfiltered, recoverable, micrograms per liter	150	< 0.08				
34496	1,1-Dichloroethane, water, unfiltered, recoverable, micrograms per liter	5	< 0.06				
34501	1,1-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6	< 0.02				
34506	1,1,1-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	200	< 0.04				
34511	1,1,2-Trichloroethane, water, unfiltered, recoverable, micrograms per liter	5	< 0.04				
34516	1,1,2,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter	1	< 0.10				
34536	1,2-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	600	< 0.04				
34541	1,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter	5	< 0.02				
34546	trans-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	10	< 0.02				
34551	1,2,4-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5	< 0.1				
34566	1,3-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
34571	1,4-Dichlorobenzene, water, unfiltered, recoverable, micrograms per liter	5	< 0.04				
34572	1,4-Dichlorobenzene, water, filtered, recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Imported Water Delivered to RCWD Upper VDC Recharge Basin
Upper Pond 5 in Pauba Valley
USGS Site No. 333024117005501

Code	Parameter	MCL	Pond 5	Pond 5			
	Sampling date		9/17/2007	7/28/2010			
34668	Dichlorodifluoromethane, water, unfiltered, recoverable, micrograms per liter		< 0.14				
34696	Naphthalene, water, unfiltered, recoverable, micrograms per liter		< 0.4				
34699	trans-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5	< 0.10				
34704	cis-1,3-Dichloropropene, water, unfiltered, recoverable, micrograms per liter	0.5	< 0.06				
38454	Dicrotophos, water, filtered, recoverable, micrograms per liter						
38775	Dichlorvos, water, filtered, recoverable, micrograms per liter						
38933	Chlorpyrifos, water, filtered, recoverable, micrograms per liter						
39086	Alkalinity, water, filtered, incremental titration, field, milligrams per liter as calcium carbonate			115			
39175	Vinyl chloride, water, unfiltered, recoverable, micrograms per liter	0.5	< 0.1				
39180	Trichloroethene, water, unfiltered, recoverable, micrograms per liter	5	< 0.02				
39381	Dieldrin, water, filtered, recoverable, micrograms per liter						
39415	Metolachlor, water, filtered, recoverable, micrograms per liter						
39532	Malathion, water, filtered, recoverable, micrograms per liter						
39572	Diazinon, water, filtered, recoverable, micrograms per liter						
39632	Atrazine, water, filtered, recoverable, micrograms per liter						
39702	Hexachlorobutadiene, water, unfiltered, recoverable, micrograms per liter		< 0.1				
46342	Alachlor, water, filtered, recoverable, micrograms per liter						
49260	Acetochlor, water, filtered, recoverable, micrograms per liter						
49295	1-Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
49933	C-14, water, filtered, percent modern		89.1				
49934	C-14, counting error, water, filtered, percent modern		0.38				
49991	Methyl acrylate, water, unfiltered, recoverable, micrograms per liter		< 0.4				
49999	1,2,3,4-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.1				
50000	1,2,3,5-Tetramethylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.1				
50002	Bromoethene, water, unfiltered, recoverable, micrograms per liter		< 0.1				
50004	tert-Butyl ethyl ether, water, unfiltered, recoverable, micrograms per liter		< 0.04				
50005	Methyl tert-pentyl ether, water, unfiltered, recoverable, micrograms per liter		< 0.04				
50305	Caffeine, water, filtered, recoverable, micrograms per liter						
50359	Metalaxyl, water, filtered, recoverable, micrograms per liter						
61209	Perchlorate, water, unfiltered, recoverable, micrograms per liter	6					
61585	Cyfluthrin, water, filtered, recoverable, micrograms per liter						
61586	Cypermethrin, water, filtered, recoverable, micrograms per liter						
61591	Fenamiphos, water, filtered, recoverable, micrograms per liter						
61593	Iprodione, water, filtered, recoverable, micrograms per liter						
61594	Isofenphos, water, filtered, recoverable, micrograms per liter						
61596	Metalaxyl, water, filtered, recoverable, micrograms per liter						
61598	Methidathion, water, filtered, recoverable, micrograms per liter						
61599	Myclobutanil, water, filtered, recoverable, micrograms per liter						
61601	Phosmet, water, filtered, recoverable, micrograms per liter						
61610	Tribuphos, water, filtered, recoverable, micrograms per liter						
61618	2-Chloro-2',6'-diethylacetanilide, water, filtered, recoverable, micrograms per liter						
61620	2-Ethyl-6-methylaniline, water, filtered, recoverable, micrograms per liter						
61625	3,4-Dichloroaniline, water, filtered, recoverable, micrograms per liter						
61633	4-Chloro-2-methylphenol, water, filtered, recoverable, micrograms per liter						
61635	Azinphos-methyl oxygen analog, water, filtered, recoverable, micrograms per liter						
61636	Chlorpyrifos oxygen analog, water, filtered, recoverable, micrograms per liter						
61644	Ethion monoxon, water, filtered, recoverable, micrograms per liter						
61645	Fenamiphos sulfone, water, filtered, recoverable, micrograms per liter						
61646	Fenamiphos sulfoxide, water, filtered, recoverable, micrograms per liter						
61652	Malaoxon, water, filtered, recoverable, micrograms per liter						
61664	Methyl paraoxon, water, filtered, recoverable, micrograms per liter						
61666	Phorate oxygen analog, water, filtered, recoverable, micrograms per liter						
61668	Phosmet oxygen analog, water, filtered, recoverable, micrograms per liter						
61674	Terbufos oxygen analog sulfone, water, filtered, recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Imported Water Delivered to RCWD Upper VDC Recharge Basin
Upper Pond 5 in Pauba Valley
USGS Site No. 333024117005501

