SANTA ANA RIVER WATERMASTER

FOR

ORANGE COUNTY WATER DISTRICT

v. CITY OF CHINO, et al.

CASE NO. 117628 - COUNTY OF ORANGE

THIRTY-EIGHTH
ANNUAL REPORT
OF THE
SANTA ANA RIVER WATERMASTER

FOR WATER YEAR
OCTOBER 1, 2007 - SEPTEMBER 30, 2008

APRIL 30, 2009

SANTA ANA RIVER WATERMASTER

ORANGE COUNTY WATER DISTRICT v. CITY OF CHINO, et al.
CASE NO. 117628--COUNTY OF ORANGE

WATERMASTER
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April 30, 2009

To: Clerk of Superior Court of Orange County and all Parties

Re: Watermaster Report for Water Year October 1, 2007 - September 30, 2008

Ladies and Gentlemen:

We have the honor of submitting herewith the Thirty-Eighth Annual Report of the Santa Ana River Watermaster. The supporting basic data Appendices are bound separately.

The principal findings of the Watermaster for the water year 2007-08 are as follows:

		At Prado	
1	Measured Outflow at Prado	199,690	acre-feet
2	Base Flow at Prado	116,483	acre-feet
3	Annual Weighted TDS in Base and Storm Flows	495	mg/L
4	Annual Adjusted Base Flow	136,382	acre-feet
5	Cumulative Adjusted Base Flow	4,662,306	acre-feet
6	Other Credits (Debits)	4,165	acre-feet
7	Cumulative Entitlement of OCWD	1,596,000	acre-feet
8	Cumulative Credit	3,100,835	acre-feet
9	One-Third of Cumulative Debit	0	acre-feet
10	Minimum Required Base Flow in 2008-09	34,000	acre-feet

At Riverside Narrows

1	Base Flow at Riverside Narrows	47,760	acre-feet
2	Annual Weighted TDS in Base Flow	675	mg/L
3	Annual Adjusted Base Flow	47,760	acre-feet
4	Cumulative Adjusted Base Flow	1,708,325	acre-feet
5	Cumulative Entitlement of IEUA and WMWD	579,500	acre-feet
6	Cumulative Credit	1,128,825	acre-feet
7	One-Third of Cumulative Debit	0	acre-feet
8	Minimum Required Base Flow in 2008-09	12,420	acre-feet

Based on these findings, the Watermaster concludes that there was full compliance with the provisions of the Stipulated Judgment in 2007-08.

At the end of the 2007-08 water year, Inland Empire Utilities Agency (formerly Chino Basin Municipal Water District) and Western Municipal Water District have a cumulative credit of 3,100,835 acre-feet to their Base Flow obligation at Prado Dam.
San Bernardino Valley Municipal Water District has a cumulative credit of 1,128,825 acre-feet to its Base Flow obligation at Riverside Narrows.

The Watermaster continued to exercise surveillance over the many active and proposed projects within the watershed for their potential effect on Base Flow.

Sincerely yours,

Santa Ana River Watermaster

By:

Richard W. Atwater

Bill B. Dendy

Samuel H. Fuller

Craig D. Miller

John V. Rossi

SANTA ANA RIVER WATERMASTER

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The following appendices are bound separately and available for review at the office of the Secretary of the Santa Ana River Watermaster.

CHAPTER I

WATERMASTER ACTIVITIES AND WATER CONDITIONS

Introduction

This Thirty-Eighth Annual Report of the Santa Ana River Watermaster covers Water Year 2007-08. The annual report is required by the Stipulated Judgment (Judgment) in the case of Orange County Water District v. City of Chino, et al., entered by the court on April 17, 1969 (Case No. 117628-County of Orange). The Judgment became effective on October 1, 1970. It contains a declaration of rights of the water users and other entities in the Lower Area of the Santa Ana River Basin downstream of Prado Dam as against those in the Upper Area tributary to Prado Dam, and provides a physical solution to satisfy those rights. Chapter IV presents a history of the litigation and a summary of the Judgment.

The physical solution accomplishes, in general, a regional intrabasin allocation of the surface flow of the Santa Ana River System. The Judgment leaves to each of the major hydrologic units within the basin the determination and regulation of individual rights therein and the development and implementation of its own water management plan subject only to compliance with the physical solution.

The Judgment designates four public agencies to represent the interests of the Upper and Lower Areas and gives them the responsibility to fulfill the obligations set forth in the Judgment, including the implementation of the physical solution. The Lower Area is represented by Orange County Water District (OCWD). The Upper Area is represented by San Bernardino Valley Municipal Water District (SBVMWD), Western Municipal Water District of Riverside County (WMWD), and Inland Empire Utilities Agency (IEUA), formerly the Chino Basin Municipal Water District (CBMWD). The locations of the districts are shown on Plate 1, "Santa Ana River Watershed".

The court appoints a five-member Watermaster Committee to administer the provisions of the Judgment. The Watermaster's duty is to maintain a continuous accounting of each of the items listed in the letter of transmittal at the front of this report and to report thereon annually for each water year to the court and the parties. The water year begins October 1 and ends the following September 30. The time for submission of the annual report is April 30, seven months after the end of the water year.

For the 2007-08 Water Year the Watermaster Committee consisted of Bill B. Dendy, Richard W. Atwater, John V. Rossi, Craig D. Miller, and Samuel H. Fuller. Mr. Dendy served as Chairman and Mr. Fuller served as Secretary/Treasurer. The history of the Watermaster Committee membership is presented in Chapter IV.

Compilation of Basic Data

The Watermaster annually compiles the basic hydrologic and water quality data necessary to determine compliance with the provisions of the Judgment. The data include records of stream discharge (flow) and quality for the Santa Ana River (River) at Prado Dam and at Riverside Narrows as well as discharges for most tributaries; flow and quality of nontributary water entering the River; rainfall records at locations in or adjacent to the Watershed; and other data that may be used to support the Watermaster's determinations.

For Water Year 2007-08 the United States Geological Survey (USGS) provided discharge and water quality data for the Santa Ana River at two gaging stations, "Santa Ana River Below Prado" (Prado) and "Santa Ana River at Metropolitan Water District (MWD) Crossing" (Riverside Narrows). The discharge data at both stations consist of computed daily mean discharges, expressed in cubic feet per second (cfs), based on continuous recordings. The water quality data at Prado consist of daily maximum and minimum values for electrical conductivity (EC), measured as specific conductance and expressed in microsiemens per centimeter (μs/cm) based on a continuous recording, and twice-monthly measured values for total dissolved solids (TDS), expressed in milligrams per liter (mg/L). The water quality data at Riverside Narrows consist of twice-monthly values for both EC and TDS. The USGS also provided discharge data for other gaging stations for streams tributary to Prado, including, among others, the Santa Ana River at E Street in San Bernardino, Chino Creek at Schaefer Avenue, Cucamonga Creek near Mira Loma, and Temescal Creek in the City of Corona (see Appendix A). At times the USGS must estimate daily mean discharges due to damaged or malfunctioning recording equipment.

The 2007-08 daily mean discharge record at Prado is considered by the USGS to be "fair" except for estimated data, which are rated "poor". Daily mean discharges at the station are controlled at times by storage operations in the reservoir behind Prado Dam just upstream. The maximum and minimum daily mean discharge values during the water year were, respectively, 2,570 cfs on January 28, 2008 and 73 cfs on July 1, 2008. The maximum and minimum daily mean EC values reported by the USGS at Prado were 1,170 μs/cm on March 25, 2008 and 263 μs/cm on January 5, 2008. The corresponding calculated TDS concentrations were 710 and 159 mg/L, respectively. EC records were rated "poor" by the USGS.

The 2007-08 daily mean discharge record at Riverside Narrows was rated by the USGS to be "fair" below 100 cfs and "poor" above. The maximum and minimum daily mean discharge values during the year were 3,180 cfs on January 5, 2008 and 47 cfs on June 21, 2008 and July 15, 2008. The maximum and minimum EC values reported by the USGS were 994 μs/cm on October 5, 2007 and 632 μs/cm on January 8, 2008. The corresponding measured TDS concentrations were 636 and 410 mg/L, respectively.

To assist in making its determinations each year the Watermaster refers to the records of many precipitation stations located in or near the Santa Ana River watershed. The record for San Bernardino County Department of Public Works (SBCDPW) Station 2146, located at the San Bernardino County Hospital, was used to define the hydrologic base period for the physical solution in the Judgment, and until Water Year 2000-01 the annual reports of

the Watermaster presented the daily and total annual precipitation record at Station 2146 in order to provide a comparison with historical conditions.

During Water Year 2000-01 Station 2146 was destroyed when the hospital buildings were demolished. For many days of that year precipitation data were missing entirely, and for many other days the reported data were clearly inconsistent with data from other nearby stations. The Watermaster decided that the record for Station 2146 for that entire year might be unreliable and decided to replace it with estimated data. Beginning with Water Year 2001-02 OCWD hydrogeologists Roy Herndon and Gwen Sharp have annually obtained the records for three nearby stations (2357 at San Bernardino, California Department of Forestry, 2015 at Del Rosa Ranger Station, and 2001B2 or 2001B3 at San Bernardino County Flood Control District) and, using the method recommended by the U.S. Weather Service, have annually estimated the precipitation at the location of the former Station 2146, and the Watermaster has accepted their estimates.

A new Station 2146-A was established by SBCDPW very near the site of the former Station 2146 and the intent of the Watermaster was to determine, over time, whether or not the quality of the record at the new station is adequate to justify its use in lieu of an estimated record. During the preparation of the report for Water Year 2004-05 the rainfall total recorded at Station 2146-A was sufficiently close to the estimate prepared by Herndon and Sharp for the Watermaster to accept the record at Station 2146-A in lieu of an estimate.

The USGS established a precipitation gage network during the 2003-04 Water Year to assist local flood control agencies with flood prediction in the area of the “Old Fire” which burned a large portion of the northerly mountains of Santa Ana River Watershed area during October and November 2003. When the local flood control agencies declined to fund the precipitation gage network the Santa Ana River Watermaster Committee recommended that the parties to the Judgment pay the annual operating expense for several of the gages and the parties agreed to do so. The parties also agreed to pay the cost for the USGS to establish and operate a precipitation gage, designated the Gilbert Street Precipitation Gage (USGS No. 340742117161701), at the same location as SBCDPW Station 2146-A. The Gilbert Street Gage was placed into operation in October 2005.

Beginning in Water Year 2005-06 Herndon and Sharp have annually compared the record for the Gilbert Street Gage to the record for Station 2146-A and found them to be virtually identical. The Watermaster has accepted their recommendation to use the Gilbert Street Gage in this and future annual reports. For Water Year 2007-08, the total precipitation recorded at the Gilbert Street gage was 13.70 inches, or 76% of the average of 17.98 inches that occurred during the 26-year base period (1934-35 through 1959-60) that was used in the formulation of the physical solution. Plate 3 graphically portrays the annual precipitation reported by the Watermaster from 1934-35 through 2007-08.

Watermaster Determinations

Each year the Watermaster uses its long-established procedures to analyze the basic hydrologic and water quality data in order to determine, at Riverside Narrows and at Prado, the Base Flow, the Adjusted Base Flow, the Cumulative Credits or Debits to Upper Area parties, and the Minimum Required Base Flow for the following water year. The procedures include determining, for both locations, the amounts of Nontributary Flow or other non-storm flow to be excluded from Base Flow.

During 2007-08 there was one source of non-storm flow in the river at Riverside Narrows, and two at Prado, that the Watermaster has included in neither Base Flow nor in the calculation of Cumulative Credits: WMWD-OCWD exchange water at both locations and Arlington Desalter water at Prado. A third source, treated municipal wastewater discharged to Temescal Creek from the San Jacinto River Watershed, was also excluded from Base Flow but was partially added to the Cumulative Credit at Prado.

- A total of 4,065 acre-feet of WMWD-OCWD Transfer water was discharged to the River above Riverside Narrows. The estimated average TDS concentration was 388 mg/L.
- At its Arlington Desalter in Riverside WMWD produced and delivered to a channel tributary to the River between Riverside Narrows and Prado 1,320 acre-feet of water having an average TDS of 393 mg/L.
- Eastern Municipal Water District (EMWD) reported that it discharged 10,808 acre-feet of municipal wastewater to Temescal Creek, with a flow-weighted average TDS of 712 mg/L, that originated in the San Jacinto River Watershed. Discharges from the San Jacinto Watershed were not taken into account in the settlement discussions and calculations that led to the flow obligations in the Judgment. In the past the Watermaster decided that fifty percent of any portion of such discharges that reach Prado Reservoir and that are subsequently captured by OCWD should be added to the Cumulative Credit at Prado (after the usual water quality adjustment). OCWD Hydrogeologist Gwen Sharp estimated that 8,930 acre-feet of the EMWD wastewater, with an average TDS concentration of 750 mg/L, reached Prado Reservoir and that 8,330 acre-feet of it was captured by OCWD, and recommended that the Cumulative Credit at Prado be increased accordingly, using the previously established fifty percent rule. The Watermaster accepted the estimate and the recommendation.

The Watermaster's determinations for the 2007-08 Water Year are explained in detail for Prado in Chapter II and for Riverside Narrows in Chapter III. A summary of annual determinations by the Watermaster for both locations for the period 1970-71 through 2007-08 is presented in Table 1. Note that the Base Flow obligations set forth in the Judgment at both Prado and Riverside Narrows have been met and cumulative credits have accrued to the Upper Area.

TABLE 1

SUMMARY OF FINDINGS AT PRADO

Water Year	Rainfall (in)[1]	USGS Measured Flow (ac-ft)	Total Flow (ac-ft)[2]	Base Flow (ac-ft)[3]	Weighted TDS (mg/L)[4]	Adjusted Base Flow (ac-ft)	Cumulative Credit (ac-ft)[5]
1970-71	11.97	51,864	51,864	38,402	727	38,402	-3,598
1971-72	9.62	51,743	51,743	40,416	707	40,416	-5,182
1972-73	18.46	76,848	77,484	48,999	638	51,531	4,349
1973-74	12.72	128,436	62,511	43,106	633	45,513	7,862
1974-75	13.49	93,397	61,855	50,176	694	51,263	17,125
1975-76	15.86	120,590	59,209	45,627	635	48,098	23,223
1976-77	11.95	72,278	62,953	48,387	660	50,000	31,223
1977-78	30.47	255,043	252,850	58,501	383	73,955	63,178
1978-79	17.51	145,198	134,506	71,863	580	79,049	100,227
1979-80	30.93	536,174	527,760	82,509	351	106,505	164,732
1980-81	10.45	118,300	117,888	74,875	728	74,875	205,652
1981-82	18.34	143,702	143,367	81,548	584	89,431	253,083
1982-83	32.36	426,273	426,750	111,692	411	138,591	353,036
1983-84	10.81	178,730	177,606	109,231	627	115,876	431,514
1984-85	12.86	163,247	162,912	125,023	617	133,670	523,184
1985-86	17.86	196,900	197,373	127,215	567	141,315	622,499
1986-87	8.08	140,872	143,191	119,848	622	127,638	708,137
1987-88	13.78	176,292	166,818	124,104	582	136,308	802,445
1988-89	12.64	159,659	152,743	119,572	583	131,230	891,675
1989-90	8.53	144,817	143,463	119,149	611	127,986	977,661
1990-91	15.48	195,186	186,426	111,151	514	128,379	1,064,040
1991-92	16.54	198,280	189,677	106,948	499	124,862	1,146,902
1992-93	30.92	571,138	566,630	128,067	368	163,499	1,268,401
1993-94	11.62	159,560	152,808	111,186	611	119,432	1,345,833
1994-95	25.14	429,270	422,816	123,468	415	152,792	1,458,387
1995-96	11.92	217,160	190,553	131,861	514	152,299	1,568,686
1996-97	18.64	249,685	198,459	136,676	514	157,861	1,684,547
1997-98	33.41	462,646	456,316	154,021	392	193,553	1,836,100
1998-99	8.02	184,998	182,310	158,637	581	174,369	1,968,469
1999-00	11.09	207,850	188,538	148,269	527	169,644	2,096,113
2000-01	16.13	222,559	208,535	153,914	525	176,360	2,230,473
2001-02	5.08	174,968	156,596	145,981	587	159,728	2,348,201
2002-03	16.22	256,157	245,947	146,113	463	174,970	2,482,058
2003-04	10.80	214,102	201,967	143,510	508	166,472	2,606,777
2004-05	29.89	638,513	637,568	154,307	348	199,570	2,766,713
2005-06	13.23	247,593	246,101	147,736	517	170,266	2,898,541
2006-07	4.61	156,147	153,823	129,830	604	140,216	3,002,288
2007-08	13.70	199,690	194,309	116,483	495	136,382	3,100,835

TABLE 1 (Continued)

SUMMARY OF FINDINGS AT RIVERSIDE NARROWS

Water Year	Rainfall (in)[1]	USGS Measured Flow (ac-ft)	Total Flow (ac-ft)[2]	Base Flow (ac-ft)[3]	Weighted TDS (mg/L)[4]	Adjusted Base Flow (ac-ft)	Cumulative Credit (ac-ft)[5]
1970-71	11.97	42,732	24,112	17,061	704	17,012	1,762
1971-72	9.62	41,257	22,253	16,157	712	16,017	2,529
1972-73	18.46	33,048	32,571	17,105	700	17,105	4,384
1973-74	12.72	25,494	24,494	16,203	700	16,203	5,337
1974-75	13.49	20,970	19,644	15,445	731	15,100	5,187
1975-76	15.86	27,627	26,540	17,263	723	16,977	6,914
1976-77	11.95	24,871	23,978	18,581	722	18,286	9,950
1977-78	30.47	182,500	181,760	22,360	726	21,941	16,641
1978-79	17.51	47,916	47,298	26,590	707	26,456	27,847
1979-80	30.93	254,333	253,817	25,549	676	25,549	38,146
1980-81	10.45	34,698	34,278	19,764	715	19,550	42,446
1981-82	18.34	83,050	82,708	32,778	678	32,778	59,974
1982-83	32.36	279,987	279,645	57,128	610	57,128	101,852
1983-84	10.81	83,087	82,745	56,948	647	56,948	143,550
1984-85	12.86	79,113	78,771	69,772	633	69,772	198,072
1985-86	17.86	99,600	99,258	68,220	624	68,220	251,042
1986-87	8.08	78,093	77,752	59,808	649	59,808	295,600
1987-88	13.78	80,047	79,706	55,324	620	55,324	335,674
1988-89	12.64	62,717	62,376	52,259	607	52,259	372,683
1989-90	8.53	58,500	58,159	53,199	590	53,583	411,016
1990-91	15.48	74,525	73,790	45,041	616	45,041	440,807
1991-92	16.54	71,768	71,427	40,306	620	40,306	465,863
1992-93	30.92	267,384	267,043	41,434	634	41,434	492,047
1993-94	11.62	45,477	45,006	31,278	677	31,278	508,075
1994-95	25.14	245,617	243,411	45,562	646	45,562	538,387
1995-96	11.92	83,256	81,786	54,548	625	54,548	577,685
1996-97	18.64	107,280	104,518	62,618	624	62,618	625,053
1997-98	33.41	214,375	213,033	65,013	601	65,013	674,816
1998-99	8.02	76,294	76,294	73,094	603	73,094	732,660
1999-00	11.09	75,572	75,572	63,499	602	63,499	780,909
2000-01	16.13	78,091	75,331	61,872	603	61,872	827,531
2001-02	5.08	68,844	59,434	58,705	606	58,705	870,986
2002-03	16.22	92,166	88,502	57,747	617	57,747	913,483
2003-04	10.80	77,336	75,799	54,788	634	54,788	953,021
2004-05	29.89	355,503	355,503	65,760	616	65,760	1,003,531
2005-06	13.23	111,840	111,113	67,161	608	67,161	1,055,442
2006-07	4.61	57,868	56,022	56,123	635	56,123	1,096,315
2007-08	13.70	78,619	74,554	47,760	675	47,760	1,128,825

TABLE 1 (Continued)

(1) Measured at San Bernardino County Department of Public Works (SBCDPW) Station 2146 (former San Bernardino County Hospital) until Water Year 2000-01. Estimated for that location for Water Years 2000-01 through 2003-04. Measured at SBCDPW Station 2146-A for Water Year 2004-05. Measured at USGS Gilbert Street Precipitation Gage at San Bernardino for Water Year 2005-06. For 2006-07, measured at SBCDPW 2146 from Oct. 1 to Dec. 21 and at USGS Gilbert Street Precipitation Gage for the remainder of the year. Measured at USGS Gilbert Street Precipitation Gage at San Bernardino for Water Year 2007-08.

(2) As determined by the Watermaster, Total Flow based on Computed Inflow at either Prado or Riverside Narrows in any year may be exclusive of any Nontributary Flow, Exchange Water or other "water management" flows and, at Prado, may include discharges from Lake Elsinore or the San Jacinto Watershed that reach the Santa Ana River.

(3) As determined by the Watermaster: (a) Base Flow at Prado in any year is exclusive of Storm Flow and may be exclusive of any Nontributary Flow, Exchange Water or other "water management" flows as well as any discharges from Lake Elsinore or the San Jacinto Watershed that reach the Santa Ana River; (b) Base Flow at Riverside Narrows in any year is exclusive of Storm Flow and may be exclusive of any Nontributary Flow, Exchange Water or other "water management" flows and, beginning in 1979-80, includes wastewater from Rubidoux CSD that is treated at the Riverside Regional WWTP.

(4) For Base and Storm Flow at Prado and Base Flow only at Riverside Narrows.

(5) As determined by the Watermaster, Cumulative Credit at Prado in any year may include credit for a portion of any water discharged from Lake Elsinore or the San Jacinto Watershed that reach the Santa Ana River.

Notable Watershed Programs and Activities

Each year when the Watermaster is compiling and analyzing the information it needs to prepare its report to the Court it also takes notice of programs and activities in the Watershed that, while they do not directly enter into the Watermaster's determinations, do have significant potential to affect River flow or quality. Following are brief descriptions of three such items.

Upper Area Wastewater Discharges

Data on municipal wastewater discharged in the Upper Area are compiled annually because it is a major contributor to Base Flow in the River. The historical data on wastewater discharged are summarized in Table 2. The locations of wastewater treatment plants are shown on Plate 2.

Salt Exports from the Upper Area

High salinity water, mostly from groundwater desalters, is exported from the Upper Area to the ocean through Santa Ana Watershed Project Authority's Santa Ana Regional Interceptor (SARI) and IEUA's Non-Reclaimable Wastewater System (NRWS). This salt export helps to protect River water quality and, therefore, helps the Upper Area parties comply with the Judgment. The available historical data on salt export are summarized in Table 3. The SARI first went into service in 1985-86. The NRWS has been in service since prior to 1970, but records of flow data prior to 1981-82 are missing.

The locations of the SARI and NRWS pipelines are shown on Plate 2.

Arundo donax Eradication

Arundo donax is a non-native species of reed that has invaded many waterways in California. It displaces native vegetation, resulting in undesirable habitat for animals. *Arundo* also consumes water at the rate of about 5.6 acre feet per acre per year compared to only about 1.9 for native plants, a net water loss of about 3.7 acre feet per year per acre of *Arundo*. By the early 1990s there were about 10,000 acres of *Arundo* in the Santa Ana River watershed. In 1997 a consortium of local, state and federal agencies launched a long term eradication program in the watershed for reasons of both habitat restoration and water savings. *Arundo* spreads quickly downstream as roots and rhizomes break off during high streamflows. Therefore the eradication program began at the farthest upstream locations and is working toward the River mouth. Each location requires multiyear retreatment. During Water Year 2007-08 the consortium eradicated 200 acres of *Arundo,* bringing the total eradicated to date to 3,500 acres.

Chino Groundwater Basin Hydraulic Control

During most of the twentieth century much of the land overlying the Chino Basin was devoted to irrigated agriculture that obtained its water supply directly from the basin. In more recent times the agriculture is being replaced by urban development, but the agricultural water use left behind a legacy of high concentrations of nitrates and other salts in the groundwater, making it unsuitable for urban use unless treated. As agricultural pumping of groundwater in the lower part of the Basin was cut back, the California Regional Water Quality Control Board, Santa Ana Region ("RWQCB"), and Orange County Water District both became concerned about the outlook for increased amounts of poor quality water rising in the Santa Ana River above Prado Dam.

Under historic anti-degradation water quality standards, the recharge of recycled water in the Chino Basin was impossible because the Basin lacked assimilative capacity. In order to allow for the use and recharge of recycled water, the RWQCB amended the Basin Plan for the Santa Ana Watershed to allow for the use of special "maximum benefit" standards. As a condition of approval of the use of the maximum benefit standards, the Regional Board's Water Quality Control Plan requires that the Chino Basin entities develop and implement a Hydraulic Control Program ("HCP") with the dual objectives of minimizing the loss of groundwater to the River and protecting the River against the salts by increasing pumping from wells low in the Basin. Much of the pumped groundwater is treated in desalination facilities, with the product water being served to municipalities and the brine stream being exported to the ocean via the SARI.

The Chino Basin entities file an annual report to demonstrate compliance to the RWQCB with the HCP's objectives of Basin isolation and protection of water quality in the River through a program of monitoring of water chemistry, hydrologic balance and piezometric groundwater surface elevations and through groundwater modeling.

TABLE 2
MUNICIPAL WASTEWATER EFFLUENT DISCHARGED ABOVE PRADO
(acre-feet)

Water Year	Wastewater discharges upstream from Colton that generally do not flow continuously to Santa Ana River above E Street				Wastewater discharges to Santa Ana River and its tributaries that have hydraulic continuity to the Santa Ana River above Riverside Narrows					Wastewater discharges to Santa Ana River between Riverside Narrows and Prado Dam								Wastewater discharges to Temescal Creek or its tributaries which have hydraulic continuity to the Santa Ana River					Total Discharge to Surface Flow of the Santa Ana River	Total Wastewater Discharged in Watershed
	Redlands	Beaumont	Yucaipa	Subtotal (A)	San Bernardino	Colton	Rialto	RIX[1]	Subtotal (B)	Riverside	Corona	IEUA #1[2]	IEUA #2	IEUA #5	IEUA CCWRF[3]	WRCR[4]	Subtotal (C)	EMWD (1)	Est. EMWD Arriving at Prado (2)	Elsinore Valley MWD (3)	Lee Lake WRP (4)	Subtotal (D) (2 + 3 + 4)	(B + C + D)	(A + B + C + D + 1 - 2)
1970-71	2,650	no record	--	2,650	17,860	2,520	2,270	--	22,650	18,620	3,190	--	--	--	--	--	21,810	--	--	--	--	--	44,460	47,110
1971-72	2,830	no record	--	2,830	16,020	2,230	2,400	--	20,650	19,010	3,230	6,740	--	--	--	--	28,980	--	--	--	--	--	49,630	52,460
1972-73	2,810	450	--	3,260	18,670	2,530	2,260	--	23,460	19,060	3,340	10,380	--	--	--	--	32,780	--	--	--	--	--	56,240	59,500
1973-74	2,770	600	--	3,370	17,680	2,530	2,320	--	22,530	19,560	3,510	11,440	2,320	--	--	--	36,830	--	--	--	--	--	59,360	62,730
1974-75	2,540	570	--	3,110	16,750	1,980	2,320	--	21,050	19,340	4,020	14,960	2,280	--	--	--	40,600	--	--	--	--	--	61,650	64,760
1975-76	2,450	620	--	3,070	17,250	2,540	2,240	--	22,030	19,580	4,700	15,450	2,950	--	--	--	42,680	--	--	--	--	--	64,710	67,780
1976-77	3,170	580	--	3,750	17,650	3,260	2,330	--	23,240	18,770	5,010	14,640	3,380	--	--	--	41,800	--	--	--	--	--	65,040	68,790
1977-78	3,280	620	--	3,900	18,590	3,810	2,380	--	24,780	20,310	5,200	14,650	4,060	--	--	--	44,220	--	--	--	--	--	69,000	72,900
1978-79	3,740	670	--	4,410	19,040	3,850	3,050	--	25,940	21,070	5,390	15,040	5,070	--	--	--	46,570	--	--	--	--	--	72,510	76,920
1979-80	4,190	690	--	4,880	20,360	4,190	2,990	--	27,540	22,910	5,360	14,410	5,520	--	--	--	48,200	--	--	--	--	--	75,740	80,620
1980-81	4,410	690	--	5,100	20,550	3,930	3,370	--	27,850	24,180	5,590	17,270	5,260	--	--	--	52,300	--	--	--	--	--	80,150	85,250
1981-82	4,420	700	--	5,120	23,340	3,780	3,470	--	30,590	25,640	5,410	19,580	5,360	--	--	--	55,990	--	--	--	--	--	86,580	91,700
1982-83	4,530	710	--	5,240	24,160	3,600	3,620	--	31,380	25,020	5,860	20,790	4,290	--	--	--	55,960	--	--	--	--	--	87,340	92,580
1983-84	5,150	800	--	5,950	22,080	3,700	3,830	--	29,610	26,090	6,200	20,950	3,950	--	--	--	57,190	--	--	--	--	--	86,800	92,750
1984-85	4,990	840	--	5,830	23,270	3,830	4,070	--	31,170	27,750	6,250	25,160	4,280	--	--	--	63,440	--	--	--	--	--	94,610	100,440
1985-86	5,200	820	--	6,020	24,720	4,010	4,720	--	33,450	28,820	5,900	28,240	2,660	--	--	--	65,620	--	--	--	--	--	99,070	105,090
1986-87	5,780	880	800	7,460	26,810	4,170	5,350	--	36,330	30,340	6,170	27,160	5,000	--	--	--	68,670	--	--	--	--	--	105,000	112,460
1987-88	6,060	940	1,850	8,850	27,880	5,240	6,040	--	39,160	34,660	6,050	31,290	5,500	--	--	--	77,500	--	--	--	--	--	116,660	125,510
1988-89	5,250	1,030	2,260	8,540	27,640	5,550	6,280	--	39,470	35,490	8,080	35,510	6,180	--	--	--	85,260	--	--	--	--	--	124,730	133,270
1989-90	6,360	1,100	2,370	9,830	28,350	5,810	6,260	--	40,420	33,210	9,140	34,760	5,730	--	--	--	82,840	--	--	--	--	--	123,260	133,090
1990-91	6,690	1,120	2,490	10,300	27,570	5,670	6,290	--	39,530	32,180	9,110	36,840	6,100	--	--	--	84,230	--	--	--	--	--	123,760	134,060
1991-92	6,230	1,150	2,580	9,960	25,060	5,660	6,360	--	37,080	32,660	9,010	40,360	5,780	--	1,550	--	89,360	--	--	--	--	--	126,440	136,400
1992-93	6,880	1,180	2,580	10,640	25,550	6,210	6,460	--	38,220	34,100	9,600	41,510	5,640	--	4,720	--	95,570	--	--	--	--	--	133,790	144,430
1993-94	6,440	1,150	2,710	10,300	23,800	5,830	6,540	--	36,170	32,640	7,790	37,310	5,430	--	7,010	--	90,180	--	--	--	--	--	126,350	136,650
1994-95	6,720	1,180	2,560	10,460	26,330	5,500	6,820	--	38,650	33,950	7,340	39,680	5,360	--	8,690	--	95,020	--	--	--	--	--	133,670	144,130
1995-96	6,550	1,260	2,640	10,450	13,240	2,770	6,890	20,760	43,660	33,960	7,850	39,590	4,810	--	9,060	--	95,270	--	--	--	--	--	138,930	149,380
1996-97	6,510	1,280	2,780	10,570	--	--	7,160	42,800	49,960	34,240	5,040	39,940	4,790	--	9,750	--	93,760	--	--	--	--	--	143,720	154,290
1997-98	7,022	1,356	3,116	11,494	--	--	7,063	49,683	56,746	35,422	8,718	44,940	4,969	--	9,264	1,461	104,774	--	--	--	--	--	161,520	173,014
1998-99	7,379	1,367	3,128	11,874	--	--	6,524	47,587	54,111	34,844	11,629	43,354	5,345	--	9,534	4,594	109,299	--	--	3,049	--	3,049	166,459	178,333
1999-00	7,670	1,373	3,284	12,327	--	--	7,392	45,012	52,404	35,399	13,152	42,967	4,378	--	9,954	2,371	108,221	--	--	4,159	--	4,159	164,784	177,111
2000-01	7,379	1,377	3,345	12,101	--	--	8,346	49,407	57,753	35,663	13,100	43,863	4,401	--	11,615	2,210	110,852	--	--	4,245	--	4,245	172,850	184,951
2001-02	7,395	1,434	3,285	12,114	--	--	7,952	44,513	52,465	35,586	12,378	40,377	4,056	--	10,677	2,380	105,454	--	--	4,477	352	4,829	162,748	174,862
2002-03	7,499	1,593	3,480	12,572	217	4	8,042	45,570	53,833	36,298	12,027	45,838	4,343	--	10,837	2,409	111,752	--	--	5,012	444	5,456	171,041	183,613
2003-04	6,625	1,793	3,898	12,316	124	0	8,158	44,526	52,808	36,664	11,394	39,734	2,307	4,821	9,113	2,818	106,851	4,345	1,140	5,037	549	6,726	166,385	181,906
2004-05	7,632	2,051	3,899	13,582	4,406	346	7,815	42,025	54,592	38,123	12,558	40,644	--	8,777	8,637	3,521	112,260	15,195	13,746	7,025	653	21,424	188,276	203,307
2005-06	5,789	2,246	3,945	11,980	1,184	101	7,883	45,259	54,427	37,358	13,021	35,486	--	9,036	8,389	3,311	106,601	14,669	12,631	6,529	701	19,861	180,889	194,907
2006-07	4,991	2,555	4,056	11,602	3	0	7,654	44,011	51,668	36,355	11,727	31,829	--	12,534	6,851	4,376	103,672	13,105	11,092	4,792	691	16,575	171,915	185,530
2007-08	3,665	2,856	4,055	10,576	563	0	7,258	42,476	50,297	35,703	9,408	26,001	--	12,200	8,029	5,952	97,293	10,808	8,930	1,553	419	10,902	158,492	170,946

1. RIX = Rapid Infiltration and Extraction Facility for San Bernadino and Colton, including over-extraction of groundwater
2. Beginning in 1997-98, includes IEUA Plant #4 flows.
3. CCWRF = Carbon Canyon Water Reclamation Facility
4. WRCR = Western Riverside County Regional Wastewater Treatment Plant

The amounts shown in this table were determined from data provided by the agencies.

TABLE 3

HIGH SALINITY WATER EXPORTED
FROM THE SANTA ANA RIVER WATERSHED

Water Year	Inland Empire Utility Agency Non-Reclaimable Wastewater	Santa Ana Watershed Project Authority Santa Ana Regional Interceptor (SARI)[1]		
	North System (acre-feet)	SARI Flow[2] (acre-feet)	Average TDS (mg/L)	Total Flow (acre-feet)
1970-71	NA	---	---	---
1971-72	NA	---	---	---
1972-73	NA	---	---	---
1973-74	NA	---	---	---
1974-75	NA	---	---	---
1975-76	NA	---	---	---
1976-77	NA	---	---	---
1977-78	NA	---	---	---
1978-79	NA	---	---	---
1979-80	NA	---	---	---
1980-81	NA	---	---	---
1981-82	4,236	---	---	4,236
1982-83	4,651	---	---	4,651
1983-84	4,142	---	---	4,142
1984-85	2,346	---	---	2,346
1985-86	2,995	2,791 [3]	NA	5,786 [3]
1986-87	4,943	2,869 [3]	NA	7,813 [3]
1987-88	5,177	2,948 [3]	NA	8,125 [3]
1988-89	5,949	3,622 [3]	NA	9,572 [3]
1989-90	5,240	7,393	1,649	12,633
1990-91	2,847	7,340	1,906	10,187
1991-92	3,421	6,457	2,346	9,878
1992-93	3,774	5,277	2,516	9,051
1993-94	3,764	7,860	2,302	11,624
1994-95	4,131	8,656	1,903	12,787
1995-96	3,863	9,597	2,175	13,460
1996-97	4,191	10,225	2,292	14,417
1997-98	4,575	8,210	2,456	12,785
1998-99	3,666	4,305	2,611	7,971
1999-00	4,272	7,711	2,154	11,983
2000-01	5,075	8,205	2,504	13,280
2001-02	4,297	8,385	3,289	12,682
2002-03	3,926	9,331	3,482	13,257
2003-04	3,950	10,505	3,798	14,455
2004-05	4,220	10,971	3,460	15,191
2005-06	5,085	12,847	4,118	17,932
2006-07	4,609	13,168	4,120	17,777
2007-08	4,658	12,123	4,986	16,781

1. Santa Ana Regional Interceptor began operation in 1985-86.
2. IEUA Non-Reclaimable Wastewater from the South System goes into the SARI and is included in SARI Flow.
3. SARI flow and Total Flow for 1985-86 through 1988-89 is partial flow.

NA = Data Not Available

Watermaster Service Expenses

In accordance with Paragraph 7(d) of the Stipulated Judgment, the fees and expenses of each of the members of the Watermaster are borne by the parties by whom they were nominated. All other Watermaster service expenses are shared by the parties, with OCWD paying 40% of the cost and WMWD, SBVMWD, and IEUA each paying 20% of the cost.

The Watermaster annually adopts a budget for the costs of services other than those provided by the USGS. Table 4 shows the budget and actual expenses incurred for such services during the 2007-08 fiscal year as well as the budget adopted for the 2008-09 fiscal year. A financial review was performed by OCWD and is reported in Appendix C.

TABLE 4

WATERMASTER SERVICE BUDGET AND EXPENSES

Budget Item	July 1, 2007 to June 30, 2008 Budget	July 1, 2007 to June 30, 2008 Expenses*	July 1, 2008 to June 30, 2009 Budget
Support Services	$13,000.00	$11,240.19	$13,000.00
Reproduction of Annual Report	1,000.00	833.78	1,000.00
TOTAL	$14,000.00	$12,073.97	$14,000.00

* Expenses for 2007-08 were paid in 2008-09

Stream flow measurements and water quality data required by the Watermaster are, for the most part, furnished by the USGS through a cooperative monitoring program which also includes some precipitation data to supplement data provided by the USGS and other agencies. The costs of the cooperative monitoring program for the 2007-08 Water Year, and each party's share of the costs, are set forth in Table 5.

TABLE 5

COSTS TO THE PARTIES AND USGS FOR MEASUREMENTS WHICH PROVIDE DATA USED BY THE SANTA ANA RIVER WATERMASTER

October 1, 2007 to September 30, 2008

	Total Cost	USGS Share	Parties' Share
USGS PRECIPITATION GAGING STATIONS			
Gilbert Street Gage at San Bernardino	$7,200	$0	$7,200
"E" Street Gage	7,200	0	7,200
Middle Fork Lytle Creek Gage	7,200	0	7,200
Ridge Top Gage near Devore	7,200	0	7,200
USGS FLOW AND WATER QUALITY GAGING			
Santa Ana River at MWD Crossing (Riverside Narrows)			
Surface Water Gage	28,950	11,600	17,350
Water Quality Monitoring/TDS Sampling	12,000	4,800	7,200
Santa Ana River below Prado Dam			
Surface Water Gage	20,600	8,250	12,350
Continuous Temperature and Conductance	27,500	11,000	16,500
Water Quality Conductance Program	2,300	0	2,300
Extra Measurements	5,250	0	5,250
Temescal Creek above Main St., near Corona	20,600	8,250	12,350
Chino Creek at Schaefer	20,600	8,250	12,350
Cucamonga Creek at Mira Loma	20,600	8,250	12,350
TOTAL COST AND SHARES	$187,200	$60,400	$126,800
COST DISTRIBUTION AMONG PARTIES			
Inland Empire Utilities Agency	20%		$25,360
Orange County Water District	40%		$50,720
San Bernardino Valley Municipal Water District	20%		$25,360
Western Municipal Water District	20%		$25,360

CHAPTER II

BASE FLOW AT PRADO

This chapter deals with determinations of 1) the components of flow at Prado, which include Nontributary Flow, Arlington Desalter discharge, water discharged from San Jacinto Watershed, Storm Flow, and Base Flow and 2) the Adjusted Base Flow at Prado credited to IEUA and WMWD.

Flow at Prado

During the 2007-08 Water Year, the flow of the Santa Ana River as measured at the USGS gaging station below Prado Dam amounted to 199,690 acre-feet. No water was in storage at the beginning of the year, but 4 acre-feet of water remained in storage at the end of the year. Inflow to the reservoir included 116,483 acre-feet of Base Flow and 68,896 acre-feet of Storm Flow. Nontributary flows consisted of Arlington Desalter discharges and WMWD-OCWD Transfer flows. Water discharged from San Jacinto Watershed was also excluded from Base Flow but was partially credited to the Cumulative Credit at Prado. Of the Nontributary Flow due to the Arlington Desalter discharge, 1,320 acre-feet reached Prado Reservoir during 2007-08. WMWD-OCWD Transfer flow at Prado was 4,065 acre-feet. Discharge from the San Jacinto Watershed calculated to have reached Prado Reservoir was 8,930 acre-feet. The monthly components of flow of the Santa Ana River at Prado Dam for 2007-08 are listed in Table 6 and are shown graphically on Plate 4. Historical Base and Storm Flows of the Santa Ana River below Prado during the period 1934-35 through 2007-08 are presented on Plate 5.

Nontributary Flow

Nontributary Flow includes water that originated outside the watershed, as well as other water that the Watermaster has determined should be excluded from Base Flow. During the 2007-08 Water Year it included Arlington Desalter discharge and WMWD-OCWD Transfer flow deliveries made to the Santa Ana River upstream of Riverside Narrows and Prado Dam. Flows from the San Jacinto Watershed were also determined to have reached Prado Reservoir. In the past it has included, and in the future may include, other water discharged to the river pursuant to the water exchanges or other such programs.

High Groundwater Mitigation Project

No High Groundwater Mitigation Project water was discharged to the Santa Ana River during the 2007-08 Water Year.

TABLE 6

COMPONENTS OF FLOW AT PRADO DAM
WATER YEAR 2007-08
(acre-feet)

	USGS Measured Outflow	Storage Change (1)	Computed Inflow	San Jacinto Watershed Flow at Prado (2)	WMWD Transfer Water (3)	San Antonio Creek (4)	Arlington Desalter	Storm Flow	Base Flow
2007									
October	10,860	0	10,860	0	0	0	209	579	10,072
November	11,048	3,240	14,288	0	257	0	141	3,234	10,656
December	26,178	(3,224)	22,954	32	199	0	214	10,925	11,584
2008									
January	45,521	10,872	56,393	3,037	0	0	0	41,294	12,062
February	25,190	(813)	24,377	3,233	0	0	0	10,087	11,057
March	24,298	(10,056)	14,242	1,811	9	0	68	1,017	11,337
April	12,589	(19)	12,570	817	450	0	189	297	10,817
May	11,597	0	11,597	0	316	0	104	1,463	9,714
June	9,072	0	9,072	0	630	0	113	0	8,329
July	7,636	4	7,640	0	678	0	74	0	6,888
August	7,912	0	7,912	0	779	0	127	0	7,006
September	7,789	0	7,789	0	747	0	81	0	6,961
Total	199,690	4	199,694	8,930	4,065	0	1,320	68,896	116,483

(1) The monthly change in storage is included in the monthly components of flow.

(2) Discharge due to overflow of Lake Elsinore and/or discharge of wastewater by EMWD from the San Jacinto Watershed.

(3) WMWD Transfer Program water pumped from Colton and Riverside Basins and discharged to the Santa Ana River above the Riverside Narrows.

(4) State Water Project water released into San Antonio Creek from turnout OC-59 and calculated to have reached Prado Dam in the 2007-08 Water Year.

