SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 1988 – 89

MARCH 1990

JAMES S. JENKS
WATERMASTER

TABLE OF CONTENTS

		Page No.
1.	Summary	1
2.	Introduction	
	2.1 Background	2
	2.2 Authority	3
	2.3 Scope	3
3.	Surface Water Availability and Use	
	3.1 Surface Flow	4
	3.2 Surface Diversions	7
	3.3 Surface Storage	8
	3.4 Appropriative Water Rights	9
4.	Imports/Exports	
	4.1 General	11
	4.2 Water Years 1966-89	12
	4.3 Water Year 1988-89	12
	4.4 Lake Skinner MOU	12
5.	Water Use	
	5.1 General	16
	5.2 Water Purveyors	16
	5.3 Irrigation Water Use	21
	5.4 Subsurface Water Production	24
	5.5 List of All Water Users	24
6.	Unauthorized Water Use	
	6.1 Unauthorized Small Storage Ponds	25
	6.2 Lake Skinner Releases	27
	6.3 Camp Pendleton Claims	28
7.	Threats to Water Supply	
	7.1 General	29
	7.2 High Nitrate Concentrations	29
	7.3 Potential Overdraft Conditions	30
	7.4 Salt Balance in Upper Santa Margarita River Watershed	30
8.	Water Quality	33
9.	Five Year Projection of Watermaster Office Tasks	
	9.1 General	35
	9.2 Task Description	35
10.	Watermaster Office Budget 1990-91	40

LIST OF TABLES

		Page No.
3.1	Stream Gaging Stations	5
3.2	Measured Surface Water Flow 1988-89	6
3.3	Appropriative Water Rights Permits & Licenses	10
4.1	Imports/Exports 1966-1989	13
4.2	Imports/Exports 1988-89	14
5.1	Water Production by Substantial Users	23
8.1	Current Water Quality Monitoring Stations	34
9.1	Projected Watermaster Tasks	36
10.1	Proposed Watermaster Office Budget	41

APPENDICES

Appendix A - Production and Use
Water Year 1988-89

Appendix B - Production and Use
Water Year 1965-66 To 1987-88

Appendix C - Substantial Water Users 1988-89

MAP

Major Water Purveyors - 1990 Bound at back of report

SECTION 1 - SUMMARY

Section 1-A summary of the Santa Margarita River Watershed Annual Watermaster Report for the 1989-89 Water Year.

Section 2-This report is the first Annual Watermaster Report and is prepared pursuant to Section II of the Court Order dated March 13, 1989, appointing a Watermaster.

Section 3-Surface water flows were much lower than normal in 1988-89, ranging from 13 to 22 percent of normal at four gaging stations with long flow records. The total quantity of water in storage in the Watershed on September 30, 1989, was 60,889 acre feet.

Section 4-About 39,901 acre feet of water were imported and distributed in the Santa Margarita River Watershed by seven water purveyors in 1988-89. Exports were 3,860 acre feet.

Section 5-Water production and use data were collected for the 1988-89 Water Year and for the 1965-66 to 1987-88 period. In 1988-89 production of local water by water purveyors was 33,262 acre feet and production by individuals for irrigation use was about 10,890 acre feet for total production of 44,152 acre feet.

Section 6-Unauthorized water use issues involve unauthorized storage ponds, failure of Metropolitan Water District to make timely releases from Lake Skinner and claims by Camp Pendleton about excessive production by Rancho California Water District.

Section 7-Threats to water supply include high nitrate levels in Rainbow Creek and in the Anza Valley, potential overdraft conditions at various locations in the watershed and salt balance in the upper watershed. Representatives of the Pechanga Indian Reservation have expressed concerns over the potential effects of urban development on their water supply.

Section 8-Available water quality data for 1988-89 and 1989-90 will be presented in the 1989-90 Watermaster Report.