Code	Parameter	MCL	Pond 5	Pond 5			
	Sampling date		9/17/2007	7/28/2010			
61705	Diethoxyoctylphenol, water, filtered, recoverable, micrograms per liter						
61706	Monoethoxyoctylphenol, water, filtered, recoverable, micrograms per liter						
62005	Cotinine, water, filtered, recoverable, micrograms per liter						
62054	1-Methylnaphthalene, water, filtered, recoverable, micrograms per liter						
62055	2,6-Dimethylnaphthalene, water, filtered, recoverable, micrograms per liter						
62056	2-Methylnaphthalene, water, filtered, recoverable, micrograms per liter						
62057	3-beta-Coprostanol, water, filtered, recoverable, micrograms per liter						
62058	3-Methyl-1H-indole, water, filtered, recoverable, micrograms per liter						
62059	3-tert-Butyl-4-hydroxyanisole, water, filtered, recoverable, micrograms per liter						
62060	4-Cumylphenol, water, filtered, recoverable, micrograms per liter						
62061	4-Octylphenol, water, filtered, recoverable, micrograms per liter						
62062	4-tert-Octylphenol, water, filtered, recoverable, micrograms per liter						
62063	5-Methyl-1H-benzotriazole, water, filtered, recoverable, micrograms per liter						
62064	Acetophenone, water, filtered, recoverable, micrograms per liter						
62065	Acetyl hexamethyl tetrahydro naphthalene, water, filtered, recoverable, micrograms per liter						
62066	9,10-Anthraquinone, water, filtered, recoverable, micrograms per liter						
62067	Benzophenone, water, filtered, recoverable, micrograms per liter						
62068	beta-Sitosterol, water, filtered, recoverable, micrograms per liter						
62070	Camphor, water, filtered, recoverable, micrograms per liter						
62071	Carbazole, water, filtered, recoverable, micrograms per liter						
62072	Cholesterol, water, filtered, recoverable, micrograms per liter						
62073	D-Limonene, water, filtered, recoverable, micrograms per liter						
62075	Hexahydrohexamethyl cyclopentabenzopyran, water, filtered, recoverable, micrograms per liter						
62076	Indole, water, filtered, recoverable, micrograms per liter						
62077	Isoborneol, water, filtered, recoverable, micrograms per liter						
62078	Isopropylbenzene, water, filtered, recoverable, micrograms per liter						
62079	Isoquinoline, water, filtered, recoverable, micrograms per liter						
62080	Menthol, water, filtered, recoverable, micrograms per liter						
62081	Methyl salicylate, water, filtered, recoverable, micrograms per liter						
62082	DEET, water, filtered, recoverable, micrograms per liter						
62083	Diethoxynonylphenol, water, filtered, recoverable, micrograms per liter						
62084	p-Cresol, water, filtered, recoverable, micrograms per liter						
62085	4-Nonylphenol, water, filtered, recoverable, micrograms per liter						
62086	beta-Stigmastanol, water, filtered, recoverable, micrograms per liter						
62087	Tris(2-chloroethyl) phosphate, water, filtered, recoverable, micrograms per liter						
62088	Tris(dichloroisopropyl) phosphate, water, filtered, recoverable, micrograms per liter						
62089	Tributyl phosphate, water, filtered, recoverable, micrograms per liter						
62090	Triclosan, water, filtered, recoverable, micrograms per liter						
62091	Triethyl citrate, water, filtered, recoverable, micrograms per liter						
62092	Triphenyl phosphate, water, filtered, recoverable, micrograms per liter						
62093	Tris(2-butoxyethyl) phosphate, water, filtered, recoverable, micrograms per liter						
62166	Fipronil, water, filtered, recoverable, micrograms per liter						
62167	Fipronil sulfide, water, filtered, recoverable, micrograms per liter						
62168	Fipronil sulfone, water, filtered, recoverable, micrograms per liter						
62169	Desulfinylfipronil amide, water, filtered, recoverable, micrograms per liter						
62170	Desulfinylfipronil, water, filtered, recoverable, micrograms per liter						
62854	Total nitrogen, (NH3+NO2+NO3+Organic), filtered, milligrams per liter		0.41				
63790	Perchlorate, water, filtered, recoverable, micrograms per liter	6	1.11				
70300	Residue on evaporation, dried at 180 degrees Celsius, water, filtered, milligrams per liter	1500	526	516			
70301	Residue, water, filtered, sum of constituents, milligrams per liter		503 E	537 E			
70303	Residue, water, filtered, tons per acre-foot						
71846	Ammonia, water, filtered, milligrams per liter as NH4		< 0.026	0.029			
71851	Nitrate, water, filtered, milligrams per liter	45 (g)	< 1.00	0.623			
71856	Nitrite, water, filtered, milligrams per liter		< 0.007	0.011			