Releases to San Antonio Creek

During the 2007-08 Water Year, no State Water Project water was released into San Antonio Creek from the Foothill Feeder at turnout OC-59 near Upland for OCWD.

Arlington Desalter Discharge

Groundwater flowing from the Arlington Basin has historically been a component of the Santa Ana River flow. This groundwater has been degraded through agricultural and other uses. Two parties to the Stipulated Judgment, WMWD and OCWD, as members of the Santa Ana Watershed Project Authority, constructed a groundwater cleanup project that is designed to reduce the poor quality underflow from the basin. This project is known as the Arlington Desalter and consists of five extraction wells and a treatment facility that reduces salinity. The capacity of the facility is approximately 6 million gallons per day (mgd). The facility began operation in July 1990, with OCWD buying the product water delivered through the Santa Ana River. Beginning in 2004, the City of Norco began purchasing a portion of the Arlington Desalter product water for direct potable use.

The Watermaster determined that the flow and TDS of the water delivered to OCWD via the Santa Ana River from this facility would be excluded from the computation of Base Flow and Adjusted Base at Prado. During the 2007-08 Water Year, 1,320 acre-feet of Arlington Desalter flows were discharged to the Arlington drain. WMWD provided daily discharge rates and electrical conductance of water discharged. A summary of Arlington Desalter discharges is contained in Appendix F.

WMWD-OCWD Transfer Program

In 2001, OCWD and WMWD entered into an agreement that provides for delivery of groundwater pumped primarily from the Colton and Riverside Basins via the Riverside Canal and Santa Ana River. During the 2007-08 Water Year, 4,065 acre-feet of WMWD-OCWD Transfer Program water deliveries were made to the Santa Ana River upstream of Riverside Narrows and Prado Dam. A summary of the WMWD-OCWD Transfer Program discharges is contained in Appendix K.

San Jacinto Watershed Discharge

Prior to the 1997-98 Water Year, discharges from the San Jacinto Watershed reaching Prado Reservoir were due to discharges from Lake Elsinore, and had been accounted for as “Lake Elsinore Discharge.” In 1998 Eastern Municipal Water District (EMWD) completed its Reach 4 discharge pipeline to Wasson Canyon, which is tributary to Temescal Wash. The pipeline discharges tertiary-treated wastewater to Temescal Wash above Lee Lake when flows exceed EMWD’s storage facility capacity. The collective discharges from Lake Elsinore and EMWD to Temescal Wash are referred to herein as San Jacinto Watershed discharges.

During the 2007-08 Water Year, EMWD discharged 10,808 acre-feet of treated wastewater to Temescal Wash, and 8,930 acre-feet of that discharge was estimated to have reached Prado Reservoir. The Watermaster previously determined that to the extent such

discharges occur and are captured by OCWD, fifty percent of such captured water will be added as Cumulative Credit at Prado. OCWD captured 8,330 acre-feet of the San Jacinto Watershed discharge and 600 acre-feet flowed past OCWD's groundwater recharge facilities and was considered as lost to the ocean. A summary of the EMWD Discharges, San Jacinto Watershed Discharge Calculations, and San Jacinto Watershed Discharges is contained in Appendix G. Page G-15, Discharge of Temescal Creek at Main Street in Corona, EMWD Discharge, and Elsinore Precipitation, illustrates the known and estimated components of flow of Temescal Creek.

Storm Flow

Portions of storm flows are retained behind Prado Dam for flow regulation and for water conservation purposes. The Army Corps of Engineers (ACOE) owns the Dam, which has a spillway elevation of 543 feet above mean sea level, and operates it according to a flow release schedule which allows for water to be captured and subsequently released at rates which can be captured and recharged by OCWD. On April 12, 1995, the ACOE, the U.S. Fish and Wildlife Service, and OCWD reached an agreement to increase the seasonal water conservation pool from elevation 494 to elevation 505 feet after March 1 of each year in exchange for a $1 million contribution by OCWD to the U.S. Fish and Wildlife Service to be used to develop least Bell's vireo habitat by the removal of a non-native plant, *Arundo donax*. In 2006 the ACOE and OCWD signed an agreement to increase the winter conservation pool elevation from elevation 494 to 498 in exchange for a $930,000 contribution to habitat restoration in the watershed. Monthly and annual quantities of Storm Flow are shown in Table 6.

During the 2007-08 Water Year, the maximum volume of water stored in Prado Reservoir reached 13,304 acre-feet on January 28, 2008. The maximum daily mean flow released from Prado Dam to the Santa Ana River was 2,570 cfs on January 28, 2008.

Base Flow

The Base Flow is that portion of the total flow remaining after subtracting Storm Flow, Nontributary Flow, Exchange Water, and certain other flows determined by the Watermaster. Flows affecting the determination of Base Flow in 2007-08 included Arlington Desalter discharge, WMWD-OCWD Transfer Program flows, and discharges from the San Jacinto Watershed. The general procedure used by the Watermaster to separate the 2007-08 flow components was the same as used for previous years and is fully described in the Fifth (1974-75) and the Twelfth (1981-82) Annual Reports. Table 6 shows the monthly and annual quantities of Base Flow.

Water Quality Adjustments

The flow-weighted average TDS for the total flow passing Prado Dam, including Arlington Desalter discharge, WMWD-OCWD Transfer Program water deliveries, and San Jacinto Watershed discharge, was found to be 504 milligrams per liter (mg/L). This determination was based on records from a continuous monitoring device operated by the USGS for EC of the Santa Ana River flow below Prado Dam. This record was supplemented by twenty-four (24) grab samples for EC collected by the USGS and analyzed for TDS.

A correlation between TDS and EC yields the following best fit equation:

$$TDS = EC \times 0.607216$$

(where the units of TDS and EC are mg/L and μs/cm, respectively)

Using the daily EC data, flow-weighted average daily values for TDS were calculated using the above equation. The plot of TDS on Plate 6 shows the daily average TDS concentration of the Santa Ana River flow passing Prado Dam. A summary of daily TDS and EC of the Santa Ana River below Prado Dam is contained in Appendix H. At Prado Dam, the flow-weighted average annual TDS value of 504 mg/L represents the quality of the total flow including Arlington Desalter discharge, WMWD-OCWD Transfer Program water deliveries, and discharges from the San Jacinto Watershed. The Stipulated Judgment requires that Base Flow shall be subject to adjustment based on the TDS of Base Flow and Storm Flow only. Hence, a determination of the TDS of Base Flow plus Storm Flow only, is detailed in the following paragraphs.

Adjustment for High Groundwater Mitigation Project Discharge

During the 2007-08 Water Year SBVMWD discharged no High Groundwater Mitigation Project water. Therefore, no water quality adjustment was necessary.

Adjustment for Flow to San Antonio Creek

During the 2007-08 Water Year, no water was released from OC-59 to San Antonio Creek. Therefore, no water quality adjustment was necessary.

Adjustment for Arlington Desalter Discharge

During the 2007-08 Water Year, 1,320 acre-feet of Arlington Desalter discharges were made. A flow-weighted average TDS of 393 mg/L was calculated for Arlington Desalter water reaching Prado Dam. A summary of the Arlington Desalter discharge, daily mean EC, and computed TDS is contained in Appendix F.

Adjustment for WMWD-OCWD Transfer Program Discharge

During the 2007-08 Water Year, 4,065 acre-feet of WMWD-OCWD Transfer Program water was delivered. A flow-weighted average TDS of 388 mg/L was calculated for WMWD-OCWD Transfer water reaching Prado Dam. A summary of the WMWD-OCWD Transfer Program flows is contained in Appendix K.

Adjustment for San Jacinto Watershed Discharge

Discharge from the San Jacinto Watershed during the 2007-08 Water Year reaching Prado Reservoir was estimated to be 8,930 acre-feet. Using EMWD discharge data, the TDS data for the discharge, and monthly volume of the discharge estimated to have reached Prado reservoir, a flow-weighted average TDS of 750 mg/L was calculated. A summary of these calculations is contained in Appendix G.

Flow Component	Annual Flow (acre-feet)	Average TDS (mg/L)	Annual Flow X Average TDS
1. Measured Outflow	199,690	504	100,643,760
2. Less High Groundwater Mitigation Project	0	---	---
3. Less Nontributary Flow San Antonio Creek	0	---	---
4. Less Arlington Desalter	(1,320)	393	(518,760)
5. Less WMWD Transfer Program	(4,065)	388	(1,577,220)
6. Less San Jacinto Watershed Discharge	(8,930)	750	(6,697,500)
7. Measured Outflow less lines 2 through 6	185,375		91,850,280
Average TDS in Total Base and Storm Flow		91,850,280 ÷ 185,375 = 495 mg/L	

After adjusting for Arlington Desalter discharges, WMWD-OCWD Transfer Program flows, and San Jacinto Watershed discharge, the weighted average annual TDS of Storm Flow and Base Flow for 2007-08 is 495 mg/L, as shown above.

Adjusted Base Flow at Prado

The Stipulated Judgment provides that the amount of Base Flow at Prado received during any year shall be subject to adjustment based on weighted average annual TDS of the Base Flow and Storm Flow at Prado as follows:

If the Weighted Average TDS in Base Flow and Storm Flow at Prado is:	Then the Adjusted Base Flow shall be determined by the formula:
Greater than 800 mg/L	$Q - \frac{35}{42{,}000} Q(TDS-800)$
700 mg/L to 800 mg/L	Q
Less than 700 mg/L	$Q + \frac{35}{42{,}000} Q(700-TDS)$

Where: Q = Base Flow actually received.

The weighted average annual TDS of 495 mg/L is less than 700 mg/L. Therefore, the Base Flow must be adjusted by the above equation for TDS less than 700 mg/L. Thus the Adjusted Base Flow is as follows:

$$(116{,}483 \text{ acre-feet}) + \frac{35}{42{,}000} (116{,}483 \text{ acre-feet}) (700 - 495) = 136{,}382 \text{ acre-feet}$$

Entitlement and Credit or Debit

Paragraph 5(c) of the Stipulated Judgment states that "CBMWD (now IEUA) and WMWD shall be responsible for an average annual Adjusted Base Flow of 42,000 acre-feet at Prado. CBMWD (IEUA) and WMWD each year shall be responsible for not less than 37,000 acre-feet of Base Flow at Prado, plus one-third of any cumulative debit; provided, however, that for any year commencing on or after October 1, 1986, when there is no cumulative debit, or for any year prior to 1986 whenever the cumulative credit exceeds 30,000 acre-feet, said minimum shall be 34,000 acre-feet."

The Watermasters agreed that San Jacinto Watershed outflows were not envisioned during the formulation of the Judgment and because of the occurrence of San Jacinto Watershed flows at Prado, the Watermaster decided, as in previous years, to credit one-half of any such outflows recharging the groundwater basin in Orange County to CBMWD (IEUA) and WMWD.

Of the 8,930 acre-feet of San Jacinto Watershed outflows reaching Prado Reservoir in 2007-08, 600 acre-feet flowed past OCWD's groundwater recharge facilities and was considered as lost to the ocean. Therefore, a net amount of 8,330 acre-feet of San Jacinto Watershed outflow recharged the Orange County groundwater basin in 2007-08. One-half of that amount has been considered a credit against the Upper Area Base Flow obligation

at Prado Dam. Thus, an additional 4,165 acre-feet was added to the Cumulative Credit at Prado Dam.

While compiling the 2002-03 Watermaster Report, it came to the attention of the Watermaster that in previous reports one-half the San Jacinto Watershed discharge reaching Prado and recharging Orange County groundwater basin had been included in the Cumulative Adjusted Base Flow as well as in the Cumulative Credit. The Watermaster determined that the San Jacinto Watershed discharge should be included only in the Cumulative Credit and not in the Cumulative Adjusted Base Flow. Therefore, the Watermaster revised the Cumulative Adjusted Base Flow and has included Table 7 summarizing the historical Watermaster findings concerning flow at Prado that reflect the revision in the report following the Watermaster's findings.

The Watermaster's findings concerning flow at Prado for 2007-08 required under the Stipulated Judgment are as follows:

1.	Measured Outflow at Prado	199,690 acre-feet
2.	Base Flow at Prado	116,483 acre-feet
3.	Annual Weighted TDS of Base and Storm Flow	495 mg/L
4.	Annual Adjusted Base Flow	136,382 acre-feet
5.	Cumulative Adjusted Base Flow	4,662,306 acre-feet
6.	Other Credits (Debits) [1]	4,165 acre-feet
7.	Cumulative Entitlement of OCWD	1,596,000 acre-feet
8.	Cumulative Credit [2]	3,100,835 acre-feet
9.	One-Third of Cumulative Debit	0 acre-feet
10.	Minimum Required Base Flow in 2008-09	34,000 acre-feet

1. Other Credits (Debits) are comprised of San Jacinto Watershed outflow.
2. Cumulative Credit includes 34,529 acre-feet of San Jacinto Watershed outflow.

TABLE 7
HISTORICAL WATERMASTER FINDINGS AT PRADO DAM
(acre-feet)

Water Year	Base Flow	Annual Adjusted Base Flow	Cumulative Adjusted Base Flow	Other Credits (Debits)[1]	Cumulative Entitlement of OCWD	Cumulative Credit[2]
1970-71	38,402	38,402	38,402	0	42,000	(3,598)
1971-72	40,416	40,416	78,818	0	84,000	(5,182)
1972-73	48,999	51,531	130,349	0	126,000	4,349
1973-74	43,106	45,513	175,862	0	168,000	7,862
1974-75	50,176	51,263	227,125	0	210,000	17,125
1975-76	45,627	48,098	275,223	0	252,000	23,223
1976-77	48,387	50,000	325,223	0	294,000	31,223
1977-78	58,501	73,955	399,178	0	336,000	63,178
1978-79	71,863	79,049	478,227	0	378,000	100,227
1979-80	82,509	106,505	584,732	0	420,000	164,732
1980-81	74,875	74,875	659,607	8,045	462,000	205,652
1981-82	81,548	89,431	749,038	0	504,000	253,083
1982-83	111,692	138,591	887,629	3,362	546,000	353,036
1983-84	109,231	115,876	1,003,505	4,602	588,000	431,514
1984-85	125,023	133,670	1,137,175	0	630,000	523,184
1985-86	127,215	141,315	1,278,490	0	672,000	622,499
1986-87	119,848	127,638	1,406,128	0	714,000	708,137
1987-88	124,104	136,308	1,542,436	0	756,000	802,445
1988-89	119,572	131,230	1,673,666	0	798,000	891,675
1989-90	119,149	127,986	1,801,652	0	840,000	977,661
1990-91	111,515	128,379	1,930,031	0	882,000	1,064,040
1991-92	106,948	124,862	2,054,893	0	924,000	1,146,902
1992-93	128,067	163,499	2,218,392	0	966,000	1,268,401
1993-94	111,186	119,432	2,337,824	0	1,008,000	1,345,833
1994-95	123,468	152,792	2,490,616	1,762	1,050,000	1,458,387
1995-96	131,861	152,299	2,642,915	0	1,092,000	1,568,686
1996-97	136,676	157,861	2,800,776	0	1,134,000	1,684,547
1997-98	154,021	193,553	2,994,329	0	1,176,000	1,836,100
1998-99	158,637	174,369	3,168,698	0	1,218,000	1,968,469
1999-00	148,269	169,644	3,338,342	0	1,260,000	2,096,113
2000-01	153,914	176,360	3,514,702	0	1,302,000	2,230,473
2001-02	145,981	159,728	3,674,430	0	1,344,000	2,348,201
2002-03	146,113	174,970	3,849,400	887	1,386,000	2,482,058
2003-04	143,510	166,472	4,015,872	247	1,428,000	2,606,777
2004-05	154,307	199,570	4,215,442	2,366	1,470,000	2,766,713
2005-06	147,736	170,266	4,385,708	3,562	1,512,000	2,898,541
2006-07	129,830	140,216	4,525,924	5,531	1,554,000	3,002,288
2007-08	116,483	136,382	4,662,306	4,165	1,596,000	3,100,835

1. Other Credits (Debits) are comprised of San Jacinto Watershed outflow.
2. Cumulative Credit includes 34,529 acre-feet of San Jacinto Watershed outflow.

CHAPTER III

BASE FLOW AT RIVERSIDE NARROWS

This chapter deals with determinations of 1) the components of flow at Riverside Narrows, which include Storm Flow and Base Flow and 2) the Adjusted Base Flow at Riverside Narrows credited to SBVMWD.

Flow at Riverside Narrows

The flow of the Santa Ana River at Riverside Narrows amounted to 78,619 acre-feet, measured at the USGS gaging station near the MWD Crossing. Separated into its components, Base Flow was 47,760 acre-feet and Storm Flow was 30,082 acre-feet. Included in Base Flow are 3,288 acre-feet of wastewater from Rubidoux Community Services District that now bypasses the USGS gaging station. Also present in the stream flow, but excluded from the Base Flow was 4,065 acre-feet of WMWD-OCWD Transfer Program flows. The Storm and Base Flow components of the flow of the Santa Ana River at Riverside Narrows for each month in the 2007-08 Water Year are listed in Table 8 and shown graphically on Plate 7. The components of flow of the Santa Ana River at Riverside Narrows during the period 1934-35 through 2007-08 are presented on Plate 8.

Nontributary Flow

Nontributary Flow includes water that originated outside the watershed, as well as other water that the Watermaster has determined should be excluded from Base Flow. During the 2007-08 Water Year WMWD-OCWD Transfer Program flow was delivered to the Santa Ana River upstream of Riverside Narrows and Prado Dam.

High Groundwater Mitigation Project

No High Groundwater Mitigation Project water was discharged to the Santa Ana River during the 2007-08 Water Year.

WMWD-OCWD Transfer Program

In 2001, OCWD and WMWD entered into an agreement that provides for delivery of groundwater pumped primarily from the Colton and Riverside Basins to OCWD via the Riverside Canal and the Santa Ana River. During the 2007-08 Water Year, WMWD delivered 4,065 acre-feet to the Santa Ana River via the Tava Lanes turnout upstream of Riverside Narrows and Prado Dam. A summary of the WMWD-OCWD Transfer Program flows is contained in Appendix K.

TABLE 8

COMPONENTS OF FLOW AT RIVERSIDE NARROWS
WATER YEAR 2007-08
(acre-feet)

Month	USGS Measured Flow	Storm Flow	SBVMWD HGMP Water[1]	WMWD Transfer Program[2]	Rubidoux Waste-water	Base Flow[3]
2007						
October	4,235	61	0	0	253	4,427
November	6,573	2,679	0	257	240	3,877
December	8,854	4,539	0	199	254	4,370
2008						
January	21,174	16,576	0	0	251	4,849
February	8,882	4,637	0	0	255	4,500
March	4,887	139	0	9	289	5,028
April	4,489	78	0	450	310	4,271
May	5,423	1,373	0	316	270	4,004
June	3,707	0	0	630	300	3,377
July	3,170	0	0	678	298	2,790
August	3,429	0	0	779	298	2,948
September	3,796	0	0	747	270	3,319
Total	78,619	30,082	0	4,065	3,288	47,760

(1) HGMP water pumped from the Bunker Hill groundwater basin and discharged into the Santa Ana River less 1% for evapotranspiration above Riverside Narrows.

(2) WMWD Transfer Program water pumped from Colton and Riverside Basins and discharged to the Santa Ana River above the Riverside Narrows.

(3) Base Flow equals USGS measured flow, minus storm flow, minus HGMP, and minus WMWD water, plus Rubidoux Wastewater.

Base Flow

Based on the hydrograph shown on Plate 7 and utilizing in general the procedures reflected in the Work Papers of the engineers (as referenced in Paragraph 2 of the Engineering Appendix of the Stipulated Judgment), a separation was made between Storm Flow and the sum of Base Flow and Nontributary Flow.

In April 1980, Rubidoux Community Services District made the first delivery of wastewater to the regional treatment plant at Riverside. Prior to that time, Rubidoux had discharged to the river upstream of the Riverside Narrows gaging station. Wastewater from Rubidoux during Water Year 2007-08, in the amount of 3,288 acre-feet, has been added to the Base Flow as measured at the gaging station. A summary of Rubidoux discharges is contained in Appendix I.

Water Quality Adjustments

The determination of water quality at the Riverside Narrows Gaging Station was made using periodic grab samples taken and analyzed for TDS by the USGS and the City of Riverside. Water quality data based on samples taken during storm flow periods were not used in the calculations. A summary of TDS and EC data of the Santa Ana River at Riverside Narrows is contained in Appendix J.

Adjustment for High Groundwater Mitigation Project Discharge

Since there was no discharge of High Groundwater Mitigation Project water during Water Year 2007-08, no water quality adjustment was required.

Adjustment for WMWD-OCWD Transfer Program Flows

During the 2007-08 Water Year, WMWD delivered 4,065 acre-feet to the Santa Ana River upstream of Riverside Narrows and Prado. A TDS of 388 mg/L was calculated for that water. A summary of the WMWD-OCWD Transfer Program flows is contained in Appendix K.

Adjustment for Wastewater Discharges from the Rubidoux Community Services District

The flow-weighted quality of wastewater from Rubidoux was 713 mg/L. A monthly summary of discharges and quality is contained in Appendix I.

The Base Flow quality resulting from exclusion of the Nontributary Flow and inclusion of the Rubidoux wastewater is shown in the following table as 675 mg/L.

Flow Component	Annual Flow (acre-feet)	Average TDS (mg/L)	Annual Flow x Average TDS
1. Base Flow plus Nontributary Flow	48,537	648	31,451,976
2. Less Nontributary Flow HGMP Pumped Water	0	---	---
3. Less WMWD Transfer Flow	(4,065)	388	(1,577,220)
4. Plus Rubidoux Wastewater	3,288	713	2,344,344
5. Base Flow (line 1 less lines 2 and 3 plus line 4)	47,760		32,219,100
Average TDS of Base Flow	32,219,100 ÷ 47,760 = 675 mg/L		

Adjusted Base Flow at Riverside Narrows

The Stipulated Judgment provides that the amount of Base Flow at Riverside Narrows received during any year shall be subject to adjustment based on weighted average annual TDS in the Base Flow as follows:

If the Weighted Average TDS in Base Flow at Riverside Narrows is:	Then the Adjusted Base Flow shall be determined by the formula:
Greater than 700 mg/L	$Q - \frac{11}{15,250}Q(TDS-700)$
600 mg/L to 700 mg/L	Q
Less than 600 mg/L	$Q + \frac{11}{15,250}Q(600-TDS)$

Where: Q = Base Flow actually received.

From the previous subsection, the weighted average annual TDS in the Base Flow at Riverside Narrows for Water Year 2007-08 was 675 mg/L. Therefore, no adjustment is necessary, and the Adjusted Base Flow for 2007-08 is 47,760 acre-feet.

Entitlement and Credit or Debit

Paragraph 5(b) of the Stipulated Judgment states that "SBVMWD shall be responsible for an average annual Adjusted Base Flow of 15,250 acre-feet at Riverside Narrows . . . SBVMWD each year shall be responsible for not less than 13,420 acre-feet of Base Flow plus one-third of any cumulative debit, provided, however, that for any year commencing on or after October 1, 1986, when there is no cumulative debit, or for any year prior to 1986 whenever the cumulative credit exceeds 10,000 acre-feet, said minimum shall be 12,420 acre-feet."

The Watermaster's findings concerning flow at Riverside Narrows for 2007-08 required under the Stipulated Judgment are as follows:

1.	Base Flow at Riverside Narrows	47,760 acre-feet
2.	Annual Weighted TDS of Base Flow	675 mg/L
3.	Annual Adjusted Base Flow	47,760 acre-feet
4.	Cumulative Adjusted Base Flow	1,708,325 acre-feet
5.	Cumulative Entitlement of IEUA and WMWD	579,500 acre-feet
6.	Cumulative Credit	1,128,825 acre-feet
7.	One-Third of Cumulative Debit	0 acre-feet
8.	Minimum Required Base Flow in 2008-09	12,420 acre-feet

CHAPTER IV

HISTORY AND SUMMARY OF THE JUDGMENT in the case of Orange County Water District v. City of Chino, et al. (Case No. 117628-County of Orange)

History of Litigation

The complaint in the case was filed by Orange County Water District on October 18, 1963, seeking an adjudication of water rights against substantially all water users in the area tributary to Prado Dam within the Santa Ana River Watershed, but excluding the area tributary to Lake Elsinore. Thirteen cross-complaints were filed in 1968, extending the adjudication to include substantially all water users in the area downstream from Prado Dam. With some 4,000 parties involved in the case (2,500 from the Upper Area and 1,500 from the Lower Area), it became obvious that every effort should be made to arrive at a settlement and physical solution in order to avoid enormous and unwieldy litigation.

Efforts to arrive at a settlement and physical solution were pursued by public officials, individuals, attorneys, and engineers. Attorneys for the parties organized in order to facilitate settlement discussions and, among other things, provided guidance for the formation and activities of an engineering committee to provide information on the physical facts.

An initial meeting of the engineers representing the parties was held on January 10, 1964. Agreement was reached that it would be beneficial to undertake jointly the compilation of basic data. Liaison was established with the Department of Water Resources, State of California, to expedite the acquisition of data. Engineers representing the parties were divided into subcommittees which were given the responsibility of investigating such things as the boundary of the Santa Ana River Watershed and its subareas, standardization of the terminology, the location and description of wells and diversion facilities, waste disposal and transfer of water between subareas.

In response to a request from the attorneys' committee at a meeting held April 17, 1964, on April 30, 1964, the joint engineering committee prepared a list of preliminary engineering studies directed toward settlement of the Santa Ana River water rights litigation. Special assignments were made to individual engineers on selected items requested by the attorneys' committee.

The attorneys and engineers for the defendants then commenced a series of meetings separate from the representatives of the plaintiffs in order to consolidate their positions and to determine a course of action. On October 7, 1964, engineers for the defendants presented the results of the studies made by the joint engineering committee. The defendants' attorneys requested that additional information be provided on the methods of measuring flow at Prado Dam, the historical supply and disposal of water passing Prado Dam, segregation of flow into components, and determination of the amount of supply which was usable by the downstream area. On December 11, 1964, the supplemental information was presented to the defendants' attorneys.

During 1965, engineers and attorneys for the defendants held numerous conferences and conducted additional studies in an attempt to determine their respective positions in the case. Early in 1966, the plaintiff and defendants exchanged drafts of possible principles for settlement. Commencing March 22 and ending April 13, 1966, four meetings were held by the engineers to discuss the draft of principles for settlement.

On February 25, 1968, the defendants submitted a request to the Court that the Order of Reference be issued requesting the California Department of Water Resources to determine the physical facts. On May 9, 1968, the plaintiffs' attorney submitted motions opposing the Order of Reference and requested that a preliminary injunction be issued. In the meantime, every effort was being made to come to an agreement on the Stipulated Judgment. Commencing on February 28, 1968 and extending until May 14, 1968, six meetings were held to determine the scope of physical facts on which agreement could be reached so that if an Order of Reference were to be approved by the Court, the work under the proposed reference would not repeat the extensive basic data collection and compilation which had already been completed and on which engineers for both plaintiffs and defendants had reached substantial agreement. Such basic data were compiled and published in two volumes under date of May 14, 1968 entitled "Appendix A, Basic Data."

On May 21, 1968, an outline of a proposal for settlement of the case was prepared and a committee of attorneys and engineers for the parties commenced preparation of the settlement documents. On June 16, 1968, the Court held a hearing on the motions it had received requesting a preliminary injunction and an Order of Reference. The parties requested that the Court delay the preliminary hearings on these motions in view of the efforts toward settlement that were underway. The plaintiff, however, was concerned regarding the necessity of bringing the case to trial within the statutory limitation and, accordingly, on July 15, 1968, submitted a motion to set the complaint in the case for trial. On October 15, 1968, the trial was commenced and was adjourned after one-half day of testimony on behalf of the plaintiff. Thereafter, the parties filed with the Court the necessary Settlement Documents including a Stipulation for Judgment. The Court entered the Judgment on April 17, 1969, along with Stipulations and Orders dismissing all defendants and cross-defendants except for the four major public water districts overlying, in aggregate, substantially all of the major areas of water use in the watershed. The districts, the locations of which are shown on Plate 1, "Santa Ana River Watershed", are as follows:

(1) Orange County Water District (OCWD), representing all lower basin entities located within Orange County downstream of Prado Dam.

(2) Western Municipal Water District (WMWD), representing middle basin entities located within Riverside County on both sides of the Santa Ana River primarily upstream from Prado Dam.

(3) Inland Empire Utilities Agency (IEUA), formerly Chino Basin Municipal Water District (CBMWD), located in the San Bernardino County Chino Basin area, representing middle basin entities within its boundaries and located primarily upstream from Prado Dam.

(4) San Bernardino Valley Municipal Water District (SBVMWD), representing all entities within its boundaries, and embraced within the upper portion of the Riverside Basin area, the Colton Basin area (being an upstream portion of the middle basin) and the San Bernardino Basin area, being essentially the upper basin.

Summary of Judgment

Declaration of Rights. The Judgment sets forth a declaration of rights. Briefly stated, the Judgment provides that the water users in the Lower Area have rights, as against the water users in the Upper Area, to receive certain average and minimum annual amounts of non-storm flow ("base flow") at Prado Dam, together with the right to all storm flow reaching Prado Dam. The amount of the Lower Area entitlement is variable based on the quality of the water received by the Lower Area. Water users in the Upper Area have the right as against the water users in the Lower Area to divert, pump, extract, conserve, store and use all surface and groundwater supplies originating within the Upper Area, so long as the Lower Area receives the water to which it is entitled under the Judgment and there is compliance with all of its provisions.

Physical Solution. The Judgment also sets forth a comprehensive "physical solution" for satisfying the rights of the Lower Area. To understand the physical solution it is necessary to understand the following terms that are used in the Judgment:

Storm Flow – That portion of the total flow which originates from precipitation and runoff and which passes a point of measurement (either Riverside Narrows or Prado Dam) without having first percolated to groundwater storage in the zone of saturation, calculated in accordance with procedures referred to in the Judgment.

Base Flow - That portion of the total surface flow passing a point of measurement (either Riverside Narrows or Prado Dam) which remains after deduction of storm flow, nontributary flows, exchange water purchased by OCWD, and certain other flows as determined by the Watermaster.

Adjusted Base Flow - Actual base flow in each year adjusted for water quality pursuant to formulas specified in the Judgment. The adjustment of Base Flow for water quality is intended to provide an incentive to the Upper Area to maintain a better quality of water in the river. When the total dissolved solids (TDS) is lower than a specified value at one of the measuring points, the water quantity obligation is lower. When the TDS is higher than a specified value, the water quantity obligation is higher. This is the first comprehensive adjudication in Southern California in which the quality of water is taken into consideration in the quantification of water rights.

Credits and Debits - Under the accounting procedures provided for in the Judgment, credits accrue to SBVMWD in any year when the Adjusted Base Flow exceeds 15,250 acre-feet at Riverside Narrows and jointly to IEUA and WMWD when the Adjusted Base Flow exceeds 42,000 acre-feet at Prado Dam. Debits accrue in any

year when the Adjusted Base Flows falls below those levels. Credits or debits accumulate year to year.

Obligation at Riverside Narrows. SBVMWD has an obligation to assure an average annual Adjusted Base Flow of 15,250 acre-feet at Riverside Narrows, subject to the following:

(1) A minimum Base Flow of 13,420 acre-feet plus one-third of any cumulative debit.

(2) After October 1, 1986, if no cumulative debit exists, the minimum Base Flow shall be 12,420 acre-feet.

(3) Prior to 1986, if the cumulative credits exceed 10,000 acre-feet, the minimum Base Flow shall be 12,420 acre-feet.

(4) All cumulative debits shall be removed by the discharge of a sufficient Base Flow at Riverside Narrows at least once in any ten consecutive years following October 1, 1976. Any cumulative credits shall remain on the books of account until used to offset any subsequent debits or until otherwise disposed of by SBVMWD.

(5) The Base Flow at Riverside Narrows shall be adjusted using weighted average annual TDS in such Base Flow in accordance with the formula set forth in the Judgment.

Obligation at Prado Dam. IEUA and WMWD have a joint obligation to assure an average annual Adjusted Base Flow of 42,000 acre-feet at Prado Dam, subject to the following:

(1) Minimum Base Flow at Prado shall not be less than 37,000 acre-feet plus one-third of any cumulative debit.

(2) After October 1, 1986, if no cumulative debit exists, the minimum Base Flow quantity shall be 34,000 acre-feet.

(3) Prior to 1986, if the cumulative credit exceeds 30,000 acre-feet, the minimum Base Flow shall be 34,000 acre-feet.

(4) Sufficient quantities of Base Flow shall be provided at Prado to discharge completely any cumulative debits at least once in any ten consecutive years following October 1, 1976. Any cumulative credits shall remain on the books of account until used to offset any debits, or until otherwise disposed of by IEUA and WMWD.

(5) The Base Flow at Prado during any year shall be adjusted using the weighted average annual TDS in the total flow at Prado (Base Flow plus Storm Flow) in accordance with the formula set forth in the Judgment.

Other Provisions. SBVMWD, IEUA and WMWD are enjoined from exporting water from the Lower Area to the Upper Area, directly or indirectly. OCWD is enjoined from exporting or "directly or indirectly causing water to flow" from the Upper Area to the Lower Area. Any inter-basin acquisition of water rights will have no effect on Lower Area entitlements. OCWD is prohibited from enforcing two prior judgments so long as the Upper Area Districts are in compliance with the physical solution. The composition of the Watermaster and the nomination and appointment process for members are described along with a definition of the Watermaster's duties and a formula for sharing its costs. The court retains continuing jurisdiction over the case. There are provisions for appointment of successor parties and rules for dealing with future actions that might conflict with the physical solution.

History of the Watermaster Committee Membership

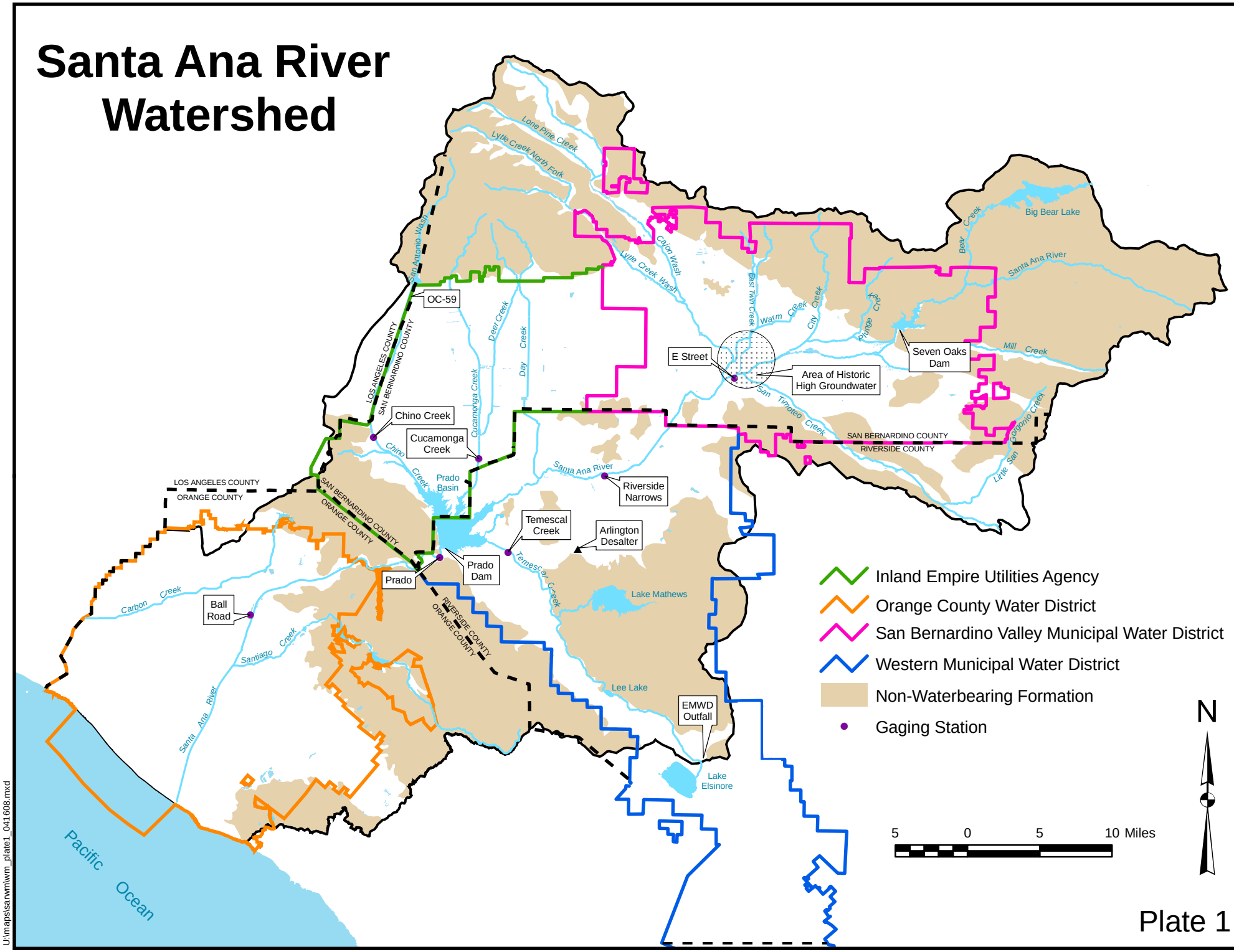
The Santa Ana River Watermaster is a committee composed of five members nominated by the parties and appointed by the court. SBVMWD, IEUA (formerly CBMWD), and WMWD nominate one member each and OCWD nominates two. The Watermaster members annually elect a Chairman, Secretary, and Treasurer.

The original five members were appointed at the time of entry of the judgment. They prepared a *pro forma* annual report for the 1969-70 Water Year. The first annual report required by the judgment was prepared for the 1970-71 Water Year and reports have been prepared annually since then.

The membership of the Watermaster has changed over the years. The historical listing of members and officers shown in Table 9 reflects the signatories to each annual report.