Section 9-Projected time requirements to provide eighteen primary Watermaster tasks are presented for the five water years from 1990-91 to 1994-95. Total projected hours and budgets for the five years are as follows:

Water Year	Projected Hours	Projected Budget
1990-91	4150	$172,956
1991-92	3900	$181,600
1992-93	2820	$161,240
1993-94	2820	$169,050
1994-95	2820	$177,000

Section 10-A Watermaster Office budget of $172,956 is proposed for the 1990-91 Water Year.

SECTION 2 - INTRODUCTION

2.1 Background

On January 25, 1951, the United States of America filed Complaint No. 1247 to seek a judicial determination of all respective water rights within the Santa Margarita River Watershed. The Final Judgment and Decree was entered on May 8, 1963, and appealed to the U. S. Court of Appeals. The decision of the Appeals Court was entered on December 1, 1965, and the Modified Final Judgment and Decree was entered on April 6, 1966. Among other things, the Decree provided that the Court:

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

In March, 1989, the Court appointed J. S. Jenks as Watermaster, to enforce the provisions of the Modified Final Judgment and Decree and subsequent instructions and orders of the Court. The March, 1989, Order also described the Watermaster's Powers and Duties as well as procedures for funding and operating the Watermaster's Office.

2.2 Authority

Section II of the Order for the Appointment of a Watermaster requires that the Watermaster submit a written report to the Court promptly after the end of each water year. This report is to contain the Watermaster's findings and conclusions regarding a number of subjects. These are listed below together with the section of this report where the topic is addressed.

Summary of Surface Water Availability (Section 3)

Water Imports and Exports (Section 4)

List of All Water Users (Section 5)

Water Use by Substantial Users (Section 5)

Unauthorized Water Use (Section 6)

Threatening Condition (Section 7)

Water Quality (Section 8)

A Five Year Projection of Watermaster Office Tasks, Expenditures and Requirements (Section 9)

A Proposed Watermaster Office Budget for Water Year Ending 1991 (Section 10)

2.3 Scope

The subjects addressed in this report are responsive to Section II of the appointing order. However since this is the first Annual Watermaster Report, data are not yet available for many of the needed subject areas. These needed data will be gathered in future years.

Information and data contained in this report are based on information reported to this office by others.

SECTION 3 - SURFACE WATER AVAILABILITY AND USE

3.1 Surface Flow

Over the years, flows in the Santa Margarita River Watershed have been measured at 17 stations. These stations and their periods of record are listed on Table 3.1 and the locations are shown on the map bound in the back of this report. Measurements at a number of these stations have been discontinued and measurements at others are just being initiated. Thus, flow measurements were available from seven stations during Water Year 1988-89.

Provisional monthly flows for these stations are shown on Table 3.2. Of these stations, only four have long enough periods of record to allow a reliable computation of the average flow. These stations are Temecula Creek near Aguanga, Murrieta Creek near Temecula, Santa Margarita River near Temecula, and Santa Margarita River at Ysidora. Total flow for Water Year 1988-89 at these stations, together with the average discharge for the station for the period of record through Water Year 1988, are listed below:

	TOTAL FLOW 1988-89 Acre Feet	AVERAGE FLOW Through 1988 Acre Feet
Temecula Creek Near Aguanga	1134	5040 (1957-88)
Murrieta Creek Near Temecula	1300	7900 (1924-88)
Santa Margarita River Near Temecula	1790	10,870 (1949-88) 20,420 (1924-48)
Santa Margarita River Near Ysidora	3326	24,850 (1923-88)

Comparison of flows measured in 1988-89 with average flows indicates that 1988-89 was considerably drier than normal. Flows in 1988-89 at the four stations ranged from 13 to 22 percent of normal.