Source: USGS California Water Science Center.

Water Quality Data for Imported Water Delivered to RCWD Upper VDC Recharge Basin
Upper Pond 5 in Pauba Valley
USGS Site No. 333024117005501

Code	Parameter	MCL	Pond 5	Pond 5			
	Sampling date		9/17/2007	7/28/2010			
71865	Iodide, water, filtered, milligrams per liter			0.012			
71870	Bromide, water, filtered, milligrams per liter		0.06	0.10			
72019	Depth to water level, feet below land surface						
73547	trans-1,4-Dichloro-2-butene, water, unfiltered, recoverable, micrograms per liter		< 0.6				
73570	Ethyl methacrylate, water, unfiltered, recoverable, micrograms per liter		< 0.1				
75985	Tritium 2-sigma combined uncertainty, water, unfiltered, picocuries per liter		1.6				
76002	Rn-222, 2-sigma combined uncertainty, water, unfiltered, picocuries per liter		15				
77041	Carbon disulfide, water, unfiltered, micrograms per liter		< 0.06				
77093	cis-1,2-Dichloroethene, water, unfiltered, recoverable, micrograms per liter	6	< 0.02				
77103	n-Butyl methyl ketone, water, unfiltered, recoverable, micrograms per liter		< 0.4				
77128	Styrene, water, unfiltered, recoverable, micrograms per liter	100	< 0.04				
77135	o-Xylene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77168	1,1-Dichloropropene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77170	2,2-Dichloropropane, water, unfiltered, recoverable, micrograms per liter		< 0.06				
77173	1,3-Dichloropropane, water, unfiltered, recoverable, micrograms per liter		< 0.1				
77220	2-Ethyltoluene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77221	1,2,3-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.1				
77222	1,2,4-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77223	Isopropylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77224	n-Propylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77226	1,3,5-Trimethylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77275	2-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77277	4-Chlorotoluene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77297	Bromochloromethane, water, unfiltered, recoverable, micrograms per liter		0.09 E				
77342	n-Butylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.1				
77350	sec-Butylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77353	tert-Butylbenzene, water, unfiltered, recoverable, micrograms per liter		< 0.08				
77356	4-Isopropyltoluene, water, unfiltered, recoverable, micrograms per liter		< 0.08				
77424	Iodomethane, water, unfiltered, recoverable, micrograms per liter		< 0.40				
77443	1,2,3-Trichloropropane, water, unfiltered, recoverable, micrograms per liter		< 0.12				
77562	1,1,1,2-Tetrachloroethane, water, unfiltered, recoverable, micrograms per liter		< 0.04				
77613	1,2,3-Trichlorobenzene, water, unfiltered, recoverable, micrograms per liter		< 0.1				
77651	1,2-Dibromoethane, water, unfiltered, recoverable, micrograms per liter	0.05	< 0.04				
77652	1,1,2-Trichloro-1,2,2-trifluoroethane, water, unfiltered, recoverable, micrograms per liter		< 0.04				
78032	Methyl tert-butyl ether, water, unfiltered, recoverable, micrograms per liter		< 0.10				
78109	3-Chloropropene, water, unfiltered, recoverable, micrograms per liter		< 0.08				
78133	Isobutyl methyl ketone, water, unfiltered, recoverable, micrograms per liter		< 0.2				
81552	Acetone, water, unfiltered, recoverable, micrograms per liter		< 6				
81555	Bromobenzene, water, unfiltered, recoverable, micrograms per liter		< 0.02				