TABLE 9
HISTORY OF THE WATERMASTER COMMITTEE MEMBERSHIP

Water Year	SBVMWD	IEUA	WMWD	OCWD	OCWD
1969-70	Clinton O. Henning	William J. Carroll	Albert A. Webb, Secretary	Max Bookman, Chairman	John M. Toups
1970-71 through 1973-74	James C. Hanson	William J. Carroll	Albert A. Webb, Secretary	Max Bookman, Chairman	John M. Toups
1974-75 through 1977-78	James C. Hanson	William J. Carroll	Donald L. Harriger	Max Bookman, Chairman	John M. Toups, Secretary
1978-79 through 1981-82	James C. Hanson	William J. Carroll	Donald L. Harriger	Max Bookman, Chairman	William R. Mills, Jr., Secretary
1982-83 through 1983-84	James C. Hanson	William J. Carroll	Donald L. Harriger	Harvey O. Banks, Chairman	William R. Mills, Jr., Secretary
1984-85 through 1988-89	Robert L. Reiter	William J. Carroll	Donald L. Harriger	Harvey O. Banks, Chairman	William R. Mills, Jr., Secretary
1989-90 through 1994-95	Robert L. Reiter, Secretary/Treasurer	William J. Carroll	Donald L. Harriger	Harvey O. Banks, Chairman	William R. Mills, Jr.
1995-96	Robert L. Reiter, Secretary/Treasurer	William J. Carroll, Chairman	Donald L. Harriger	Bill B. Dendy	William R. Mills, Jr.
1996-97	Robert L. Reiter, Secretary/Treasurer	William J. Carroll	Donald L. Harriger	Bill B. Dendy	William R. Mills, Jr., Chairman
1997-98	Robert L. Reiter, Secretary/Treasurer	Robb D. Quincey	Donald L. Harriger	Bill B. Dendy	William R. Mills, Jr., Chairman
1998-99 through 2000-01	Robert L. Reiter, Secretary/Treasurer	Richard W. Atwater	Donald L. Harriger	Bill B. Dendy	William R. Mills, Jr., Chairman
2001-02 through 2002-03	Robert L. Reiter, Secretary/Treasurer	Richard W. Atwater	Donald L. Harriger, Chairman	Bill B. Dendy	Virginia L. Grebbien
2003-04 through 2005-06	Robert L. Reiter, Chairman/Treasurer	Richard W. Atwater	John V. Rossi	Bill B. Dendy, Secretary	Virginia L. Grebbien
2006-07 through 2007-08	Samuel H. Fuller, Secretary/Treasurer	Richard W. Atwater	John V. Rossi	Bill B. Dendy, Chairman	Craig D. Miller


Santa Ana River Watershed
Lone Pine Creek
Lytle Creek North Fork
San Antonio Wash
Lytle Creek Wash
Cajon Wash
Bear Creek
Big Bear Lake
Santa Ana River
East Twin Creek
Warm Creek
City Creek
Plunge Creek
Mill Creek
Seven Oaks Dam
E Street
Area of Historic High Groundwater
San Timoteo Creek
Gorgonio Creek
Little San
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
OC-59
Deer Creek
Day Creek
Cucamonga Creek
Chino Creek
Cucamonga Creek
Chino Creek
Prado Basin
Santa Ana River
Riverside Narrows
LOS ANGELES COUNTY
ORANGE COUNTY
SAN BERNARDINO COUNTY
ORANGE COUNTY
Temescal Creek
Arlington Desalter
Prado Dam
Prado
Temescal Creek
Lake Mathews
Carbon Creek
Ball Road
Santiago Creek
RIVERSIDE COUNTY
ORANGE COUNTY
Lee Lake
EMWD Outfall
Santa Ana River
Lake Elsinore
Pacific Ocean
Inland Empire Utilities Agency
Orange County Water District
San Bernardino Valley Municipal Water District
Western Municipal Water District
Non-Waterbearing Formation
Gaging Station
N
5 0 5 10 Miles
Plate 1
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Santa Ana River Watershed Wastewater Treatment Plants and Salt Export Pipelines

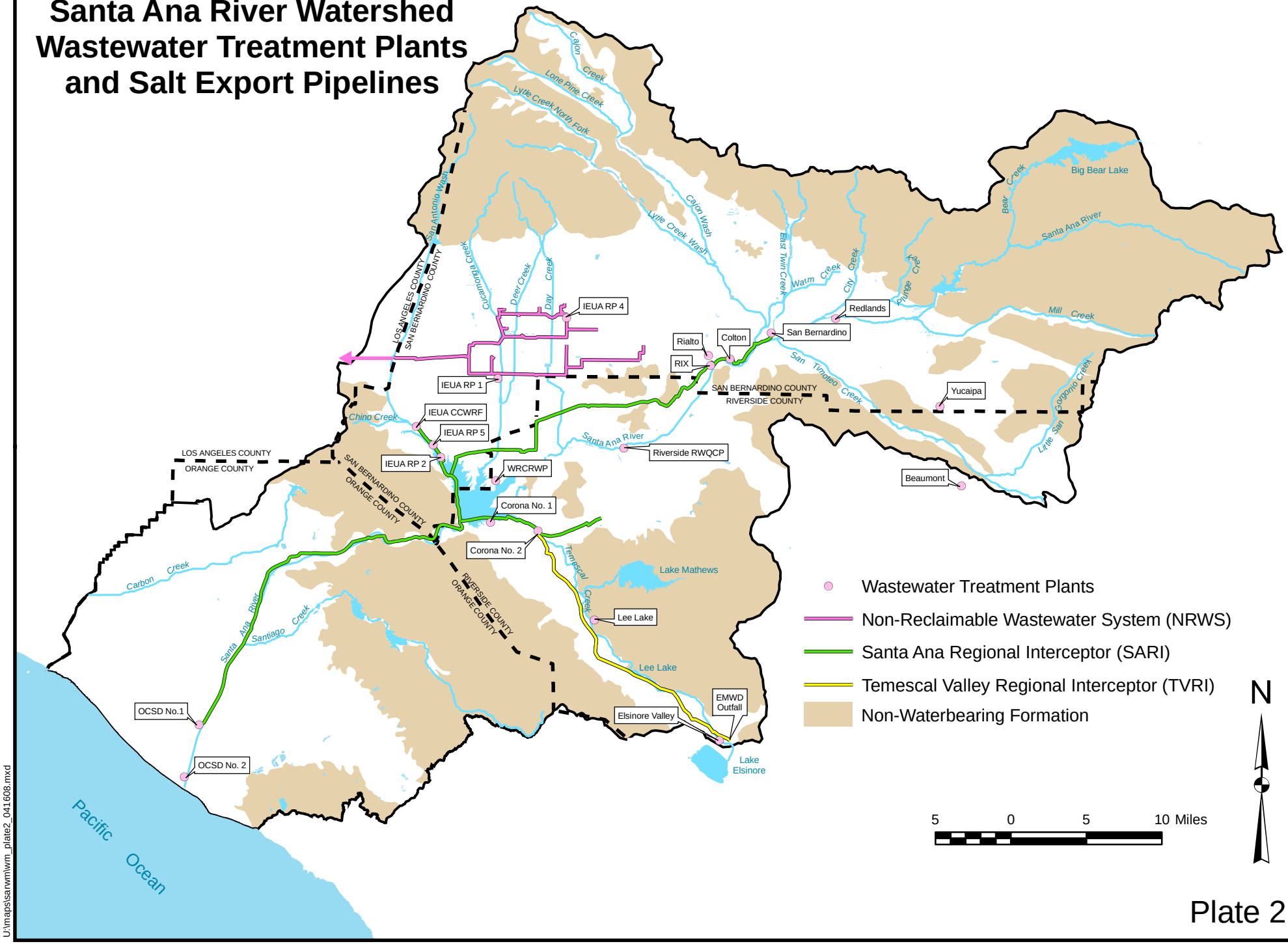

Plate 2

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PRECIPITATION AT SAN BERNARDINO STARTING WITH 1934-35

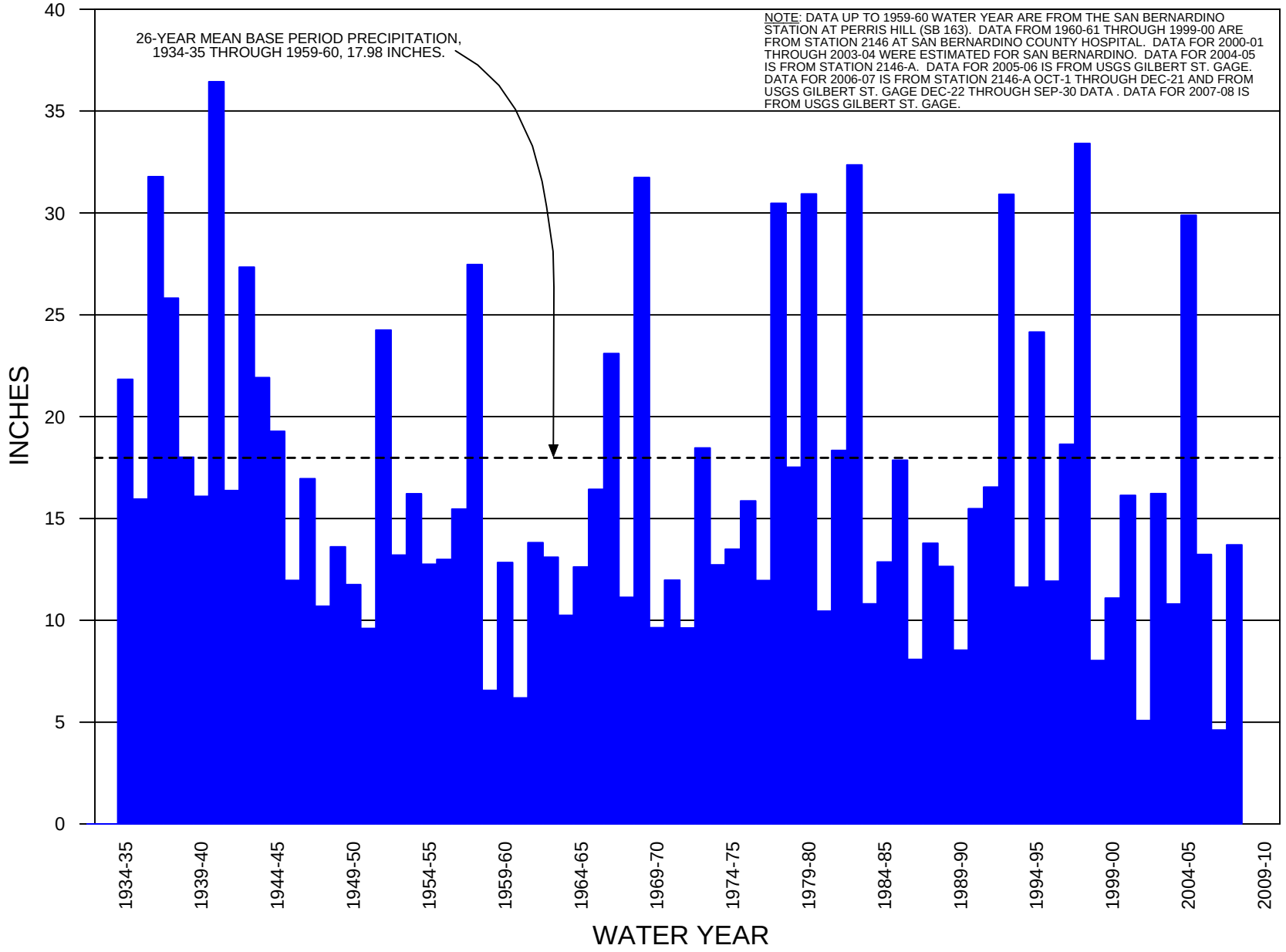
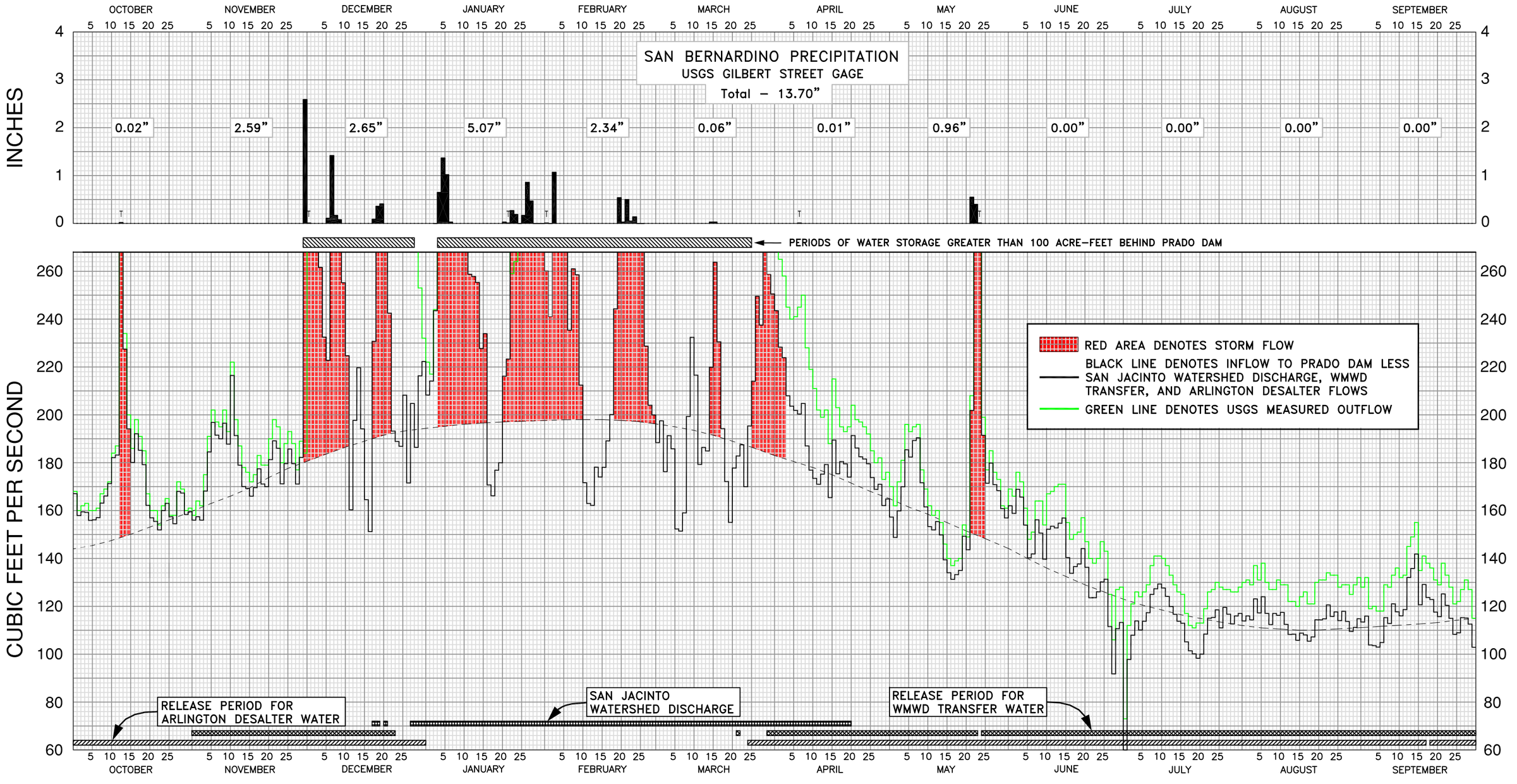


PLATE 3



DISCHARGE OF SANTA ANA RIVER AT PRADO DAM & SAN BERNARDINO PRECIPITATION
WATER YEAR 2007-08

Plate 4

DISCHARGE OF SANTA ANA RIVER AT PRADO STARTING WITH 1934-35

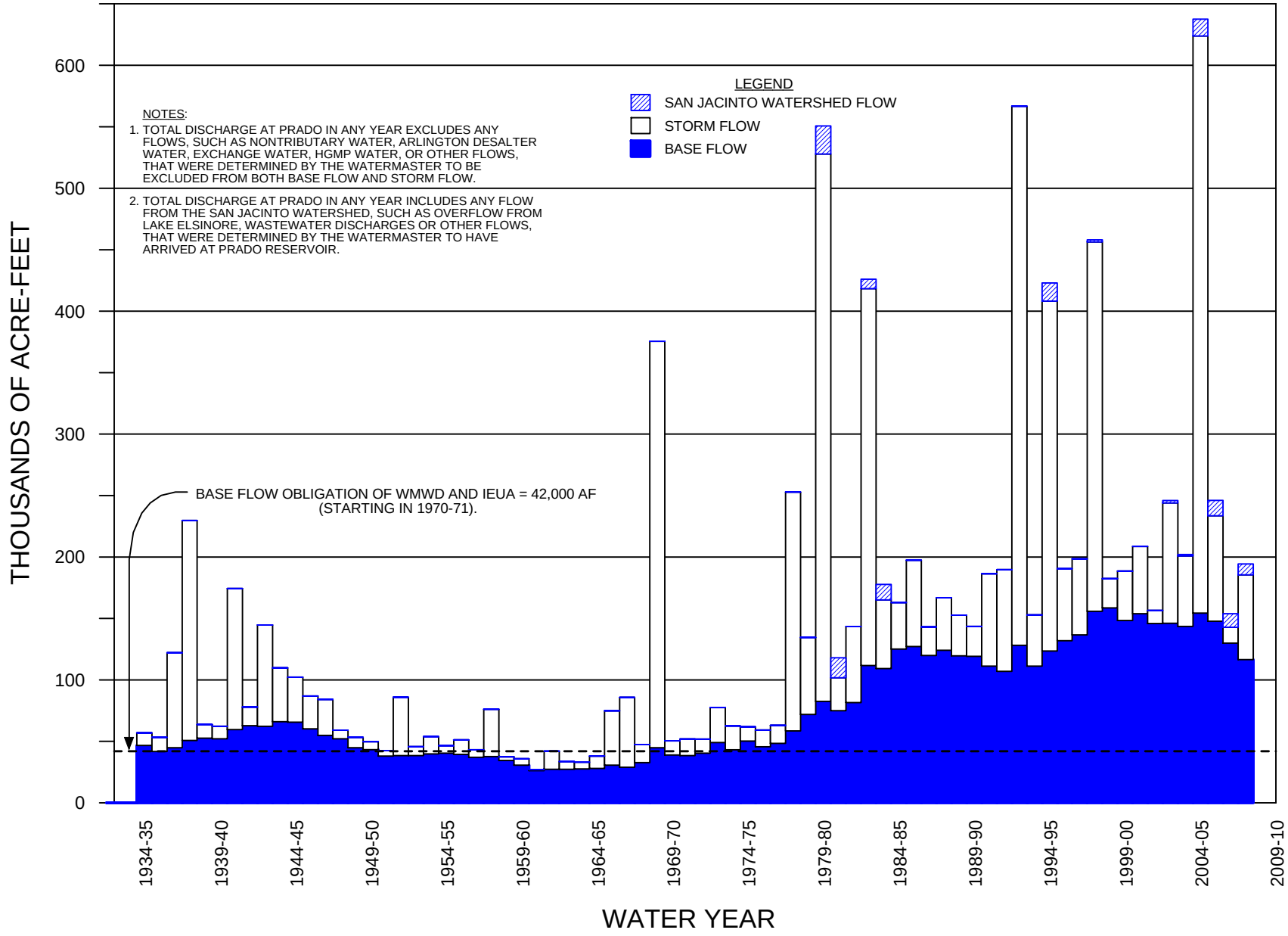
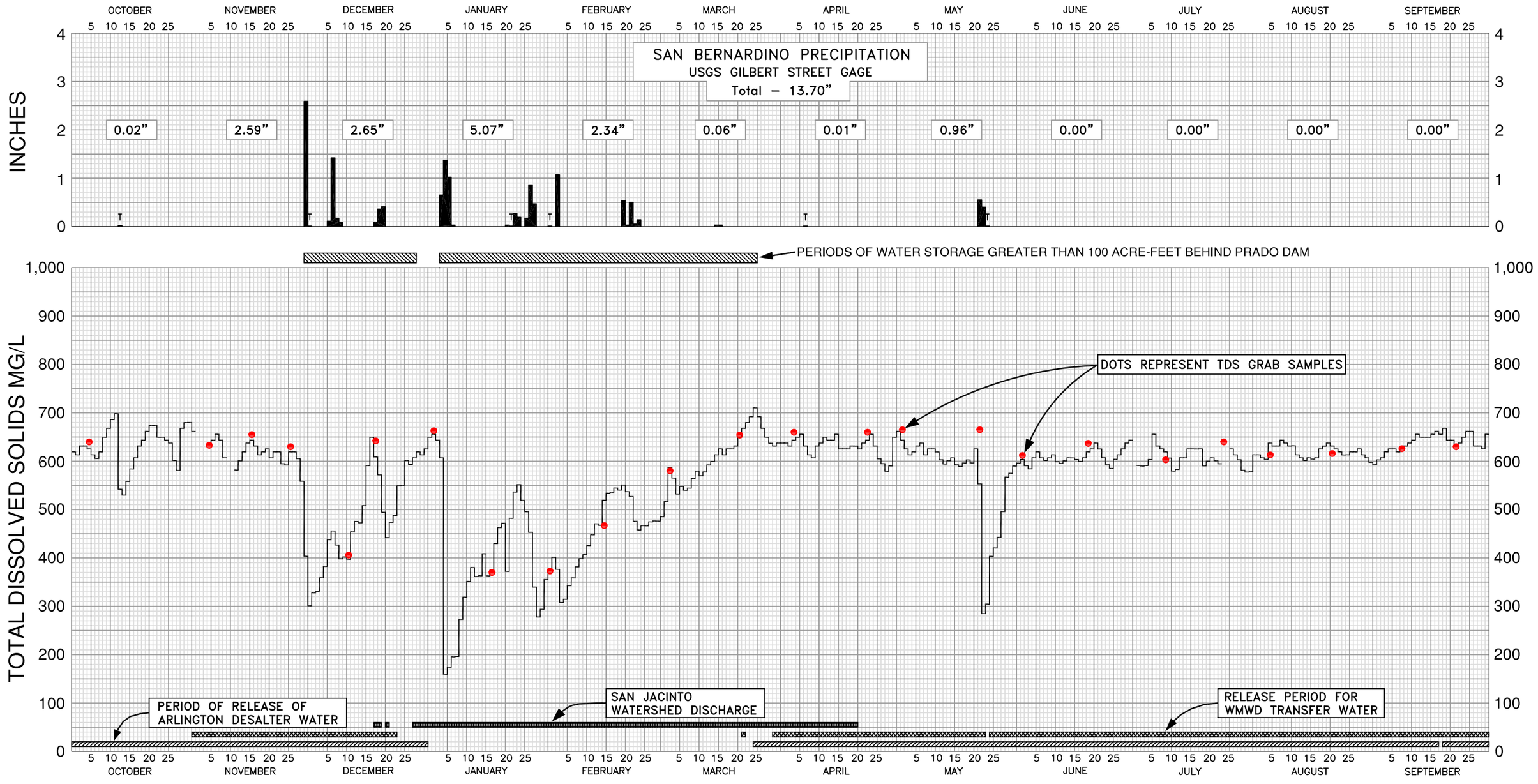
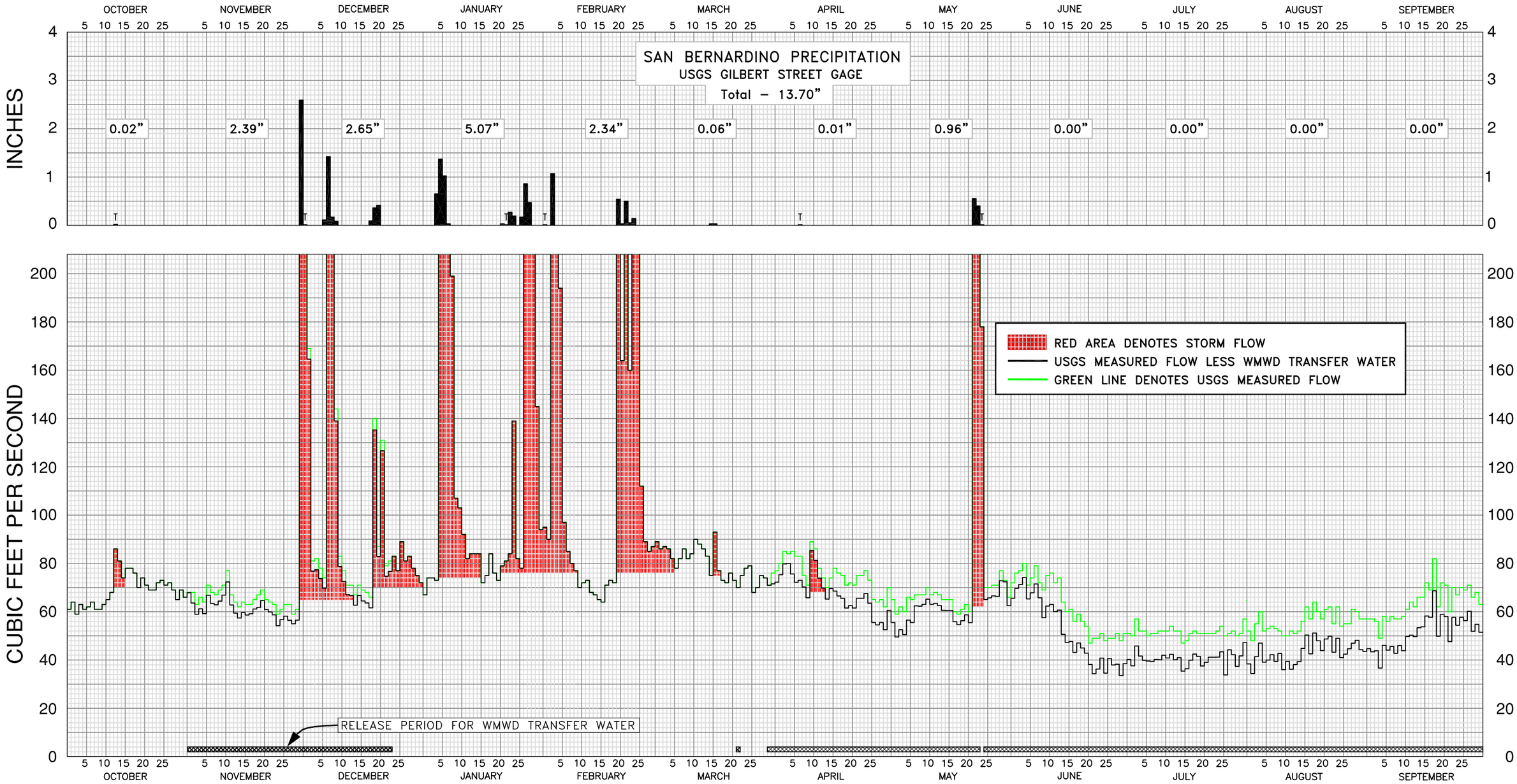


PLATE 5



DISSOLVED SOLIDS IN SANTA ANA RIVER BELOW PRADO DAM
WATER YEAR 2007-08

Plate 6



DISCHARGE OF SANTA ANA RIVER AT RIVERSIDE NARROWS & SAN BERNARDINO PRECIPITATION
WATER YEAR 2007-08

Plate 7

DISCHARGE OF SANTA ANA RIVER AT RIVERSIDE NARROWS STARTING WITH 1934-35

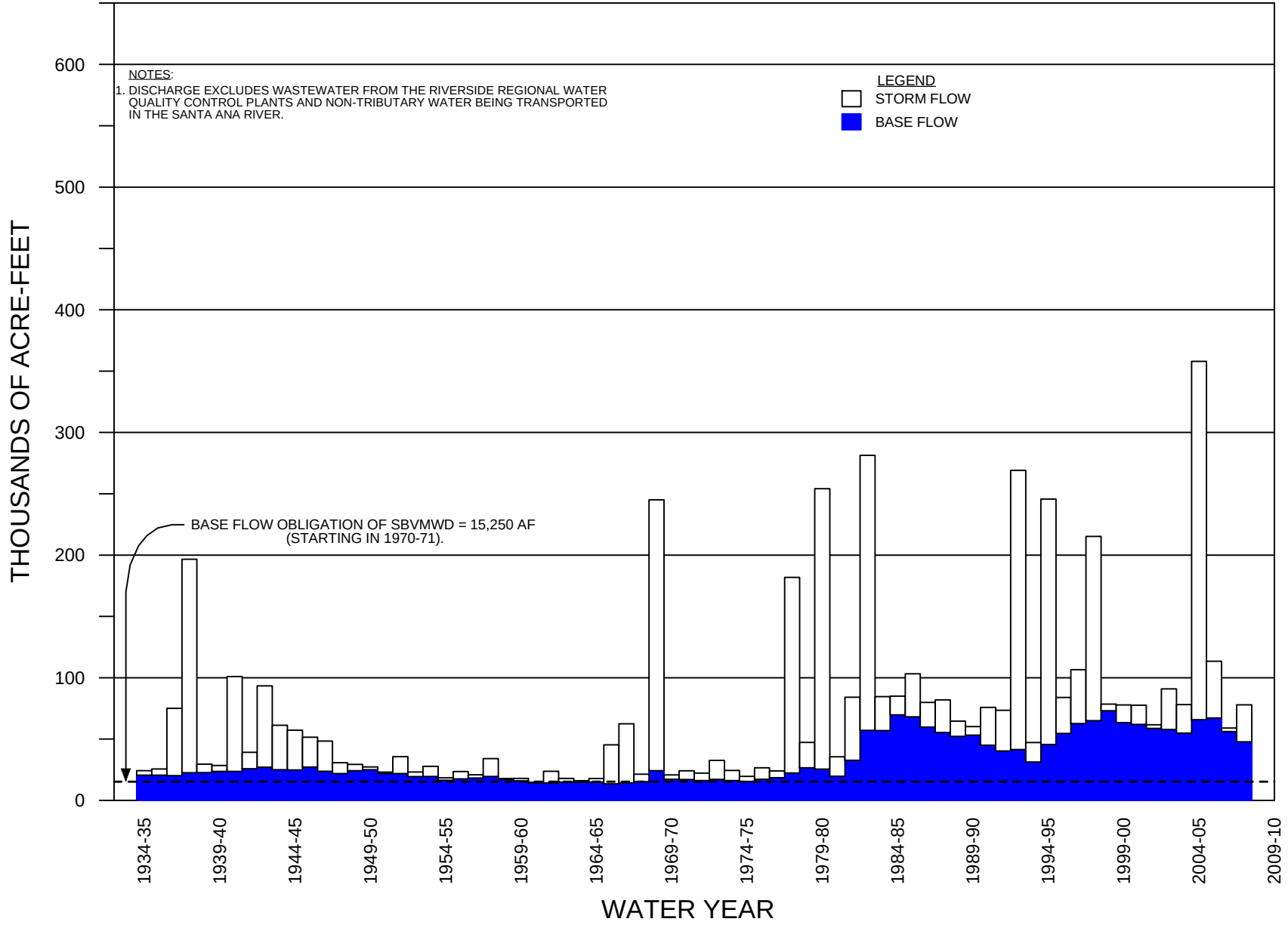


PLATE 8

SANTA ANA RIVER WATERMASTER

FOR

ORANGE COUNTY WATER DISTRICT

v. CITY OF CHINO et al.

CASE NO. 117628 - COUNTY OF ORANGE

BASIC DATA

FOR THE

THIRTY-EIGHTH ANNUAL REPORT

OF THE

SANTA ANA RIVER WATERMASTER

FOR WATER YEAR

OCTOBER 1, 2007 - SEPTEMBER 30, 2008

APRIL 30, 2009

APPENDIX A

USGS FLOW MEASUREMENTS OF THE SANTA ANA RIVER FLOWS BELOW PRADO, AT MWD CROSSING, AND WATER QUALITY RECORDS FOR THE SANTA ANA RIVER AT PRADO DAM AND AT MWD CROSSING; USGS FLOW MEASUREMENTS AT E STREET, AND OF TEMESCAL CREEK ABOVE MAIN STREET (AT CORONA), CUCAMONGA CREEK (NEAR MIRA LOMA) AND CHINO CREEK AT SCHAEFER AVENUE (NEAR CHINO)

WATER YEAR 2007-08

Water-Data Report 2008

11074000 Santa Ana River below Prado Dam, CA

Santa Ana River Basin

LOCATION.--Lat 33°53′00″, long 117°38′40″ referenced to North American Datum of 1927, Riverside County, CA, Hydrologic Unit 18070203, in La Sierra Grant, on right bank of outlet channel, 2,500 ft downstream from axis of Prado Dam, and 4.5 mi west of Corona.

DRAINAGE AREA.--2,258 mi² of which 768 mi² probably is noncontributing, above Lake Elsinore.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1930 to November 1939 (irrigation seasons only), March 1940 to current year. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.--Water-stage recorder and concrete control August 1944 through Apr. 25, 2005, and since Nov. 14, 2005. Datum of gage is approximately 449 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 18, 1940, at about same site at various datums. From Apr. 26, 2005, to Nov. 13, 2005, gage was located on right bank of a temporary bypass (diversion) channel, in use during the construction of an improved outlet channel from Prado Dam. Temporary gage was at a different datum. Since Nov. 14, 2005, gage is located on right bank of reconstructed outlet channel.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated since 1940 by Prado Flood-Control Reservoir, capacity, 196,200 acre-ft. Natural streamflow affected by extensive ground-water withdrawals, diversion for irrigation, discharges of treated effluent, and return flow from irrigated areas. Releases of imported water are made to the basin by the California Water Project at times in some years, via San Antonio Creek from Rialto Pipeline below San Antonio Dam. During the current year, no California Water Project releases were made. See schematic diagram of Santa Ana River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft³/s, Jan. 15, 2005, gage height, 8.73 ft, site and datum then in use, from rating curve extended above 11,600 ft³/s; minimum daily, 2.4 ft³/s, July 29 to Aug. 3, Sept. 20, 1978 (result of gate closure).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 100,000 ft³/s, on basis of slope-area measurement of peak flow at site 2.5 mi downstream.

11074000 Santa Ana River below Prado Dam, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	168	158	378	222	431	366	271	170	169	e73	130	128
2	160	164	451	217	431	357	265	162	166	112	131	132
3	162	162	501	244	767	360	258	172	176	121	129	119
4	163	175	531	285	1,300	364	245	181	172	126	137	120
5	160	191	516	892	628	412	240	196	161	124	131	118
6	160	202	416	2,280	490	441	241	193	148	126	138	118
7	161	197	415	2,550	487	441	245	195	151	129	130	129
8	167	195	556	1,340	492	443	250	196	164	137	127	128
9	169	202	547	572	485	447	228	177	164	141	127	133
10	172	e193	545	504	460	466	219	169	154	141	131	136
11	184	e222	551	475	457	482	211	162	167	140	129	132
12	187	198	547	468	406	482	202	158	168	137	129	133
13	322	187	533	461	319	477	199	160	170	133	122	145
14	234	178	535	452	335	460	202	155	171	129	122	149
15	200	176	519	432	342	437	188	146	171	126	120	155
16	186	172	498	480	346	431	215	140	155	125	124	135
17	198	175	482	503	358	430	203	137	148	117	126	141
18	191	183	337	491	365	425	195	139	150	112	121	138
19	185	179	322	478	389	422	193	140	151	111	121	136
20	167	179	370	467	398	416	195	154	157	113	130	131
21	160	190	398	467	356	414	204	149	147	113	131	129
22	160	198	389	337	274	410	198	208	140	119	131	138
23	154	195	376	259	272	403	197	610	138	126	134	133
24	162	180	359	264	291	391	195	345	140	127	133	128
25	165	188	359	273	340	365	192	199	147	130	133	121
26	158	193	362	275	371	299	185	177	143	128	128	122
27	158	188	325	1,390	369	280	180	185	125	127	129	127
28	172	177	308	2,570	370	270	182	176	106	127	129	131
29	169	189	287	2,100	371	285	173	173	127	126	125	127
30	160	184	253	699	---	290	176	162	128	126	129	115
31	161	---	232	503	---	284	---	161	---	128	132	---
Total	5,475	5,570	13,198	22,950	12,700	12,250	6,347	5,847	4,574	3,850	3,989	3,927
Mean	177	186	426	740	438	395	212	189	152	124	129	131
Max	322	222	556	2,570	1,300	482	271	610	176	141	138	155
Min	154	158	232	217	272	270	173	137	106	73	120	115
Ac-ft	10,860	11,050	26,180	45,520	25,190	24,300	12,590	11,600	9,070	7,640	7,910	7,790

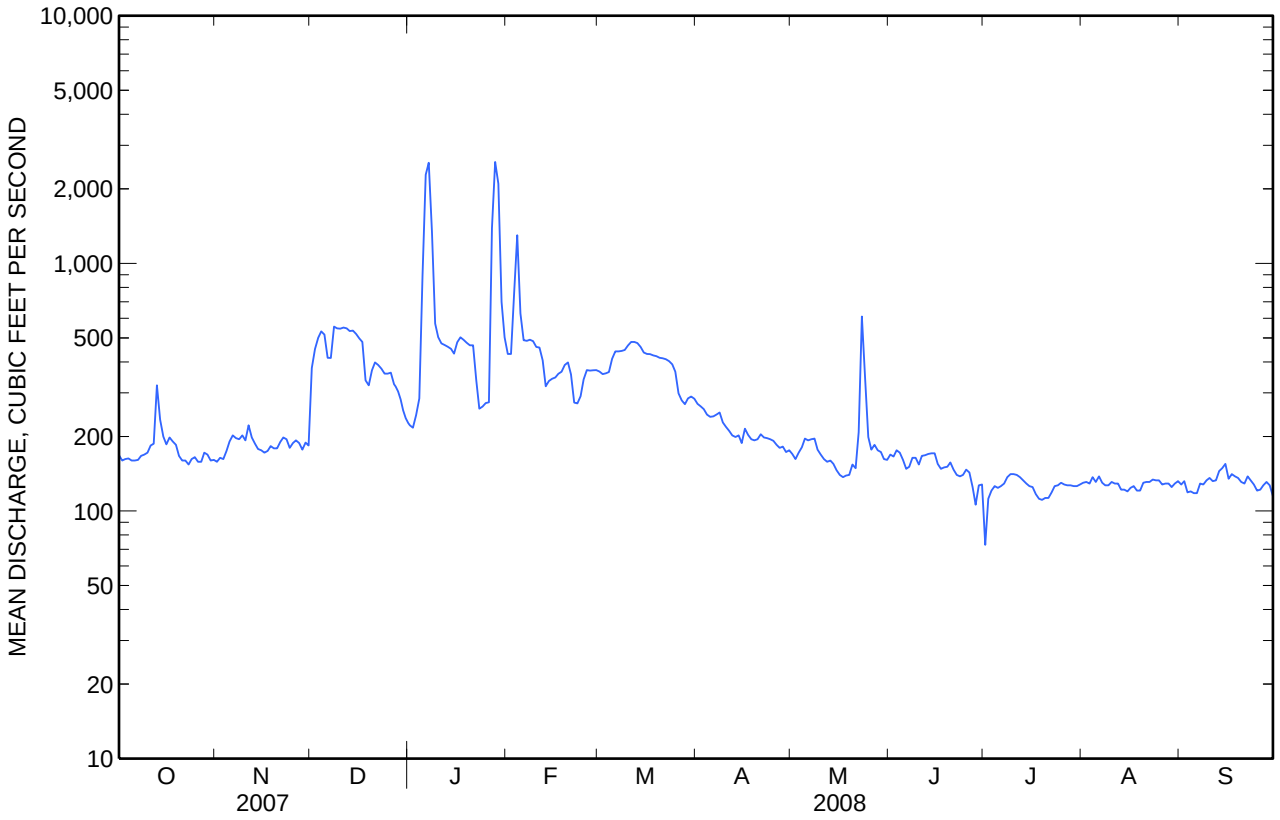
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	130	149	218	370	438	402	266	192	157	129	108	103
Max	910	322	709	3,543	2,733	2,556	1,101	915	736	446	402	372
(WY)	(2005)	(1997)	(1967)	(1993)	(1998)	(1980)	(1980)	(1998)	(1983)	(1998)	(2005)	(1997)
Min	22.4	33.5	39.5	49.2	49.8	54.3	43.3	35.2	29.0	17.7	14.8	16.2
(WY)	(1962)	(1963)	(1963)	(1963)	(1961)	(1961)	(1961)	(1961)	(1961)	(1960)	(1960)	(1960)

11074000 Santa Ana River below Prado Dam, CA—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1941 - 2008	
Annual total	82,250		100,677			
Annual mean	225		275		221	
Highest annual mean					882	2005
Lowest annual mean					36.4	1961
Highest daily mean	556	Dec 8	2,570	Jan 28	11,400	Jan 14, 2005
Lowest daily mean	140	Aug 16	73	Jul 1	2.4	Jul 29, 1978
Annual seven-day minimum	146	Sep 11	113	Jun 27	3.0	Sep 24, 1973
Maximum peak flow			2,860	Jan 8	13,200	Jan 15, 2005
Maximum peak stage			6.14	Jan 8	8.73	Jan 15, 2005
Annual runoff (ac-ft)	163,100		199,700		160,000	
10 percent exceeds	335		481		386	
50 percent exceeds	193		184		137	
90 percent exceeds	151		127		40	



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.
CHEMICAL DATA: Water years 1967 to current year.
SPECIFIC CONDUCTANCE: Water years 1968, 1970 to current year.
WATER TEMPERATURE: Water years 1968 (monthly max/min only), 1970 to current year.
BIOLOGICAL DATA: Water years 1975-81.
CHLORIDE: Water year 1971.
SEDIMENT DATA: Water years 1974-94, 1999 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1968 to current year.
WATER TEMPERATURE: October 1969 to current year.
CHLORIDE: October 1970 to September 1971.
SUSPENDED-SEDIMENT DISCHARGE: October 1973 to June 1982.

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperature since October 1969.

REMARKS.--Specific conductance and water temperature records are affected by releases from Prado Dam. Interruptions in record at times due to malfunction of recording or sensing equipment. Sediment data and a portion of chemical data collected for the National Water-Quality Assessment (NAWQA) Program.

Specific conductance records rated poor except for Jan. 3 to Feb. 1, Feb. 16 to Mar. 21, Apr. 24 to May 6, June 3-25, Aug. 6-14, and Aug. 21 to Sept. 30, which are rated fair.

Water temperature records rated excellent except for Feb. 20 to June 19, which are rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,830 microsiemens, Apr. 30, 1971; minimum recorded, 150 microsiemens, Jan. 5, 2008.
WATER TEMPERATURE: Maximum recorded, 36.0°C, Sept. 4, 1972, Sept. 8, 1984; minimum recorded, 2.5°C, Dec. 30, 1969.
SEDIMENT CONCENTRATION: Maximum daily mean, 2,870 mg/L, Mar. 5, 1978; minimum daily mean, 3 mg/L, Apr. 2, 1980, and several days during 1982.
SEDIMENT LOAD: Maximum daily, 18,900 tons, Mar. 5, 1978; minimum daily, 0.58 ton, Sept. 20, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,210 microsiemens, Oct. 29; minimum recorded, 150 microsiemens, Jan. 5.
WATER TEMPERATURE: Maximum recorded, 29.4°C, June 22; minimum recorded, 10.6°C, Dec. 27, 28.

11074000 Santa Ana River below Prado Dam, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Date	Time	Instan-taneous dis-charge, cfs (00061)	Specif-ic conduc-tance, wat unf µS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Residue on evap. at 180deg C wat flt mg/L (70300)
Oct						
05...	1230	152	1,080	22.0	20.3	640
Nov						
05...	0930	194	1,030	17.5	17.7	633
16...	1000	169	1,070	20.0	17.3	655
26...	1030	191	1,030	20.0	14.0	630
Dec						
11...	0950	552	673	14.0	12.5	406
18...	0935	286	1,040	15.0	12.2	642
Jan						
02...	1000	218	1,100	19.0	12.0	663
17...	1010	499	582	17.0	11.3	370
Feb						
01...	0940	429	592	9.0	11.9	373
15...	0930	343	775	19.0	13.3	467
Mar						
03...	0945	366	956	19.5	15.0	580
21...	0910	417	1,080	18.5	17.3	654
Apr						
04...	0825	244	1,060	21.0	16.1	660
23...	0940	205	1,090	24.0	16.7	660
May						
02...	1120	162	1,090	29.0	19.1	665
22...	1015	156	1,070	25.0	19.8	665
Jun						
02...	0900	177	1,030	20.0	19.6	612
19...	0940	155	1,050	31.5	22.0	637
Jul						
09...	0920	142	1,020	29.5	24.9	603
24...	1050	129	1,030	30.5	24.3	640
Aug						
05...	0925	132	1,030	31.5	25.7	613
21...	0935	138	1,030	32.0	23.8	616
Sep						
08...	1025	124	1,040	31.0	24.3	626
22...	1045	142	1,050	25.5	21.5	630

11074000 Santa Ana River below Prado Dam, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 1 of 8
[Remark codes: <, less than; E, estimated.]

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inf tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt infl pt titr., field, mg/L (00453)	Carbonate, wat flt infl pt titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)
Oct													
05...	1015	158	747	9.5	106	8.1	1,050	22.0	19.5	202	242	2	127
Nov													
15...	1300	174	748	10.2	114	8.1	1,050	32.0	19.5	210	249	3	124
Dec													
20...	1430	414	753	13.0	129	7.8	822	14.5	14.5	166	202	--	93.4
Jan													
17...	1415	507	752	9.8	91	7.8	642	18.0	11.5	134	163	--	66.7
31...	1400	458	757	9.9	94	7.8	650	16.5	12.5	124	151	--	70.7
Feb													
12...	1200	462	752	9.6	94	7.8	730	27.0	13.5	148	180	--	78.2
28...	1400	366	747	9.5	94	7.9	780	26.0	14.0	169	196	--	84.5
Mar													
13...	1330	484	750	9.6	101	8.1	998	24.5	17.0	195	233	2	118
27...	1345	277	750	9.4	100	8.0	1,100	24.5	17.5	215	258	2	122
Apr													
03...	1230	260	754	10.1	95	8.0	1,040	--	12.0	206	246	2	123
24...	1415	188	751	10.6	120	8.2	1,080	25.0	20.5	210	251	2	133
May													
06...	1345	182	750	11.5	125	8.2	1,060	--	18.5	--	252	2	125
23...	1330	1,180	742	11.3	116	7.4	333	--	15.5	67	81	--	29.4
Jun													
02...	1000	171	750	13.8	155	8.2	1,020	20.0	20.0	211	252	3	117
19...	1230	154	746	9.8	121	8.2	1,040	37.0	24.5	210	246	5	116
Jul													
09...	1500	131	744	8.9	112	8.2	1,040	29.0	25.5	194	231	2	125
Aug													
11...	1500	124	746	8.6	106	8.1	1,050	30.5	24.5	195	231	3	130
Sep													
04...	1345	108	744	9.5	118	8.1	1,050	33.5	25.0	204	248	--	126

11074000 Santa Ana River below Prado Dam, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 2 of 8
[Remark codes: <, less than; E, estimated.]

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L as P (00665)	1-Naphthol, water, fltrd 0.7u GF µg/L (49295)	2,6-Diethylaniline water, fltrd 0.7u GF µg/L (82660)	2Chloro-2',6'-diethyl acetanilide wat flt µg/L (61618)	CIAT, water, fltrd, µg/L (04040)	2-Ethyl-6-methylaniline water, fltrd, µg/L (61620)	3,4-Dichloroaniline water, fltrd, µg/L (61625)
Oct													
05...	103	<.020	6.73	.041	7.51	1.05	1.16	<.04	<.006	<.010	<.014	<.010	<.009
Nov													
15...	98.7	.045	6.27	.024	7.00	1.06	1.19	<.04	<.006	<.010	<.014	<.010	<.011
Dec													
20...	80.7	.050	3.15	.075	4.03	.845	.95	--	--	--	--	--	--
Jan													
17...	69.2	.033	2.38	.061	3.14	.558	.64	<.04	<.006	<.010	<.014	<.010	E.016
31...	74.6	.043	2.59	.032	3.30	.420	.52	<.04	<.006	<.010	<.014	<.010	E.021
Feb													
12...	76.9	<.020	2.65	.046	3.14	.681	.73	<.04	<.006	<.010	<.014	<.010	E.025
28...	79.6	.095	2.84	.044	3.38	.677	.72	<.04	<.006	<.010	<.014	<.010	E.029
Mar													
13...	108	.021	3.40	.040	4.13	.896	.96	<.04	<.006	<.010	E.009	<.010	E.018
27...	111	<.020	5.03	.034	6.12	1.03	1.25	<.04	<.006	<.010	<.014	<.010	E.013
Apr													
03...	110	<.020	5.78	.032	6.65	1.17	1.29	<.04	<.006	<.010	E.012	<.010	E.017
24...	109	.040	6.21	.034	6.90	1.23	1.36	<.04	<.006	<.010	E.015	<.010	E.013
May													
06...	110	.056	5.79	.039	6.78	1.40	1.44	<.04	<.006	<.010	E.011	<.010	E.013
23...	29.5	.493	2.44	.071	6.90	.271	2.68	<.04	<.006	<.010	<.014	<.010	<.008
Jun													
02...	101	.024	5.08	.036	5.88	1.45	1.46	<.04	<.006	<.010	E.012	<.010	E.014
19...	101	<.020	5.43	.051	6.02	1.54	1.48	<.04	<.006	<.010	E.013	<.010	E.016
Jul													
09...	107	.093	4.48	.111	4.97	1.11	1.14	<.04	<.006	<.010	E.012	<.010	E.016
Aug													
11...	112	.028	4.02	.059	4.59	1.47	1.46	<.04	<.006	<.010	E.010	<.010	E.016
Sep													
04...	106	.030	4.44	.059	4.75	1.44	1.44	<.04	<.006	<.010	E.012	<.010	E.013

11074000 Santa Ana River below Prado Dam, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 3 of 8
[Remark codes: <, less than; E, estimated.]