Monthly flows shown in Table 3.2 consist primarily of naturally occurring surface runoff except for flows at the Murrieta Creek and Santa Margarita River stations near Temecula. Flows at those stations include water discharged by Rancho California Water District into Murrieta Creek just upstream from

TABLE 3.1
SANTA MARGARITA RIVER WATERSHED
STREAM GAGING STATIONS

STATION NAME	USGS STATION NUMBER	WATERSHED AREA SQ. MILES	SOURCE OF RECORD	PERIOD OF RECORD
Temecula Creek Near Aguanga	11042400	131	USGS	8/57 – 9/89
Wilson Creek Above Vail Lake	-------	---	USGS	
Temecula Creek At Vail Dam	11042520	320	USGS	2/23 – 10/77
Vail Lake at Temecula (Reservoir Storage)	11042510	320	USGS	10/60 – 9/89
Pechanga Creek Near Temecula	11042631	14	USGS	10/87-9/89
Warm Springs Creek Near Murrieta	11042800	55	USGS	10/87-9/89
Santa Gertrudis Creek Near Temecula	11042900	93	USGS	10/87-9/89
Murrieta Creek At Temecula	11043000	222	USGS	10/25 – 9/89
Santa Margarita River Near Temecula	11044000	588	USGS	2/23 – 9/89
Rainbow Creek At Willow Glen Road	-------	---	USGS	9/89
Sandia Creek near Santa Margarita River	-------	---	USGS	9/89
Santa Margarita River Near Fallbrook	11044500	644	USGS	10/24 – 80; 9/89
Santa Margarita River Tributary Near Fallbrook	11044600	0.52	USGS	10/61 – 9/65
DeLuz Creek Near Fallbrook	11044900	48	USGS/NRO	2/51 – 67; 68 – 77
Santa Margarita River Near DeLuz Station	11045000	705	USGS	10/24 – 9/26
Fallbrook Creek Near Lake O'Neill	NA	---	USGS/NRO	68 – 9/89
Santa Margarita River At Ysidora	11046000	723	USGS	3/23 – 9/89

YEAR: 1920 1930 1940 1950 1960 1970 1980 1990

TABLE 3.2
SANTA MARGARITA RIVER WATERSHED

MEASURED SURFACE WATER FLOW 1988-89
Quantities in Acre Feet

GAGING STATION	DRAINAGE AREA SQ. MILES	MONTH OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	1988-89 WATER YEAR TOTAL	ANNUAL AVERAGE THRU 1988	YEARS OF RECORD
Temecula Creek																
Near Aguanga	131	64	87	153	168	176	179	107	64	42	30	30	34	1,134	5,040	31
Pechanga Creek																
Near Temecula	13.8	0	0	4	1	2	0	0	0	0	0	0	0	7	N/A	1
Warm Springs Creek																
Near Murrieta	55.4	0	0	40	t	0	0	0	0	0	0	0	0	46	N/A	1
Santa Gertrudis Creek																
Near Temecula	92.8	0	0	7	28	59	34	0	0	0	0	0	1	129	N/A	1
Murrieta Creek																
At Temecula	222	68	4	258	149	49	33	4	130	126	132	144	203	1,300	7,900	64
Santa Margarita River																
Near Temecula	588	83	16	354	182	102	141	19	159	155	157	176	246	1,790	20,420	40 (1949-88) 25 (1924-48)
Santa Margarita River																
At Ysidora	723	0	89	1,030	660	459	371	287	257	173	t	0	0	3,326	24,850	65

t = trace

the gaging station. These discharges are pursuant to Section Eleventh of the 1940 Stipulated Judgment which requires maintenance of a flow of three cubic feet per second (cfs) at the Santa Margarita River station near Temecula between May 1 and October 31 of each year. Provisional discharge for months of May through October are shown on the following tabulation:

	MONTHLY DISCHARGE	
	Acre Feet	Average Daily cfs
October 1988	83	1.4
May 1989	159	2.6
June 1989	155	2.6
July 1989	157	2.6
August 1989	176	2.9
September 1989	246	4.1
TOTAL	976	

Release of 852 acre feet by Rancho California Water District constituted most of the measured 976 acre feet of water flowing past the Santa Margarita River gage during the six month period.