81576	Diethyl ether, water, unfiltered, recoverable, micrograms per liter		< 0.1				
81577	Diisopropyl ether, water, unfiltered, recoverable, micrograms per liter		< 0.06				
81593	Methyl acrylonitrile, water, unfiltered, recoverable, micrograms per liter		< 0.4				
81595	Ethyl methyl ketone, water, unfiltered, recoverable, micrograms per liter		< 1.6				
81597	Methyl methacrylate, water, unfiltered, recoverable, micrograms per liter		< 0.2				
81607	Tetrahydrofuran, water, unfiltered, recoverable, micrograms per liter		< 1				
82081	C-13/C-12 ratio, water, unfiltered, per mil		-6.46				
82082	Deuterium/Protium ratio, water, unfiltered, per mil		-83	-81.6			
82085	Oxygen-18/Oxygen-16 ratio, water, unfiltered, per mil		-10.14	-10.01			
82303	Rn-222, water, unfiltered, picocuries per liter		0				
82346	Ethion, water, filtered, recoverable, micrograms per liter						
82625	1,2-Dibromo-3-chloropropane, water, unfiltered, recoverable, micrograms per liter		< 0.5				
82630	Metribuzin, water, filtered, recoverable, micrograms per liter						
82660	2,6-Diethylaniline, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82661	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						

Source: USGS California Water Science Center.

Water Quality Data for Imported Water Delivered to RCWD Upper VDC Recharge Basin
Upper Pond 5 in Pauba Valley
USGS Site No. 333024117005501

Code	Parameter	MCL	Pond 5	Pond 5			
	Sampling date		9/17/2007	7/28/2010			
82662	Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82664	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82667	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82670	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82673	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82675	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82676	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82680	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82682	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82683	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82686	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
82687	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, micrograms per liter						
85795	m-Xylene plus p-xylene, water, unfiltered, recoverable, micrograms per liter		< 0.08				
90095	Specific conductance, water, unfiltered, laboratory, microsiemens per centimeter at 25 degrees Celsius		859	868			
90851	Triholomehtanes, water, unfiltered, calcd, micrograms per liter		50.2				
90867	Triholomehtanes, water, unfiltered, calcd, micrograms per liter		50.2				
99583	Bisphenol A-d3, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99584	Caffeine-13C, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99585	Decafluorobiphenyl, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99586	Fluoranthene-d10, surrogate, Schedule/lab code 2033/8033, water, filtered, percent recovery						
99832	1,2-Dichloroethane-d4, surrogate, Schedule 2090, water, unfiltered, percent recovery						
99833	Toluene-d8, surrogate, Schedule 2090, water, unfiltered, percent recovery						
99834	1-Bromo-4-fluorobenzene, surrogate, VOC schedules, water, unfiltered, percent recovery						
99994	Diazinon-d10, surrogate, Schedule 2003, water, filtered, percent recovery						
99995	alpha-HCH-d6, surrogate, Schedule 2003, water, filtered, percent recovery						

Notes: U.S. EPA STORET numbers for MCLs correspond to the same as the USGS NWIS data parameter number except as follows:

(a) MCL shown for U.S EPA STORET No. 620.
(b) MCL shown for U.S. EPASTORET No. 951.
(c) MCL shown for U.S. EPA STORET No. 1002.
(d) MCL shown for U.S. EPA STORET No. 1007.
(e) MCL shown for U.S. EPA STORET No. 1012.
(f) MCL shown for U.S. EPA STORET No. 1027.
(g) MCL shown for U.S. EPA STORET No. 1034.
(h) MCL shown for U.S. EPA STORET No. 1042.
(i) MCL shown for U.S. EPA STORET No. 1059.
(j) MCL shown for U.S EPA STORET No. 1067.
(k) MCL shown for U.S. EPASTORET No. 1077.
(l) MCL shown for U.S. EPA STORET No. 1092.
(m) MCL shown for U.S. EPA STORET No. 1097.
(n) MCL shown for U.S. EPA STORET No. 1105.
(o) MCL shown for U.S. EPA STORET No. 1147.
(p) MCL shown for U.S. EPA STORET No. 34247.
(q) MCL shown for U.S. EPA STORET No. 71850.

Code--Data parameter number used in USGS National Water Information System (NWIS).
E--Estimated.
M--Presence verifed but not quantified.
MCL--Maximum Contaminant Level reported by California DHS (May 25, 2007 Database) for U.S. EPA STORET number.
V--Biased results from contamination.

Source: USGS California Water Science Center.

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

APPENDIX E.5

COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT

WATER QUALITY DATA FOR VAIL LAKE

September 2011

Water Quality Data for Vail Lake (USGS Station No. 11042510)
RCWD Water Quality Sampling Station No. 3 Vail 1M

Parameter	3 Vail 1M	3 Vail 1M	3 Vail 1M	3 Vail 1M	3 Vail 1M	3 Vail 1M	3 Vail 1M
Sampling Date	9/22/2009	10/21/2009	11/18/2009	5/26/2010	6/17/2010	8/14/2010	9/18/2010
Reservoir Storage Content, acre feet	22,030	21,630	21,230	25,790	25,490	24,510	24,000
Reservoir Storage Content, percent full	44.6	43.8	43.0	52.2	51.6	49.6	48.6
Water Surface Elevation, feet above mean sea level	1,438.92	1,438.34	1,437.76	1,444.13	1,443.74	1,442.42	1,441.71
Water Surface Elevation, feet above bottom of lowest outlet	86.42	85.84	85.26	91.63	91.24	89.92	89.21
Sampling Depth, meters below water surface	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Dissolved Oxygen, milligrams per liter			10.7	7.98	8.54	6	
pH, standard units		8.98	8.72	9.11	9.29	9.49	
Specific Conductance, microsiemens per centimeter at 25 degrees Celsius		1274	1058	1172	1174	1193	1210
Temperature, water, degrees Celsius		19.84	16.02	19.90	22.84	23.88	22.51
Aluminum, micrograms per liter							ND
Ammonia, milligrams per liter as nitrogen	ND	ND	ND	ND		ND	ND
Antimony, micrograms per liter							ND
Arsenic, micrograms per liter							ND
Barium, micrograms per liter							25
Beryllium, micrograms per liter							ND
Bicarbonate as HCO3, milligrams per liter	260	290	300	240		150	180
Carbonate as CO3, milligrams per liter	12	ND	ND	14		48	34
Chloride, milligrams per liter	180		180	130		150	160
Cyanide, milligrams per liter							ND
Fluoride, milligrams per liter							0.5
Hydroxide as OH, milligrams per liter	ND	ND	ND	ND		ND	ND
Inorganic Nitrogern, milligrams per liter	ND	ND	ND	ND		ND	ND
Lead, micrograms per liter							ND
Mercury, micrograms per liter							ND
Nickel, micrograms per liter							ND
Nitrate Nitrogen, milligrams per liter	ND	ND	ND	ND		ND	ND
Nitrite Nitrogen, milligrams per liter	ND	ND	ND	ND		ND	ND
Ortho Phosphate Phosphorus, milligrams per liter	ND	ND	0.053	ND		ND	ND
Perchlorate, micrograms per liter							ND
Selenium, micrograms per liter							ND
Silver, micrograms per liter							ND
Sulfate, milligrams per liter	180		180	140		150	170
Thalium, micrograms per liter							ND
Total Alkalinity as CaCO3, milligrams per liter	230	240	250	220		200	200
Total Chromium, micrograms per liter							ND
Total Suspended Solids, milligrams per liter	ND	ND	7	8		18	13

Notes:
Station No. 3 Vail 1M located near upstream face of Vail Dam, sample depth one meter below water surface.
Total capacity, 49,370 acre feet, between elevations 1,352.5 feet, bottom of lowest outlet, and 1,470 feet, crest of spillway.
ND - None detected.