Date	3,5-Di-chloro-aniline water, fltrd, µg/L (61627)	4-Chloro-2methyl phenol, water, fltrd, µg/L (61633)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	alpha-Endo-sulfan, water, fltrd, µg/L (34362)	Atra-zine, water, fltrd, µg/L (39632)	Azin-phos-methyl oxon, water, fltrd, µg/L (61635)	Azin-phos-methyl, water, fltrd 0.7u GF µg/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF µg/L (82673)	Car-baryl, water, fltrd 0.7u GF µg/L (82680)	Carbo-furan, water, fltrd 0.7u GF µg/L (82674)	Chlor-pyrifos oxon, water, fltrd, µg/L (61636)	Chlor-pyrifos water, fltrd, µg/L (38933)
Oct													
05...	<.008	<.005	<.006	<.012	<.006	E.008	<.04	<.120	<.004	<.060	<.020	<.06	<.005
Nov													
15...	<.008	<.005	<.006	<.013	<.008	.010	<.04	<.120	<.004	E.009	<.020	<.06	<.005
Dec													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
Jan													
17...	<.008	<.005	<.006	<.006	<.006	.008	<.04	<.120	<.004	E.014	<.020	<.06	<.005
31...	<.008	<.005	<.006	<.008	<.006	E.006	<.04	<.120	<.006	E.010	<.020	<.06	<.005
Feb													
12...	<.008	<.005	<.006	<.006	<.006	<.009	<.04	<.120	<.004	E.010	<.020	<.06	<.005
28...	<.008	<.005	<.006	<.006	<.006	<.007	<.04	<.120	<.004	E.011	<.020	<.06	<.005
Mar													
13...	<.008	E.005	<.006	<.006	<.006	.008	<.04	<.120	<.010	E.009	<.020	<.06	<.005
27...	<.008	<.005	<.006	<.006	<.007	.009	<.04	<.120	<.010	<.060	<.020	<.06	<.005
Apr													
03...	<.008	<.005	<.006	<.006	<.006	E.007	<.04	<.120	<.010	<.060	<.020	<.06	<.005
24...	<.008	<.005	<.006	<.011	<.006	.009	<.04	<.120	<.010	<.060	<.020	<.06	<.005
May													
06...	<.008	<.005	<.006	<.006	<.006	E.007	<.04	<.120	<.010	E.018	<.020	<.06	<.005
23...	<.008	<.005	<.006	<.006	--	<.007	<.04	<.120	<.010	E.150	E.056	<.06	E.015
Jun													
02...	<.008	<.005	<.006	<.006	<.006	.014	<.04	<.120	<.010	E.007	<.020	<.06	<.005
19...	<.008	<.005	<.006	<.008	<.006	.008	<.04	<.120	<.010	<.060	<.020	<.06	<.005
Jul													
09...	<.008	<.005	<.006	<.006	<.006	E.007	<.04	<.120	<.010	<.060	<.020	<.06	<.005
Aug													
11...	<.008	<.005	<.006	<.006	<.006	E.006	<.04	<.120	<.010	<.060	<.020	<.06	<.005
Sep													
04...	<.008	<.005	<.006	<.007	<.006	E.007	<.04	<.120	<.010	<.060	<.020	<.06	<.005

11074000 Santa Ana River below Prado Dam, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 4 of 8
[Remark codes: <, less than; E, estimated.]

Date	cis-Permethrin water fltrd 0.7u GF µg/L (82687)	cis-Propiconazole, water, fltrd, µg/L (79846)	Cyanazine, water, fltrd, µg/L (04041)	Cyfluthrin, water, fltrd, µg/L (61585)	lambda-Cyhalothrin, water, fltrd, µg/L (61595)	Cypermethrin water, fltrd, µg/L (61586)	DCPA, water, fltrd 0.7u GF µg/L (82682)	Desulfinylfipronil, water, fltrd, µg/L (62170)	Diazinon, water, fltrd, µg/L (39572)	Dicrotophos, water, fltrd, µg/L (38454)	Dieldrin, water, fltrd, µg/L (39381)	Dimethoate, water, fltrd 0.7u GF µg/L (82662)	Disulfoton sulfone water, fltrd, µg/L (61640)
Oct													
05...	<.010	<.006	<.020	<.016	<.007	<.014	E.002	E.005	<.005	<.08	<.009	<.006	<.01
Nov													
15...	<.010	<.006	<.020	<.016	<.004	<.014	E.004	E.005	<.005	<.08	<.009	<.006	<.01
Dec													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
Jan													
17...	<.010	E.021	<.020	<.016	<.015	<.014	.010	E.007	E.004	<.08	<.009	<.006	<.01
31...	<.010	E.010	<.020	<.016	<.004	<.014	.020	E.007	<.005	<.08	<.009	<.006	<.01
Feb													
12...	<.010	E.009	<.020	<.016	<.004	<.014	.010	E.009	<.005	<.08	<.009	<.006	<.01
28...	<.010	E.009	<.020	<.016	<.004	<.014	.041	E.009	<.005	<.08	<.009	<.006	<.01
Mar													
13...	<.010	E.005	<.020	<.016	<.004	<.014	.008	<.012	<.005	<.08	<.009	<.006	<.01
27...	<.010	<.006	<.020	<.016	<.004	<.014	E.005	E.006	<.005	<.08	<.009	<.006	<.01
Apr													
03...	<.010	<.006	<.020	<.016	<.004	<.014	<.003	E.007	<.005	<.08	<.009	<.006	<.01
24...	<.010	<.006	<.020	<.016	<.004	<.014	E.005	E.007	<.005	<.08	<.009	<.006	<.01
May													
06...	<.010	<.006	<.020	<.016	<.004	<.014	E.006	E.004	<.005	<.08	<.009	<.006	<.01
23...	<.010	<.006	<.020	<.016	<.004	<.014	.040	.014	.024	<.08	<.009	<.006	<.01
Jun													
02...	<.010	<.006	<.020	<.016	<.004	<.014	E.004	E.007	<.005	<.08	<.009	<.006	<.01
19...	<.010	<.006	<.020	<.016	<.004	<.014	E.002	E.005	<.005	<.08	<.009	<.006	<.01
Jul													
09...	<.010	<.006	<.020	<.016	<.004	<.020	<.003	E.006	<.005	<.08	<.009	<.006	<.01
Aug													
11...	<.010	<.006	<.020	<.020	<.010	<.017	E.002	E.005	<.005	<.08	<.009	<.006	<.01
Sep													
04...	<.010	<.006	<.020	<.016	<.018	<.014	<.003	E.006	<.005	<.08	<.009	<.006	<.01

11074000 Santa Ana River below Prado Dam, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 5 of 8
[Remark codes: <, less than; E, estimated.]

Date	Disulfoton, water, fltrd 0.7u GF µg/L (82677)	Endosulfan sulfate water, fltrd, µg/L (61590)	EPTC, water, fltrd 0.7u GF µg/L (82668)	Ethion monoxon water, fltrd, µg/L (61644)	Ethion, water, fltrd, µg/L (82346)	Ethoprop, water, fltrd 0.7u GF µg/L (82672)	Fenamiphos sulfone water, fltrd, µg/L (61645)	Fenamiphos sulfoxide, water, fltrd, µg/L (61646)	Fenamiphos, water, fltrd, µg/L (61591)	Desulfinylfipronil amide, wat flt µg/L (62169)	Fipronil sulfide water, fltrd, µg/L (62167)	Fipronil sulfone water, fltrd, µg/L (62168)	Fipronil, water, fltrd, µg/L (62166)
Oct													
05...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.04	<.03	<.029	E.005	<.024	E.007
Nov													
15...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.04	<.03	<.029	E.006	<.024	E.006
Dec													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
Jan													
17...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.04	<.03	E.004	E.006	E.008	E.012
31...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.04	<.03	E.008	E.007	<.024	E.012
Feb													
12...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.04	<.03	E.007	E.008	E.011	E.014
28...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.04	<.03	E.007	E.008	E.009	E.013
Mar													
13...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	<.029	E.005	<.024	<.020
27...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	<.029	E.005	<.024	E.005
Apr													
03...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	<.029	E.009	<.024	E.012
24...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	<.029	E.010	<.024	E.012
May													
06...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	<.029	E.003	<.024	E.004
23...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	E.004	E.004	<.024	E.035
Jun													
02...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	E.005	E.006	<.024	<.020
19...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	<.029	E.005	E.006	E.005
Jul													
09...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	<.029	E.005	<.024	E.007
Aug													
11...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	E.003	E.004	<.024	E.004
Sep													
04...	<.04	<.022	<.002	<.02	<.006	<.012	<.053	<.20	<.03	<.029	<.013	<.024	E.005

11074000 Santa Ana River below Prado Dam, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 6 of 8
[Remark codes: <, less than; E, estimated.]

Date	Fonofos water, fltrd, µg/L (04095)	Hexazinone, water, fltrd, µg/L (04025)	Iprodione, water, fltrd, µg/L (61593)	Isofenphos, water, fltrd, µg/L (61594)	Malaoxon, water, fltrd, µg/L (61652)	Malathion, water, fltrd, µg/L (39532)	Metalaxyl, water, fltrd, µg/L (61596)	Methidathion, water, fltrd, µg/L (61598)	Methyl paraoxon, water, fltrd, µg/L (61664)	Methyl parathion, water, fltrd 0.7u GF µg/L (82667)	Metolachlor, water, fltrd, µg/L (39415)	Metribuzin, water, fltrd, µg/L (82630)	Molinate, water, fltrd 0.7u GF µg/L (82671)
Oct													
05...	<.010	<.008	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	<.010	<.012	<.024
Nov													
15...	<.010	<.008	<.01	<.006	<.022	<.016	<.032	<.006	<.01	<.008	<.010	<.012	<.045
Dec													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
Jan													
17...	<.010	.029	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	<.010	<.012	<.048
31...	<.010	.091	<.017	<.006	<.020	<.016	<.007	<.004	<.01	<.008	<.010	<.012	<.003
Feb													
12...	<.010	.050	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	<.010	<.012	<.003
28...	<.010	.070	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	E.008	<.012	<.003
Mar													
13...	<.010	.021	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	<.010	<.012	<.003
27...	<.010	.017	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	<.010	<.012	<.003
Apr													
03...	<.010	<.015	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	<.010	<.012	<.003
24...	<.010	<.008	<.01	<.006	<.020	.400	<.027	<.004	<.01	<.008	<.010	<.012	<.003
May													
06...	<.010	<.008	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	E.008	<.012	<.003
23...	<.010	.060	<.0426	<.006	<.020	.097	<.007	<.004	<.01	<.008	<.010	<.012	<.003
Jun													
02...	<.010	<.008	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	E.007	<.012	<.003
19...	<.010	<.008	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	<.010	<.012	<.003
Jul													
09...	<.010	<.008	<.01	<.006	<.020	<.016	<.007	<.004	<.01	<.008	<.010	<.012	<.006
Aug													
11...	<.010	<.008	<.01	<.006	<.020	<.016	<.020	<.004	<.01	<.008	E.008	<.012	<.003
Sep													
04...	<.010	<.008	<.01	<.006	<.020	<.016	<.023	<.004	<.01	<.008	<.010	<.012	<.003

11074000 Santa Ana River below Prado Dam, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 7 of 8
[Remark codes: <, less than; E, estimated.]

Date	Myclo-butanil water, fltrd, µg/L (61599)	Oxy-fluor-fen, water, fltrd, µg/L (61600)	Pendi-meth-alin, water, fltrd 0.7u GF µg/L (82683)	Phorate oxon, water, fltrd, µg/L (61666)	Phorate water, fltrd 0.7u GF µg/L (82664)	Phosmet oxon, water, fltrd, µg/L (61668)	Phosmet water, fltrd, µg/L (61601)	Prome-ton, water, fltrd, µg/L (04037)	Prome-tryn, water, fltrd, µg/L (04036)	Propy-zamide, water, fltrd 0.7u GF µg/L (82676)	Pro-panil, water, fltrd 0.7u GF µg/L (82679)	Propar-gite, water, fltrd 0.7u GF µg/L (82685)	Sima-zine, water, fltrd, µg/L (04035)
Oct													
05...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	.01	<.006	<.004	<.006	<.04	.021
Nov													
15...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	.01	<.006	<.004	<.006	<.04	.076
Dec													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
Jan													
17...	.012	<.006	<.012	<.03	<.040	<.05	<.008	.01	<.006	<.004	<.006	<.04	.092
31...	<.010	<.006	E.009	<.03	<.040	<.05	<.008	.01	<.006	<.004	<.006	<.04	.071
Feb													
12...	<.010	<.006	<.012	<.03	<.040	--	<.008	.01	<.006	<.004	<.006	<.04	.076
28...	<.010	<.006	.012	<.03	<.040	<.05	<.008	.01	<.006	<.004	<.006	<.04	.113
Mar													
13...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	.02	<.006	<.004	<.006	<.04	.110
27...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	.01	<.006	<.004	<.006	<.04	.110
Apr													
03...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	.04	<.006	<.004	<.006	<.04	.109
24...	<.013	<.006	<.012	<.03	<.040	<.05	<.008	.01	<.006	<.004	<.006	<.04	.092
May													
06...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	E.01	<.006	<.004	<.006	<.04	.051
23...	.024	<.006	<.012	<.03	<.040	<.05	<.009	<.01	<.006	<.004	<.006	<.04	1.86
Jun													
02...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	.01	<.006	<.004	<.006	<.04	.052
19...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	E.01	<.006	<.004	<.006	<.04	.046
Jul													
09...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	.01	<.006	<.004	<.006	<.04	.030
Aug													
11...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	.02	<.006	<.004	<.006	<.04	.028
Sep													
04...	<.010	<.006	<.012	<.03	<.040	<.05	<.008	E.01	<.006	<.004	<.006	<.04	.024

11074000 Santa Ana River below Prado Dam, CA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 8 of 8
[Remark codes: <, less than; E, estimated.]

Date	Tebu-thiuron water, fltrd 0.7u GF µg/L (82670)	Teflu-thrin, water, fltrd, µg/L (61606)	Ter-bufos oxon sulfone water, fltrd, µg/L (61674)	Terbu-fos, water, fltrd 0.7u GF µg/L (82675)	Ter-buthyl-azine, water, fltrd, µg/L (04022)	Thio-bencarb water, fltrd 0.7u GF µg/L (82681)	trans-Propi-cona-zole, water, fltrd, µg/L (79847)	Tribu-phos, water, fltrd, µg/L (61610)	Tri-flur-alin, water, fltrd 0.7u GF µg/L (82661)	Di-chlor-vos, water, fltrd, µg/L (38775)
Oct										
05...	<.02	<.005	<.13	<.02	<.01	<.010	<.02	<.035	<.006	<.01
Nov										
15...	<.02	<.005	--	<.02	<.01	<.010	<.02	--	<.006	<.01
Dec										
20...	--	--	--	--	--	--	--	--	--	--
Jan										
17...	E.07	<.003	<.05	<.02	<.01	<.010	E.02	<.123	<.006	<.01
31...	.03	<.006	<.04	<.02	<.01	<.010	E.02	<.100	<.006	<.01
Feb										
12...	<.02	<.003	<.04	<.02	.03	<.010	E.02	<.035	<.006	<.01
28...	<.02	<.003	<.04	<.02	<.01	<.010	E.01	<.035	<.006	<.01
Mar										
13...	<.02	<.007	<.04	<.02	<.01	<.010	E.01	<.035	<.009	<.01
27...	<.02	<.003	<.12	<.02	<.01	<.010	<.02	<.067	<.009	<.01
Apr										
03...	<.02	<.009	<.04	<.02	<.01	<.010	<.02	<.070	<.009	<.01
24...	<.02	<.010	<.04	<.02	<.01	<.010	<.02	<.250	<.009	<.01
May										
06...	E.01	<.003	<.04	<.02	<.01	<.010	<.02	<.035	<.009	<.01
23...	<.02	<.003	<.04	<.02	<.01	<.010	E.03	<.086	<.009	E.01
Jun										
02...	<.02	<.003	<.04	<.02	<.01	<.010	<.02	<.035	<.009	<.01
19...	<.01	<.006	<.04	<.02	<.01	<.010	<.02	<.240	<.009	<.01
Jul										
09...	<.02	<.007	<.13	<.02	<.01	<.010	<.02	<.270	<.009	<.01
Aug										
11...	<.02	<.005	<.20	<.02	<.01	<.010	<.02	<.200	<.009	<.01
Sep										
04...	<.02	<.006	<.07	<.02	<.01	<.010	<.02	<.260	<.009	<.01

11074000 Santa Ana River below Prado Dam, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

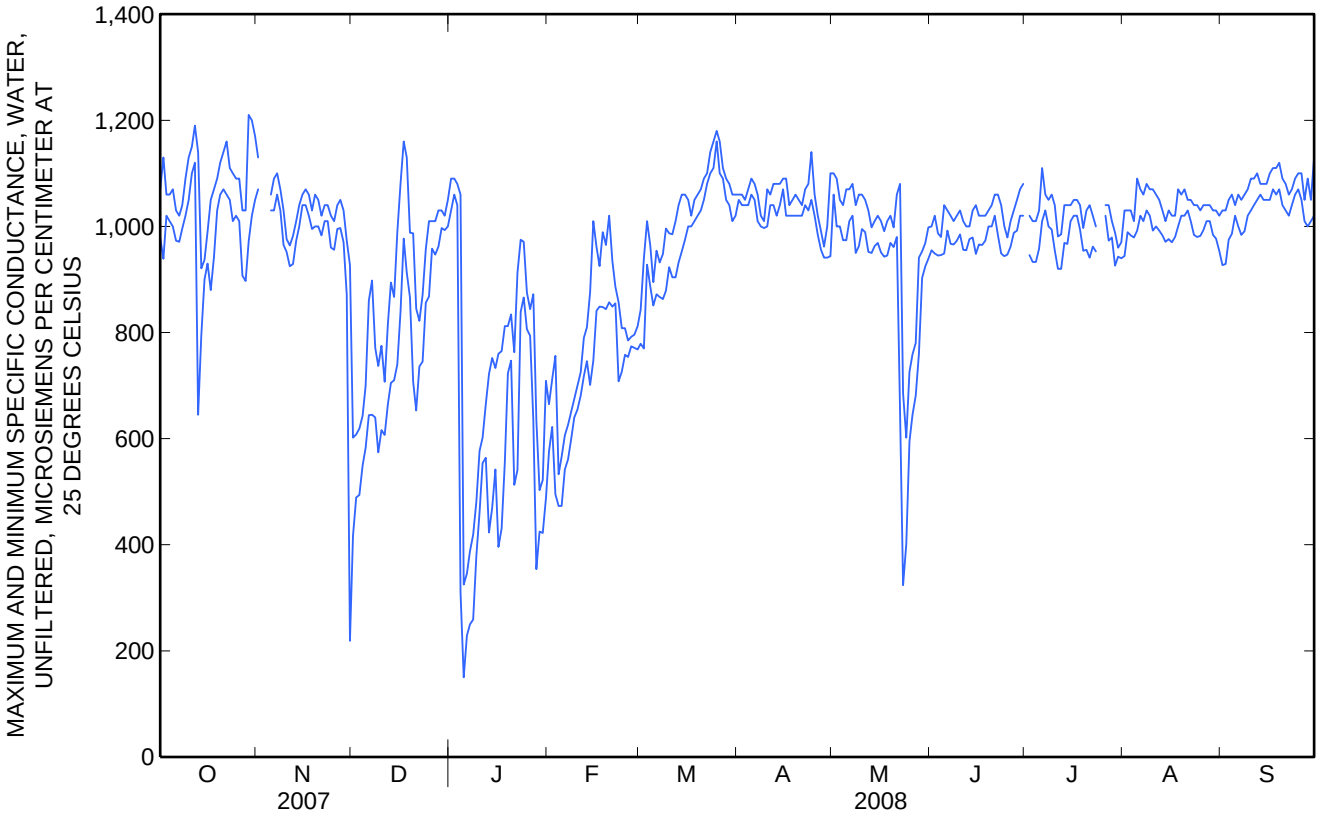
Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	October		November		December		January		February		March	
1	1,070	979	1,130	1,070	602	417	1,090	1,030	665	576	843	779
2	1,130	939	---	---	608	489	1,090	1,060	712	622	940	770
3	1,060	1,020	---	---	619	494	1,080	1,040	756	495	1,010	928
4	1,060	1,010	---	---	643	549	1,060	310	533	473	964	887
5	1,070	1,000	1,060	1,030	700	583	325	150	566	473	895	851
6	1,030	973	1,090	1,030	860	644	346	229	606	542	954	872
7	1,020	971	1,100	1,060	898	645	388	250	626	561	932	867
8	1,040	996	1,070	1,030	771	640	419	259	651	600	948	863
9	1,090	1,020	1,030	965	737	574	481	379	675	640	996	879
10	1,130	1,050	976	952	775	616	577	461	700	655	987	923
11	1,150	1,100	964	925	707	607	602	554	725	681	985	904
12	1,190	1,120	982	929	816	665	665	564	790	718	1,010	904
13	1,140	645	1,010	973	894	705	722	423	810	746	1,040	932
14	921	795	1,040	1,000	867	710	752	470	876	701	1,060	953
15	937	900	1,060	1,040	989	740	733	542	1,010	747	1,060	975
16	990	930	1,070	1,040	1,080	839	760	396	961	841	1,050	1,000
17	1,050	880	1,060	1,020	1,160	977	765	431	925	849	1,020	1,000
18	1,070	942	1,030	995	1,130	913	812	556	989	848	1,050	1,010
19	1,090	1,030	1,060	1,000	988	866	812	723	965	844	1,060	1,020
20	1,120	1,060	1,050	1,000	987	707	834	747	1,020	857	1,070	1,030
21	1,140	1,070	1,020	983	845	653	763	513	935	849	1,090	1,050
22	1,160	1,060	1,040	1,010	822	736	913	541	886	855	1,100	1,080
23	1,110	1,050	1,040	1,010	871	745	975	839	857	708	1,140	1,100
24	1,100	1,010	1,020	960	957	856	971	866	808	726	1,160	1,110
25	1,090	1,020	1,010	956	1,010	868	875	806	808	758	1,180	1,160
26	1,090	1,010	1,040	995	1,010	958	844	794	785	754	1,160	1,100
27	1,030	907	1,050	997	1,010	947	872	635	792	774	1,110	1,090
28	1,030	897	1,030	970	1,030	962	635	354	796	771	1,090	1,050
29	1,210	972	973	871	1,030	997	503	425	812	768	1,080	1,040
30	1,200	1,020	927	219	1,020	993	522	422	---	---	1,060	1,010
31	1,170	1,050	---	---	1,050	1,000	709	488	---	---	1,060	1,020
Month	1,210	645	---	---	1,160	417	1,090	150	1,020	473	1,180	770

11074000 Santa Ana River below Prado Dam, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	April		May		June		July		August		September	
1	1,060	1,050	1,100	1,060	1,000	955	---	---	1,030	944	1,030	927
2	1,060	1,040	1,090	1,000	1,020	949	1,020	946	1,030	989	1,030	929
3	1,050	1,040	1,050	1,000	987	945	1,010	933	1,030	983	1,050	975
4	1,070	1,040	1,040	974	980	946	1,010	933	1,010	979	1,060	986
5	1,090	1,060	1,070	974	1,040	949	1,030	958	1,090	992	1,040	1,020
6	1,080	1,050	1,070	1,010	1,030	992	1,110	1,010	1,070	1,020	1,060	1,000
7	1,060	1,010	1,080	1,020	1,020	967	1,060	1,030	1,060	1,010	1,050	984
8	1,020	1,000	1,040	950	1,010	966	1,050	1,000	1,080	1,030	1,060	991
9	1,010	997	1,060	963	1,020	973	1,060	994	1,070	1,020	1,070	1,020
10	1,070	1,000	1,060	995	1,030	985	1,040	955	1,070	992	1,090	1,030
11	1,060	1,040	1,050	989	1,010	956	981	920	1,060	1,000	1,090	1,040
12	1,080	1,040	1,030	952	1,000	955	985	920	1,050	992	1,100	1,050
13	1,080	1,020	998	950	1,000	976	1,040	969	1,030	983	1,080	1,060
14	1,080	1,040	1,010	963	1,030	979	1,040	967	1,010	971	1,080	1,050
15	1,090	1,070	1,020	969	1,040	948	1,040	1,010	1,030	976	1,080	1,050
16	1,090	1,020	1,010	951	1,020	966	1,050	1,020	1,020	970	1,100	1,050
17	1,040	1,020	991	943	1,020	965	1,050	1,020	1,020	980	1,110	1,070
18	1,050	1,020	1,010	945	1,020	973	1,040	994	1,070	1,000	1,110	1,060
19	1,060	1,020	1,020	969	1,030	1,000	997	954	1,060	1,020	1,120	1,070
20	1,050	1,020	998	961	1,040	1,000	1,030	956	1,070	1,020	1,090	1,040
21	1,040	1,020	1,060	980	1,060	1,020	1,040	941	1,050	1,030	1,080	1,030
22	1,070	1,040	1,080	652	1,060	983	1,020	962	1,050	1,010	1,060	1,020
23	1,080	1,030	685	324	1,040	949	1,000	953	1,040	984	1,070	1,040
24	1,140	1,050	602	401	1,000	944	---	---	1,040	980	1,090	1,060
25	1,060	1,020	726	595	979	947	---	---	1,030	982	1,100	1,070
26	1,020	984	759	645	1,010	962	1,040	1,020	1,040	993	1,100	1,050
27	991	956	780	681	1,030	988	1,040	973	1,040	1,010	1,050	1,010
28	962	941	941	760	1,050	992	1,010	979	1,040	1,010	1,090	1,000
29	1,000	941	953	903	1,070	1,020	988	926	1,030	984	1,050	1,010
30	1,100	944	969	925	1,080	1,020	960	943	1,030	977	1,130	1,020
31	---	---	998	939	---	---	970	940	1,020	954	---	---
Month	1,140	941	1,100	324	1,080	944	---	---	1,090	944	1,130	927

11074000 Santa Ana River below Prado Dam, CA—Continued



SANTA ANA RIVER BELOW PRADO DAM - STATION 11074000
FLOW WEIGHTED SPECIFIC CONDUCTANCE
WATER YEAR 2007-08

MM/DD/YY	DAY	Q CFS	MEAN SC uS/cm	Q-WTD SC uS/cm
Oct 1 2007	1	168	1020	1020
Oct 2 2007	2	160	1010	1010
Oct 3 2007	3	162	1040	1040
Oct 4 2007	4	163	1040	1040
Oct 5 2007	5	160	1030	1030
Oct 6 2007	6	160	1010	1010
Oct 7 2007	7	161	998	997
Oct 8 2007	8	167	1020	1020
Oct 9 2007	9	169	1070	1070
Oct 10 2007	10	172	1100	1100
Oct 11 2007	11	184	1130	1130
Oct 12 2007	12	187	1150	1150
Oct 13 2007	13	322	926	893
Oct 14 2007	14	234	876	873
Oct 15 2007	15	200	920	919
Oct 16 2007	16	186	962	962
Oct 17 2007	17	198	1000	1000
Oct 18 2007	18	191	1040	1040
Oct 19 2007	19	185	1060	1060
Oct 20 2007	20	167	1090	1090
Oct 21 2007	21	160	1110	1110
Oct 22 2007	22	160	1110	1110
Oct 23 2007	23	154	1070	1070
Oct 24 2007	24	162	1070	1070
Oct 25 2007	25	165	1060	1060
Oct 26 2007	26	158	1050	1050
Oct 27 2007	27	158	992	991
Oct 28 2007	28	172	956	957
Oct 29 2007	29	169	1100	1100
Oct 30 2007	30	160	1120	1120
Oct 31 2007	31	161	1120	1120
Nov 1 2007	32	158	1090	1090
Nov 2 2007	33			
Nov 3 2007	34			
Nov 4 2007	35			
Nov 5 2007	36	191	1050	1050
Nov 6 2007	37	202	1060	1060
Nov 7 2007	38	197	1080	1080
Nov 8 2007	39	195	1060	1060
Nov 9 2007	40	202	1000	1000
Nov 10 2007	41			
Nov 11 2007	42			
Nov 12 2007	43	198	960	958
Nov 13 2007	44	187	990	990
Nov 14 2007	45	178	1020	1020
Nov 15 2007	46	176	1050	1050
Nov 16 2007	47	172	1060	1060
Nov 17 2007	48	175	1040	1040
Nov 18 2007	49	183	1010	1010
Nov 19 2007	50	179	1020	1020
Nov 20 2007	51	179	1030	1030
Nov 21 2007	52	190	1000	1000
Nov 22 2007	53	198	1020	1020

SANTA ANA RIVER BELOW PRADO DAM - STATION 11074000
FLOW WEIGHTED SPECIFIC CONDUCTANCE
WATER YEAR 2007-08

MM/DD/YY	DAY	Q CFS	MEAN SC uS/cm	Q-WTD SC uS/cm
Nov 23 2007	54	195	1020	1020
Nov 24 2007	55	180	980	980
Nov 25 2007	56	188	976	976
Nov 26 2007	57	193	1020	1020
Nov 27 2007	58	188	1020	1020
Nov 28 2007	59	177	995	997
Nov 29 2007	60	189	922	920
Nov 30 2007	61	184	629	665
Dec 1 2007	62	378	496	496
Dec 2 2007	63	451	540	540
Dec 3 2007	64	501	544	545
Dec 4 2007	65	531	591	591
Dec 5 2007	66	516	630	630
Dec 6 2007	67	416	739	721
Dec 7 2007	68	415	771	751
Dec 8 2007	69	556	703	703
Dec 9 2007	70	547	656	656
Dec 10 2007	71	545	662	662
Dec 11 2007	72	551	654	654
Dec 12 2007	73	547	748	748
Dec 13 2007	74	533	783	783
Dec 14 2007	75	535	779	779
Dec 15 2007	76	519	838	837
Dec 16 2007	77	498	974	974
Dec 17 2007	78	482	1070	1070
Dec 18 2007	79	337	989	1003
Dec 19 2007	80	322	942	942
Dec 20 2007	81	370	817	815
Dec 21 2007	82	398	729	728
Dec 22 2007	83	389	780	780
Dec 23 2007	84	376	804	804
Dec 24 2007	85	359	905	904
Dec 25 2007	86	359	907	906
Dec 26 2007	87	362	990	990
Dec 27 2007	88	325	977	977
Dec 28 2007	89	308	1000	1000
Dec 29 2007	90	287	1020	1020
Dec 30 2007	91	253	1010	1010
Dec 31 2007	92	232	1030	1030
Jan 1 2008	93	222	1070	1070
Jan 2 2008	94	217	1080	1080
Jan 3 2008	95	244	1060	1060
Jan 4 2008	96	285	1020	1000
Jan 5 2008	97	892	257	263
Jan 6 2008	98	2280	285	287
Jan 7 2008	99	2550	322	322
Jan 8 2008	100	1340	348	324
Jan 9 2008	101	572	450	450
Jan 10 2008	102	504	528	525
Jan 11 2008	103	475	579	579
Jan 12 2008	104	468	626	626
Jan 13 2008	105	461	596	596
Jan 14 2008	106	452	599	598

SANTA ANA RIVER BELOW PRADO DAM - STATION 11074000
FLOW WEIGHTED SPECIFIC CONDUCTANCE
WATER YEAR 2007-08

MM/DD/YY	DAY	Q CFS	MEAN SC uS/cm	Q-WTD SC uS/cm
Jan 15 2008	107	432	673	673
Jan 16 2008	108	480	605	598
Jan 17 2008	109	503	620	618
Jan 18 2008	110	491	709	708
Jan 19 2008	111	478	762	762
Jan 20 2008	112	467	777	777
Jan 21 2008	113	467	613	613
Jan 22 2008	114	337	819	794
Jan 23 2008	115	259	883	883
Jan 24 2008	116	264	908	908
Jan 25 2008	117	273	855	855
Jan 26 2008	118	275	816	816
Jan 27 2008	119	1390	788	746
Jan 28 2008	120	2570	560	559
Jan 29 2008	121	2100	455	458
Jan 30 2008	122	699	483	484
Jan 31 2008	123	503	596	585
Feb 1 2008	124	431	616	616
Feb 2 2008	125	431	661	661
Feb 3 2008	126	767	662	620
Feb 4 2008	127	1300	508	507
Feb 5 2008	128	628	524	518
Feb 6 2008	129	490	565	565
Feb 7 2008	130	487	591	591
Feb 8 2008	131	492	628	628
Feb 9 2008	132	485	656	656
Feb 10 2008	133	460	670	670
Feb 11 2008	134	457	701	701
Feb 12 2008	135	406	741	738
Feb 13 2008	136	319	775	775
Feb 14 2008	137	335	770	770
Feb 15 2008	138	342	856	856
Feb 16 2008	139	346	879	879
Feb 17 2008	140	358	882	882
Feb 18 2008	141	365	897	897
Feb 19 2008	142	389	889	890
Feb 20 2008	143	398	907	907
Feb 21 2008	144	356	888	884
Feb 22 2008	145	274	868	868
Feb 23 2008	146	272	784	784
Feb 24 2008	147	291	753	754
Feb 25 2008	148	340	770	769
Feb 26 2008	149	371	769	769
Feb 27 2008	150	369	782	782
Feb 28 2008	151	370	785	785
Feb 29 2008	152	371	784	784
Mar 1 2008	153	366	799	799
Mar 2 2008	154	357	852	850
Mar 3 2008	155	360	967	967
Mar 4 2008	156	364	931	931
Mar 5 2008	157	412	877	877
Mar 6 2008	158	441	902	902
Mar 7 2008	159	441	889	889

SANTA ANA RIVER BELOW PRADO DAM - STATION 11074000
FLOW WEIGHTED SPECIFIC CONDUCTANCE
WATER YEAR 2007-08

MM/DD/YY	DAY	Q CFS	MEAN SC uS/cm	Q-WTD SC uS/cm
Mar 8 2008	160	443	897	897
Mar 9 2008	161	447	929	929
Mar 10 2008	162	466	954	954
Mar 11 2008	163	482	939	939
Mar 12 2008	164	482	952	952
Mar 13 2008	165	477	976	976
Mar 14 2008	166	460	988	987
Mar 15 2008	167	437	1010	1010
Mar 16 2008	168	431	1030	1030
Mar 17 2008	169	430	1010	1010
Mar 18 2008	170	425	1030	1030
Mar 19 2008	171	422	1030	1030
Mar 20 2008	172	416	1040	1040
Mar 21 2008	173	414	1070	1070
Mar 22 2008	174	410	1100	1100
Mar 23 2008	175	403	1120	1120
Mar 24 2008	176	391	1140	1140
Mar 25 2008	177	365	1170	1170
Mar 26 2008	178	299	1140	1140
Mar 27 2008	179	280	1100	1100
Mar 28 2008	180	270	1070	1070
Mar 29 2008	181	285	1050	1050
Mar 30 2008	182	290	1040	1040
Mar 31 2008	183	284	1050	1050
Apr 1 2008	184	271	1050	1050
Apr 2 2008	185	265	1050	1050
Apr 3 2008	186	258	1040	1040
Apr 4 2008	187	245	1060	1060
Apr 5 2008	188	240	1070	1070
Apr 6 2008	189	241	1080	1080
Apr 7 2008	190	245	1040	1040
Apr 8 2008	191	250	1010	1010
Apr 9 2008	192	228	1000	1000
Apr 10 2008	193	219	1040	1040
Apr 11 2008	194	211	1050	1050
Apr 12 2008	195	202	1070	1070
Apr 13 2008	196	199	1060	1060
Apr 14 2008	197	202	1060	1060
Apr 15 2008	198	188	1080	1080
Apr 16 2008	199	215	1030	1030
Apr 17 2008	200	203	1030	1030
Apr 18 2008	201	195	1030	1030
Apr 19 2008	202	193	1040	1040
Apr 20 2008	203	195	1040	1040
Apr 21 2008	204	204	1030	1030
Apr 22 2008	205	198	1050	1050
Apr 23 2008	206	197	1060	1060
Apr 24 2008	207	195	1080	1080
Apr 25 2008	208	192	1040	1040
Apr 26 2008	209	185	997	997
Apr 27 2008	210	180	980	980
Apr 28 2008	211	182	954	954
Apr 29 2008	212	173	973	972

SANTA ANA RIVER BELOW PRADO DAM - STATION 11074000
FLOW WEIGHTED SPECIFIC CONDUCTANCE
WATER YEAR 2007-08

MM/DD/YY	DAY	Q CFS	MEAN SC uS/cm	Q-WTD SC uS/cm
Apr 30 2008	213	176	1070	1070
May 1 2008	214	170	1090	1090
May 2 2008	215	162	1060	1060
May 3 2008	216	172	1030	1030
May 4 2008	217	181	1010	1010
May 5 2008	218	196	1020	1020
May 6 2008	219	193	1040	1040
May 7 2008	220	195	1050	1050
May 8 2008	221	196	1010	1010
May 9 2008	222	177	1030	1030
May 10 2008	223	169	1030	1030
May 11 2008	224	162	1020	1020
May 12 2008	225	158	993	993
May 13 2008	226	160	979	979
May 14 2008	227	155	990	990
May 15 2008	228	146	1000	1000
May 16 2008	229	140	977	976
May 17 2008	230	137	971	971
May 18 2008	231	139	982	982
May 19 2008	232	140	993	993
May 20 2008	233	154	983	983
May 21 2008	234	149	1030	1030
May 22 2008	235	208	971	911
May 23 2008	236	610	500	469
May 24 2008	237	345	511	502
May 25 2008	238	199	667	665
May 26 2008	239	177	693	693
May 27 2008	240	185	730	729
May 28 2008	241	176	818	817
May 29 2008	242	173	934	934
May 30 2008	243	162	947	947
May 31 2008	244	161	972	972
Jun 1 2008	245	169	982	982
Jun 2 2008	246	166	995	994
Jun 3 2008	247	176	973	973
Jun 4 2008	248	172	963	963
Jun 5 2008	249	161	1000	1000
Jun 6 2008	250	148	1020	1020
Jun 7 2008	251	151	1000	1000
Jun 8 2008	252	164	991	991
Jun 9 2008	253	164	1000	1000
Jun 10 2008	254	154	1010	1010
Jun 11 2008	255	167	987	987
Jun 12 2008	256	168	981	981
Jun 13 2008	257	170	989	989
Jun 14 2008	258	171	1000	1000
Jun 15 2008	259	171	999	999
Jun 16 2008	260	155	994	994
Jun 17 2008	261	148	987	987
Jun 18 2008	262	150	1000	1000
Jun 19 2008	263	151	1020	1020
Jun 20 2008	264	157	1030	1030
Jun 21 2008	265	147	1050	1050

SANTA ANA RIVER BELOW PRADO DAM - STATION 11074000
FLOW WEIGHTED SPECIFIC CONDUCTANCE
WATER YEAR 2007-08

MM/DD/YY	DAY	Q CFS	MEAN SC uS/cm	Q-WTD SC uS/cm
Jun 22 2008	266	140	1030	1030
Jun 23 2008	267	138	1000	1000
Jun 24 2008	268	140	977	976
Jun 25 2008	269	147	964	964
Jun 26 2008	270	143	995	995
Jun 27 2008	271	125	1010	1010
Jun 28 2008	272	106	1030	1030
Jun 29 2008	273	127	1050	1050
Jun 30 2008	274	128	1060	1060
Jul 1 2008				
Jul 2 2008	276	112	974	974
Jul 3 2008	277	121	972	972
Jul 4 2008	278	126	974	974
Jul 5 2008	279	124	995	994
Jul 6 2008	280	126	1080	1080
Jul 7 2008	281	129	1040	1040
Jul 8 2008	282	137	1030	1030
Jul 9 2008	283	141	1020	1020
Jul 10 2008	284	141	999	999
Jul 11 2008	285	140	955	955
Jul 12 2008	286	137	961	960
Jul 13 2008	287	133	1000	1000
Jul 14 2008	288	129	1000	1000
Jul 15 2008	289	126	1030	1030
Jul 16 2008	290	125	1030	1030
Jul 17 2008	291	117	1030	1030
Jul 18 2008	292	112	1030	1030
Jul 19 2008	293	111	973	973
Jul 20 2008	294	113	988	988
Jul 21 2008	295	113	1000	1000
Jul 22 2008	296	119	990	990
Jul 23 2008	297	126	980	980
Jul 24 2008				
Jul 25 2008				
Jul 26 2008	300	128	1030	1030
Jul 27 2008	301	127	1010	1010
Jul 28 2008	302	127	993	993
Jul 29 2008	303	126	957	957
Jul 30 2008	304	126	951	951
Jul 31 2008	305	128	952	952
Aug 1 2008	306	130	1010	1010
Aug 2 2008	307	131	1010	1010
Aug 3 2008	308	129	1000	1000
Aug 4 2008	309	137	995	995
Aug 5 2008	310	131	1050	1050
Aug 6 2008	311	138	1040	1040
Aug 7 2008	312	130	1040	1040
Aug 8 2008	313	127	1060	1060
Aug 9 2008	314	127	1050	1050
Aug 10 2008	315	131	1040	1040
Aug 11 2008	316	129	1040	1040
Aug 12 2008	317	129	1010	1010
Aug 13 2008	318	122	1000	1000

SANTA ANA RIVER BELOW PRADO DAM - STATION 11074000
FLOW WEIGHTED SPECIFIC CONDUCTANCE
WATER YEAR 2007-08

MM/DD/YY	DAY	Q CFS	MEAN SC uS/cm	Q-WTD SC uS/cm
Aug 14 2008	319	122	991	991
Aug 15 2008	320	120	1000	1000
Aug 16 2008	321	124	995	996
Aug 17 2008	322	126	1000	1000
Aug 18 2008	323	121	1030	1030
Aug 19 2008	324	121	1040	1040
Aug 20 2008	325	130	1050	1050
Aug 21 2008	326	131	1040	1040
Aug 22 2008	327	131	1030	1030
Aug 23 2008	328	134	1020	1020
Aug 24 2008	329	133	1010	1010
Aug 25 2008	330	133	1010	1010
Aug 26 2008	331	128	1020	1020
Aug 27 2008	332	129	1020	1020
Aug 28 2008	333	129	1030	1030
Aug 29 2008	334	125	1010	1010
Aug 30 2008	335	129	1000	1000
Aug 31 2008	336	132	985	984
Sep 1 2008	337	128	977	977
Sep 2 2008	338	132	993	993
Sep 3 2008	339	119	1000	1000
Sep 4 2008	340	120	1020	1020
Sep 5 2008	341	118	1030	1030
Sep 6 2008	342	118	1030	1030
Sep 7 2008	343	129	1020	1020
Sep 8 2008	344	128	1030	1030
Sep 9 2008	345	133	1040	1040
Sep 10 2008	346	136	1050	1050
Sep 11 2008	347	132	1060	1060
Sep 12 2008	348	133	1080	1080
Sep 13 2008	349	145	1070	1070
Sep 14 2008	350	149	1070	1070
Sep 15 2008	351	155	1070	1070
Sep 16 2008	352	135	1080	1080
Sep 17 2008	353	141	1090	1090
Sep 18 2008	354	138	1080	1080
Sep 19 2008	355	136	1100	1100
Sep 20 2008	356	131	1060	1060
Sep 21 2008	357	129	1060	1060
Sep 22 2008	358	138	1040	1040
Sep 23 2008	359	133	1050	1050
Sep 24 2008	360	128	1070	1070
Sep 25 2008	361	121	1090	1090
Sep 26 2008	362	122	1090	1090
Sep 27 2008	363	127	1040	1040
Sep 28 2008	364	131	1040	1040
Sep 29 2008	365	127	1030	1030
Sep 30 2008	366	115	1080	1080