3.2 Surface Water Diversions

Surface water diversions on Temecula Creek were reported for Vail Lake as well as for two substantial users. Water was diverted from Wilson Creek for irrigation at lands in Lancaster Valley. Diversions from the Santa Margarita River were by the Margarita Land and Development Company and Camp Pendleton at Lake O'Neill.

At Vail Lake 695 acre feet were diverted to storage between November 1, 1988 and April 30, 1989.

Two substantial water users - Cottle and Strange - diverted water from Temecula Creek onto 17 acres of permanent pasture, 110 acres of oats/barley, and 35 acres of alfalfa. Estimated total diversions were 405 acre feet including estimated losses.

Agri-Empire diverted 273 acre feet from Wilson Creek onto 315 acres of leased land in the Lancaster Valley. Surface diversions were supplemented by well production.

The Margarita Land and Development Company reported that 92.3 acre feet were diverted directly from the River and from a shallow (52 foot) well located adjacent to the River.

At Lake O'Neill, 1295.06 acre feet were diverted into storage during January, February and March. In November, 1989, all the water remaining in Lake O'Neill (approximately 900 acre feet) was released back into the Santa Margarita River for groundwater recharge.

Estimated diversion, consumptive use, losses and returns are shown in the tabulation below for surface diversions by substantial users:

Diverter	Diversion	Consumptive Use	Estimated Losses	Estimated Returns
Cottle/ Strange	405	273	41 (1)	91 (2)
Agri Empire	273	185	27 (1)	61 (2)
Margarita Land & Dev.	92	62	9 (1)	21 (2)
Camp Pendleton Lake O'Neill	1295	--	395	900

(1) Losses at 10% of diversions
(2) Returns at 25% of diversions

3.3 Water Storage

There are three major water storage facilities in the Santa Margarita River Watershed. These are listed below, together with the water in storage on September 30, 1989.

Lake Skinner	41,565 Acre Feet
Vail Lake	18,424 Acre Feet
Lake O'Neill	900 Acre Feet (approximately)
TOTAL IN STORAGE SEPTEMBER 30, 1989	60,889 Acre Feet

Of the foregoing, the water in Lake Skinner is stored by Metropolitan Water District of Southern California for use by its member agencies. Stored water in Vail Lake is controlled by Rancho California Water District and that in Lake O'Neill is controlled by the U. S. Marine Corps at Camp Pendleton.

3.4 Appropriative Water Rights

A list of current permits, licenses and other active rights obtained from the State Water Rights Control Board (SWRCB) is shown on Table 3.3. Total direct diversions and storage rights from creeks in the Watershed are shown below:

	Direct Diversions Gallons Per Day	Storage Acre Feet
Coahilla Valley	720	5
Cottonwood Creek	485,000	18
Cutea Creek	5,825	-----
DeLuz Creek	4,700	142
Fern Creek	213,000	-----
Kohler Canyon	158,000	-----
Long Canyon Spring	523	-----
Rainbow Creek	1,550	0.5
Rattlesnake Canyon	12,000	-----
Temecula Creek	25,820	40,000
Sandia Canyon	---	8
Sourdough Spring	55	-----
TOTAL	907,193	40,173.5

In addition to the foregoing, the SWRCB lists 199,000 acre feet in storage rights on the Santa Margarita River, of which 195,000 acre feet is held by the U. S. Bureau of Reclamation for the Santa Margarita Project.

These direct diversion rights of 907,193 gallons per day correspond to 1.4 cfs or 2.78 acre feet per day. Thus the vast majority of direct diversions are made under riparian rights.