Source: Rancho California Water District.

Water Quality Data for Vail Lake (USGS Station No. 11042510)
RCWD Water Quality Sampling Station No. 3 Vail 1MAB

Parameter	3 Vail 1MAB	3 Vail 1MAB	3 Vail 1MAB	3 Vail 1MAB	3 Vail 1MAB	3 Vail 1MAB	3 Vail 1MAB
Sampling Date	9/22/2009	10/21/2009	11/18/2009	5/26/2010	6/17/2010	8/14/2010	9/18/2010
Reservoir Storage Content, acre feet	22,030	21,630	21,230	25,790	25,490	24,510	24,000
Reservoir Storage Content, percent full	44.6	43.8	43.0	52.2	51.6	49.6	48.6
Water Surface Elevation, feet above mean sea level	1,438.92	1,438.34	1,437.76	1,444.13	1,443.74	1,442.42	1,441.71
Water Surface Elevation, feet above bottom of lowest outlet	86.42	85.84	85.26	91.63	91.24	89.92	89.21
Sampling Depth, meters above reservoir bottom	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Dissolved Oxygen, milligrams per liter			12.4	14.13	77.2	6.1	
pH, standard units		7.47	8.5	7.8	7.71	7.64	
Specific Conductance, microsiemens per centimeter at 25 degrees Celsius		1212	1053	1250	1253	1243	1226
Temperature, water, degrees Celsius		15.46	15.6	12.2	12.46	13.5	16.64
Aluminum, micrograms per liter							
Ammonia, milligrams per liter as nitrogen	4.10	5.50	0.12	1.90		2.40	1.80
Antimony, micrograms per liter							
Arsenic, micrograms per liter							
Barium, micrograms per liter							
Beryllium, micrograms per liter							
Bicarbonate as HCO3, milligrams per liter	370	360	300	300		320	420
Carbonate as CO3, milligrams per liter	ND	ND	ND	ND		ND	ND
Chloride, milligrams per liter	160		180	150		150	160
Cyanide, milligrams per liter							
Fluoride, milligrams per liter							
Hydroxide as OH, milligrams per liter	ND	ND	ND	ND		ND	ND
Inorganic Nitrogern, milligrams per liter	4.10	5.50	ND	1.90		2.40	1.80
Lead, micrograms per liter							
Mercury, micrograms per liter							
Nickel, micrograms per liter							
Nitrate Nitrogen, milligrams per liter	ND	ND	ND	ND		ND	ND
Nitrite Nitrogen, milligrams per liter	ND	ND	ND	ND		ND	ND
Ortho Phosphate Phosphorus, milligrams per liter	0.78	1.10	0.053	0.470		0.530	1.400
Perchlorate, micrograms per liter							
Selenium, micrograms per liter							
Silver, micrograms per liter							
Sulfate, milligrams per liter	110		190	140		120	69
Thalium, micrograms per liter							
Total Alkalinity as CaCO3, milligrams per liter	300	300	250	250		260	340
Total Chromium, micrograms per liter							
Total Suspended Solids, milligrams per liter	ND	ND	6	5		ND	ND

Notes:
Station No. 3 Vail 1M located near upstream face of Vail Dam, sample depth one meter above reservoir bottom.
Total capacity, 49,370 acre feet, between elevations 1,352.5 feet, bottom of lowest outlet, and 1,470 feet, crest of spillway.
ND - None detected.

Source: Rancho California Water District.