11074000 Santa Ana River below Prado Dam, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

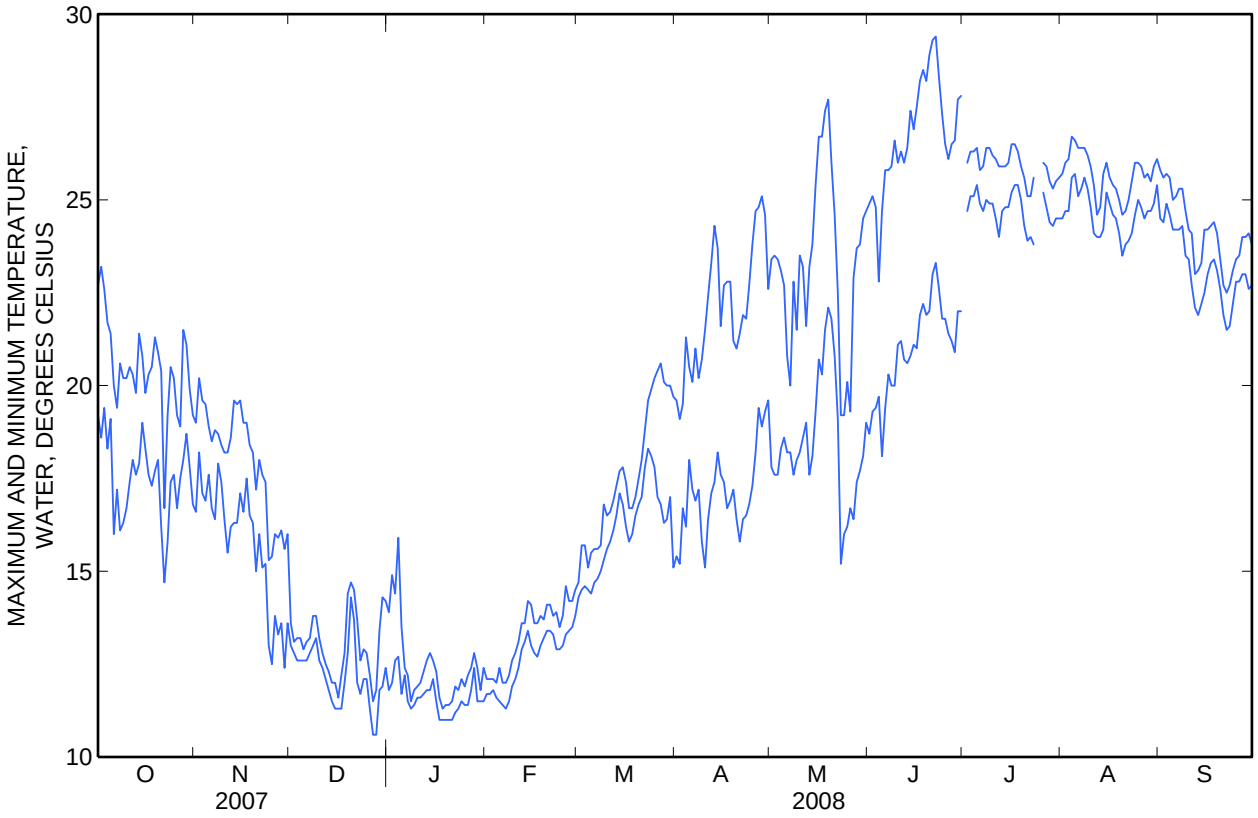
Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	October		November		December		January		February		March	
1	22.7	19.2	19.0	16.6	13.6	13.0	13.9	11.8	12.1	11.7	14.7	14.3
2	23.2	18.6	20.2	18.2	13.1	12.8	14.9	12.0	12.1	11.7	15.7	14.5
3	22.6	19.4	19.6	17.1	13.2	12.6	14.4	12.6	12.1	11.8	15.7	14.6
4	21.7	18.3	19.5	16.9	13.2	12.6	15.9	12.7	12.0	11.6	15.1	14.5
5	21.4	19.1	18.9	17.6	12.9	12.6	13.5	11.7	12.4	11.5	15.5	14.4
6	20.0	16.0	18.5	16.7	13.1	12.6	12.4	12.2	12.0	11.4	15.6	14.7
7	19.4	17.2	18.8	16.4	13.2	12.8	12.2	11.5	12.0	11.3	15.6	14.8
8	20.6	16.1	18.7	17.9	13.8	13.0	11.5	11.3	12.2	11.5	15.7	15.0
9	20.2	16.3	18.4	17.4	13.8	13.2	11.8	11.4	12.6	11.9	16.8	15.3
10	20.2	16.7	18.2	16.4	13.2	12.6	11.9	11.6	12.8	12.1	16.5	15.6
11	20.5	17.4	18.2	15.5	12.8	12.4	12.0	11.6	13.1	12.4	16.6	15.8
12	20.3	18.0	18.6	16.2	12.5	12.1	12.3	11.7	13.6	12.9	16.9	16.1
13	19.8	17.6	19.6	16.3	12.3	11.8	12.6	11.8	13.6	13.1	17.3	16.5
14	21.4	17.9	19.5	16.3	12.0	11.5	12.8	11.8	14.2	13.4	17.7	17.1
15	20.8	19.0	19.6	17.1	12.0	11.3	12.6	12.1	14.1	13.0	17.8	16.8
16	19.8	18.3	19.0	16.6	11.6	11.3	12.3	11.5	13.6	12.8	17.4	16.2
17	20.3	17.6	19.0	17.5	12.2	11.3	11.6	11.0	13.6	12.7	16.7	15.8
18	20.5	17.3	18.4	16.5	12.8	12.0	11.3	11.0	13.8	13.0	16.7	16.0
19	21.3	17.7	18.2	16.3	14.4	12.8	11.4	11.0	13.7	13.2	17.0	16.5
20	20.9	18.0	17.2	15.0	14.7	14.3	11.4	11.0	14.1	13.4	17.5	16.8
21	20.4	16.2	18.0	16.0	14.5	13.7	11.5	11.0	14.1	13.4	18.0	17.0
22	16.7	14.7	17.6	15.1	13.7	12.0	11.9	11.2	13.8	13.3	18.8	17.8
23	19.2	15.8	17.4	15.2	12.6	11.7	11.8	11.3	13.9	12.9	19.6	18.3
24	20.5	17.4	15.3	13.0	12.9	12.1	12.1	11.5	13.5	12.9	19.9	18.1
25	20.2	17.6	15.4	12.5	12.8	12.1	11.9	11.4	13.8	13.0	20.2	17.8
26	19.2	16.7	16.0	13.8	12.2	11.3	12.2	11.4	14.6	13.3	20.4	17.0
27	18.9	17.5	15.9	13.3	11.5	10.6	12.4	11.8	14.2	13.4	20.6	16.8
28	21.5	18.0	16.1	13.6	11.8	10.6	12.8	12.4	14.2	13.5	20.1	16.3
29	21.1	18.7	15.6	12.4	13.4	11.8	12.4	11.5	14.5	13.8	20.0	16.4
30	19.9	17.8	16.0	13.6	14.3	11.9	11.8	11.5	---	---	20.0	17.0
31	19.2	16.8	---	---	14.2	12.4	12.4	11.5	---	---	19.7	15.1
Month	23.2	14.7	20.2	12.4	14.7	10.6	15.9	11.0	14.6	11.3	20.6	14.3

11074000 Santa Ana River below Prado Dam, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	April		May		June		July		August		September	
1	19.6	15.4	23.4	17.8	24.9	18.7	---	---	25.7	24.5	25.8	24.5
2	19.1	15.2	23.5	17.6	25.1	19.3	26.0	24.7	26.0	24.7	25.6	24.4
3	19.5	16.7	23.4	17.6	24.8	19.4	26.3	25.1	26.1	24.7	25.7	24.9
4	21.3	16.2	23.1	18.3	22.8	19.7	26.3	25.1	26.7	25.6	25.6	24.6
5	20.5	18.0	22.7	18.6	24.7	18.1	26.4	25.4	26.6	25.7	25.0	24.2
6	20.1	17.2	20.8	18.2	25.8	19.4	25.8	24.9	26.4	25.1	25.1	24.2
7	21.0	16.9	20.0	18.2	25.8	20.3	25.9	24.7	26.4	25.3	25.3	24.2
8	20.2	17.2	22.8	17.6	25.9	20.0	26.4	25.0	26.4	25.6	25.3	24.3
9	20.7	15.8	21.5	18.0	26.6	20.0	26.4	24.9	26.2	25.3	24.7	23.5
10	21.5	15.1	23.5	18.2	26.0	21.1	26.2	24.9	25.9	24.8	24.2	23.4
11	22.4	16.4	23.2	18.6	26.3	21.2	26.1	24.5	25.4	24.1	24.1	22.7
12	23.3	17.1	21.6	19.0	26.0	20.7	25.9	24.0	24.6	24.0	23.0	22.1
13	24.3	17.4	23.2	17.6	26.4	20.6	25.9	24.7	24.8	24.0	23.1	21.9
14	23.7	18.2	23.8	18.1	27.4	20.8	25.9	24.8	25.7	24.2	23.3	22.2
15	21.6	17.6	25.4	19.3	26.9	21.1	26.0	24.8	26.0	25.2	24.2	22.5
16	22.7	17.4	26.7	20.7	27.5	21.0	26.5	25.2	25.6	24.9	24.2	23.0
17	22.8	16.7	26.7	20.3	28.2	21.9	26.5	25.4	25.4	24.6	24.3	23.3
18	22.8	16.9	27.4	21.5	28.5	22.2	26.3	25.4	25.3	24.5	24.4	23.4
19	21.2	17.2	27.7	22.1	28.2	21.9	25.9	25.0	25.0	24.1	24.1	23.1
20	21.0	16.4	26.0	21.8	28.9	22.0	25.6	24.3	24.6	23.5	23.4	22.6
21	21.4	15.8	24.6	20.8	29.3	23.0	25.1	23.9	24.7	23.8	22.7	21.9
22	21.9	16.4	22.5	19.1	29.4	23.3	25.1	24.0	25.0	23.9	22.5	21.5
23	21.8	16.5	19.2	15.2	28.3	22.6	25.6	23.8	25.5	24.1	22.7	21.6
24	22.7	16.8	19.2	16.0	27.3	21.8	---	---	26.0	24.6	23.1	22.2
25	23.8	17.3	20.1	16.2	26.5	21.8	---	---	26.0	25.0	23.4	22.8
26	24.7	18.2	19.3	16.7	26.1	21.4	26.0	25.2	25.9	24.8	23.5	22.8
27	24.8	19.4	22.9	16.4	26.5	21.2	25.9	24.8	25.6	24.5	24.0	23.0
28	25.1	18.9	23.7	17.4	26.6	20.9	25.5	24.4	25.7	24.7	24.0	23.0
29	24.6	19.3	23.8	17.7	27.7	22.0	25.3	24.3	25.5	24.7	24.1	22.6
30	22.6	19.6	24.5	18.1	27.8	22.0	25.5	24.5	25.9	24.9	23.8	22.7
31	---	---	24.7	19.0	---	---	25.6	24.5	26.1	25.4	---	---
Month	25.1	15.1	27.7	15.2	29.4	18.1	---	---	26.7	23.5	25.8	21.5

11074000 Santa Ana River below Prado Dam, CA—Continued



11074000 Santa Ana River below Prado Dam, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Date	Time	Instan-taneous dis-charge, cfs (00061)	Temper-ature, water, deg C (00010)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
Oct						
05...SS	1015	158	19.5	77	92	39
Nov						
15...SS	1300	174	19.5	83	50	23
Jan						
17...SS	1415	507	11.5	98	7	9.6
31...SS	1400	458	12.5	100	39	48
Feb						
12...SS	1200	462	13.5	97	4	5.0
28...SS	1400	366	14.0	96	5	4.9
Mar						
13...SS	1330	484	17.0	92	7	9.1
27...SS	1345	277	17.5	100	112	84
Apr						
03...SS	1230	260	12.0	98	64	45
24...SS	1415	188	20.5	99	79	40
May						
06...SS	1345	182	18.5	98	48	24
23...SS	1330	1,180	15.5	71	1,900	6,050
Jun						
02...SS	1000	171	20.0	94	55	25
19...SS	1230	154	24.5	94	44	18
Jul						
09...SS	1500	131	25.5	93	75	27
Aug						
11...SS	1500	124	24.5	97	46	15
Sep						
04...SS	1345	108	25.0	96	38	11

SS Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) Program protocol.

11074000 Santa Ana River below Prado Dam, CA—Continued

CROSS SECTION ANALYSES
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 1 of 2

Date	Time	Stream width, feet (00004)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif-ic conduc-tance, wat unf µS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Loca-tion in X-sect. looking dwnstrm ft from l bank (00009)
Oct							
05...	1212	31.4	--	--	1,060	20.2	3.00
05...	1213	31.4	--	--	1,060	20.2	3.00
05...	1214	31.4	--	--	1,060	20.2	6.00
05...	1215	31.4	--	--	1,070	20.2	6.00
05...	1216	31.4	--	--	1,060	20.2	9.00
05...	1217	31.4	--	--	1,070	20.2	9.00
05...	1218	31.4	--	--	1,080	20.2	12.0
05...	1219	31.4	--	--	1,080	20.2	12.0
05...	1220	31.4	--	--	1,090	20.2	15.0
05...	1221	31.4	--	--	1,080	20.2	15.0
05...	1222	31.4	--	--	1,080	20.2	18.0
05...	1223	31.4	--	--	1,090	20.3	18.0
05...	1224	31.4	--	--	1,080	20.3	21.0
05...	1225	31.4	--	--	1,090	20.3	21.0
05...	1226	31.4	--	--	1,090	20.3	24.0
05...	1227	31.4	--	--	1,090	20.3	24.0
05...	1228	31.4	--	--	1,090	20.3	27.0
05...	1229	31.4	--	--	1,090	20.3	27.0
05...	1230	31.4	--	--	1,080	20.4	30.0
Jan							
31...	1428	--	9.8	8.0	647	12.5	152
31...	1429	--	9.8	7.9	651	12.5	152
31...	1431	--	10.0	7.9	662	12.5	118
31...	1432	--	9.9	7.8	657	12.5	118
31...	1434	--	9.9	7.8	659	12.5	84.0
31...	1435	--	9.9	7.8	670	12.5	84.0
31...	1437	--	10.0	7.8	682	12.5	50.0
31...	1438	--	10.0	7.7	685	12.5	50.0
31...	1440	--	10.1	7.7	686	12.5	16.0
31...	1441	--	10.0	7.7	686	12.5	16.0

Note: Instantaneous discharge at the mean time of cross-sectional measurements: Oct. 5, 153 ft^3/s; Jan. 31, 431 ft^3/s; Mar. 3, 368 ft^3/s; June 2, 174 ft^3/s.

11074000 Santa Ana River below Prado Dam, CA—Continued

CROSS SECTION ANALYSES
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 2 of 2

Date	Time	Stream width, feet (00004)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif-ic conduc-tance, wat unf µS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Loca-tion in X-sect. looking dwnstr m ft from l bank (00009)
Mar							
03...	1046	91.0	--	--	962	15.1	81.0
03...	1047	91.0	--	--	962	14.9	70.0
03...	1048	91.0	--	--	961	14.9	70.0
03...	1049	91.0	--	--	962	14.9	60.0
03...	1051	91.0	--	--	962	14.9	60.0
03...	1053	91.0	--	--	961	14.9	50.0
03...	1054	91.0	--	--	961	14.9	50.0
03...	1055	91.0	--	--	961	14.9	40.0
03...	1056	91.0	--	--	961	14.9	40.0
03...	1057	91.0	--	--	961	14.9	30.0
03...	1058	91.0	--	--	960	14.9	30.0
03...	1059	91.0	--	--	961	15.0	27.5
Jun							
02...	1001	34.0	14.1	8.2	1,020	20.0	30.2
02...	1002	34.0	14.4	8.2	1,020	20.0	30.2
02...	1003	34.0	13.4	8.2	1,020	20.0	23.8
02...	1004	34.0	13.8	8.2	1,020	20.0	23.8
02...	1005	34.0	13.8	8.2	1,020	20.0	17.0
02...	1006	34.0	14.0	8.2	1,020	20.0	17.0
02...	1007	34.0	13.9	8.2	1,020	20.0	10.2
02...	1008	34.0	13.9	8.2	1,020	20.0	10.2
02...	1009	34.0	14.1	8.2	1,020	20.0	3.40
02...	1010	34.0	13.8	8.2	1,020	20.0	3.40

Note: Instantaneous discharge at the mean time of cross-sectional measurements: Oct. 5, 153 ft^3/s; Jan. 31, 431 ft^3/s; Mar. 3, 368 ft^3/s; June 2, 174 ft^3/s.

USGS
science for a changing world

Water-Data Report 2008

11066460 Santa Ana River at Metropolitan Water District Crossing, near Arlington, CA

Santa Ana River Basin

LOCATION.--Lat 33°58′07″, long 117°26′51″ referenced to North American Datum of 1927, in NE ¼ SW ¼ sec.30, T.2 S., R.5 W., Riverside County, CA, Hydrologic Unit 18070203, near center of Metropolitan Water District pipeline crossing, 0.8 mi downstream from Union Pacific Railroad Bridge, 1.1 mi upstream from bridge on Van Buren Boulevard, and 3.3 mi north of Arlington.

DRAINAGE AREA.--852 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1970 to current year.

REVISED RECORDS.--WDR CA-83-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 685 ft above NGVD of 1929, from topographic map. Prior to Apr. 15, 1985, water-stage recorder at site 300 ft upstream on left bank at different datum. From Apr. 15 to Sept. 30, 1985, water-stage recorder near right bank (atop pier 9 of Metropolitan Water District pipeline crossing), at same site and datum. From Oct. 1, 1985, to June 16, 1993, water-stage recorder and crest-stage gage on right bank at same site and datum. From June 17, 1993, to Sept. 30, 2003, water-stage recorder and crest-stage gage on left bank at same site and datum.

REMARKS.--Records fair below 100 ft³/s and poor above. Flow partly regulated by Big Bear Lake (station 11049000) and, since November 1999, by Seven Oaks Flood-Control Reservoir, capacity, 145,600 acre-ft. Natural streamflow affected by ground-water withdrawals, diversions for irrigation, return flows from irrigated areas, and discharges of treated effluent. The records at this station are equivalent to those collected at "Santa Ana River at Riverside Narrows, near Arlington" minus the flow at "Riverside Water-Quality Control Plant at Riverside Narrows, near Arlington". See schematic diagram of Santa Ana River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,800 ft³/s, Jan. 11, 2005, gage height, 14.64 ft, from rating curve extended above 21,900 ft³/s on basis of area-velocity studies; maximum gage height, 20.23 ft, site and datum then in use, Mar. 4, 1978; minimum daily, 15 ft³/s, Sept. 7, 8, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1927, 100,000 ft³/s, Mar. 2, 1938, on basis of slope-area measurement, at site 1.1 mi downstream. Flood of Jan. 22, 1862, 320,000 ft³/s, on basis of slope-conveyance study, at site 8.2 mi upstream. Stage at that site was 5 ft higher than that of Mar. 2, 1938.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and (or) maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov 30	1800	7,900	*11.60
Dec 7	0800	2,110	9.43
Jan 5	0700	*11,100	11.34
Jan 27	0900	4,660	9.57
Feb 3	1645	4,440	9.53
Feb 20	2230	3,130	8.92
May 22	2145	2,780	9.11

11066460 Santa Ana River at Metropolitan Water District Crossing, near Arlington, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	61	68	1,090	67	95	89	77	65	72	51	52	57
2	64	68	169	74	90	86	80	59	76	50	48	57
3	59	63	81	74	797	87	85	62	77	57	55	56
4	63	66	82	73	450	86	84	60	80	52	60	49
5	61	64	78	3,180	194	82	85	66	71	52	52	58
6	62	71	74	998	97	78	83	65	74	50	53	56
7	64	68	731	1,330	85	82	83	67	79	51	54	58
8	61	67	216	199	80	86	75	67	72	51	53	57
9	61	69	144	107	77	82	71	67	69	52	52	57
10	63	71	83	103	70	84	89	70	75	52	50	58
11	65	77	77	92	72	90	86	67	76	52	50	61
12	68	67	71	82	73	88	78	68	72	54	52	64
13	86	64	71	84	68	86	74	67	74	52	51	62
14	81	62	67	84	67	83	70	65	64	52	52	66
15	74	64	71	84	65	75	74	65	60	47	56	66
16	78	63	69	72	64	93	78	65	61	48	62	72
17	78	63	68	75	71	77	76	60	56	51	57	69
18	76	65	66	84	73	73	75	59	59	52	64	82
19	70	67	140	76	72	72	71	61	56	51	60	62
20	74	69	87	73	229	76	72	63	54	51	57	72
21	71	65	131	79	164	73	71	60	47	51	61	71
22	69	64	79	81	366	70	75	267	49	51	62	60
23	69	63	81	84	160	75	75	443	49	51	55	70
24	72	59	83	139	295	78	77	178	51	52	62	67
25	73	61	77	82	231	79	73	70	48	54	54	70
26	71	63	89	78	112	68	65	70	49	50	55	69
27	72	63	81	1,310	89	70	64	71	49	51	55	71
28	69	59	83	1,330	85	75	65	71	51	52	61	66
29	65	61	78	242	87	74	62	77	48	50	60	68
30	69	1,420	75	145	---	71	70	73	51	51	57	63
31	66	---	72	94	---	76	---	66	---	57	57	---
Total	2,135	3,314	4,464	10,675	4,478	2,464	2,263	2,734	1,869	1,598	1,729	1,914
Mean	68.9	110	144	344	154	79.5	75.4	88.2	62.3	51.5	55.8	63.8
Max	86	1,420	1,090	3,180	797	93	89	443	80	57	64	82
Min	59	59	66	67	64	68	62	59	47	47	48	49
Ac-ft	4,230	6,570	8,850	21,170	8,880	4,890	4,490	5,420	3,710	3,170	3,430	3,800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1999, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	59.5	78.3	103	238	293	326	148	121	79.2	52.9	52.5	53.8
Max	194	259	292	1,839	1,411	1,806	604	666	351	145	233	129
(WY)	(1988)	(1984)	(1984)	(1993)	(1980)	(1995)	(1983)	(1983)	(1983)	(1983)	(1983)	(1976)
Min	20.5	21.2	23.3	24.7	23.1	23.7	23.1	22.3	20.2	16.8	17.9	18.0
(WY)	(1974)	(1975)	(1974)	(1972)	(1972)	(1972)	(1971)	(1972)	(1981)	(1981)	(1981)	(1974)

11066460 Santa Ana River at Metropolitan Water District Crossing, near Arlington, CA—Continued

SUMMARY STATISTICS

	Water Years 1970 - 1999	
Annual mean	134	
Highest annual mean	416	1983
Lowest annual mean	29.0	1975
Highest daily mean	11,500	Mar 2, 1983
Lowest daily mean	15	Sep 7, 1980
Annual seven-day minimum	16	Jul 1, 1981
Maximum peak flow	31,300	Feb 24, 1998
Maximum peak stage	20.23	Mar 4, 1978
Annual runoff (ac-ft)	97,140	
10 percent exceeds	209	
50 percent exceeds	63	
90 percent exceeds	23	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2008, BY WATER YEAR (WY)

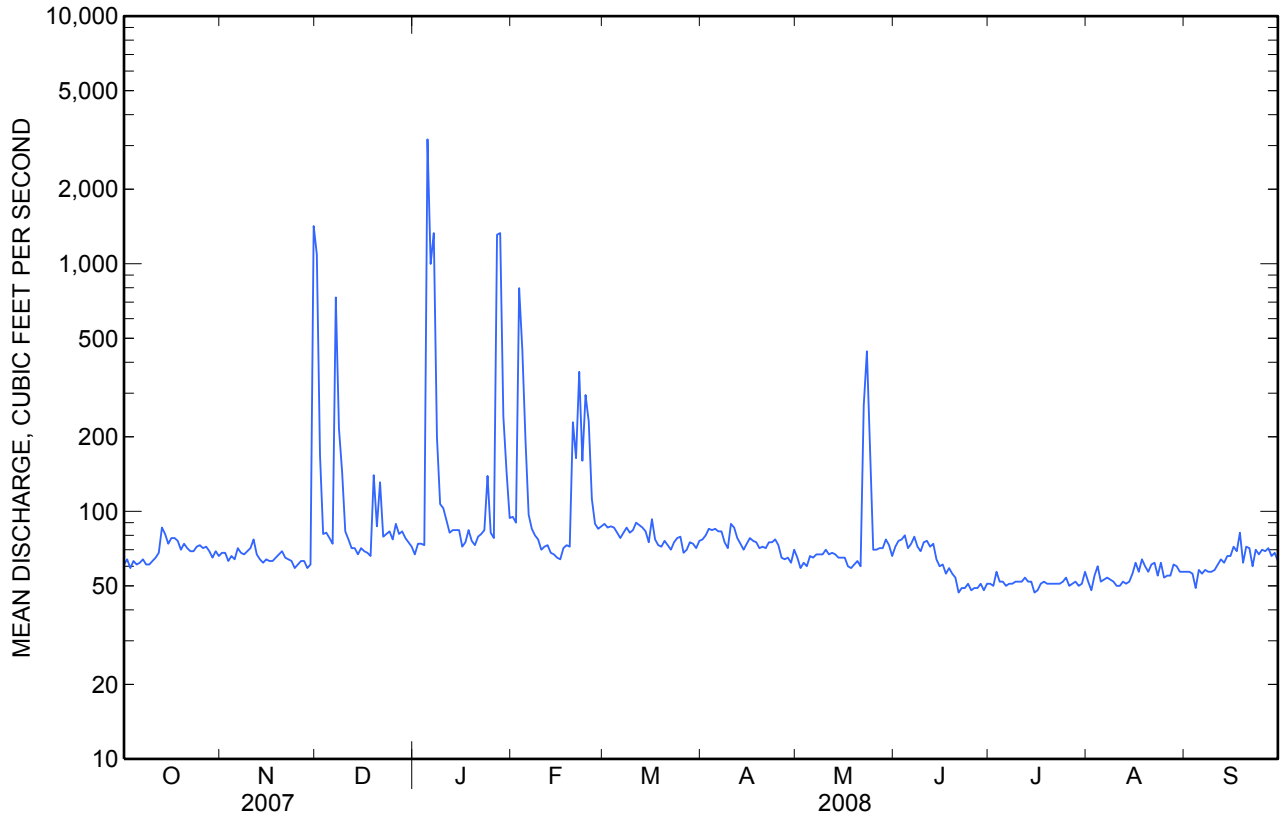
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	132	102	135	388	261	182	191	123	88.9	75.7	86.1	73.4
Max	498	141	255	2,350	755	498	500	314	192	137	201	86.6
(WY)	(2005)	(2003)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
Min	68.9	81.5	85.9	82.1	87.9	79.5	75.4	70.9	62.3	51.5	55.8	63.6
(WY)	(2008)	(2000)	(2000)	(2003)	(2002)	(2008)	(2008)	(2004)	(2008)	(2008)	(2008)	(2004)

SUMMARY STATISTICS

[e, estimated]

	Calendar Year 2007		Water Year 2008		Water Years 2000 - 2008	
Annual total	31,405		39,637			
Annual mean	86.0		108		153	
Highest annual mean					491	2005
Lowest annual mean					79.9	2007
Highest daily mean	1,420	Nov 30	3,180	Jan 5	e22,000	Jan 11, 2005
Lowest daily mean	58	Jul 6	47	Jun 21	47	Jun 21, 2008
Annual seven-day minimum	61	Jun 30	49	Jun 21	49	Jun 21, 2008
Maximum peak flow			11,100	Jan 5	47,800	Jan 11, 2005
Maximum peak stage			11.60	Nov 30	16.58	Oct 20, 2004
Annual runoff (ac-ft)	62,290		78,620		110,600	
10 percent exceeds	93		92		178	
50 percent exceeds	74		70		84	
90 percent exceeds	63		52		65	

11066460 Santa Ana River at Metropolitan Water District Crossing, near Arlington, CA—Continued



11066460 Santa Ana River at Metropolitan Water District Crossing, near Arlington, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.
CHEMICAL DATA: Water years 1970 to current year.
SPECIFIC CONDUCTANCE: Water years 1970-78, 1999-2000.
WATER TEMPERATURE: Water years 1999-2000.
SEDIMENT DATA: Water years 1999-2000.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Residue on evap. at 180degC wat flt mg/L (70300)
Oct					
05...	1240	63	994	23.2	636
19...	1110	76	980	22.2	615
Nov					
05...	1315	56	950	21.8	596
27...	1050	64	957	16.9	610
Dec					
11...	1125	74	919	16.1	562
20...	1100	76	907	17.6	578
Jan					
08...	0955	193	632	12.8	410
30...	1220	132	735	16.7	456
Feb					
11...	0950	75	906	16.0	563
27...	1040	85	894	19.4	561
Mar					
13...	1040	72	924	20.0	574
24...	1300	76	951	21.4	595
Apr					
10...	1110	79	897	19.3	555
29...	1025	59	951	22.5	605
May					
19...	0955	63	941	23.0	583
29...	0940	80	905	19.2	545
Jun					
13...	1000	78	893	22.6	564
26...	1350	49	989	29.5	635
Jul					
02...	1240	49	910	32.0	567
18...	1100	52	960	27.7	627
Aug					
08...	1235	53	970	30.2	610
25...	1135	50	964	28.5	589
Sep					
03...	1045	60	965	26.2	598
22...	1233	52	960	--	594

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Water-Data Report 2008

11059300 Santa Ana River at E Street, near San Bernardino, CA

Santa Ana River Basin

LOCATION.--Lat 34°03′54″, long 117°17′58″ referenced to North American Datum of 1927, San Bernardino County, CA, Hydrologic Unit 18070203, in San Bernardino Grant, on left bank, 0.4 mi downstream from E Street Bridge, 0.4 mi upstream from Warm Creek, 1.2 mi downstream from San Timoteo Creek, 2.8 mi south of San Bernardino, and 26 mi downstream from Big Bear Lake.

DRAINAGE AREA.--541 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1939 to September 1954, October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 940 ft above NGVD of 1929, from topographic map. Prior to Nov. 10, 1950, on right bank 0.4 mi upstream at datum 24.50 ft higher. Nov. 11, 1950, to September 1954, on both banks 0.4 mi upstream at datum 24.50 ft higher. October 1966 to September 1976, on right bank 0.4 mi upstream at datum 14.50 ft higher. October 1976 to September 1977, gage was removed for channel construction. October 1977 to Jan. 28, 1981, on right bank, 0.5 mi upstream at elevation 10 ft higher.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (station 11049000) and, since November 1999, by Seven Oaks Flood-Control Reservoir, capacity, 145,600 acre-ft. Natural flow of stream affected by ground-water withdrawals and diversion for domestic use and irrigation upstream from station. Effluent from sewage reclamation plant 1.0 mi upstream caused sustained flow past gage from 1967 to Mar. 21, 1996. See schematic diagram of Santa Ana River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,700 ft³/s, Jan. 11, 2005, gage height, 9.04 ft, current site and datum, from rating curve extended above 5,930 ft³/s on basis of critical-depth computations; maximum gage height, 11.9 ft, Feb. 25, 1969, site and datum then in use; no flow for many days many years prior to 1967 and since Mar. 21, 1996.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and (or) maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft³/s)	Gage height (ft)
Nov 30	1515	2,810	5.35
Dec 7	0445	1,440	4.81
Jan 5	0200	1,840	5.04
Jan 27	0430	1,890	5.06
Feb 3	1245	1,690	4.98
Feb 20	1930	*3,400	*5.50
May 22	1815	2,500	5.26

11059300 Santa Ana River at E Street, near San Bernardino, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e0.00	4.3	558	5.5	15	7.8	4.1	1.6	2.9	0.00	0.00	1.2
2	e1.1	5.3	65	5.5	10	7.3	3.5	1.7	2.8	0.00	0.00	1.0
3	1.2	4.5	24	5.6	526	7.4	4.2	1.1	3.5	0.00	0.00	0.89
4	0.30	6.8	9.5	6.9	327	7.6	4.3	1.8	3.1	0.00	0.07	0.00
5	0.00	5.2	9.6	884	89	6.1	3.2	3.2	3.4	0.00	0.80	0.00
6	0.17	4.2	9.1	705	34	5.8	4.1	2.2	2.0	0.00	0.00	0.00
7	0.00	3.9	399	582	21	4.8	4.1	3.1	1.3	0.00	0.00	0.00
8	0.00	5.4	85	154	15	5.5	2.9	3.2	1.5	0.00	0.00	0.00
9	0.00	7.2	54	46	11	5.5	2.9	3.2	1.6	0.00	0.00	0.00
10	0.00	6.5	23	21	8.5	4.9	1.7	2.4	0.76	0.00	0.00	0.00
11	0.00	5.6	21	12	9.1	5.1	2.7	2.6	0.82	0.00	0.00	0.00
12	2.7	5.1	15	10	8.9	4.3	2.6	4.3	0.42	0.00	0.00	0.00
13	5.6	7.8	11	9.3	8.0	3.9	2.5	4.2	0.72	0.00	0.00	0.00
14	6.7	4.0	9.9	9.9	9.3	3.1	2.2	1.1	0.26	0.00	0.00	0.00
15	6.2	4.3	9.7	12	9.4	4.0	2.8	0.91	0.05	0.00	0.00	0.00
16	6.2	6.3	11	8.0	7.1	5.9	2.9	0.35	0.50	0.00	0.00	0.00
17	8.2	5.6	11	7.8	7.6	4.7	2.2	0.57	0.01	0.00	0.00	0.00
18	8.7	5.7	11	7.3	6.8	4.0	2.0	0.00	0.01	0.00	0.00	0.00
19	8.5	6.7	52	6.1	7.5	3.4	2.1	0.00	0.01	0.00	0.00	0.00
20	7.1	7.3	43	6.0	229	2.8	1.7	0.84	0.01	0.00	0.00	0.00
21	6.5	6.4	22	7.4	130	1.5	3.3	1.3	0.01	0.00	0.00	0.00
22	3.1	6.2	9.9	6.3	212	1.6	5.0	201	0.00	0.00	0.00	0.00
23	4.5	7.0	10	10	119	1.1	5.1	213	0.00	0.00	0.00	0.00
24	4.5	6.1	9.7	45	217	1.5	4.4	76	0.01	0.00	0.00	0.00
25	4.6	7.1	9.6	7.6	141	2.3	4.0	15	0.01	0.00	0.00	0.00
26	6.1	7.7	10	6.5	55	2.2	3.5	6.5	0.00	0.00	0.00	0.00
27	6.4	9.4	8.8	658	24	1.2	2.1	6.1	0.00	0.00	0.00	0.00
28	7.9	7.4	9.7	806	19	2.7	2.6	7.5	0.00	0.00	0.00	0.00
29	7.9	7.7	9.0	287	10	3.2	2.6	4.8	0.00	0.00	0.00	0.00
30	6.9	780	9.0	71	---	2.9	1.5	3.8	0.00	0.00	0.00	0.00
31	7.1	---	8.0	24	---	3.1	---	2.8	---	0.00	0.37	---
Total	128.17	956.7	1,546.5	4,432.7	2,286.2	127.2	92.8	576.17	25.70	0.00	1.24	3.09
Mean	4.13	31.9	49.9	143	78.8	4.10	3.09	18.6	0.86	0.00	0.04	0.10
Max	8.7	780	558	884	526	7.8	5.1	213	3.5	0.00	0.80	1.2
Min	0.00	3.9	8.0	5.5	6.8	1.1	1.5	0.00	0.00	0.00	0.00	0.00
Ac-ft	254	1,900	3,070	8,790	4,530	252	184	1,140	51	0.00	2.5	6.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1954, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	.88	3.47	20.9	23.7	20.6	37.4	27.2	11.3	2.39	.93	.87	.63
Max	3.35	21.3	117	109	72.2	183	237	145	31.2	9.87	8.37	6.32
(WY)	(1942)	(1945)	(1946)	(1943)	(1945)	(1943)	(1941)	(1941)	(1941)	(1940)	(1940)	(1939)
Min	.000	.007	.000	1.90	2.41	1.70	1.14	.14	.000	.000	.000	.000
(WY)	(1951)	(1952)	(1951)	(1948)	(1942)	(1951)	(1951)	(1942)	(1950)	(1950)	(1942)	(1948)

11059300 Santa Ana River at E Street, near San Bernardino, CA—Continued

SUMMARY STATISTICS

	Water Years 1939 - 1954	
Annual mean	12.7	
Highest annual mean	56.6	1941
Lowest annual mean	.78	1951
Highest daily mean	2,350	Jan 23, 1943
Lowest daily mean	.00	Jun 19, 1940
Annual seven-day minimum	.00	Sep 10, 1940
Maximum peak flow	7,600	Jan 23, 1943
Maximum peak stage	6.50	Jan 23, 1943
Annual runoff (ac-ft)	9,190	
10 percent exceeds	16	
50 percent exceeds	1.0	
90 percent exceeds	.00	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	33.9	43.3	77.4	158	232	253	132	103	63.9	40.8	36.8	34.6
Max	117	191	469	1,327	2,096	1,279	742	707	339	162	160	75.0
(WY)	(1984)	(1984)	(1967)	(1993)	(1980)	(1980)	(1980)	(1983)	(1983)	(1969)	(1983)	(1983)
Min	12.4	13.2	14.8	13.2	11.6	10.6	12.5	9.35	13.0	9.08	9.97	9.93
(WY)	(1968)	(1972)	(1970)	(1972)	(1968)	(1972)	(1972)	(1967)	(1971)	(1967)	(1967)	(1967)

SUMMARY STATISTICS

	Water Years 1967 - 1995	
Annual mean	100	
Highest annual mean	441	1980
Lowest annual mean	17.2	1968
Highest daily mean	14,800	Feb 25, 1969
Lowest daily mean	6.4	Jul 13, 1967
Annual seven-day minimum	8.1	Sep 16, 1967
Maximum peak flow	28,000	Feb 25, 1969
Maximum peak stage	11.90	Feb 25, 1969
Annual runoff (ac-ft)	72,490	
10 percent exceeds	165	
50 percent exceeds	35	
90 percent exceeds	14	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	17.5	31.2	29.8	101	253	48.0	55.4	110	31.2	9.13	18.4	22.6
Max	38.1	56.2	42.6	230	729	114	190	430	116	20.9	66.1	75.8
(WY)	(1996)	(1997)	(1998)	(1997)	(1998)	(1998)	(1998)	(1998)	(1998)	(1999)	(1998)	(1998)
Min	4.97	11.0	16.5	22.2	7.57	0.10	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1998)	(1998)	(1999)	(1999)	(1997)	(1997)	(1997)	(1996)	(1996)	(1996)	(1996)	(1996)

11059300 Santa Ana River at E Street, near San Bernardino, CA—Continued

SUMMARY STATISTICS

	Water Years 1996 - 1999	
Annual mean	59.4	
Highest annual mean	152	1998
Lowest annual mean	15.9	1999
Highest daily mean	5,050	Feb 24, 1998
Lowest daily mean	0.00	Mar 22, 1996
Annual seven-day minimum	0.00	Mar 22, 1996
Maximum peak flow	21,100	Feb 23, 1998
Maximum peak stage	7.70	Feb 23, 1998
Annual runoff (ac-ft)	43,010	
10 percent exceeds	138	
50 percent exceeds	7.5	
90 percent exceeds	0.00	

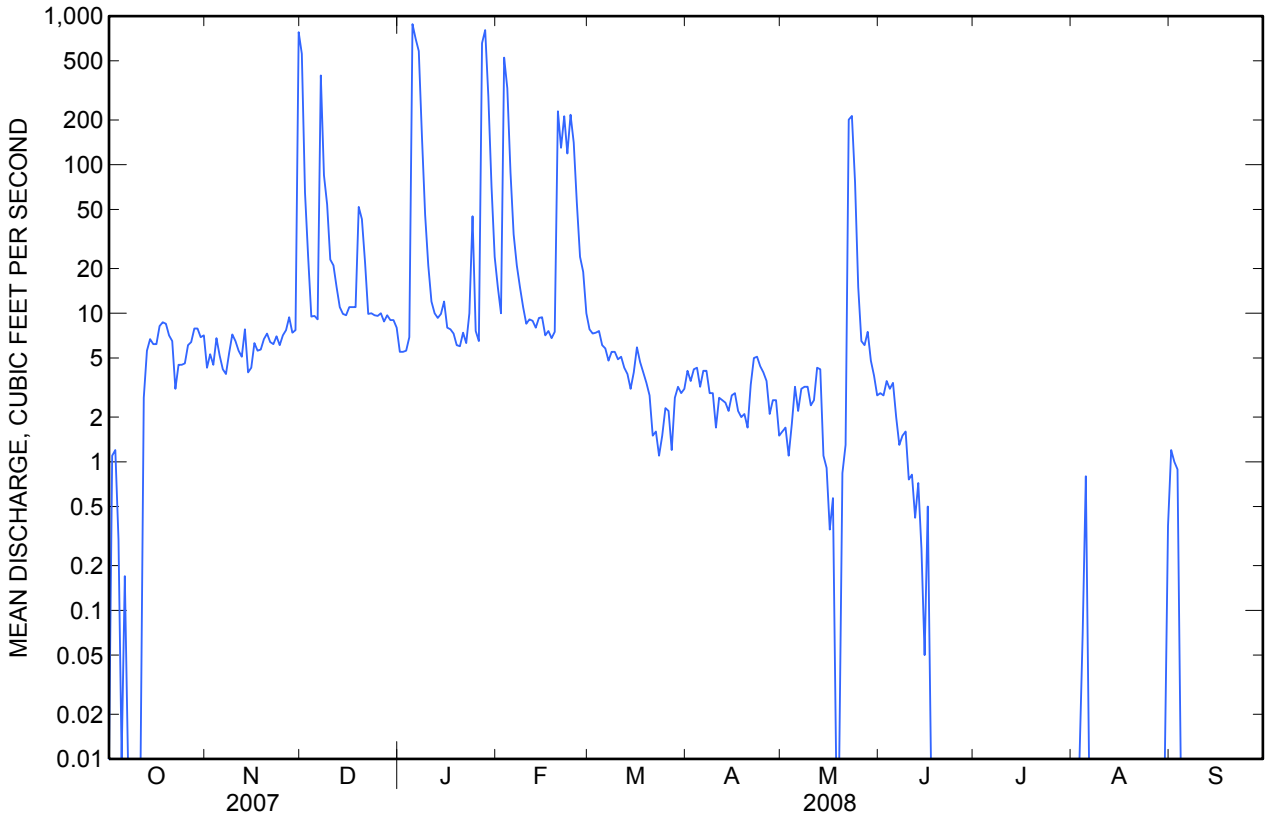
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	29.0	12.3	27.9	158	100	71.4	78.5	41.6	12.8	6.28	11.8	6.00
Max	200	39.7	96.9	1,185	376	398	351	247	112	52.9	102	40.6
(WY)	(2005)	(2003)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)	(2005)
Min	0.00	0.67	1.16	0.00	0.82	4.10	0.04	0.00	0.00	0.00	0.00	0.00
(WY)	(2003)	(2001)	(2001)	(2003)	(2002)	(2008)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 2000 - 2008	
Annual total	4,608.11		10,176.47			
Annual mean	12.6		27.8		46.1	
Highest annual mean					265	2005
Lowest annual mean					1.70	2002
Highest daily mean	780	Nov 30	884	Jan 5	12,500	Jan 11, 2005
Lowest daily mean	0.00	Mar 30	0.00	Oct 1	0.00	May 14, 2000
Annual seven-day minimum	0.00	Apr 5	0.00	Jun 26	0.00	Sep 11, 2000
Maximum peak flow			3,400	Feb 20	35,700	Jan 11, 2005
Maximum peak stage			5.50	Feb 20	9.04	Jan 11, 2005
Annual runoff (ac-ft)	9,140		20,190		33,430	
10 percent exceeds	24		22		73	
50 percent exceeds	3.4		3.2		1.2	
90 percent exceeds	0.00		0.00		0.00	

11059300 Santa Ana River at E Street, near San Bernardino, CA—Continued



11059300 Santa Ana River at E Street, near San Bernardino, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-72, 1983-86, 1988 to current year.
CHEMICAL ANALYSES: Water years 1969 (partial-record station), 1970-72.
SPECIFIC CONDUCTANCE: Water years 1968-72.
WATER TEMPERATURE: Water years 1968, 1983.
SEDIMENT DATA: Water years 1983-86, 1988 to current year.