TABLE 3.3
SANTA MARGARITA RIVER WATERSHED
APPROPRIATIVE WATER RIGHTS

PERMITS AND LICENSES

I.D. NO.	OWNER	FILING DATE	SOURCE OF WATER	POINT OF DIVERSION	AMOUNT	USE	STATUS
6629	William H. & Sandra J. Cyrus	4/9/30	Coahuila Valley	Sec. 4, 7S, 3E	DD-720 gpd	D	License
6893	Earl C. & Mamie LaBine	2/13/31	Temecula Creek	Sec. 20, 9S, 2E	DD-820 gpd	D/I	License
7035	Nyla Lawler	8/10/31	Cutea Creek	Sec. 29, 9S, 1E	DD-5725 gpd	D/I	License
7731	Earl C. & Mamie LaBine	11/02/33	Temecula Creek	Sec. 20, 9S, 2E	DD-7200 gpd	D/I	License
9137	Goodarz Irani	10/07/37	Temecula Creek	Sec. 12, 9S, 1E	DD-400 gpd	D	License
9291	Luis Olivos	5/13/38	Nelson Creek	Sec. 23, 8S, 0S	DD-1550 gpd	D	License
10806	James R., Phyllis & Bruce Granner	4/22/44	Temecula Creek	Sec. 34, 9S, 2E	DD-2880 gpd	D	License
11161	Roy C. Pursche & J. Zink	9/26/45	Rattlesnake Canyon	Sec. 28, 9S, 2E	DD-12,000 gpd	D/I	License
11518	Rancho California Water District	8/16/46	Temecula Creek	Sec. 10, 8S, 1W	ST-40,000 AF	D/I/R	Permit
11587	USBR	10/11/46	Santa Margarita River	Sec. 12, 9S, 4W	ST-10,000 AF	D/I/M	Permit
12178	USBR	11/28/47	Santa Margarita River	Sec. 12, 9S, 4W	ST-10,000 AF	D/I/M	Permit
12179	USBR	11/28/47	Santa Margarita River	Sec. 12, 9S, 4W	ST-10,000 AF	D/I/M	Permit
13505	David H. & Kathleen C. Lypps	12/12/49	Cottonwood Creek	Sec. 30, 8S, 4W	DD-0.75 cfs & ST-42 AF	R/S	License
17239	Ward Family Trust	8/15/56	Temecula Creek	Sec. 20, 9S, 2E	DD-120 gpd	D/E	License
20507	David H. & Kathleen C. Lypps	11/24/61	Cottonwood Creek	Sec. 19, 8S, 4W Sec. 30, 8S, 4W	ST-18 AF	I/R	License
20608	Richard F. & Rosabel L. Matthews	2/13/62	DeLuz Creek	Sec. 20, 8S, 4W	ST-100 AF	D/I/R	License
20742	U. S. Cleveland National Forest	4/24/62	Sourdough Spring	Sec. 25, 9S, 1E	DD-55 gpd	E	License
21074	U. S. Cleveland National Forest	12/07/62	Cutca Spring	Sec. 17, 9S, 1E	100 gpd	S/W	License
21471A	U. S. Department of Navy	9/23/63	Santa Margarita River	Sec. 5, 10S, 4W Sec. 2, 11S, 5W	ST-4,000 AF	D/I/M/Z	License
21471B	U. S. Bureau of Reclamation	9/23/63	Santa Margarita River	Sec. 32, 9S, 4W	ST-165,000 AF	D/I/M/Z	Permit
27756	James R. Granner	5/23/83	Temecula Creek	Sec. 3, 10S, 2E	DD-14,400 gpd	I/S	Permit
28133	Charles F. Ruggles	5/14/84	Cahuilla Creek	Sec. 14, 8S, 2E	ST-5AF	E/H/I/R/S	Permit
			APPLICATIONS				
28923	Thousand Trails, Inc.	10/20/86	Temecula Creek	Sec. 35, 8S, 1E	DD-0.6 cfs ST-20 AF	E R	
28930	Agri-Empire	10/22/86	Chihuahua Creek	Sec. 1, 9S, 2E Sec. 2, 9S, 2E Sec. 11, 9S, 2E	ST-70 AF ST-70 AF ST-70 AF	I	
			OTHER RIGHTS				
057515/Federal	U. S. Cleveland National Forest	1/01/70	Long Canyon Spring		DD-523 gpd	R/S/W	
000024/State	Judge Dial Perkins	12/26/86	Santa Margarita River	Sec. 12, 9S, 4W	DD-133.3 gpd	D	
0000751/State	Lawrence Butler	5/31/67	Fern Creek	Sec. 31, 8S, 4W	DD-0.33 cfs	I	
011411/State	Agri Empire Corporation	5/16/84	Kohler Canyon	Sec. 33, 9S, 2E	DD-0.245 cfs ST-40 AF	I/S	
012235/State	William A. & Lois D. Cunningham	8/27/85	DeLuz Creek	Sec. 4, 9S, 4W	DD-4700 gpd		
011583/Stock	George F. Yackey	12/27/77	Sandia Canyon	Sec. 25, 8S, 4W	ST-8.0 AF	S	
002380/Stock	Chris R. & Jeanette L. Duarte	12/16/77	Rainbow Creek	Sec. 12, 9S, 3W	ST-0.5 AF	S	