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 2009-10

APPENDIX F

ANNUAL REPORT ISSUES SUBORDINATED DURING EFFECTIVE PERIOD OF THE COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT

September 2011

APPENDIX F

SANTA MARGARITA RIVER WATERSHED

ANNUAL REPORT ISSUES SUBORDINATED DURING EFFECTIVE PERIOD OF THE COOPERATIVE WATER RESOURCE MANAGEMENT AGREEMENT

Introduction

Prior to implementation of the Cooperative Water Resource Management Agreement (CWRMA) entered into by Rancho California Water District (RCWD) and the United States on behalf of Camp Pendleton, there were each year contentions raised by Camp Pendleton with respect to various aspects of the Annual Watermaster Report. These contentions are settled so long as that agreement is in effect. Accordingly, there is no need to raise those particular issues or publish them in the main text of the annual report or in related correspondence.

However, the respective positions on these issues need to be preserved and protected from any finding of waiver, and there is a need to continue to collect related data in the event of need in the future.

Therefore, the applicable textual material in the previous annual reports and related comments and responses have been gathered here for preservation and maintenance of rights, with the understanding that the previous annual exchange of applicable contentions in the process of preparing the annual report is no longer necessary.

Issues Reserved

Section 3, Surface Water Availability and Use: In the absence of CWRMA implementation, Camp Pendleton disputes the method of calculation used in the annual report in Subsection 3.2 (Surface Water Diversions) and Table 3.3 (Surface Water Diversions to Storage) for presentation of the information regarding Vail Lake and further asserts its belief that the Vail Dam impoundment fails to comply with the 1940 Stipulated Judgment.

Section 4, Subsurface Water Availability and Use: In the absence of CWRMA implementation, and with respect to Figure 4.1 (Water Level Elevations – Windmill Well) and to Subsections 4.3 (Water Levels) and 4.4 (Groundwater Storage), Camp Pendleton is concerned about the apparent excessive pumping in the Upper Basin, and further asserts its belief that the lengthy and significant drawdown and concomitant loss in storage adversely affect the water supply for adjacent and downstream users holding senior water rights.

Section 7, Water Production and Use: First, in the absence of CWRMA implementation, and with regard to the local production figures shown in Table 7.1 (Water Production and Use), Camp Pendleton is concerned about the high level of groundwater production from the Upper Basin, a level that Camp Pendleton believes to be substantially greater than the safe yield.

Second, in the absence of CWRMA implementation, and with regard to Footnote 4 of Table 7.1 (distinction between RCWD pumping of older alluvium water and of Vail recovery water), Camp Pendleton has serious reservations as to the accounting system that is being used as well as the legal and technical bases upon which such system has been formulated.

Third, in the absence of CWRMA implementation, and as to the RCWD part of Subsection 7.2 (Water Purveyors), Camp Pendleton has serious reservations as to the accounting system that is being used as well as the legal and technical bases upon which such system has been formulated. These reservations include the following:

1. As to the "Vail Appropriation" part: *Representatives of the United States contend that under the 1940 Stipulated Judgment storage of water in Vail Lake is limited to Rancho California Water District's share of the flood waters of the Santa Margarita River system. However, to date, the parties have not agreed on a definition of "flood waters."*

2. As to the "Division of Local Water" part: *In 1995 well logs and geophysical logs of all Rancho California WD wells were reviewed by representatives of the United States and Rancho California WD to determine the depths of the younger alluvium. There was general agreement between the parties about the depth of the younger alluvium in production wells, except for ten wells shown on Table 7.7 of the 1994-95 report. The remaining disagreements relate to differences about the magnitude of the clay layer needed to define the base of the younger alluvium, the importance of neighboring well logs, and general concepts about overall geologic setting.*

Section 8, Unauthorized Water Use: In the absence of CWRMA implementation, and with respect to water use by RCWD, Camp Pendleton asserts the following:

1. Such use is in violation of the 1940 Stipulated Judgment by reason of, among other things, Vail Lake operations in excess of entitlement and pumping from both younger and older alluvium in excess of entitlement, which contentions RCWD disputes;

2. Rediversion and use of water impounded by Vail Dam are not in accord with terms of Permit 7032;

3. Unauthorized pumping is being done, including pumping from the younger alluvium outside of Pauba Valley without a permit and pumping from the older alluvium in violation of Court adjudications.

Section 9, Threats to Water Supply: In the absence of CWRMA implementation, and with respect to Subsection 9.3 (Potential Overdraft Conditions) and as noted in the foregoing comments to Sections 4 and 7, Camp Pendleton is seriously concerned regarding the apparent excessive pumping in the Upper Basin.