PERIOD OF DAILY RECORD.--October 1982 to September 1983.
WATER TEMPERATURE: November 1982 to September 1983.
SUSPENDED-SEDIMENT DISCHARGE: October 1982 to September 1983.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 2

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, falldia dst wat percent <.002mm (70337)	Suspnd. sediment, falldia dst wat percent <.004mm (70338)	Suspnd. sediment, falldia dst wat percent <.008mm (70339)	Suspnd. sediment, falldia dst wat percent <.016mm (70340)	Suspnd. sediment, falldia dst wat percent <.031mm (70341)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspnd. sediment, sieve diametr percent <.125mm (70332)	Suspnd. sediment, sieve diametr percent <.25mm (70333)	Suspnd. sediment, sieve diametr percent <.5 mm (70334)	Suspnd. sediment, sieve diametr percent <1 mm (70335)
Nov													
08...	0750	2.5	14.5	--	--	--	--	--	50	83	98	100	--
30...	1200	1,720	12.5	13	15	17	29	50	66	82	93	99	100
Dec													
01...	1305	185	12.5	45	58	74	86	90	92	94	97	99	100
07...	1235	398	12.5	18	19	22	33	47	62	80	95	100	--
19...	1320	20	14.5	--	--	--	--	--	72	78	97	100	--
Jan													
05...	1355	733	11.0	29	40	51	61	69	76	86	97	100	--
07...	1150	416	12.5	42	53	58	64	68	70	75	89	98	100
29...	1315	249	11.5	--	--	--	--	--	62	67	85	98	100
Feb													
04...	1525	225	13.5	40	49	52	55	57	58	62	75	96	100
25...	1110	127	13.5	--	--	--	--	--	43	63	87	98	100
Mar													
05...	1340	6.5	21.0	--	--	--	--	--	72	75	86	100	--
Apr													
03...	1425	4.8	20.0	--	--	--	--	--	85	87	94	100	--
30...	1610	2.0	20.0	--	--	--	--	--	99	100	--	--	--
May													
23...	1250	130	12.5	65	84	90	92	94	94	95	97	100	--
Jun													
10...	1415	1.5	34.0	--	--	--	--	--	95	--	--	--	--
Aug													
05...	1255	1.1	33.0	--	--	--	--	--	91	--	--	--	--
Sep													
03...	0745	2.0	19.0	47	75	94	99	100	--	--	--	--	--

11059300 Santa Ana River at E Street, near San Bernardino, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 2

Date	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
Nov		
08...	191	1.3
30...	5,950	27,600
Dec		
01...	4,250	2,120
07...	3,720	4,000
19...	87	4.7
Jan		
05...	7,270	14,400
07...	2,810	3,160
29...	737	495
Feb		
04...	1,320	802
25...	1,310	449
Mar		
05...	159	2.8
Apr		
03...	229	3.0
30...	1,130	6.1
May		
23...	2,070	727
Jun		
10...	47	.19
Aug		
05...	20	.06
Sep		
03...	2,750	15

Water-Data Report 2008

11072100 Temescal Creek above Main Street, at Corona, CA

Santa Ana River Basin

LOCATION.--Lat 33°53′21″, long 117°33′43″ referenced to North American Datum of 1927, Riverside County, CA, Hydrologic Unit 18070203, in La Sierra Grant, on right bank, 500 ft upstream from Main Street Bridge in Corona, and 1.5 mi upstream from topographic boundary of Prado Flood-Control Basin.

DRAINAGE AREA.--224 mi², excludes 768 mi² above Lake Elsinore.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1980 to July 1983, February 1984 to current year.

GAGE.--Water-stage recorder and concrete-lined flood-control channel. Elevation of gage is 600 ft above NGVD of 1929, from topographic map. December 1967 to September 1974, water-stage recorder at site 1.2 mi downstream at different datum (published as station 11072200, "Temescal Creek at Corona"). October 1980 to July 1983 at site 500 ft downstream at different datum.

REMARKS.--Records fair above 500 ft³/s and poor below. Flow regulated by several small storage reservoirs. Many diversions upstream from station for irrigation. Water discharged to channel from Arlington Desalter at times since September 1990; records for water years 1981 to 1990 and 1991 to current year are not equivalent. See schematic diagram of Santa Ana River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,720 ft³/s, Mar. 1, 1983, gage height, 11.67 ft, site and datum then in use, on basis of slope-conveyance study; minimum daily, 0.27 ft³/s, Sept. 25, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 8,850 ft³/s, Feb. 25, 1969, gage height, 8.17 ft, from floodmark, at old site (station 11072200) 1.2 mi downstream on basis of slope-area measurement of peak flow.

11072100 Temescal Creek above Main Street, at Corona, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4.3	3.1	51	8.0	94	66	26	6.2	3.3	5.3	7.0	5.9
2	5.0	4.0	11	5.0	92	53	35	6.3	3.8	4.6	5.1	6.3
3	7.3	3.7	7.1	4.4	132	40	38	6.3	5.9	4.3	5.6	6.8
4	8.3	4.6	5.5	20	94	33	45	6.1	4.6	4.5	5.4	8.3
5	8.5	4.9	4.1	271	84	27	37	6.3	5.0	4.9	4.8	7.4
6	7.8	3.8	6.2	275	76	32	36	6.1	4.7	4.7	4.5	4.7
7	8.1	4.9	22	229	68	44	35	6.5	4.5	4.8	5.0	5.4
8	8.1	5.0	23	106	56	51	37	6.4	4.8	5.2	4.4	5.8
9	8.4	6.0	13	84	53	47	40	6.2	5.5	5.9	4.6	5.3
10	5.7	5.8	5.5	75	60	40	44	6.6	5.0	5.6	4.2	8.2
11	6.4	5.7	6.4	73	65	35	37	5.0	5.5	4.7	4.5	8.9
12	10	7.1	3.1	70	64	39	31	4.0	6.3	4.4	5.1	3.7
13	47	9.0	3.2	62	61	36	24	2.1	9.2	4.5	4.7	3.7
14	7.7	7.8	3.8	56	59	26	22	2.2	6.5	4.5	4.4	3.1
15	6.9	6.3	5.6	54	57	46	22	4.9	4.6	4.2	6.4	2.8
16	6.6	5.6	9.3	57	61	70	20	3.4	e4.6	3.8	6.9	3.3
17	6.1	5.4	4.0	58	67	47	22	4.2	e4.5	3.7	6.7	2.9
18	6.1	3.9	6.2	51	63	41	9.1	6.1	e4.9	3.7	6.1	3.9
19	6.3	4.0	9.8	47	62	37	7.5	3.9	e5.3	4.0	5.0	4.1
20	6.0	6.3	3.8	46	73	34	15	5.2	e5.5	4.1	6.8	2.7
21	3.2	6.7	23	47	68	30	7.2	5.8	e5.8	4.2	8.5	2.3
22	5.0	5.7	6.9	48	223	30	6.4	12	e6.0	4.5	8.5	3.5
23	2.8	4.6	6.8	91	78	37	8.7	13	e6.4	4.4	4.5	2.7
24	3.1	3.4	7.1	119	158	40	7.4	10	7.0	3.8	7.9	2.6
25	3.8	3.1	3.7	104	70	38	6.4	7.5	8.2	3.6	5.6	2.6
26	2.9	2.1	3.1	95	66	36	6.3	5.0	6.8	4.1	4.1	2.3
27	5.6	1.6	4.2	402	68	34	5.3	4.3	6.9	4.2	3.8	2.7
28	6.2	1.4	8.2	401	68	32	5.4	3.8	4.8	4.7	4.2	3.4
29	3.7	1.6	7.9	177	67	32	5.6	3.5	5.1	4.6	7.1	3.8
30	3.6	427	8.6	131	---	31	5.8	3.7	5.0	4.9	9.2	3.0
31	3.2	---	8.3	107	---	28	---	3.4	---	5.0	8.3	---
Total	223.7	564.1	291.4	3,373.4	2,307	1,212	647.1	176.0	166.0	139.4	178.9	132.1
Mean	7.22	18.8	9.40	109	79.6	39.1	21.6	5.68	5.53	4.50	5.77	4.40
Max	47	427	51	402	223	70	45	13	9.2	5.9	9.2	8.9
Min	2.8	1.4	3.1	4.4	53	26	5.3	2.1	3.3	3.6	3.8	2.3
Ac-ft	444	1,120	578	6,690	4,580	2,400	1,280	349	329	276	355	262

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1990, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	7.62	15.1	23.8	23.0	14.5	40.9	13.1	12.0	9.35	7.15	6.45	6.99
Max	16.1	55.9	126	116	25.5	237	39.3	43.7	30.0	10.9	13.4	11.3
(WY)	(1986)	(1981)	(1981)	(1981)	(1981)	(1983)	(1983)	(1983)	(1983)	(1985)	(1990)	(1985)
Min	2.36	4.67	2.53	7.01	7.42	6.26	4.02	3.77	1.12	1.20	1.79	1.09
(WY)	(1985)	(1987)	(1982)	(1989)	(1982)	(1990)	(1989)	(1982)	(1982)	(1982)	(1982)	(1981)

11072100 Temescal Creek above Main Street, at Corona, CA—Continued

SUMMARY STATISTICS

	Water Years 1981 - 1990	
Annual mean	12.4	
Highest annual mean	33.7	1981
Lowest annual mean	6.10	1987
Highest daily mean	1,720	Mar 1, 1983
Lowest daily mean	.27	Sep 25, 1981
Annual seven-day minimum	.56	Sep 23, 1981
Maximum peak flow	4,720	Mar 1, 1983
Maximum peak stage	11.67	Mar 1, 1983
Annual runoff (ac-ft)	8,990	
10 percent exceeds	27	
50 percent exceeds	6.1	
90 percent exceeds	2.7	

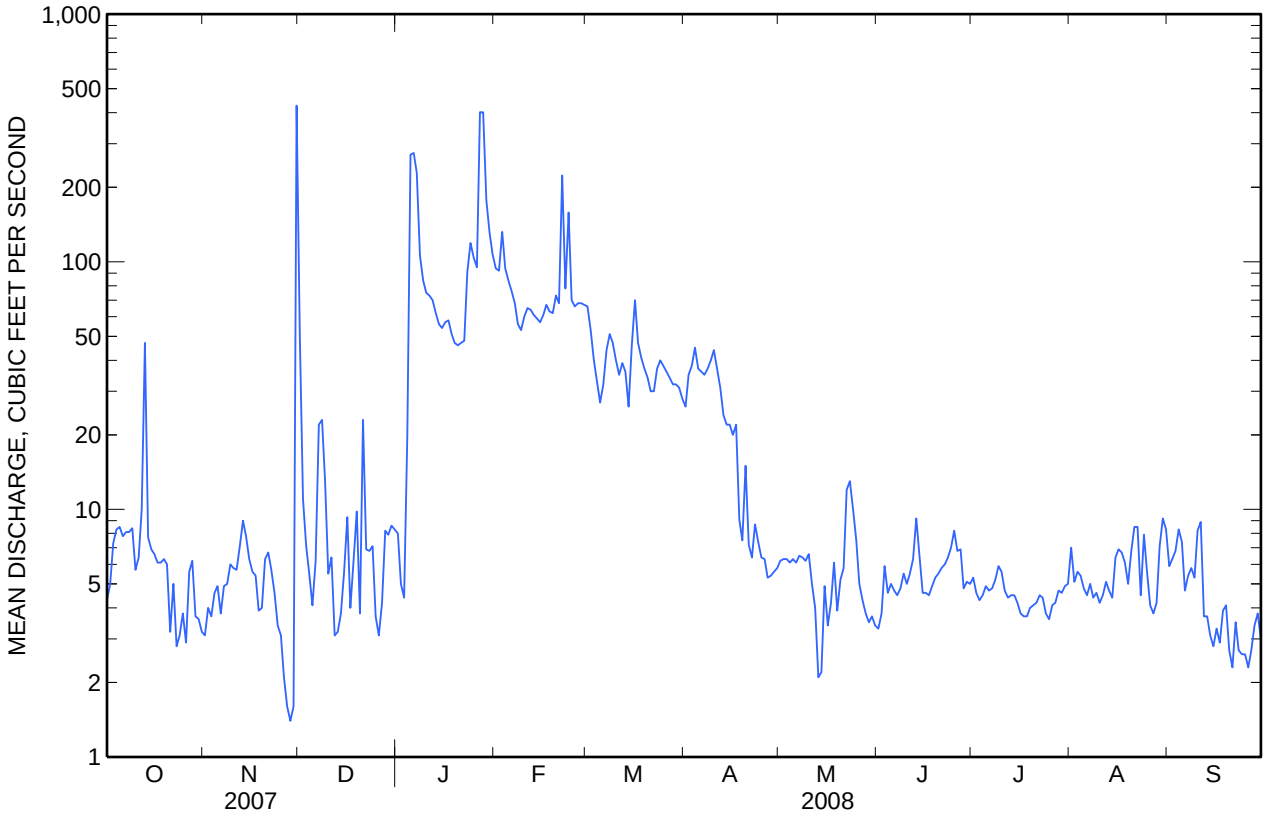
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	16.1	19.2	21.4	60.1	96.7	64.5	40.8	22.7	13.4	11.6	11.3	12.0
Max	52.5	58.2	66.5	335	400	349	190	100	34.3	24.9	20.7	30.4
(WY)	(2005)	(2006)	(2005)	(2005)	(2005)	(1995)	(1995)	(1995)	(1995)	(1993)	(2005)	(2005)
Min	6.22	5.55	9.35	10.7	10.5	5.19	2.89	3.24	3.25	3.56	4.20	3.04
(WY)	(1996)	(1996)	(1999)	(2003)	(2002)	(2001)	(1991)	(1992)	(2003)	(1994)	(2004)	(2004)

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1991 - 2008	
Annual total	7,222.3		9,411.1			
Annual mean	19.8		25.7		32.1	
Highest annual mean					104	2005
Lowest annual mean					12.5	2004
Highest daily mean	427	Nov 30	427	Nov 30	2,090	Feb 24, 1998
Lowest daily mean	1.4	Nov 28	1.4	Nov 28	0.34	Jul 3, 1992
Annual seven-day minimum	2.5	Nov 23	2.5	Nov 23	0.89	Jan 13, 1992
Maximum peak flow			2,510	Nov 30	4,030	Jan 9, 2005
Maximum peak stage			5.90	Nov 30	6.72	Jan 9, 2005
Annual runoff (ac-ft)	14,330		18,670		23,280	
10 percent exceeds	54		66		61	
50 percent exceeds	7.8		6.3		13	
90 percent exceeds	4.1		3.6		4.4	

11072100 Temescal Creek above Main Street, at Corona, CA—Continued



Water-Data Report 2008

11073495 Cucamonga Creek near Mira Loma, CA

Santa Ana River Basin

LOCATION.--Lat 33°58′58″, long 117°35′55″ referenced to North American Datum of 1927, in SW ¼ NE ¼ sec.22, T.2 S., R.7 W., San Bernardino County, CA, Hydrologic Unit 18070203, on right bank, 300 ft upstream from Merrill Avenue Bridge, and 4.6 mi west of Mira Loma.

DRAINAGE AREA.--75.8 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--January 1968 to July 1977, December 1978 to current year.
CHEMICAL DATA: Water years 1999-2000.
SPECIFIC CONDUCTANCE: Water years 1999-2000.
WATER TEMPERATURE: Water years 1999-2000.
SEDIMENT DATA: Water years 1999-2000.

GAGE.--Water-stage recorder, crest-stage gage, and concrete-lined flood-control channel. Elevation of gage is 660 ft above NGVD of 1929, from topographic map. Prior to July 1977 at site 100 ft downstream at different datum.

REMARKS.--Records poor. Channel is a trapezoidal concrete floodway; records for low and medium flows prior to July 31, 1977, are not equivalent (channel concrete lined since July 31, 1977). Inland Empire Utilities Agency Tertiary Plant No. 1 began discharging effluent 3.3 mi upstream from station on May 8, 1985. See schematic diagram of Santa Ana River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s, Oct. 20, 2004, gage height, 6.58 ft, from rating curve extended above 617 ft³/s on basis of step-backwater computations; maximum gage height, 7.85 ft, Feb. 27, 1983. Prior to operation of Plant No. 1, no flow for most of some years. Minimum daily since 1985, 2.5 ft³/s, June 6, 1987.

11073495 Cucamonga Creek near Mira Loma, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	41	25	60	55	63	42	43	36	24	22	28	30
2	42	26	45	56	70	40	42	36	e28	27	36	30
3	40	32	43	56	151	39	38	39	24	32	30	25
4	37	52	48	594	69	41	36	39	24	35	26	16
5	35	51	44	1,310	64	37	41	39	27	19	25	23
6	42	50	48	610	57	37	38	38	22	32	33	28
7	39	39	247	192	56	37	38	37	28	28	25	40
8	45	43	62	73	58	38	39	34	31	51	29	36
9	46	31	60	66	62	41	41	32	32	50	27	36
10	39	32	52	62	64	31	35	31	29	46	25	37
11	42	40	56	55	62	29	37	28	30	40	22	29
12	41	29	55	58	52	30	37	27	26	40	25	21
13	99	38	58	57	50	33	38	25	31	32	e22	31
14	49	35	59	52	53	33	31	25	37	28	e29	26
15	37	31	60	52	43	40	23	22	37	27	e37	30
16	40	34	63	52	52	31	44	24	31	25	20	18
17	57	35	66	48	57	30	38	28	27	23	20	31
18	45	35	97	49	52	26	35	26	31	20	19	19
19	39	22	201	53	56	26	37	29	33	25	29	20
20	40	24	121	59	110	30	35	32	26	23	30	23
21	47	28	114	61	34	37	34	28	26	20	29	e24
22	e52	42	59	64	169	34	31	49	28	23	32	27
23	57	39	58	151	48	33	32	248	31	31	35	24
24	43	31	57	94	103	30	29	33	28	26	31	e18
25	32	38	59	219	43	33	27	24	33	24	24	e16
26	28	33	59	91	34	35	30	26	25	28	25	25
27	31	33	55	489	31	37	28	25	30	34	34	37
28	46	36	53	613	38	31	27	26	38	25	27	49
29	37	37	55	96	39	69	28	22	48	19	19	33
30	29	534	56	72	---	61	31	18	29	27	24	25
31	27	---	56	66	---	43	---	22	---	32	31	---
Total	1,324	1,555	2,226	5,625	1,840	1,134	1,043	1,148	894	914	848	827
Mean	42.7	51.8	71.8	181	63.4	36.6	34.8	37.0	29.8	29.5	27.4	27.6
Max	99	534	247	1,310	169	69	44	248	48	51	37	49
Min	27	22	43	48	31	26	23	18	22	19	19	16
Ac-ft	2,630	3,080	4,420	11,160	3,650	2,250	2,070	2,280	1,770	1,810	1,680	1,640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1977, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	.021	1.15	1.55	18.2	4.65	1.91	1.35	.065	.001	.000	.000	.11
Max	.19	6.07	7.91	149	30.7	7.94	13.1	.54	.007	.000	.000	1.03
(WY)	(1972)	(1971)	(1972)	(1969)	(1969)	(1969)	(1969)	(1977)	(1969)	(1968)	(1968)	(1976)
Min	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	(1969)	(1969)	(1970)	(1975)	(1972)	(1972)	(1968)	(1968)	(1968)	(1968)	(1968)	(1968)

11073495 Cucamonga Creek near Mira Loma, CA—Continued

SUMMARY STATISTICS

	Water Years 1968 - 1977	
Annual mean	2.73	
Highest annual mean	16.8	1969
Lowest annual mean	.16	1976
Highest daily mean	2,600	Jan 25, 1969
Lowest daily mean	.00	Feb 1, 1968
Annual seven-day minimum	.00	Feb 1, 1968
Maximum peak flow	9,100	Jan 25, 1969
Maximum peak stage	7.08	Jan 25, 1969
Annual runoff (ac-ft)	1,980	
10 percent exceeds	.10	
50 percent exceeds	.00	
90 percent exceeds	.00	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1984, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	3.49	11.3	7.69	34.1	65.0	46.3	12.1	3.43	.48	.37	1.47	1.08
Max	11.1	27.9	24.7	149	216	205	63.4	19.8	2.30	1.22	6.99	3.45
(WY)	(1984)	(1983)	(1984)	(1983)	(1980)	(1983)	(1983)	(1983)	(1983)	(1983)	(1983)	(1983)
Min	.091	.002	.006	1.67	1.29	2.44	.056	.063	.008	.019	.009	.011
(WY)	(1981)	(1980)	(1980)	(1984)	(1984)	(1984)	(1981)	(1979)	(1979)	(1981)	(1979)	(1979)

SUMMARY STATISTICS

	Water Years 1979 - 1984	
Annual mean	17.5	
Highest annual mean	53.4	1983
Lowest annual mean	1.51	1981
Highest daily mean	2,530	Mar 1, 1983
Lowest daily mean	.00	Feb 6, 1979
Annual seven-day minimum	.00	Feb 6, 1979
Maximum peak flow	16,100	Feb 27, 1983
Maximum peak stage	7.85	Feb 27, 1983
Annual runoff (ac-ft)	12,700	
10 percent exceeds	10	
50 percent exceeds	.13	
90 percent exceeds	.01	

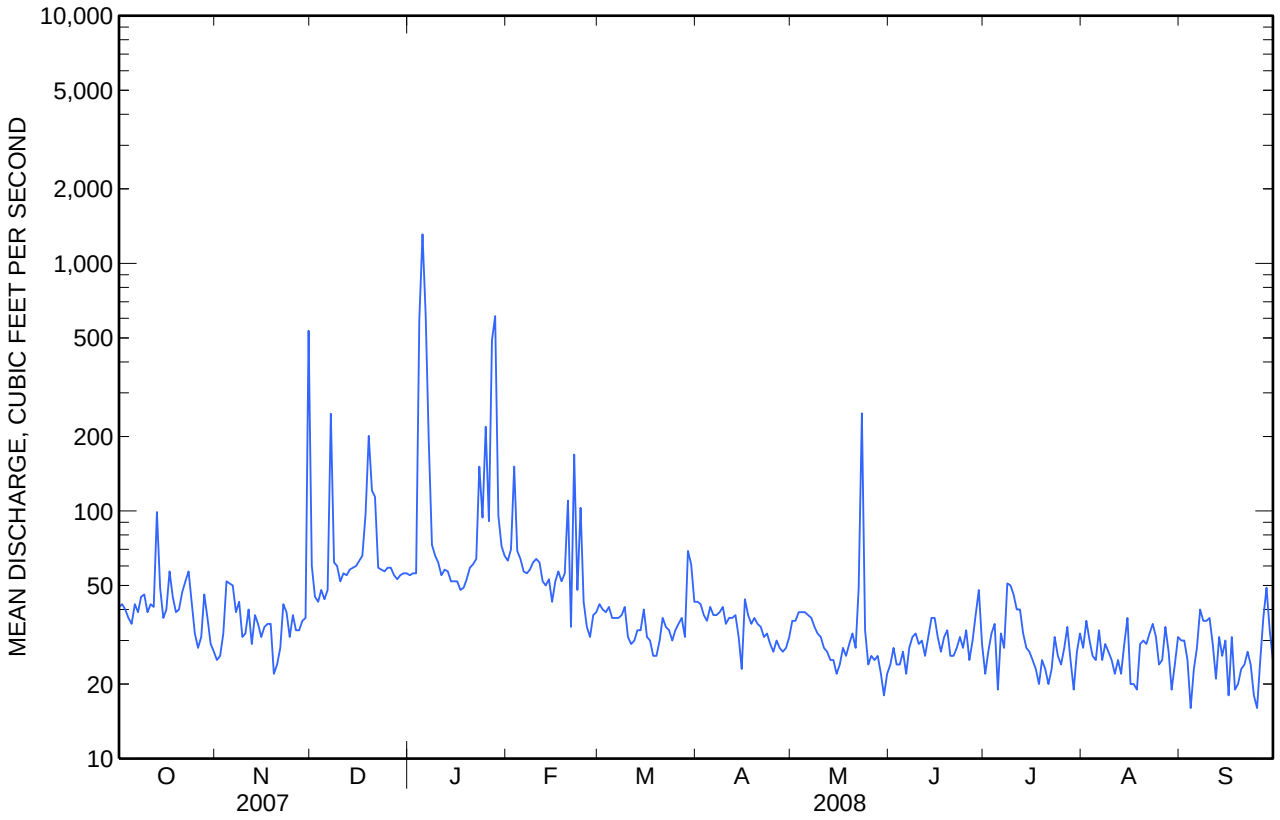
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	47.7	45.3	54.0	94.0	109	68.8	50.7	39.2	36.9	35.1	34.3	38.1
Max	223	102	113	442	350	198	114	69.4	57.1	53.4	51.8	52.0
(WY)	(2005)	(2003)	(2005)	(2005)	(2005)	(1995)	(2006)	(2003)	(1992)	(2004)	(1992)	(1986)
Min	20.4	23.4	21.0	26.1	34.9	25.3	20.5	18.5	18.1	19.3	18.5	16.4
(WY)	(1987)	(1989)	(1987)	(1989)	(1989)	(1988)	(1987)	(1988)	(1988)	(1987)	(1987)	(1988)

11073495 Cucamonga Creek near Mira Loma, CA—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1986 - 2008	
Annual total	19,070		19,378			
Annual mean	52.2		52.9		54.2	
Highest annual mean					137	2005
Lowest annual mean					26.6	1987
Highest daily mean	534	Nov 30	1,310	Jan 5	5,200	Jan 9, 2005
Lowest daily mean	22	Nov 19	16	Sep 4	2.5	Jun 6, 1987
Annual seven-day minimum	30	Nov 15	22	Sep 19	12	Aug 25, 1988
Maximum peak flow			9,040	Jan 5	17,300	Oct 20, 2004
Maximum peak stage			5.12	Jan 5	6.58	Oct 20, 2004
Annual runoff (ac-ft)	37,830		38,440		39,240	
10 percent exceeds	64		62		62	
50 percent exceeds	45		35		37	
90 percent exceeds	33		24		21	



Water-Data Report 2008

11073360 Chino Creek at Schaefer Avenue, near Chino, CA

Santa Ana River Basin

LOCATION.--Lat 34°00′14″, long 117°43′34″ referenced to North American Datum of 1927, San Bernardino County, CA, Hydrologic Unit 18070203, in Santa Ana del Chino Grant, on right bank, 300 ft downstream from old Schaefer Avenue Bridge, 0.8 mi downstream from San Antonio Creek, and 1.5 mi southwest of Chino.

DRAINAGE AREA.--48.9 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1969 to current year.
CHEMICAL DATA: Water year 1998.
SEDIMENT DATA: Water year 1998.

REVISED RECORDS.--WDR CA-84-1: 1983 (instantaneous maximum discharge). WDR CA-95-1: 1992, 1993.

GAGE.--Water-stage recorder and concrete-lined flood-control channel. Concrete dikes formed low-water control from October 1975 to Apr. 16, 1991. Elevation of gage is 685 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Since 1997, due to construction in area of gage, Schaefer Avenue no longer extends to the Chino Creek crossing. The Schaefer Avenue Bridge, however, remains. Flow mostly regulated by San Antonio Flood-Control Reservoir, capacity, 7,700 acre-ft. Natural streamflow affected by extensive ground-water withdrawals, diversions for power, domestic use, irrigation, and return flow from irrigated areas. Releases of imported water are made to the basin by the California Water Project at times in some years, via San Antonio Creek from Rialto Pipeline below San Antonio Dam, at a site approximately 11 mi upstream. During the current year, no California Water Project releases were made. See schematic diagram of Santa Ana River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s, Feb. 27, 1983, gage height, 10.32 ft, from rating curve extended above 560 ft³/s, on basis of slope-conveyance study; no flow May 21, June 30, July 1, Oct. 30, Nov. 3, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 9.23 ft, present datum, discharge, 9,200 ft³/s, on basis of contracted-opening measurement at site 6.1 mi downstream.

11073360 Chino Creek at Schaefer Avenue, near Chino, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e1.9	0.74	3.8	1.4	1.9	2.0	1.7	1.7	1.3	1.3	1.6	3.4
2	e1.9	0.76	1.7	1.6	1.8	2.2	1.6	1.4	1.2	1.4	2.2	1.5
3	1.8	0.75	1.4	1.4	61	1.4	1.8	1.4	1.3	1.1	1.6	1.4
4	1.6	1.1	1.6	352	3.1	1.4	1.6	1.3	1.3	1.3	1.8	1.3
5	1.3	0.85	1.4	296	2.1	1.7	1.7	1.4	1.3	1.1	2.0	1.2
6	1.1	0.68	2.7	166	1.9	1.7	1.6	1.3	1.4	0.97	2.0	1.4
7	1.0	0.61	42	19	2.0	1.5	1.6	1.3	1.3	1.0	1.8	1.3
8	1.1	0.59	3.1	2.2	1.9	1.6	1.6	1.3	1.4	1.1	1.7	1.2
9	1.1	0.61	3.5	1.8	1.9	1.8	1.6	1.3	1.2	1.3	1.7	1.4
10	1.1	0.67	2.1	1.8	1.9	1.8	1.5	1.4	1.4	1.3	1.6	1.5
11	1.1	0.59	1.4	1.7	1.8	1.5	1.4	1.3	1.5	1.2	1.5	1.3
12	1.3	0.58	1.5	1.6	1.8	1.3	1.4	1.3	1.6	6.9	1.4	3.3
13	43	0.55	1.3	1.6	1.8	1.4	1.5	1.4	1.4	3.8	1.4	4.8
14	1.4	0.53	1.4	1.9	5.0	1.2	1.4	1.5	1.5	1.9	1.4	4.6
15	1.5	0.54	1.3	1.7	1.9	5.6	1.5	1.5	1.3	1.9	1.5	3.0
16	1.3	0.54	1.3	1.4	1.8	1.8	1.8	1.5	1.3	1.8	2.1	1.6
17	1.2	0.54	1.4	1.5	1.8	1.6	1.4	1.5	1.4	1.8	1.6	2.8
18	1.3	0.54	21	1.6	1.9	1.4	1.5	1.4	1.4	1.8	1.4	5.5
19	1.2	0.54	61	1.8	1.8	1.4	1.6	1.3	1.3	1.8	1.7	7.2
20	1.1	0.54	18	1.5	15	1.4	1.5	1.4	1.3	1.7	1.9	7.2
21	1.2	0.57	4.4	1.7	2.1	1.4	1.4	1.2	1.3	1.6	1.9	7.2
22	1.2	0.52	2.1	3.4	75	1.5	1.6	30	1.3	1.7	1.5	4.1
23	1.0	0.58	1.7	90	6.1	1.4	1.6	7.7	1.7	1.4	1.6	1.1
24	0.99	0.51	1.4	37	54	1.6	1.6	1.9	1.4	1.5	1.4	0.91
25	1.2	0.49	1.3	163	3.2	1.6	1.7	1.5	1.1	1.4	1.6	0.92
26	0.93	0.54	1.5	28	2.4	1.6	1.8	1.2	1.1	1.5	1.6	0.88
27	0.93	0.50	1.4	205	1.8	1.5	1.7	1.4	1.2	1.3	1.5	0.92
28	0.98	0.50	1.5	107	2.1	1.6	1.6	1.4	1.2	1.3	1.5	0.88
29	0.99	0.50	1.4	3.2	1.8	1.6	1.7	1.3	1.1	1.4	3.6	0.87
30	1.1	295	1.4	2.3	---	2.1	1.7	1.3	1.2	1.9	5.0	0.93
31	1.2	---	1.4	2.0	---	1.4	---	1.3	---	1.8	4.9	---
Total	80.02	312.56	192.4	1,502.1	262.6	53.0	47.7	78.1	39.7	53.27	60.0	75.61
Mean	2.58	10.4	6.21	48.5	9.06	1.71	1.59	2.52	1.32	1.72	1.94	2.52
Max	43	295	61	352	75	5.6	1.8	30	1.7	6.9	5.0	7.2
Min	0.93	0.49	1.3	1.4	1.8	1.2	1.4	1.2	1.1	0.97	1.4	0.87
Ac-ft	159	620	382	2,980	521	105	95	155	79	106	119	150

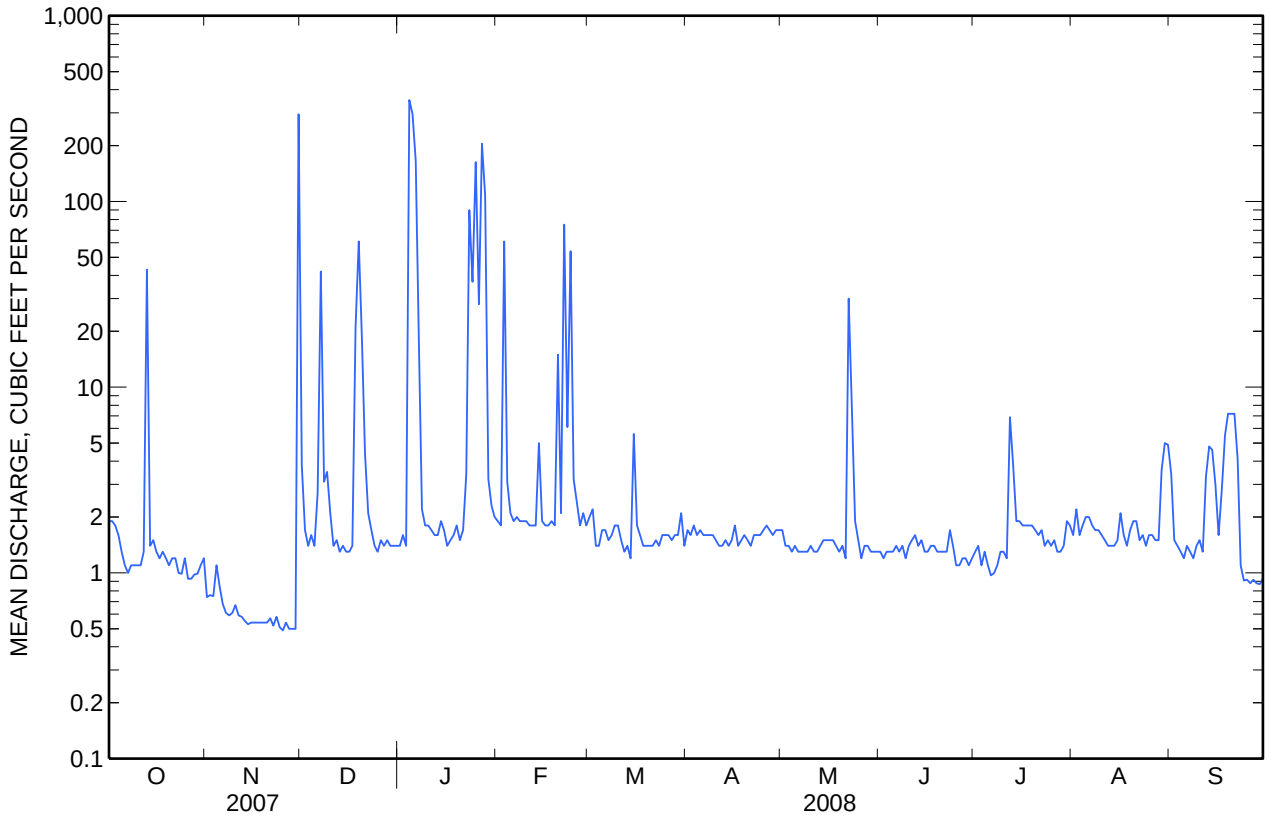
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	17.4	16.0	24.5	36.1	38.8	26.8	9.78	12.4	16.7	17.1	15.1	13.5
Max	126	113	189	221	193	257	68.6	104	184	176	191	198
(WY)	(1979)	(1976)	(1976)	(2005)	(1980)	(1978)	(1974)	(1997)	(1976)	(1974)	(1974)	(1997)
Min	0.06	0.23	0.53	0.55	0.33	0.30	0.14	0.22	0.06	0.07	0.14	0.13
(WY)	(1978)	(1978)	(1970)	(1972)	(1972)	(1972)	(1977)	(1973)	(1977)	(1977)	(1976)	(1977)

11073360 Chino Creek at Schaefer Avenue, near Chino, CA—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1970 - 2008	
Annual total	1,388.63		2,757.06			
Annual mean	3.80		7.53		20.3	
Highest annual mean					92.4	1974
Lowest annual mean					2.81	2007
Highest daily mean	295	Nov 30	352	Jan 4	2,060	Mar 1, 1978
Lowest daily mean	0.49	Nov 25	0.49	Nov 25	0.00	May 21, 1977
Annual seven-day minimum	0.52	Nov 23	0.52	Nov 23	0.02	Oct 28, 1977
Maximum peak flow			2,600	Jan 4	12,700	Feb 27, 1983
Maximum peak stage			6.62	Jan 4	10.32	Feb 27, 1983
Annual runoff (ac-ft)	2,750		5,470		14,690	
10 percent exceeds	2.6		3.9		69	
50 percent exceeds	1.4		1.5		1.4	
90 percent exceeds	0.75		0.93		0.40	



APPENDIX B

DAILY PRECIPITATION DATA
FOR SAN BERNARDINO

WATER YEAR 2007-08

TABLE B-1

DAILY PRECIPITATION
USGS GILBERT STREET PRECIPITATION GAGE AT SAN BERNARDINO
NEAR FORMER COUNTY HOSPITAL SITE
(inches)

	2007			2008								
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0.01	0	0.01	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	1.07	0	0	0	0	0	0	0
4	0	0	0	0.65	0	0	0	0	0	0	0	0
5	0	0	0	1.37	0	0	0	0	0	0	0	0
6	0	0	0.11	1.02	0	0	0	0	0	0	0	0
7	0	0	1.42	0.03	0	0	0.01	0	0	0	0	0
8	0	0	0.17	0	0	0	0	0	0	0	0	0
9	0	0	0.08	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0.02	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0.03	0	0	0	0	0	0
16	0	0	0	0	0	0.03	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0.09	0	0	0	0	0	0	0	0	0
19	0	0	0.36	0	0	0	0	0	0	0	0	0
20	0	0	0.41	0	0.54	0	0	0	0	0	0	0
21	0	0	0	0.03	0.03	0	0	0	0	0	0	0
22	0	0	0	0.01	0.50	0	0	0.55	0	0	0	0
23	0	0	0	0.27	0.05	0	0	0.40	0	0	0	0
24	0	0	0	0.19	0.14	0	0	0.01	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0.17	0	0	0	0	0	0	0	0
27	0	0	0	0.86	0	0	0	0	0	0	0	0
28	0	0	0	0.47	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	2.59	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	
Total	0.02	2.59	2.65	5.07	2.34	0.06	0.01	0.96	0.00	0.00	0.00	0.00

Total Rainfall = 13.70 Inches

APPENDIX C

SANTA ANA RIVER WATERMASTER
FINANCIAL STATEMENTS WITH REPORT
ON EXAMINATION BY
ORANGE COUNTY WATER DISTRICT CONTROLLER

WATER YEAR 2007-08

SANTA ANA RIVER WATERMASTER

FINANCIAL STATEMENTS

JUNE 30, 2008

SANTA ANA RIVER WATERMASTER

STATEMENT OF ASSETS AND LIABILITIES ARISING FROM CASH TRANSACTIONS

JUNE 30, 2008

ASSETS

Cash in savings account	$ 17,722

FUND BALANCE

Fund Balance	$ 17,722

SANTA ANA RIVER WATERMASTER

STATEMENT OF REVENUE AND EXPENSES ARISING FROM CASH TRANSACTIONS

FOR THE PERIOD JULY 1, 2007 - JUNE 30, 2008

	Actual	Budget	Variance - Favorable (Unfavorable)
REVENUE COLLECTED:			
Water District Contributions			
Orange County Water District	$ 5,600	$ 5,600	0
Inland Empire Utilities Agency	2,800	2,800	0
Western Municipal Water District	2,800	2,800	0
San Bernardino Valley Municipal Water District	2,800	2,800	0
TOTAL REVENUE COLLECTED	$ 14,000	$ 14,000	$ -
EXPENSES PAID:			
Professional Engineering Services		$ 13,000	13,000
Administrative Expenses:			
Auditing Services			
Reproduction of Annual Report		1,000	1,000
Reimburse SBVMWD **2004-2005** Services		0	0
Bank service charges	$ 145		
	$ 145	$ 14,000	$ 13,855
EXCESS OF REVENUE COLLECTED OVER (UNDER) EXPENSES PAID	$ 13,855		
FUND BALANCE AT JUNE 30, 2007	$ 3,867		
FUND BALANCE AT JUNE 30, 2008	$ 17,722		

SANTA ANA RIVER WATERMASTER

STATEMENT OF REVENUE AND EXPENSES ARISING FROM CASH TRANSACTIONS

FOR THE PERIOD JULY 1, 2006 - JUNE 30, 2007

	Actual	Budget	Variance - Favorable (Unfavorable)
REVENUE COLLECTED:			
Water District Contributions			
Orange County Water District	$ 10,400	$ 5,600	4,800
Inland Empire Utilities Agency	5,200	2,800	2,400
Western Municipal Water District	5,200	2,800	2,400
San Bernardino Valley Municipal Water District	5,200	2,800	2,400
Interest From Savings Account (Net of bank fees)	(5)	0	(5)
TOTAL REVENUE COLLECTED	$ 25,995	$ 14,000	$ 11,995
EXPENSES PAID:			
Professional Engineering Services	$ 27,631	$ 13,000	(14,631)
Administrative Expenses:			
Auditing Services			
Reproduction of Annual Report	1,964	1,000	(964)
Reimburse SBVMWD 2004-2005 Services	14,104	0	(14,104)
	$ 43,699	$ 14,000	$ (29,699)
EXCESS OF REVENUE COLLECTED OVER (UNDER) EXPENSES PAID	(17,704)		
FUND BALANCE AT JUNE 30, 2006	21,571		
FUND BALANCE AT JUNE 30, 2007	3,867		

APPENDIX D

SAN BERNARDINO HIGH GROUNDWATER MITIGATION PROJECT WATER DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS

WATER YEAR 2007-08

There was no discharge of HGMP water to Santa Ana River in the Bunker Hill area during the 2007-08 water year.

APPENDIX E

WATER QUALITY AND DISCHARGE OF WATER RELEASED BY MWDSC TO SAN ANTONIO CREEK NEAR UPLAND (CONNECTION OC-59)

WATER YEAR 2007-08

There was no discharge by MWDSC to San Antonio Creek near Upland (Connection OC-59) during the 2007-08 water year.