KEY TO USE: DD - Direct Diversion; D - Domestic; R - Recreation; E - Fire Protection; H - Fish Culture
ST - Diversion to Storage; I - Irrigation; M - Municipal; S - Stockwatering; Z - Other

SECTION 4 - IMPORTS/EXPORTS

4.1 General

Water is imported into southern California by the Metropolitan Water District of Southern California (MWD). This imported water is sold to MWD member agencies, several of which have service areas in the Santa Margarita River Watershed. These agencies include Eastern MWD, San Diego County Water Authority and Western MWD. These member agencies either resell the water to local water purveyors or sell the water directly to customers for use. Imported water purveyors in the Santa Margarita River Watershed include the following:

DeLuz Heights Municipal Water District
Eastern Municipal Water District
Elsinore Valley Municipal Water District
Fallbrook Public Utility District
Rainbow Municipal Water District
Rancho California Water District
Western Municipal Water District

In addition to water imported into southern California by MWD, another category of imported water is water which is developed in southern California and imported into the Santa Margarita River Watershed. At present this occurs in the Elsinore Valley MWD which pumps water from wells outside the Santa Margarita River Watershed but delivers water to a portion of its service area which is inside the Santa Margarita River Watershed.

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

Exportations from the Santa Margarita River Watershed include water pumped at Camp Pendleton which is used in the San Luis Rey River or Las Flores Creek Watersheds, wastewater from the Fallbrook area exported by the Fallbrook Sanitary District and wastewater exports by Elsinore Valley MWD. Some of the water exported at Camp Pendleton is returned to the Watershed as wastewater.

The following paragraphs of this report describe imports during the 1966-1989 period and during 1988-89. There is also discussion of MWD's Lake Skinner operations which are located on Tucalota Creek.

4.2 Water Years 1966-1989

Water quantities imported into the Santa Margarita River Watershed during Water Years 1966-1989 are shown on Table 4.1. Imports into the Santa Margarita River Watershed were estimated for Fallbrook PUD and Rainbow MWD because portions of the districts' service areas are outside the Santa Margarita and meters are not available to allow a direct measurement of water use within the watershed. Eastern MWD and Elsinore Valley MWD also import water into the Santa Margarita River Watershed, but estimates haven't been prepared of those quantities as yet.

Exports over the 1966-1989 period are also shown on Table 4.1. These include estimated water exports on Camp Pendleton less estimated wastewater returns, as well as an estimate of exports by the Fallbrook Sanitary District after 1983 and Elsinore Valley MWD after 1986. Exports do not include water which naturally flows into the Pacific Ocean downstream of the gage at Ysidora.