APPENDIX F

WATER QUALITY AND DISCHARGE FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN

WATER YEAR 2007-08

TABLE F-1

QUALITY OF WATER DISCHARGED
FROM THE ARLINGTON DESALTER
TO THE ARLINGTON VALLEY DRAIN

WATER YEAR 2007-08

Month	Discharge (acre-feet)	Weighted TDS[1] (mg/L)	Discharge X TDS
2007			
October	209	311	65,003
November	141	422	59,544
December	214	355	76,055
2008			
January	0	---	---
February	0	---	---
March	68	364	24,748
April	189	426	80,540
May	104	418	43,504
June	113	422	47,708
July	74	492	36,381
August	127	417	52,900
September	81	406	32,917
Total	1,320		519,300
Yearly Flow-weighted TDS =		393	

1. Calculation of weighted TDS excludes flow data for days when no EC was available.

TABLE F-2

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

OCTOBER 2007

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	0.9	1.8	618	361	644
2	2.1	4.1	621	363	1,483
3	2.5	5.0	512	300	1,491
4	3.8	7.4	545	319	2,367
5	4.1	8.1	534	313	2,524
6	3.8	7.6	540	316	2,405
7	3.9	7.8	538	315	2,462
8	3.9	7.6	540	316	2,414
9	2.9	5.7	572	335	1,921
10	0.7	1.4	669	391	540
11	1.8	3.6	631	369	1,338
12	3.8	7.5	533	312	2,325
13	4.7	9.3	522	305	2,829
14	6.5	12.9	499	292	3,771
15	5.9	11.6	502	293	3,405
16	5.8	11.6	505	295	3,425
17	5.8	11.6	505	295	3,424
18	5.7	11.4	497	291	3,313
19	5.7	11.4	491	287	3,274
20	4.8	9.5	504	295	2,796
21	3.0	5.9	523	306	1,812
22	4.5	8.9	495	290	2,571
23	2.0	4.0	597	349	1,403
24	2.0	3.9	627	367	1,419
25	1.9	3.8	626	366	1,406
26	0.6	1.1	701	410	440
27	3.5	6.8	532	311	2,130
28	4.0	7.9	527	309	2,425
29	1.6	3.2	617	361	1,153
30	1.6	3.2	578	338	1,068
31	1.5	2.9	608	356	1,026
Total	105	209			65,003
	Monthly Flow Weighted TDS			311	

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

NOVEMBER 2007

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	1.8	3.6	693	405	1,468
2	2.1	4.2	657	384	1,615
3	1.9	3.7	686	401	1,490
4	2.0	4.0	670	392	1,553
5	1.7	3.3	716	419	1,375
6	0.9	1.8	960	562	1,000
7	0.8	1.7	979	572	949
8	0.8	1.6	989	578	941
9	0.9	1.7	968	566	956
10	1.0	2.1	879	514	1,058
11	0.8	1.6	965	565	919
12	2.4	4.8	620	362	1,747
13	3.4	6.8	568	332	2,245
14	3.3	6.6	571	334	2,196
15	2.4	4.7	624	365	1,703
16	1.5	3.0	723	423	1,285
17	1.5	3.0	727	425	1,267
18	1.7	3.3	702	411	1,349
19	2.6	5.2	752	440	2,296
20	4.6	9.1	689	403	3,660
21	4.5	9.0	676	395	3,569
22	4.7	9.3	669	391	3,639
23	4.6	9.1	674	394	3,605
24	4.0	7.9	714	418	3,283
25	4.0	8.0	671	392	3,143
26	2.4	4.8	847	495	2,372
27	1.8	3.6	1,019	596	2,158
28	1.9	3.7	1,004	587	2,162
29	2.3	4.6	696	407	1,874
30	2.7	5.3	854	499	2,667
Total	71	141			59,544
	Monthly Flow Weighted TDS			422	

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

DECEMBER 2007

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	2.1	4.2	940	550	2,312
2	8.1	16.2	569	333	5,384
3	3.4	6.7	618	361	2,419
4	2.6	5.2	649	380	1,982
5	2.0	3.9	814	476	1,870
6	3.4	6.7	615	360	2,419
7	6.2	12.2	573	335	4,094
8	7.2	14.2	551	322	4,581
9	7.7	15.4	541	316	4,856
10	3.2	6.4	594	348	2,209
11	2.7	5.2	626	366	1,922
12	1.1	2.1	885	518	1,113
13	0.8	1.5	816	477	703
14	2.0	3.9	689	403	1,572
15	4.9	9.8	532	311	3,059
16	6.7	13.3	507	296	3,948
17	1.2	2.4	553	323	764
18	0.6	1.1	873	511	565
19	0.7	1.4	952	557	753
20	0.7	1.4	952	557	786
21	3.3	6.5	604	353	2,289
22	6.1	12.0	528	309	3,710
23	6.1	12.0	529	309	3,720
24	4.7	9.4	545	319	2,996
25	1.2	2.4	695	407	961
26	1.0	2.0	803	470	952
27	1.7	3.4	786	460	1,553
28	4.4	8.7	704	412	3,601
29	4.3	8.5	709	415	3,539
30	4.4	8.8	599	350	3,087
31	3.7	7.3	544	318	2,336
Total	108	214			76,055
	Monthly Flow Weighted TDS			355	

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

JANUARY 2008

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	0	0	---	---	---
2	0	0	---	---	---
3	0	0	---	---	---
4	0	0	---	---	---
5	0	0	---	---	---
6	0	0	---	---	---
7	0	0	---	---	---
8	0	0	---	---	---
9	0	0	---	---	---
10	0	0	---	---	---
11	0	0	---	---	---
12	0	0	---	---	---
13	0	0	---	---	---
14	0	0	---	---	---
15	0	0	---	---	---
16	0	0	---	---	---
17	0	0	---	---	---
18	0	0	---	---	---
19	0	0	---	---	---
20	0	0	---	---	---
21	0	0	---	---	---
22	0	0	---	---	---
23	0	0	---	---	---
24	0	0	---	---	---
25	0	0	---	---	---
26	0	0	---	---	---
27	0	0	---	---	---
28	0	0	---	---	---
29	0	0	---	---	---
30	0	0	---	---	---
31	0	0	---	---	---
Total	0	0			0
	Monthly Flow Weighted TDS			---	

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

FEBRUARY 2008

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	0	0	---	---	---
2	0	0	---	---	---
3	0	0	---	---	---
4	0	0	---	---	---
5	0	0	---	---	---
6	0	0	---	---	---
7	0	0	---	---	---
8	0	0	---	---	---
9	0	0	---	---	---
10	0	0	---	---	---
11	0	0	---	---	---
12	0	0	---	---	---
13	0	0	---	---	---
14	0	0	---	---	---
15	0	0	---	---	---
16	0	0	---	---	---
17	0	0	---	---	---
18	0	0	---	---	---
19	0	0	---	---	---
20	0	0	---	---	---
21	0	0	---	---	---
22	0	0	---	---	---
23	0	0	---	---	---
24	0	0	---	---	---
25	0	0	---	---	---
26	0	0	---	---	---
27	0	0	---	---	---
28	0	0	---	---	---
29	0	0	---	---	---
Total	0	0			0
	Monthly Flow Weighted TDS			---	

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

MARCH 2008

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	0	0	---	---	---
2	0	0	---	---	---
3	0	0	---	---	---
4	0	0	---	---	---
5	0	0	---	---	---
6	0	0	---	---	---
7	0	0	---	---	---
8	0	0	---	---	---
9	0	0	---	---	---
10	0	0	---	---	---
11	0	0	---	---	---
12	0	0	---	---	---
13	0	0	---	---	---
14	0	0	---	---	---
15	0	0	---	---	---
16	0	0	---	---	---
17	0	0	---	---	---
18	0	0	---	---	---
19	0	0	---	---	---
20	0	0	---	---	---
21	0	0	---	---	---
22	0	0	---	---	---
23	0	0	---	---	---
24	0	0	---	---	---
25	2.6	5.1	454	266	1,346
26	6.0	12.0	595	348	4,178
27	5.0	9.9	741	434	4,286
28	4.0	7.9	---	---	---
29	6.6	13.0	---	---	---
30	7.2	14.3	---	---	---
31	3.0	5.9	---	---	---
Total	34	68			9,810
	Monthly Flow Weighted TDS[1]			364	

1. Monthly Flow Weighted TDS excludes flow data for days when no EC was available.

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

APRIL 2008

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	0.7	1.4	884	517	730
2	3.5	7.0	496	290	2,031
3	4.5	8.8	616	361	3,187
4	6.0	12.0	674	394	4,719
5	3.0	6.0	876	513	3,100
6	2.8	5.6	889	520	2,906
7	3.1	6.2	845	494	3,081
8	2.9	5.7	853	499	2,835
9	2.8	5.5	861	503	2,751
10	3.4	6.8	799	467	3,156
11	2.8	5.6	860	503	2,812
12	1.9	3.7	925	541	2,011
13	1.5	3.0	1,033	604	1,800
14	3.0	5.9	779	456	2,699
15	3.1	6.2	699	409	2,535
16	5.1	10.1	566	331	3,332
17	6.1	12.1	640	374	4,539
18	3.0	6.0	831	486	2,923
19	3.0	5.9	839	491	2,907
20	7.5	14.9	614	359	5,351
21	3.2	6.3	724	424	2,679
22	2.4	4.7	719	421	1,976
23	5.1	10.0	589	345	3,448
24	4.0	7.9	624	365	2,869
25	3.0	5.9	679	397	2,341
26	1.7	3.4	831	486	1,642
27	1.6	3.3	840	492	1,615
28	1.6	3.1	848	496	1,537
29	1.4	2.8	891	521	1,473
30	1.7	3.3	826	483	1,617
Total	95	189			80,601
	Monthly Flow Weighted TDS			426	

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

MAY 2008

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	3.2	6.4	653	382	2,425
2	3.7	7.4	630	369	2,728
3	2.6	5.2	689	403	2,105
4	1.6	3.1	854	499	1,564
5	1.1	2.1	957	560	1,203
6	1.2	2.3	1080	631	1,454
7	1.1	2.3	1084	634	1,441
8	0.9	1.8	1098	642	1,143
9	1.4	2.8	579	339	957
10	2.6	5.2	700	409	2,150
11	4.7	9.4	662	387	3,626
12	1.4	2.9	686	401	1,145
13	0.1	0.2	637	373	92
14	0.7	1.4	695	406	574
15	2.1	4.1	796	466	1,916
16	1.4	2.8	958	560	1,582
17	1.6	3.1	901	527	1,651
18	1.4	2.9	874	511	1,459
19	0.3	0.5	710	415	204
20	0.4	0.8	494	289	240
21	0.8	1.6	521	305	487
22	1.5	2.9	562	329	969
23	4.9	9.8	545	319	3,110
24	4.7	9.3	551	322	2,987
25	2.6	5.2	622	364	1,910
26	1.3	2.5	805	471	1,186
27	0.7	1.4	845	494	698
28	0.5	0.9	900	526	485
29	0.5	1.0	1047	613	583
30	0.6	1.1	971	568	645
31	0.5	1.0	1022	598	624
Total	52	104			43,342
	Monthly Flow Weighted TDS			418	

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

JUNE 2008

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	0.6	1.1	1,003	587	630
2	0.8	1.6	788	461	750
3	1.4	2.8	576	337	941
4	0.5	1.0	628	367	383
5	1.4	2.7	518	303	819
6	1.5	3.0	746	436	1,326
7	1.6	3.2	787	460	1,455
8	1.6	3.1	787	460	1,441
9	1.9	3.8	728	426	1,621
10	1.7	3.3	767	449	1,488
11	1.8	3.5	758	443	1,565
12	2.6	5.1	664	388	1,992
13	3.9	7.7	---	---	---
14	2.9	5.8	635	372	2,144
15	1.3	2.6	857	501	1,323
16	1.3	2.6	870	509	1,312
17	1.4	2.7	850	497	1,329
18	1.4	2.8	837	490	1,353
19	2.2	4.4	634	371	1,640
20	1.7	3.4	813	475	1,634
21	1.9	3.7	795	465	1,712
22	1.7	3.4	820	480	1,634
23	1.6	3.3	836	489	1,590
24	3.7	7.3	628	367	2,682
25	3.3	6.6	644	377	2,499
26	3.3	6.5	647	379	2,452
27	2.4	4.8	718	420	1,999
28	1.5	3.0	---	---	---
29	1.9	3.7	---	---	---
30	2.2	4.4	736	431	1,903
Total	57	113			41,619
	Monthly Flow Weighted TDS			422	

1. Monthly Flow Weighted TDS excludes flow data for days when no EC was available.

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

JULY 2008

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	2.2	4.5	732	428	1,905
2	1.8	3.5	806	471	1,664
3	1.8	3.7	796	465	1,700
4	1.7	3.5	816	478	1,657
5	1.8	3.5	811	474	1,659
6	1.8	3.5	808	472	1,653
7	1.5	3.0	730	427	1,298
8	1.7	3.4	818	479	1,645
9	1.8	3.6	806	472	1,679
10	1.6	3.3	833	487	1,600
11	1.2	2.4	978	572	1,352
12	1.2	2.4	960	562	1,362
13	1.2	2.4	---	---	---
14	1.3	2.6	931	544	1,404
15	0.6	1.2	914	535	656
16	0.4	0.9	921	539	480
17	0.7	1.4	929	543	784
18	1.1	2.1	1,022	598	1,248
19	1.3	2.6	911	533	1,407
20	1.2	2.4	917	536	1,301
21	1.0	2.0	915	535	1,068
22	0.7	1.5	962	563	846
23	1.1	2.2	768	449	992
24	0.8	1.7	872	510	845
25	0.9	1.8	845	494	880
26	0.8	1.6	882	516	840
27	0.7	1.3	987	577	744
28	0.5	1.0	---	---	---
29	0.7	1.4	---	---	---
30	0.7	1.4	721	422	608
31	1.2	2.5	611	357	878
Total	37	74			34,156
	Monthly Flow Weighted TDS			492	

1. Monthly Flow Weighted TDS excludes flow data for days when no EC was available.

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

AUGUST 2008

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	2.5	5.0	612	358	1,804
2	1.4	2.8	789	462	1,289
3	1.0	2.1	900	527	1,083
4	0.9	1.7	981	574	1,004
5	0.8	1.7	1,002	586	972
6	0.9	1.9	925	541	1,013
7	1.2	2.4	803	470	1,110
8	1.0	2.0	850	497	1,007
9	0.7	1.4	1,003	587	847
10	0.7	1.5	995	582	858
11	1.0	1.9	873	511	972
12	0.7	1.4	648	379	512
13	0.9	1.7	---	---	---
14	0.9	1.8	664	388	716
15	3.0	5.9	719	420	2,465
16	3.5	7.0	760	444	3,097
17	3.5	7.0	759	444	3,094
18	2.7	5.4	837	489	2,629
19	1.7	3.4	1,030	603	2,072
20	2.5	5.0	599	350	1,765
21	4.3	8.6	576	337	2,906
22	4.1	8.1	563	329	2,658
23	1.7	3.3	733	429	1,408
24	4.2	8.4	573	335	2,797
25	2.3	4.6	658	385	1,774
26	1.4	2.7	793	464	1,239
27	0.7	1.4	984	576	813
28	1.3	2.5	---	---	---
29	3.7	7.2	---	---	---
30	5.1	10.1	611	358	3,611
31	3.8	7.5	624	365	2,723
Total	64	127			48,235
	Monthly Flow Weighted TDS			417	

1. Monthly Flow Weighted TDS excludes flow data for days when no EC was available.

TABLE F-2 (continued)

SUMMARY OF DISCHARGE AND WEIGHTED TDS
FROM THE ARLINGTON DESALTER TO THE ARLINGTON VALLEY DRAIN
WATER YEAR 2007-08

SEPTEMBER 2008

Day	Arlington Discharge (cfs)	Arlington Discharge (acre-feet)	Daily Mean EC (microsiemens/cm)	Computed TDS (mg/L)[1]	Outflow X TDS
1	2.3	4.5	683	399	1,790
2	2.5	4.9	703	411	2,008
3	3.0	5.9	685	401	2,361
4	4.1	8.0	621	363	2,919
5	3.1	6.1	650	380	2,335
6	1.2	2.4	871	509	1,204
7	1.3	2.6	827	484	1,278
8	0.9	1.8	803	470	851
9	1.0	1.9	753	441	839
10	4.2	8.3	632	370	3,066
11	4.7	9.3	624	365	3,393
12	0.6	1.3	816	477	601
13	0.6	1.3	---	---	---
14	0.5	1.1	885	518	556
15	0.9	1.8	708	414	737
16	0.5	1.1	880	515	553
17	0.6	1.1	859	503	571
18	1.0	0.0	---	---	---
19	1.0	4.0	484	283	1,121
20	0.3	0.6	1,007	589	362
21	0.3	0.6	1,034	605	353
22	0.5	0.9	822	481	443
23	0.3	0.6	1,040	608	355
24	0.4	0.8	879	514	426
25	0.4	0.9	865	506	435
26	0.4	0.8	893	522	417
27	0.9	1.8	657	384	708
28	1.8	3.5	---	---	---
29	1.2	2.3	---	---	---
30	0.6	1.2	712	417	499
Total	41	81			30,179
	Monthly Flow Weighted TDS			406	

1. Monthly Flow Weighted TDS excludes flow data for days when no EC was available.

APPENDIX G

WATER QUALITY AND DISCHARGE FROM THE SAN JACINTO WATERSHED

WATER YEAR 2007-08

TABLE G-1
SAN JACINTO WATERSHED DISCHARGE CALCULATIONS
WATER YEAR 2007-08
DECEMBER 2007

Day	[1] Temescal Creek Flow (cfs)	[2] Arlington Desalter Flow (cfs)	[3]=[1]-[2] Temescal Creek Flow - Arlington Desalter (cfs)	[4] Temescal Creek Base Flow (cfs)	[5] EMWD Wastewater Discharge (cfs)	[6] Scalped Storm Flow (cfs)	[7]=[3]-[4]-[6] San Jacinto Water Reaching Prado (cfs)
1	51	2.1	48.9	2.9	0	46	0
2	11	8.1	2.9	2.8	0	0	0
3	7.1	3.4	3.7	3.7	0	0	0
4	6	2.6	2.9	2.9	0	0	0
5	4	2.0	2.1	2.1	0	0	0
6	6	3.4	2.8	2.8	10	0	0
7	22	6.2	15.8	2.9	17	13	0
8	23	7.2	15.8	2.9	18	13	0
9	13	7.7	5.3	2.9	26	2	0
10	6	3.2	2.3	2.3	16	0	0
11	6	2.7	3.7	3.8	22	0	0
12	3	1.1	2.0	2.0	17	0	0
13	3	0.8	2.4	2.5	16	0	0
14	4	2.0	1.8	1.8	15	0	0
15	6	4.9	0.7	0.6	24	0	0
16	9	6.7	2.6	2.6	11	0	0
17	4	1.2	2.8	2.8	6	0	0
18	6	0.6	5.6	3.1	2	0	2
19	10	0.7	9.1	3.1	19	3	3
20	4	0.7	3.1	3.1	43	0	0
21	23	3.3	19.7	2.2	62	13	5
22	7	6.1	0.9	0.8	63	0	0
23	7	6.1	0.7	0.7	73	0	0
24	7	4.7	2.4	2.4	38	0	0
25	4	1.2	2.5	2.5	72	0	0
26	3	1.0	2.1	2.1	61	0	0
27	4	1.7	2.5	2.5	65	0	0
28	8	4.4	3.8	2.8	65	0	1
29	8	4.3	3.6	2.6	74	0	1
30	9	4.4	4.2	2.2	69	0	2
31	8	3.7	4.6	2.6	62	0	2
Total (cfs)	291	108	183	77	960	90	16
(acre-feet)	578	214	364	153	1,905	179	32

1. USGS measured flow of Temescal Creek above Main St. at Corona.
2. Discharge of the Arlington Desalter to the Arlington Valley Channel.
3. Temescal Creek flow minus the Arlington Desalter contribution.
4. When other flow was present, Temescal base flow was assumed to be 4 cfs based on flowrates during non-storm periods.
5. Eastern Municipal Water District wasterwater discharge to Temescal Creek at Wasson Canyon.
6. Temescal Creek flow attributed to storm events.
7. Flow in Temescal Creek at Corona attributed to EMWD discharge of wastewater to Temescal Creek.

TABLE G-1
SAN JACINTO WATERSHED DISCHARGE CALCULATIONS
WATER YEAR 2007-08
JANUARY 2008

Day	[1] Temescal Creek Flow (cfs)	[2] Arlington Desalter Flow (cfs)	[3]=[1]-[2] Temescal Creek Flow - Arlington Desalter (cfs)	[4] Temescal Creek Base Flow (cfs)	[5] EMWD Wastewater Discharge (cfs)	[6] Scalped Storm Flow (cfs)	[7]=[3]-[4]-[6] San Jacinto Water Reaching Prado (cfs)
1	8	0	8	3	64	0	5
2	5	0	5	3	56	0	2
3	4.4	0	4.4	2.4	54	0	2
4	20	0	20	3	51	0	17
5	271	0	271	3	58	218	50
6	275	0	275	3	66	206	66
7	229	0	229	3	63	160	66
8	106	0	106	3	61	43	60
9	84	0	84	3	66	24	57
10	75	0	75	3	60	15	57
11	73	0	73	3	54	12	58
12	70	0	70	3	54	9	58
13	62	0	62	3	58	0	59
14	56	0	56	3	59	0	53
15	54	0	54	3	63	0	51
16	57	0	57	3	56	0	54
17	58	0	58	3	32	0	55
18	51	0	51	3	45	4	44
19	47	0	47	3	19	0	44
20	46	0	46	3	26	0	43
21	47	0	47	3	42	15	29
22	48	0	48	3	71	12	33
23	91	0	91	3	70	42	46
24	119	0	119	3	63	61	55
25	104	0	104	3	68	38	63
26	95	0	95	3	59	26	66
27	402	0	402	3	67	333	66
28	401	0	401	3	70	332	66
29	177	0	177	3	73	106	68
30	131	0	131	3	69	60	68
31	107	0	107	3	68	34	70
Total (cfs)	3,373	0	3,373	92	1,788	1,750	1,531
(acre-feet)	6,691	0	6,691	183	3,546	3,471	3,037

1. USGS measured flow of Temescal Creek above Main St. at Corona.
2. Discharge of the Arlington Desalter to the Arlington Valley Channel.
3. Temescal Creek flow minus the Arlington Desalter contribution.
4. When other flow was present, Temescal base flow was assumed to be 4 cfs based on flowrates during non-storm periods.
5. Eastern Municipal Water District wasterwater discharge to Temescal Creek at Wasson Canyon.
6. Temescal Creek flow attributed to storm events.
7. Flow in Temescal Creek at Corona attributed to EMWD discharge of wastewater to Temescal Creek.

TABLE G-1
SAN JACINTO WATERSHED DISCHARGE CALCULATIONS
WATER YEAR 2007-08
FEBRUARY 2008

Day	[1] Temescal Creek Flow (cfs)	[2] Arlington Desalter Flow (cfs)	[3]=[1]-[2] Temescal Creek Flow - Arlington Desalter (cfs)	[4] Temescal Creek Base Flow (cfs)	[5] EMWD Wastewater Discharge (cfs)	[6] Scalped Storm Flow (cfs)	[7]=[3]-[4]-[6] San Jacinto Water Reaching Prado (cfs)
1	94	0	94	4	69	20	70
2	92	0	92	4	70	18	70
3	132	0	132	4	69	59	69
4	94	0	94	4	66	22	68
5	84	0	84	4	63	13	67
6	76	0	76	4	42	10	62
7	68	0	68	4	53	8	56
8	56	0	56	4	52	0	52
9	53	0	53	4	56	0	49
10	60	0	60	4	56	0	56
11	65	0	65	4	56	0	61
12	64	0	64	4	57	0	60
13	61	0	61	4	61	0	57
14	59	0	59	4	66	0	55
15	57	0	57	4	67	1	52
16	61	0	61	4	60	0	57
17	67	0	67	4	61	0	63
18	63	0	63	4	58	0	59
19	62	0	62	4	61	0	58
20	73	0	73	4	55	10	59
21	68	0	68	4	48	7	57
22	223	0	223	4	42	166	53
23	78	0	78	4	40	25	49
24	158	0	158	4	43	108	46
25	70	0	70	4	48	22	44
26	66	0	66	4	49	18	44
27	68	0	68	4	48	18	46
28	68	0	68	4	43	18	46
29	67	0	67	4	0	18	45
Total (cfs)	2,307	0	2,307	116	1,560	561	1,630
(acre-feet)	4,576	0	4,576	230	3,094	1,113	3,233

1. USGS measured flow of Temescal Creek above Main St. at Corona.
2. Discharge of the Arlington Desalter to the Arlington Valley Channel.
3. Temescal Creek flow minus the Arlington Desalter contribution.
4. When other flow was present, Temescal base flow was assumed to be 4 cfs based on flowrates during non-storm periods.
5. Eastern Municipal Water District wasterwater discharge to Temescal Creek at Wasson Canyon.
6. Temescal Creek flow attributed to storm events.
7. Flow in Temescal Creek at Corona attributed to EMWD discharge of wastewater to Temescal Creek.

TABLE G-1
SAN JACINTO WATERSHED DISCHARGE CALCULATIONS
WATER YEAR 2007-08
MARCH 2008

Day	[1] Temescal Creek Flow (cfs)	[2] Arlington Desalter Flow (cfs)	[3]=[1]-[2] Temescal Creek Flow - Arlington Desalter (cfs)	[4] Temescal Creek Base Flow (cfs)	[5] EMWD Wastewater Discharge (cfs)	[6] Scalped Storm Flow (cfs)	[7]=[3]-[4]-[6] San Jacinto Water Reaching Prado (cfs)
1	66	0	66	4	0	17	45
2	53	0	53	4	0	9	40
3	40	0	40	4	35	1	35
4	33	0	33	4	53	0	29
5	27	0	27	4	50	0	23
6	32	0	32	4	69	0	28
7	44	0	44	4	58	0	40
8	51	0	51	4	62	0	47
9	47	0	47	4	63	0	43
10	40	0	40	4	65	0	36
11	35	0	35	4	36	0	31
12	39	0	39	4	1	0	35
13	36	0	36	4	0	0	32
14	26	0	26	4	0	0	22
15	46	0	46	4	0	21	21
16	70	0	70	4	0	46	20
17	47	0	47	4	0	23	20
18	41	0	41	4	0	17	20
19	37	0	37	4	30	8	25
20	34	0	34	4	44	0	30
21	30	0	30	4	39	0	26
22	30	0	30	4	38	0	26
23	37	0	37	4	43	0	33
24	40	0	40	4	37	0	36
25	38	2.6	35.4	3.4	33	0	32
26	36	6	30	3.9	17	0	26
27	34	5	29	4	24	0	25
28	32	4	28	4	24	0	24
29	32	6.6	25.4	3.4	25	0	22
30	31	7.2	23.8	3.8	34	0	20
31	28	3	25	4	30	0	21
Total (cfs)	1,212	34	1,178	123	909	142	913
(acre-feet)	2,404	68	2,336	243	1,802	282	1,811

1. USGS measured flow of Temescal Creek above Main St. at Corona.
2. Discharge of the Arlington Desalter to the Arlington Valley Channel.
3. Temescal Creek flow minus the Arlington Desalter contribution.
4. When other flow was present, Temescal base flow was assumed to be 4 cfs based on flowrates during non-storm periods.
5. Eastern Municipal Water District wasterwater discharge to Temescal Creek at Wasson Canyon.
6. Temescal Creek flow attributed to storm events.
7. Flow in Temescal Creek at Corona attributed to EMWD discharge of wastewater to Temescal Creek.

TABLE G-1
SAN JACINTO WATERSHED DISCHARGE CALCULATIONS
WATER YEAR 2007-08
APRIL 2008

Day	[1] Temescal Creek Flow (cfs)	[2] Arlington Desalter Flow (cfs)	[3]=[1]-[2] Temescal Creek Flow - Arlington Desalter (cfs)	[4] Temescal Creek Base Flow (cfs)	[5] EMWD Wastewater Discharge (cfs)	[6] Scalped Storm Flow (cfs)	[7]=[3]-[4]-[6] San Jacinto Water Reaching Prado (cfs)
1	26	0.7	25.3	4.3	28	0	21
2	35	3.5	31.5	3.5	34	0	28
3	38	4.5	33.5	3.5	16	4	26
4	45	6.0	39.0	4.0	22	10	25
5	37	3.0	34.0	4.0	27	4	26
6	36	2.8	33.2	5.2	31	1	27
7	35	3.1	31.9	3.9	36	0	28
8	37	2.9	34.1	4.1	14	0	30
9	40	2.8	37.2	4.2	16	0	33
10	44	3.4	40.6	5.6	8	0	35
11	37	2.8	34.2	4.2	2	0	30
12	31	1.9	29.1	4.1	0	0	25
13	24	1.5	22.5	4.5	0	0	18
14	22	3.0	19.0	4.0	0	0	15
15	22	3.1	18.9	3.9	0	0	15
16	20	5.1	14.9	3.9	0	0	11
17	22	6.1	15.9	3.9	0	0	12
18	9	3.0	6.1	4.1	0	0	2
19	8	3.0	4.5	3.5	0	0	1
20	15	7.5	7.5	3.5	0	0	4
21	7	3.2	4.0	4.0	0	0	0
22	6	2.4	4.0	4.0	0	0	0
23	9	5.1	3.6	3.7	0	0	0
24	7	4.0	3.4	3.4	0	0	0
25	6	3.0	3.4	3.4	0	0	0
26	6	1.7	4.6	4.6	0	0	0
27	5	1.6	3.7	3.6	0	0	0
28	5	1.6	3.8	3.8	0	0	0
29	6	1.4	4.2	4.2	0	0	0
30	6	1.7	4.1	4.1	0	0	0
Total (cfs)	647	95	552	121	231	19	412
(acre-feet)	1,284	189	1,094	239	459	38	817

1. USGS measured flow of Temescal Creek above Main St. at Corona.
2. Discharge of the Arlington Desalter to the Arlington Valley Channel.
3. Temescal Creek flow minus the Arlington Desalter contribution.
4. When other flow was present, Temescal base flow was assumed to be 4 cfs based on flowrates during non-storm periods.
5. Eastern Municipal Water District wasterwater discharge to Temescal Creek at Wasson Canyon.
6. Temescal Creek flow attributed to storm events.
7. Flow in Temescal Creek at Corona attributed to EMWD discharge of wastewater to Temescal Creek.

TABLE G-1
SAN JACINTO WATERSHED DISCHARGE CALCULATIONS
WATER YEAR 2007-08
MAY 2008

Day	[1] Temescal Creek Flow (cfs)	[2] Arlington Desalter Flow (cfs)	[3]=[1]-[2] Temescal Creek Flow - Arlington Desalter (cfs)	[4] Temescal Creek Base Flow (cfs)	[5] EMWD Wastewater Discharge (cfs)	[6] Scalped Storm Flow (cfs)	[7]=[3]-[4]-[6] San Jacinto Water Reaching Prado (cfs)
1	6.2	3.2	3.0	3.0	0	0	0
2	6.3	3.7	2.6	2.6	0	0	0
3	6.3	2.6	3.7	3.7	0	0	0
4	6.1	1.6	4.5	4.5	0	0	0
5	6.3	1.1	5.2	5.2	0	0	0
6	6.1	1.2	5.0	4.9	0	0	0
7	6.5	1.1	5.4	5.4	0	0	0
8	6.4	0.9	5.5	5.5	0	0	0
9	6.2	1.4	4.8	4.8	0	0	0
10	6.6	2.6	4.0	4.0	0	0	0
11	5.0	4.7	0.3	0.3	0	0	0
12	4.0	1.4	2.6	2.6	0	0	0
13	2.1	0.1	2.0	2.0	0	0	0
14	2.2	0.7	1.5	1.5	0	0	0
15	4.9	2.1	2.8	2.8	0	0	0
16	3.4	1.4	2.0	2.0	0	0	0
17	4.2	1.6	2.6	2.6	0	0	0
18	6.1	1.4	4.7	4.7	0	0	0
19	3.9	0.3	3.6	3.7	0	0	0
20	5.2	0.4	4.8	4.8	0	0	0
21	5.8	0.8	5.0	5.0	0	0	0
22	12	1.5	10.5	3.5	0	7	0
23	13	4.9	8.1	4.1	0	4	0
24	10	4.7	5.3	3.3	0	2	0
25	7.5	2.6	4.9	3.9	0	1	0
26	5.0	1.3	3.7	3.7	0	0	0
27	4.3	0.7	3.6	3.6	0	0	0
28	3.8	0.5	3.3	3.3	0	0	0
29	3.5	0.5	3.0	3.0	0	0	0
30	3.7	0.6	3.1	3.1	0	0	0
31	3.4	0.5	2.9	2.9	0	0	0
Total (cfs)	176	52	124	110	0	14	0
(acre-feet)	349	104	246	218	0	28	0

1. USGS measured flow of Temescal Creek above Main St. at Corona.
2. Discharge of the Arlington Desalter to the Arlington Valley Channel.
3. Temescal Creek flow minus the Arlington Desalter contribution.
4. When other flow was present, Temescal base flow was assumed to be 4 cfs based on flowrates during non-storm periods.
5. Eastern Municipal Water District wasterwater discharge to Temescal Creek at Wasson Canyon.
6. Temescal Creek flow attributed to storm events.
7. Flow in Temescal Creek at Corona attributed to EMWD discharge of wastewater to Temescal Creek.

TABLE G-2
SUMMARY OF SAN JACINTO WATERSHED DISCHARGE
WATER YEAR 2007-08
DECEMBER 2007

Day	EMWD Discharge to Temescal Creek (cfs)[1]	San Jacinto Watershed Outflow Reaching Prado (cfs)[2]	Santa Ana River Flow Lost to the Ocean (cfs)[3]	San Jacinto Outflow Recharged by OCWD (cfs)[4]
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	10	0	0	0
7	17	0	0	0
8	18	0	0	0
9	26	0	0	0
10	16	0	0	0
11	22	0	0	0
12	17	0	0	0
13	16	0	0	0
14	15	0	0	0
15	24	0	0	0
16	11	0	0	0
17	6	0	0	0
18	2	2	0	3
19	19	3	0	3
20	43	0	0	0
21	62	5	0	5
22	63	0	0	0
23	73	0	10	0
24	38	0	0	0
25	72	0	0	0
26	61	0	0	0
27	65	0	0	0
28	65	1	0	1
29	74	1	0	1
30	69	2	0	2
31	62	2	0	2
Total	960	16	10	16

(1) Eastern Municipal Water District (EMWD) effluent discharge to Temescal Creek at Wasson Canyon.

(2) The amount of EMWD discharge determined to have reached Prado reservoir by scalping the flow of Temescal Creek at the Main St. gauging station in Corona.

(3) Flow of the Santa Ana River at Ball Road has historically been lost to the ocean. OCWD Forebay Operations currently sink 35 cfs between Ball Road and Orangewood Avenue. Therefore, the Ball Road figure minus 35 cfs was used for "Santa Ana River Flow Lost to the Ocean".

(4) When the Santa Ana River flow lost to the ocean is greater than the San Jacinto watershed outflow reaching Prado Dam, it is assumed that no San Jacinto watershed outflow could be recharged by OCWD. When San Jacinto watershed outflow reaching Prado Dam was greater than the Santa Ana River flow lost to the ocean, San Jacinto watershed outflow recharged by OCWD was calculated as the difference between the two.

TABLE G-2
SUMMARY OF SAN JACINTO WATERSHED DISCHARGE
WATER YEAR 2007-08
JANUARY 2008

Day	EMWD Discharge to Temescal Creek (cfs)[1]	San Jacinto Watershed Outflow Reaching Prado (cfs)[2]	Santa Ana River Flow Lost to the Ocean (cfs)[3]	San Jacinto Outflow Recharged by OCWD (cfs)[4]
1	64	5	0	5
2	56	2	0	2
3	54	2	0	2
4	51	17	0	17
5	58	50	0	50
6	66	66	0	66
7	63	66	0	66
8	61	60	0	60
9	66	57	0	57
10	60	57	0	57
11	54	58	0	58
12	54	58	0	58
13	58	59	55	4
14	59	53	0	53
15	63	51	0	51
16	56	54	0	54
17	32	55	0	55
18	45	44	0	44
19	19	44	0	44
20	26	43	0	43
21	42	29	0	29
22	71	33	0	33
23	70	46	0	46
24	63	55	0	55
25	68	63	0	63
26	59	66	0	66
27	67	66	0	66
28	70	66	0	66
29	73	68	0	68
30	69	68	0	68
31	68	70	0	70
Total	1,788	1,531	55	1,476

(1) Eastern Municipal Water District (EMWD) effluent discharge to Temescal Creek at Wasson Canyon.

(2) The amount of EMWD discharge determined to have reached Prado reservoir by scalping the flow of Temescal Creek at the Main St. gauging station in Corona.

(3) Flow of the Santa Ana River at Ball Road has historically been lost to the ocean. OCWD Forebay Operations currently sink 35 cfs between Ball Road and Orangewood Avenue. Therefore, the Ball Road figure minus 35 cfs was used for "Santa Ana River Flow Lost to the Ocean".

(4) When the Santa Ana River flow lost to the ocean is greater than the San Jacinto watershed outflow reaching Prado Dam, it is assumed that no San Jacinto watershed outflow could be recharged by OCWD. When San Jacinto watershed outflow reaching Prado Dam was greater than the Santa Ana River flow lost to the ocean, San Jacinto watershed outflow recharged by OCWD was calculated as the difference between the two.

TABLE G-2
SUMMARY OF SAN JACINTO WATERSHED DISCHARGE
WATER YEAR 2007-08
FEBRUARY 2008

Day	EMWD Discharge to Temescal Creek (cfs)[1]	San Jacinto Watershed Outflow Reaching Prado (cfs)[2]	Santa Ana River Flow Lost to the Ocean (cfs)[3]	San Jacinto Outflow Recharged by OCWD (cfs)[4]
1	69	70	0	70
2	70	70	0	70
3	69	69	0	69
4	66	68	0	68
5	63	67	0	67
6	42	62	0	62
7	53	56	0	56
8	52	52	0	52
9	56	49	0	49
10	56	56	0	56
11	56	61	0	61
12	57	60	0	60
13	61	57	0	57
14	66	55	0	55
15	67	52	0	52
16	60	57	0	57
17	61	63	0	63
18	58	59	0	59
19	61	58	0	58
20	55	59	0	59
21	48	57	0	57
22	42	53	0	53
23	40	49	0	49
24	43	46	0	46
25	48	44	0	44
26	49	44	0	44
27	48	46	0	46
28	43	46	0	46
29	0	45	0	45
Total	1,560	1,630	0	1,630

(1) Eastern Municipal Water District (EMWD) effluent discharge to Temescal Creek at Wasson Canyon.

(2) The amount of EMWD discharge determined to have reached Prado reservoir by scalping the flow of Temescal Creek at the Main St. gauging station in Corona.

(3) Flow of the Santa Ana River at Ball Road has historically been lost to the ocean. OCWD Forebay Operations currently sink 35 cfs between Ball Road and Orangewood Avenue. Therefore, the Ball Road figure minus 35 cfs was used for "Santa Ana River Flow Lost to the Ocean".

(4) When the Santa Ana River flow lost to the ocean is greater than the San Jacinto watershed outflow reaching Prado Dam, it is assumed that no San Jacinto watershed outflow could be recharged by OCWD. When San Jacinto watershed outflow reaching Prado Dam was greater than the Santa Ana River flow lost to the ocean, San Jacinto watershed outflow recharged by OCWD was calculated as the difference between the two.

TABLE G-2
SUMMARY OF SAN JACINTO WATERSHED DISCHARGE
WATER YEAR 2007-08
MARCH 2008

Day	EMWD Discharge to Temescal Creek (cfs)[1]	San Jacinto Watershed Outflow Reaching Prado (cfs)[2]	Santa Ana River Flow Lost to the Ocean (cfs)[3]	San Jacinto Outflow Recharged by OCWD (cfs)[4]
1	0	45	60	0
2	0	40	0	40
3	35	35	0	35
4	53	29	0	29
5	50	23	0	23
6	69	28	0	28
7	58	40	0	40
8	62	47	19	28
9	63	43	0	43
10	65	36	0	36
11	36	31	0	31
12	1	35	0	35
13	0	32	0	32
14	0	22	0	22
15	0	21	0	21
16	0	20	0	20
17	0	20	0	20
18	0	20	0	20
19	30	25	0	25
20	44	30	0	30
21	39	26	0	26
22	38	26	0	26
23	43	33	0	33
24	37	36	0	36
25	33	32	0	32
26	17	26	0	26
27	24	25	0	25
28	24	24	0	24
29	25	22	0	22
30	34	20	0	20
31	30	21	0	21
Total	909	913	79	849

(1) Eastern Municipal Water District (EMWD) effluent discharge to Temescal Creek at Wasson Canyon.

(2) The amount of EMWD discharge determined to have reached Prado reservoir by scalping the flow of Temescal Creek at the Main St. gauging station in Corona.

(3) Flow of the Santa Ana River at Ball Road has historically been lost to the ocean. OCWD Forebay Operations currently sink 35 cfs between Ball Road and Orangewood Avenue. Therefore, the Ball Road figure minus 35 cfs was used for "Santa Ana River Flow Lost to the Ocean".

(4) When the Santa Ana River flow lost to the ocean is greater than the San Jacinto watershed outflow reaching Prado Dam, it is assumed that no San Jacinto watershed outflow could be recharged by OCWD. When San Jacinto watershed outflow reaching Prado Dam was greater than the Santa Ana River flow lost to the ocean, San Jacinto watershed outflow recharged by OCWD was calculated as the difference between the two.

TABLE G-2
SUMMARY OF SAN JACINTO WATERSHED DISCHARGE
WATER YEAR 2007-08
APRIL 2008

Day	EMWD Discharge to Temescal Creek (cfs)[1]	San Jacinto Watershed Outflow Reaching Prado (cfs)[2]	Santa Ana River Flow Lost to the Ocean (cfs)[3]	San Jacinto Outflow Recharged by OCWD (cfs)[4]
1	28	21	0	21
2	34	28	0	28
3	16	26	0	26
4	22	25	0	25
5	27	26	0	26
6	31	27	959	0
7	36	28	2,215	0
8	14	30	2,495	0
9	16	33	1,335	0
10	8	35	68	0
11	2	30	30	0
12	0	25	0	25
13	0	18	0	18
14	0	15	0	15
15	0	15	0	15
16	0	11	0	11
17	0	12	0	12
18	0	2	0	2
19	0	1	0	1
20	0	4	0	4
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	19	0
25	0	0	0	0
26	0	0	32	0
27	0	0	0	0
28	0	0	1,175	0
29	0	0	2,495	0
30	0	0	2,195	0
Total	231	412	13,018	229

(1) Eastern Municipal Water District (EMWD) effluent discharge to Temescal Creek at Wasson Canyon.

(2) The amount of EMWD discharge determined to have reached Prado reservoir by scalping the flow of Temescal Creek at the Main St. gauging station in Corona.

(3) Flow of the Santa Ana River at Ball Road has historically been lost to the ocean. OCWD Forebay Operations currently sink 35 cfs between Ball Road and Orangewood Avenue. Therefore, the Ball Road figure minus 35 cfs was used for "Santa Ana River Flow Lost to the Ocean".

(4) When the Santa Ana River flow lost to the ocean is greater than the San Jacinto watershed outflow reaching Prado Dam, it is assumed that no San Jacinto watershed outflow could be recharged by OCWD. When San Jacinto watershed outflow reaching Prado Dam was greater than the Santa Ana River flow lost to the ocean, San Jacinto watershed outflow recharged by OCWD was calculated as the difference between the two.

TABLE G-2
SUMMARY OF SAN JACINTO WATERSHED DISCHARGE
WATER YEAR 2007-08
MAY 2008

Day	EMWD Discharge to Temescal Creek (cfs)[1]	San Jacinto Watershed Outflow Reaching Prado (cfs)[2]	Santa Ana River Flow Lost to the Ocean (cfs)[3]	San Jacinto Outflow Recharged by OCWD (cfs)[4]
1	0	0	298	0
2	0	0	57	0
3	0	0	0	0
4	0	0	0	0
5	0	0	302	0
6	0	0	907	0
7	0	0	56	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	24	0
25	0	0	0	0
26	0	0	8	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	0
31	0	0	0	0
Total	0	0	1,652	0

(1) Eastern Municipal Water District (EMWD) effluent discharge to Temescal Creek at Wasson Canyon.

(2) The amount of EMWD discharge determined to have reached Prado reservoir by scalping the flow of Temescal Creek at the Main St. gauging station in Corona.

(3) Flow of the Santa Ana River at Ball Road has historically been lost to the ocean. OCWD Forebay Operations currently sink 35 cfs between Ball Road and Orangewood Avenue. Therefore, the Ball Road figure minus 35 cfs was used for "Santa Ana River Flow Lost to the Ocean".

(4) When the Santa Ana River flow lost to the ocean is greater than the San Jacinto watershed outflow reaching Prado Dam, it is assumed that no San Jacinto watershed outflow could be recharged by OCWD. When San Jacinto watershed outflow reaching Prado Dam was greater than the Santa Ana River flow lost to the ocean, San Jacinto watershed outflow recharged by OCWD was calculated as the difference between the two.

TABLE G-3
SUMMARY OF SAN JACINTO WATERSHED DISCHARGE
WATER YEAR 2007-08

MONTHLY TOTALS

Month	EMWD Discharge to Temescal Creek (cfs)[1]	San Jacinto Watershed Outflow Reaching Prado (cfs)[2]	Santa Ana River Flow Lost to the Ocean (cfs)[3]	San Jacinto Outflow Recharged By OCWD (cfs)[4]
2007				
October	0	0	0	0
November	0	0	0	0
December	960	16	10	16
2008				
January	1,788	1,531	55	1,476
February	1,560	1,630	0	1,630
March	909	913	79	849
April	231	412	13,018	229
May	0	0	1,652	0
June	1	0	0	0
July	0	0	0	0
August	0	0	99	0
September	0	0	0	0
Total (cfs)	5,449	4,502	14,913	4,200
(acre-feet)	10,808	8,930	29,579	8,330

(1) Eastern Municipal Water District (EMWD) effluent discharge to Temescal Creek at Wasson Canyon.

(2) The amount of EMWD discharge determined to have reached Prado reservoir by scalping the flow of Temescal Creek at the Main St. gauging station in Corona.

(3) Flow of the Santa Ana River at Ball Road has historically been lost to the ocean. OCWD Forebay Operations currently sink 35 cfs between Ball Road and Orangewood Avenue. Therefore, the Ball Road figure minus 35 cfs was used for "Santa Ana River Flow Lost to the Ocean".

(4) When the Santa Ana River flow lost to the ocean is greater than the San Jacinto watershed outflow reaching Prado Dam, it is assumed that no San Jacinto watershed outflow could be recharged by OCWD. When San Jacinto watershed outflow reaching Prado Dam was greater than the Santa Ana River flow lost to the ocean, San Jacinto watershed outflow recharged by OCWD was calculated as the difference between the two.

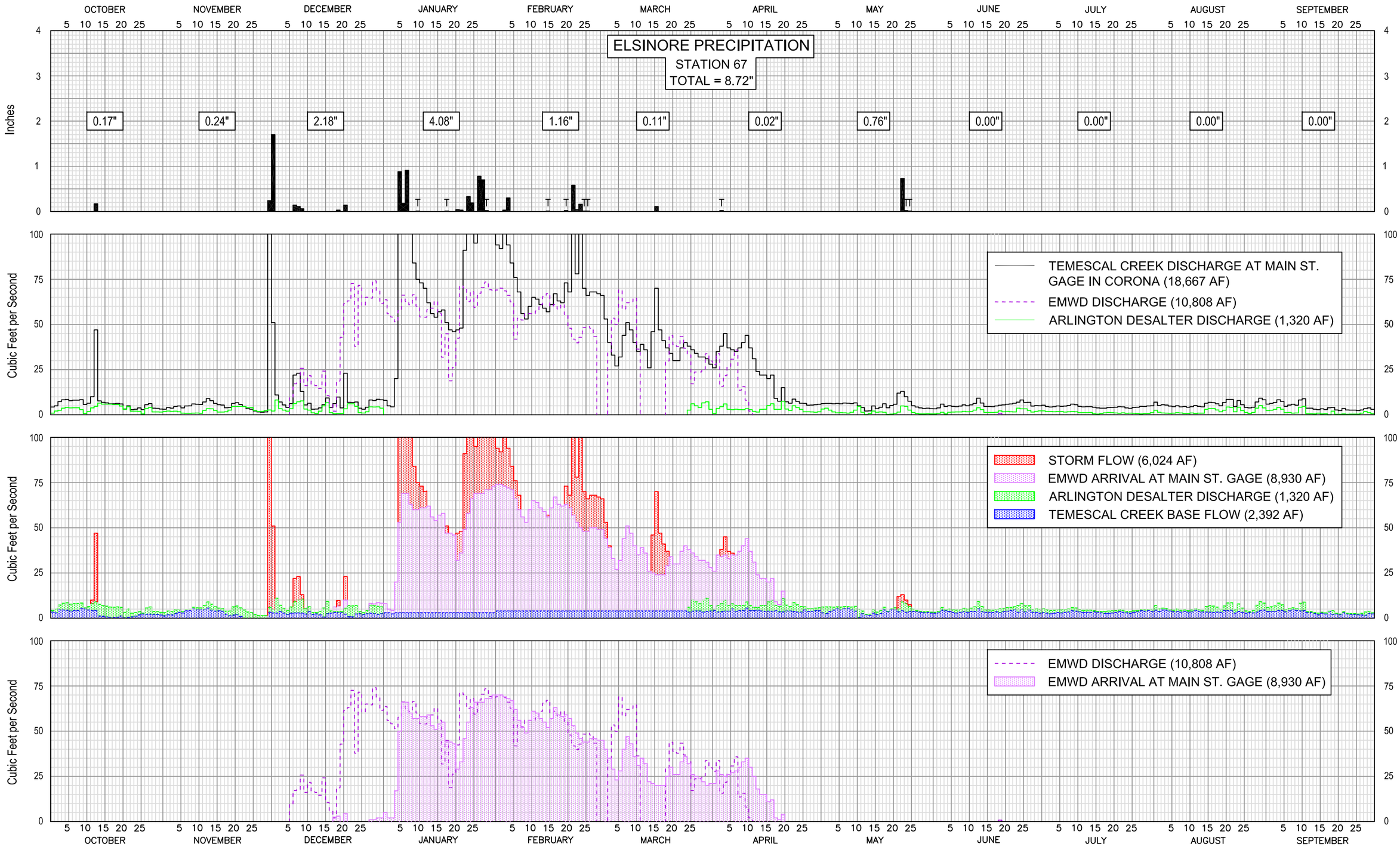
TABLE G-4
SUMMARY OF FLOW-WEIGHTED AVERAGE TDS
OF SAN JACINTO WATERSHED DISCHARGE
CALCULATED TO REACH PRADO RESERVOIR
WATER YEAR 2007-08

Month	EMWD Discharge to Temescal Creek[1] (acre-feet)	EMWD Disharge TDS[2] (mg/L)	95% of EMWD Discharge[3] (acre-feet)	Flow at Prado x TDS
2007				
October	0	---	0	0
November	0	---	0	0
December	1,905	740	1,810	1,409,688
2008				
January	3,546	705	3,368	2,499,628
February	3,094	670	2,939	2,072,977
March	1,802	730	1,712	1,315,462
April	459	870	436	399,343
May	0	---	0	0
June	2	---	2	0
July	0	---	0	0
August	0	---	0	0
September	0	---	0	0
Total	10,808		10,267	7,697,097

Flow-weighted TDS at Discharge [4] = 712 mg/L

Flow-weighted TDS of Discharge with 5% Evaporation [5] = 750 mg/L

(1) Actual EMWD discharge to Temescal Creek at Wasson Canyon.
(2) Water quality data for EMWD Surface Water Discharge at Wasson Canyon.
(3) EMWD discharge with 5% evaporation prior to arriving at Prado reservoir.
(4) Water quality for EMWD discharge at Wasson Canyon =
(Sum of Monthly Discharge Volume X Discharge TDS)/Total Discharge Volume.
(5) Water quality for EMWD discharge arriving at Prado reservoir =
(Sum of Monthly Discharge Volume X Discharge TDS)/95% of Total Discharge Volume.



DISCHARGE OF TEMESCAL CREEK AT MAIN STREET IN CORONA, EMWD DISCHARGE, ARLINGTON DESALTER DISCHARGE, AND ELSINORE PRECIPITATION

WATER YEAR 2007-08

APPENDIX H

WATER QUALITY AND DISCHARGE OF THE SANTA ANA RIVER BELOW PRADO DAM

WATER YEAR 2007-08

TABLE H-1

WATER QUALITY SAMPLES BELOW PRADO DAM
WATER YEAR 2007-08

Date	EC (microsiemens/cm)	TDS (mg/L)	Source
10/5/2007	1080	640	USGS
10/9/2007	1050	638	OCWD
11/5/2007	1030	633	USGS
11/6/2007	1040	616	OCWD
11/16/2007	1070	655	USGS
11/26/2007	1030	630	USGS
11/27/2007	1060	636	OCWD
12/11/2007	673	406	USGS
12/18/2007	1040	642	USGS
1/2/2008	1100	663	USGS
1/8/2008	380	266	OCWD
1/17/2008	582	370	USGS
2/1/2008	592	373	USGS
2/12/2008	720	408	OCWD
2/15/2008	775	467	USGS
3/3/2008	956	580	USGS
3/4/2008	939	568	OCWD
3/21/2008	1080	654	USGS
4/4/2008	1060	660	USGS
4/8/2008	1070	632	OCWD
4/23/2008	1090	660	USGS
5/2/2008	1090	665	USGS
5/6/2008	1080	716	OCWD
5/22/2008	1070	665	USGS
6/2/2008	1030	612	USGS
6/10/2008	1040	630	OCWD
6/19/2008	1050	637	USGS
7/8/2008	1030	598	OCWD
7/9/2008	1020	603	USGS
7/24/2008	1030	640	USGS
8/5/2008	1030	613	USGS
8/5/2008	1040	620	OCWD
8/12/2008	1020	606	OCWD
8/19/2008	1030	622	OCWD
8/21/2008	1030	616	USGS
8/26/2008	1050	624	OCWD
9/2/2008	1020	612	OCWD
9/8/2008	1040	626	USGS
9/22/2008	1050	630	USGS

TABLE H-2

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

OCTOBER 2007

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	168	1020	619	104,053
2	160	1010	613	98,126
3	162	1040	632	102,304
4	163	1040	632	102,935
5	160	1030	625	100,069
6	160	1010	613	98,126
7	161	997	605	97,468
8	167	1020	619	103,433
9	169	1070	650	109,803
10	172	1100	668	114,885
11	184	1130	686	126,252
12	187	1150	698	130,582
13	322	893	542	174,603
14	234	873	530	124,043
15	200	919	558	111,606
16	186	962	584	108,650
17	198	1000	607	120,229
18	191	1040	632	120,617
19	185	1060	644	119,075
20	167	1090	662	110,532
21	160	1110	674	107,842
22	160	1110	674	107,842
23	154	1070	650	100,057
24	162	1070	650	105,255
25	165	1060	644	106,202
26	158	1050	638	100,737
27	158	991	602	95,077
28	172	957	581	99,950
29	169	1100	668	112,881
30	160	1120	680	108,813
31	161	1120	680	109,493
Total	5,475			3,431,540

Monthly Flow Weighted TDS = 627 mg/L

1. TDS = EC x 0.607216

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

NOVEMBER 2007

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	158	1090	662	104,575
2	164 [2]	----	----	----
3	162 [2]	----	----	----
4	175 [2]	----	----	----
5	191	1050	638	121,777
6	202	1060	644	130,017
7	197	1080	656	129,191
8	195	1060	644	125,512
9	202	1000	607	122,658
10	193 [2]	----	----	----
11	222 [2]	----	----	----
12	198	958	582	115,179
13	187	990	601	112,414
14	178	1020	619	110,246
15	176	1050	638	112,213
16	172	1060	644	110,708
17	175	1040	632	110,513
18	183	1010	613	112,232
19	179	1020	619	110,865
20	179	1030	625	111,952
21	190	1000	607	115,371
22	198	1020	619	122,633
23	195	1020	619	120,775
24	180	980	595	107,113
25	188	976	593	111,417
26	193	1020	619	119,537
27	188	1020	619	116,440
28	177	997	605	107,155
29	189	920	559	105,583
30	184	665	404	74,299
Total	5,570			2,840,374

Monthly Flow Weighted TDS = 610 mg/L

1. TDS = EC x 0.607216 2. Nov. 2-4 and 10-11 flow data not included in TDS calculation.

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

DECEMBER 2007

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	378	496	301	113,846
2	451	540	328	147,881
3	501	545	331	165,797
4	531	591	359	190,557
5	516	630	383	197,394
6	416	721	438	182,126
7	415	751	456	189,248
8	556	703	427	237,341
9	547	656	398	217,888
10	545	662	402	219,077
11	551	654	397	218,813
12	547	748	454	248,446
13	533	783	475	253,415
14	535	779	473	253,066
15	519	837	508	263,776
16	498	974	591	294,531
17	482	1070	650	313,166
18	337	1003	609	205,246
19	322	942	572	184,183
20	370	815	495	183,106
21	398	728	442	175,937
22	389	780	474	184,241
23	376	804	488	183,564
24	359	904	549	197,063
25	359	906	550	197,499
26	362	990	601	217,614
27	325	977	593	192,806
28	308	1000	607	187,022
29	287	1020	619	177,756
30	253	1010	613	155,162
31	232	1030	625	145,100
Total	13,198			6,292,671

Monthly Flow Weighted TDS = 477 mg/L

1. TDS = EC x 0.607216

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

JANUARY 2008

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	222	1070	650	144,238
2	217	1080	656	142,307
3	244	1060	644	157,050
4	285	1000	607	173,057
5	892	263	160	142,450
6	2,280	287	174	397,338
7	2,550	322	196	498,585
8	1,340	324	197	263,629
9	572	450	273	156,297
10	504	525	319	160,669
11	475	579	352	167,000
12	468	626	380	177,895
13	461	596	362	166,836
14	452	598	363	164,128
15	432	673	409	176,540
16	480	598	363	174,295
17	503	618	375	188,755
18	491	708	430	211,085
19	478	762	463	221,170
20	467	777	472	220,334
21	467	613	372	173,828
22	337	794	482	162,478
23	259	883	536	138,868
24	264	908	551	145,557
25	273	855	519	141,733
26	275	816	495	136,259
27	1,390	746	453	629,646
28	2,570	559	339	872,345
29	2,100	458	278	584,020
30	699	484	294	205,431
31	503	585	355	178,676
Total	22,950			7,472,501

Monthly Flow Weighted TDS = 326 mg/L

1. TDS = EC x 0.607216

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

FEBRUARY 2008

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	431	616	374	161,213
2	431	661	401	172,990
3	767	620	376	288,755
4	1,300	507	308	400,216
5	628	518	315	197,530
6	490	565	343	168,108
7	487	591	359	174,767
8	492	628	381	187,615
9	485	656	398	193,192
10	460	670	407	187,144
11	457	701	426	194,526
12	406	738	448	181,939
13	319	775	471	150,119
14	335	770	468	156,631
15	342	856	520	177,764
16	346	879	534	184,675
17	358	882	536	191,732
18	365	897	545	198,806
19	389	890	540	210,224
20	398	907	551	219,196
21	356	884	537	191,093
22	274	868	527	144,415
23	272	784	476	129,488
24	291	754	458	133,232
25	340	769	467	158,763
26	371	769	467	173,238
27	369	782	475	175,217
28	370	785	477	176,366
29	371	784	476	176,617
Total	12,700			5,455,571

Monthly Flow Weighted TDS = 430 mg/L

1. TDS = EC x 0.607216

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

MARCH 2008

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	366	799	485	177,571
2	357	850	516	184,260
3	360	967	587	211,384
4	364	931	565	205,776
5	412	877	533	219,402
6	441	902	548	241,540
7	441	889	540	238,058
8	443	897	545	241,290
9	447	929	564	252,154
10	466	954	579	269,946
11	482	939	570	274,825
12	482	952	578	278,630
13	477	976	593	282,691
14	460	987	599	275,688
15	437	1010	613	268,007
16	431	1030	625	269,561
17	430	1010	613	263,714
18	425	1030	625	265,809
19	422	1030	625	263,932
20	416	1040	632	262,706
21	414	1070	650	268,985
22	410	1100	668	273,854
23	403	1120	680	274,073
24	391	1140	692	270,660
25	365	1170	710	259,312
26	299	1140	692	206,976
27	280	1100	668	187,022
28	270	1070	650	175,425
29	285	1050	638	181,709
30	290	1040	632	183,136
31	284	1050	638	181,072
Total	12,250			7,409,167
		Monthly Flow Weighted TDS =	605	mg/L

1. TDS = EC x 0.607216

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

APRIL 2008

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	271	1050	638	172,783
2	265	1050	638	168,958
3	258	1040	632	162,928
4	245	1060	644	157,694
5	240	1070	650	155,933
6	241	1080	656	158,046
7	245	1040	632	154,719
8	250	1010	613	153,322
9	228	1000	607	138,445
10	219	1040	632	138,299
11	211	1050	638	134,529
12	202	1070	650	131,244
13	199	1060	644	128,086
14	202	1060	644	130,017
15	188	1080	656	123,289
16	215	1030	625	134,468
17	203	1030	625	126,963
18	195	1030	625	121,959
19	193	1040	632	121,880
20	195	1040	632	123,143
21	204	1030	625	127,588
22	198	1050	638	126,240
23	197	1060	644	126,799
24	195	1080	656	127,880
25	192	1040	632	121,249
26	185	997	605	111,998
27	180	980	595	107,113
28	182	954	579	105,430
29	173	972	590	102,107
30	176	1070	650	114,351
Total	6,347			4,007,460

Monthly Flow Weighted TDS = 631 mg/L

1. TDS = EC x 0.607216

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

MAY 2008

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	170	1090	662	112,517
2	162	1060	644	104,271
3	172	1030	625	107,574
4	181	1010	613	111,005
5	196	1020	619	121,395
6	193	1040	632	121,880
7	195	1050	638	124,327
8	196	1010	613	120,204
9	177	1030	625	110,702
10	169	1030	625	105,698
11	162	1020	619	100,336
12	158	993	603	95,269
13	160	979	594	95,114
14	155	990	601	93,177
15	146	1000	607	88,654
16	140	976	593	82,970
17	137	971	590	80,776
18	139	982	596	82,884
19	140	993	603	84,415
20	154	983	597	91,922
21	149	1030	625	93,189
22	208	911	553	115,060
23	610	469	285	173,718
24	345	502	305	105,164
25	199	665	404	80,356
26	177	693	421	74,482
27	185	729	443	81,892
28	176	817	496	87,313
29	173	934	567	98,115
30	162	947	575	93,155
31	161	972	590	95,024
Total	5,847			3,132,560

Monthly Flow Weighted TDS = 536 mg/L

1. TDS = EC x 0.607216

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

JUNE 2008

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	169	982	596	100,772
2	166	994	604	100,193
3	176	973	591	103,985
4	172	963	585	100,577
5	161	1000	607	97,762
6	148	1020	619	91,665
7	151	1000	607	91,690
8	164	991	602	98,687
9	164	1000	607	99,583
10	154	1010	613	94,446
11	167	987	599	100,087
12	168	981	596	100,074
13	170	989	601	102,091
14	171	1000	607	103,834
15	171	999	607	103,730
16	155	994	604	93,554
17	148	987	599	88,700
18	150	1000	607	91,082
19	151	1020	619	93,523
20	157	1030	625	98,193
21	147	1050	638	93,724
22	140	1030	625	87,561
23	138	1000	607	83,796
24	140	976	593	82,970
25	147	964	585	86,047
26	143	995	604	86,398
27	125	1010	613	76,661
28	106	1030	625	66,296
29	127	1050	638	80,972
30	128	1060	644	82,387
Total	4,574			2,781,040
		Monthly Flow Weighted TDS =	608	mg/L

1. TDS = EC x 0.607216

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

JULY 2008

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	73 [2]	----	----	----
2	112	974	591	66,240
3	121	972	590	71,416
4	126	974	591	74,520
5	124	994	604	74,843
6	126	1080	656	82,630
7	129	1040	632	81,464
8	137	1030	625	85,684
9	141	1020	619	87,330
10	141	999	607	85,532
11	140	955	580	81,185
12	137	960	583	79,861
13	133	1000	607	80,760
14	129	1000	607	78,331
15	126	1030	625	78,804
16	125	1030	625	78,179
17	117	1030	625	73,176
18	112	1030	625	70,048
19	111	973	591	65,581
20	113	988	600	67,792
21	113	1000	607	68,615
22	119	990	601	71,536
23	126	980	595	74,979
24	127 [2]	----	----	----
25	130 [2]	----	----	----
26	128	1030	625	80,055
27	127	1010	613	77,888
28	127	993	603	76,577
29	126	957	581	73,219
30	126	951	577	72,760
31	128	952	578	73,993
Total	3,850			2,132,998

Monthly Flow Weighted TDS = 606 mg/L

1. TDS = EC x 0.607216 2. July 1, 24, and 25 flow data not included in TDS calculation.

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

AUGUST 2008

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	130	1010	613	79,727
2	131	1010	613	80,341
3	129	1000	607	78,331
4	137	995	604	82,773
5	131	1050	638	83,523
6	138	1040	632	87,148
7	130	1040	632	82,096
8	127	1060	644	81,743
9	127	1050	638	80,972
10	131	1040	632	82,727
11	129	1040	632	81,464
12	129	1010	613	79,114
13	122	1000	607	74,080
14	122	991	602	73,414
15	120	1000	607	72,866
16	124	996	605	74,994
17	126	1000	607	76,509
18	121	1030	625	75,677
19	121	1040	632	76,412
20	130	1050	638	82,885
21	131	1040	632	82,727
22	131	1030	625	81,932
23	134	1020	619	82,994
24	133	1010	613	81,567
25	133	1010	613	81,567
26	128	1020	619	79,278
27	129	1020	619	79,897
28	129	1030	625	80,681
29	125	1010	613	76,661
30	129	1000	607	78,331
31	132	984	598	78,870
Total	3,989			2,471,301

Monthly Flow Weighted TDS = 620 mg/L

1. TDS = EC x 0.607216

TABLE H-2 (continued)

SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM
WATER YEAR 2007-08

SEPTEMBER 2008

Day	Prado Outflow (cfs)	Daily Mean EC (microsiemens/cm)	Computed TDS[1]	Outflow X TDS
1	128	977	593	75,936
2	132	993	603	79,591
3	119	1000	607	72,259
4	120	1020	619	74,323
5	118	1030	625	73,801
6	118	1030	625	73,801
7	129	1020	619	79,897
8	128	1030	625	80,055
9	133	1040	632	83,990
10	136	1050	638	86,710
11	132	1060	644	84,962
12	133	1080	656	87,220
13	145	1070	650	94,210
14	149	1070	650	96,808
15	155	1070	650	100,707
16	135	1080	656	88,532
17	141	1090	662	93,323
18	138	1080	656	90,499
19	136	1100	668	90,839
20	131	1060	644	84,318
21	129	1060	644	83,031
22	138	1040	632	87,148
23	133	1050	638	84,798
24	128	1070	650	83,164
25	121	1090	662	80,086
26	122	1090	662	80,748
27	127	1040	632	80,201
28	131	1040	632	82,727
29	127	1030	625	79,430
30	115	1080	656	75,416
Total	3,927			2,508,532
		Monthly Flow Weighted TDS =	639	mg/L

1. TDS = EC x 0.607216

TABLE H-3

ANNUAL SUMMARY OF FLOW WEIGHTED TDS BELOW PRADO DAM

WATER YEAR 2007-08

Month	Monthly Flow (cfs-days)	Monthly Weighted TDS (mg/L)	Monthly Flow x TDS
2007			
October	5,475	627	3,431,540
November	5,570	610	3,399,417
December	13,198	477	6,292,671
2008			
January	22,950	326	7,472,501
February	12,700	430	5,455,571
March	12,250	605	7,409,167
April	6,347	631	4,007,460
May	5,847	536	3,132,560
June	4,574	608	2,781,040
July	3,850	606	2,332,967
August	3,989	620	2,471,301
September	3,927	639	2,508,532
Total	100,677		50,694,727
Yearly Flow-weighted TDS =		504	

APPENDIX I

WATER QUALITY AND FLOW OF WASTEWATER FROM RUBIDOUX COMMUNITY SERVICES DISTRICT DISCHARGED BELOW THE RIVERSIDE NARROWS GAGING STATION

WATER YEAR 2007-08

PREPARED BY

JOHN V. ROSSI

TABLE I-1

QUANTITY AND QUALITY OF WASTEWATER FROM RUBIDOUX
DISCHARGED BELOW THE
RIVERSIDE NARROWS GAGING STATION

WATER YEAR 2007-08

MONTH	Discharge (acre -feet)	TDS (mg/L)	Discharge xTDS
2007			
October	253	696	176,088
November	240	723	173,520
December	254	666	169,164
2008	251	680	170,680
January	255	682	173,910
February	289	700	202,300
March	310	716	221,960
April	270	704	190,080
May	300	776	232,800
June	298	740	220,520
July	298	748	222,904
August	270	706	190,620
September			
Total	3,288		2,344,546

Flow weighted TDS = $\frac{2,344,546}{3,288}$ = 713 mg/L

APPENDIX J

WATER QUALITY AND DISCHARGE OF THE SANTA ANA RIVER AT RIVERSIDE NARROWS

WATER YEAR 2007-08

PREPARED BY

JOHN V. ROSSI

TABLE J-1

WATER QUALITY SAMPLES AT RIVERSIDE NARROWS
WATER YEAR 2007-08

	Date Sampled	EC (microsiemens/cm)	TDS (mg/L)	Source of Data		Ratio	Average
2007	10/1/07	1082	668	C of R		0.62	
	10/5/07	994	636	USGS		0.64	
	10/10/07	1112	680	C of R		0.61	
	10/15/07	1096	664	C of R		0.61	
	10/19/07	980	615	USGS		0.63	
	10/24/07	1081	656	C of R		0.61	
	10/29/07	1110	692	C of R		0.62	659
	11/5/07	950	596	USGS		0.63	
	11/7/07	1086	708	C of R		0.65	
	11/14/07	1012	620	C of R		0.61	
	11/21/07	1055	628	C of R		0.60	
	11/26/07	1054	608	C of R		0.58	
	11/27/07	957	610	USGS		0.64	628
	12/5/07	1031	600	C of R	*	0.58	
	12/10/07	951	536	C of R	*	0.56	
	12/11/07	919	562	USGS	*	0.61	
	12/19/07	685	444	C of R	*	0.65	
	12/20/07	907	578	USGS		0.64	
	12/24/07	1062	656	C of R		0.62	617
2008	1/2/08	1160	672	C of R		0.58	
	1/7/08	388	376	C of R	*	0.97	
	1/8/08	632	410	USGS	*	0.65	
	1/16/08	1051	660	C of R		0.63	
	1/21/08	1038	670	C of R		0.65	
	1/30/08	714	440	C of R	*	0.62	
	1/30/08	735	456	USGS	*	0.62	667

* Data not used in determining monthly averages; storm flow.
C of R City of Riverside
USGS U.S. Geological Survey

TABLE J-1

WATER QUALITY SAMPLES AT RIVERSIDE NARROWS
WATER YEAR 2007-08

Date Sampled	EC (microsiemens/cm)	TDS (mg/L)	Source of Data		Ratio	Average
2/4/08	443	425	C of R	*	0.96	
2/11/08	906	563	USGS		0.62	
2/13/08	1019	620	C of R		0.61	
2/18/08	1055	656	C of R		0.62	
2/27/08	960	600	C of R	*	0.63	
2/27/08	894	561	USGS	*	0.63	613
3/3/08	1014	612	C of R		0.60	
3/12/08	1066	660	C of R		0.62	
3/13/08	924	574	USGS		0.62	
3/17/08	1053	636	C of R		0.60	
3/24/08	951	595	USGS		0.63	
3/26/08	1063	672	C of R		0.63	
3/31/08	1043	648	C of R		0.62	628
4/9/08	1040	608	C of R	*	0.58	
4/10/08	897	555	USGS	*	0.62	
4/14/08	1078	648	C of R		0.60	
4/23/08	1056	640	C of R		0.61	
4/28/08	1113	680	C of R		0.61	
4/29/08	951	605	USGS		0.64	643
5/7/08	1104	696	C of R		0.63	
5/12/08	1108	664	C of R		0.60	
5/19/08	941	583	USGS		0.62	
5/21/08	1139	712	C of R		0.63	
5/26/08	1009	616	C of R	*	0.61	
5/29/08	905	545	USGS	*	0.60	664

* Data not used in determining monthly averages; storm flow.
C of R City of Riverside
USGS U.S. Geological Survey

TABLE J-1

WATER QUALITY SAMPLES AT RIVERSIDE NARROWS
WATER YEAR 2007-08

Date Sampled	EC (microsiemens/cm)	TDS (mg/L)	Source of Data		Ratio	Average
6/4/08	1019	636	C of R		0.62	
6/10/08	1025	652	C of R		0.64	
6/13/08	893	564	USGS		0.63	
6/18/08	1085	676	C of R		0.62	
6/23/08	1147	732	C of R		0.64	
6/26/08	989	635	USGS		0.64	649
7/2/08	1104	708	C of R		0.64	
7/2/08	910	567	USGS		0.62	
7/7/08	1110	728	C of R		0.66	
7/16/08	1153	748	C of R		0.65	
7/18/08	960	627	USGS		0.65	
7/21/08	1146	728	C of R	*	0.64	676
8/4/08	1034	668	C of R		0.65	
8/8/08	970	610	USGS		0.63	
8/13/08	1139	792	C of R		0.70	
8/18/08	1075	696	C of R		0.65	
8/25/08	964	589	USGS		0.61	
8/27/08	1121	780	C of R		0.70	689
9/1/08	1126	740	C of R		0.66	
9/3/08	965	598	USGS		0.62	
9/15/08	1128	732	C of R		0.65	
9/22/08	960	594	USGS		0.62	
9/24/08	1100	656	C of R		0.60	664

* Data not used in determining monthly averages; storm flow.
C of R City of Riverside
USGS U.S. Geological Survey

TABLE J-2

ANNUAL SUMMARY OF FLOW WEIGHTED TDS AT RIVERSIDE NARROWS
WATER YEAR 2007-08

	Month	Stream Flow [1] (acre-feet)	Monthly Average TDS [2] (mg/L)	Monthly Flow x TDS
2007	October	4,174	659	2,750,666
	November	3,894	628	2,445,432
	December	4,315	617	2,662,355
2008	January	4,598	667	3,066,866
	February	4,245	613	2,602,172
	March	4,748	628	2,981,744
	April	4,411	643	2,836,273
	May	4,050	664	2,689,200
	June	3,707	649	2,405,843
	July	3,170	676	2,142,920
	August	3,429	689	2,362,581
	September	3,796	664	2,520,544
	Total	48,537		31,466,596

$$\text{Flow-weighted TDS} = \frac{31{,}466{,}596}{48{,}537} = 648 \text{ mg/L}$$

(1) USGS measured flow minus storm flow.
(2) TDS based on water quality data from Table J-1.

APPENDIX K

WMWD TRANSFER PROGRAM WATER DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS

WATER YEAR 2007-08

TABLE K-1

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
(acre-feet)

Month	Discharge Above Riverside Narrows[1]	Flow Arriving At Riverside Narrows[1]	Flow Arriving At Prado Dam [1]
2007			
October	0	0	0
November	257	257	257
December	199	199	199
2008			
January	0	0	0
February	0	0	0
March	9	9	9
April	450	450	450
May	316	316	316
June	630	630	630
July	678	678	678
August	779	779	779
September	747	747	747
Total	4,065	4,065	4,065

(1) Unadjusted for evapotranspiration loss per agreement between WMWD and OCWD.

TABLE K-2

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
OCTOBER 2007

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0	0	0
20	0	0	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
30	0	0	0
31	0	0	0
Total in cfs-days	0	0	0
Total in AF	0	0	0

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
NOVEMBER 2007

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	0.1	0.1	0.1
2	4.4	4.4	4.4
3	4.1	4.1	4.1
4	4.8	4.8	4.8
5	4.8	4.8	4.8
6	4.2	4.2	4.2
7	4.6	4.6	4.6
8	4.1	4.1	4.1
9	4.6	4.6	4.6
10	4.1	4.1	4.1
11	4.7	4.7	4.7
12	4.2	4.2	4.2
13	4.6	4.6	4.6
14	4.6	4.6	4.6
15	4.3	4.3	4.3
16	4.4	4.4	4.4
17	3.9	3.9	3.9
18	3.9	3.9	3.9
19	5.2	5.2	5.2
20	4.4	4.4	4.4
21	4.1	4.1	4.1
22	4.1	4.1	4.1
23	4.3	4.3	4.3
24	4.8	4.8	4.8
25	4.3	4.3	4.3
26	4.8	4.8	4.8
27	6.5	6.5	6.5
28	4.0	4.0	4.0
29	4.5	4.5	4.5
30	4.3	4.3	4.3
Total in cfs-days	129.7	129.7	129.7
Total in AF	257	257	257

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
DECEMBER 2007

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	4.4	4.4	4.4
2	4.4	4.4	4.4
3	4.2	4.2	4.2
4	4.6	4.6	4.6
5	4.3	4.3	4.3
6	4.3	4.3	4.3
7	4.9	4.9	4.9
8	3.6	3.6	3.6
9	5.0	5.0	5.0
10	4.3	4.3	4.3
11	4.5	4.5	4.5
12	3.9	3.9	3.9
13	4.3	4.3	4.3
14	4.3	4.3	4.3
15	4.3	4.3	4.3
16	4.5	4.5	4.5
17	4.4	4.4	4.4
18	4.4	4.4	4.4
19	4.7	4.7	4.7
20	4.1	4.1	4.1
21	4.3	4.3	4.3
22	4.3	4.3	4.3
23	4.3	4.3	4.3
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
30	0	0	0
31	0	0	0
Total in cfs-days	100.0	100.0	100.0
Total in AF	199	199	199

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
JANUARY 2008

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0	0	0
20	0	0	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
30	0	0	0
31	0	0	0
Total in cfs-days	0	0	0
Total in AF	0	0	0

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
FEBRUARY 2008

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0	0	0
20	0	0	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
Total in cfs-days	0	0	0
Total in AF	0	0	0

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
MARCH 2008

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0	0	0
20	0	0	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
30	0.1	0.1	0.1
31	4.5	4.5	4.5
Total in cfs-days	4.6	4.6	4.6
Total in AF	9	9	9

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
APRIL 2008

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	4.8	4.8	4.8
2	4.7	4.7	4.7
3	5.2	5.2	5.2
4	4.0	4.0	4.0
5	9.4	9.4	9.4
6	10.8	10.8	10.8
7	10.0	10.0	10.0
8	4.8	4.8	4.8
9	5.2	5.2	5.2
10	3.7	3.7	3.7
11	4.7	4.7	4.7
12	4.1	4.1	4.1
13	4.2	4.2	4.2
14	4.8	4.8	4.8
15	4.4	4.4	4.4
16	9.5	9.5	9.5
17	9.5	9.5	9.5
18	9.5	9.5	9.5
19	9.5	9.5	9.5
20	9.5	9.5	9.5
21	9.5	9.5	9.5
22	9.5	9.5	9.5
23	9.5	9.5	9.5
24	9.5	9.5	9.5
25	9.5	9.5	9.5
26	9.5	9.5	9.5
27	9.5	9.5	9.5
28	9.5	9.5	9.5
29	9.5	9.5	9.5
30	9.5	9.5	9.5
Total in cfs-days	226.7	226.7	226.7
Total in AF	450	450	450

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
MAY 2008

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	9.5	9.5	9.5
2	9.5	9.5	9.5
3	9.5	9.5	9.5
4	9.5	9.5	9.5
5	9.5	9.5	9.5
6	9.5	9.5	9.5
7	4.6	4.6	4.6
8	4.7	4.7	4.7
9	4.0	4.0	4.0
10	4.8	4.8	4.8
11	4.0	4.0	4.0
12	4.6	4.6	4.6
13	4.5	4.5	4.5
14	4.4	4.4	4.4
15	4.5	4.5	4.5
16	4.5	4.5	4.5
17	4.1	4.1	4.1
18	4.3	4.3	4.3
19	4.7	4.7	4.7
20	4.3	4.3	4.3
21	4.5	4.5	4.5
22	4.7	4.7	4.7
23	4.9	4.9	4.9
24	0.0	0.0	0.0
25	4.9	4.9	4.9
26	4.3	4.3	4.3
27	4.4	4.4	4.4
28	4.7	4.7	4.7
29	4.2	4.2	4.2
30	0.6	0.6	0.6
31	3.5	3.5	3.5
Total in cfs-days	159.5	159.5	159.5
Total in AF	316	316	316

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
JUNE 2008

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	6.4	6.4	6.4
2	6.3	6.3	6.3
3	5.7	5.7	5.7
4	5.8	5.8	5.8
5	5.7	5.7	5.7
6	6.2	6.2	6.2
7	7.5	7.5	7.5
8	6.2	6.2	6.2
9	11.5	11.5	11.5
10	12.6	12.6	12.6
11	13.0	13.0	13.0
12	11.9	11.9	11.9
13	13.3	13.3	13.3
14	13.4	13.4	13.4
15	12.7	12.7	12.7
16	13.3	13.3	13.3
17	12.8	12.8	12.8
18	12.0	12.0	12.0
19	11.0	11.0	11.0
20	11.2	11.2	11.2
21	8.8	8.8	8.8
22	14.7	14.7	14.7
23	12.7	12.7	12.7
24	10.2	10.2	10.2
25	13.4	13.4	13.4
26	8.4	8.4	8.4
27	11.0	11.0	11.0
28	12.7	12.7	12.7
29	14.4	14.4	14.4
30	12.5	12.5	12.5
Total in cfs-days	317.8	317.8	317.8
Total in AF	630	630	630

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
JULY 2008

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	10.8	10.8	10.8
2	12.4	12.4	12.4
3	11.2	11.2	11.2
4	10.4	10.4	10.4
5	12.1	12.1	12.1
6	10.4	10.4	10.4
7	11.6	11.6	11.6
8	10.8	10.8	10.8
9	11.9	11.9	11.9
10	10.0	10.0	10.0
11	11.2	11.2	11.2
12	11.6	11.6	11.6
13	11.9	11.9	11.9
14	11.0	11.0	11.0
15	11.6	11.6	11.6
16	11.6	11.6	11.6
17	11.1	11.1	11.1
18	9.5	9.5	9.5
19	9.5	9.5	9.5
20	13.5	13.5	13.5
21	12.0	12.0	12.0
22	9.8	9.8	9.8
23	9.8	9.8	9.8
24	10.8	10.8	10.8
25	10.6	10.6	10.6
26	16.2	16.2	16.2
27	6.8	6.8	6.8
28	9.8	9.8	9.8
29	12.6	12.6	12.6
30	9.3	9.3	9.3
31	9.8	9.8	9.8
Total in cfs-days	341.6	341.6	341.6
Total in AF	678	678	678

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
AUGUST 2008

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	13.6	13.6	13.6
2	13.6	13.6	13.6
3	13.6	13.6	13.6
4	13.0	13.0	13.0
5	12.9	12.9	12.9
6	13.0	13.0	13.0
7	11.8	11.8	11.8
8	13.6	13.6	13.6
9	9.3	9.3	9.3
10	14.0	14.0	14.0
11	10.6	10.6	10.6
12	15.9	15.9	15.9
13	12.9	12.9	12.9
14	12.7	12.7	12.7
15	11.2	11.2	11.2
16	11.7	11.7	11.7
17	14.4	14.4	14.4
18	12.8	12.8	12.8
19	12.0	12.0	12.0
20	13.1	13.1	13.1
21	12.3	12.3	12.3
22	12.1	12.1	12.1
23	11.8	11.8	11.8
24	13.0	13.0	13.0
25	13.0	13.0	13.0
26	12.6	12.6	12.6
27	10.3	10.3	10.3
28	14.0	14.0	14.0
29	11.8	11.8	11.8
30	12.7	12.7	12.7
31	13.4	13.4	13.4
Total in cfs-days	392.8	392.8	392.8
Total in AF	779	779	779

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-2 (continued)

WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08
SEPTEMBER 2008

Day	Discharge Above Riverside Narrows (cfs)	Flow Arriving At Riverside Narrows[1] (cfs)	Flow Arriving At Prado Dam[1] (cfs)
1	12.3	12.3	12.3
2	13.6	13.6	13.6
3	12.2	12.2	12.2
4	12.3	12.3	12.3
5	11.9	11.9	11.9
6	11.9	11.9	11.9
7	12.4	12.4	12.4
8	14.2	14.2	14.2
9	11.0	11.0	11.0
10	14.1	14.1	14.1
11	11.3	11.3	11.3
12	13.7	13.7	13.7
13	12.3	12.3	12.3
14	12.6	12.6	12.6
15	12.3	12.3	12.3
16	13.8	13.8	13.8
17	11.3	11.3	11.3
18	13.3	13.3	13.3
19	12.1	12.1	12.1
20	13.1	13.1	13.1
21	13.0	13.0	13.0
22	12.4	12.4	12.4
23	12.3	12.3	12.3
24	12.6	12.6	12.6
25	12.3	12.3	12.3
26	12.7	12.7	12.7
27	10.8	10.8	10.8
28	14.1	14.1	14.1
29	13.2	13.2	13.2
30	11.5	11.5	11.5
Total in cfs-days	376.6	376.6	376.6
Total in AF	747	747	747

(1) Unadjusted for evapotranspiration loss per agreement between WMWD

TABLE K-3

SUMMARY OF TDS OF WMWD TRANSFER PROGRAM WATER
DISCHARGED TO THE SANTA ANA RIVER ABOVE RIVERSIDE NARROWS
WATER YEAR 2007-08

Month	WMWD Transfer Program Discharge (acre-feet)	TDS[1] (mg/L)	Discharge x TDS
2007			
October	0	---	---
November	257	471	121,047
December	199	*471*	93,729
2008			
January	0	---	---
February	0	---	---
March	9	450	4,068
April	450	450	202,500
May	316	450	142,200
June	630	370	233,100
July	678	340	230,520
August	779	325	253,175
September	747	395	295,065
Total	4,065		1,575,404

Flow-weighted TDS of pumped groundwater releases to the Santa Ana River: [2]

$$\text{TDS} = \frac{1{,}575{,}404}{4{,}065} = 388 \text{ mg/L}$$

(1) Water quality data is from the Tava Lanes site on the Riverside Canal. Since there was no data for December, the previous month was used.

(2) Unadjusted for evaporation loss per agreement between WMWD and OCWD.