4.3 Water Year 1988-89

Water quantities imported into and exported from the Santa Margarita River Watershed for months during Water Year 1988-89 are listed on Table 4.2.

4.4 Lake Skinner MOU

Lake Skinner is a 44,000 acre foot reservoir constructed by MWD on Tucalota Creek, within the Santa Margarita River Watershed. The purpose of Lake Skinner is to provide regulatory and emergency storage capacity for water imported to southern California.

It was recognized that the construction and operation of Lake Skinner would affect surface and subsurface flows on Tucalota Creek so, on November 12, 1974, a Memorandum of Understanding and Agreement on Operation of Lake Skinner was developed and adopted. That MOU was approved by the Court on January 16, 1975.

The MOU contains provisions to protect Santa Margarita River Watershed water users from potential effects of Lake Skinner on either subsurface or surface flows.

Protection against a decrease in subsurface flows caused by the dam is afforded by a provision in the MOU which requires that MWD release water from Lake Skinner into Tucalota Creek if groundwater levels fall below a depth of 22.76 feet in Well AV-28. MWD released 111.2 acre feet of water to Tucalota Creek under this provision in Water Year 1988-89.

TABLE 4.1

SANTA MARGARITA RIVER WATERSHED
IMPORTS/EXPORTS 1966-1988
Quantities in Acre Feet

	IMPORTS								EXPORTS					
	DELUZ		ELSINORE			RANCHO			CAMP PENDLETON			ELSINORE		
YEAR	HEIGHTS	EASTERN	VALLEY	FALLBROOK	RAINBOW	CAL	WESTERN	TOTAL			NET	VALLEY	FALLBROOK	TOTAL
MONTH	MWD	MWD	MWD	PUD	MWD	WD	MWD(1)	IMPORTS	EXPORT	IMPORTS	EXPORT	MWD	SD	EXPORTS
1966	0	N/R	N/R	3,404	1,308	0	24	4,735	3,299	974	2,325	0	0	2,325
1967	0	N/R	N/R	2,857	1,095	0	20	3,973	3,231	1,243	1,989	0	0	1,989
1968	0	N/R	N/R	3,427	1,377	0	27	4,831	3,427	1,214	2,213	0	0	2,213
1969	0	N/R	N/R	2,891	1,253	0	25	4,168	3,350	1,170	2,181	0	0	2,181
1970	0	N/R	N/R	3,630	1,689	0	31	5,349	3,829	1,113	2,716	0	0	2,716
1971	0	N/R	N/R	3,407	1,650	0	34	5,092	3,484	1,090	2,395	0	0	2,395
1972	0	N/R	N/R	3,916	2,037	0	34	5,987	3,479	1,168	2,311	0	0	2,311
1973	38	N/R	N/R	3,172	1,616	0	30	4,856	3,480	1,187	2,292	0	0	2,292
1974	134	N/R	N/R	3,833	2,049	0	36	6,053	3,468	1,140	2,327	0	0	2,327
1975	213	N/R	N/R	3,384	1,247	0	34	4,878	3,034	1,530	1,504	0	0	1,504
1976	431	N/R	N/R	4,196	2,239	0	35	6,901	3,555	1,497	2,057	0	0	2,057
1977	587	N/R	N/R	4,625	2,343	1,983	24	9,563	3,130	1,416	1,714	0	0	1,714
1978	651	N/R	569	4,551	2,188	5,397	26	13,382	3,006	1,283	1,724	0	0	1,724
1979	961	N/R	712	4,762	2,348	6,940	24	15,746	4,692	1,427	3,265	0	0	3,265
1980	1,191	N/R	696	5,213	2,489	10,128	25	19,742	3,587	1,405	2,182	0	0	2,182
1981	1,994	N/R	798	6,549	3,153	15,442	34	27,971	3,827	1,249	2,579	0	0	2,579
1982	1,805	N/R	678	5,274	2,460	13,375	34	23,626	3,696	1,273	2,424	0	0	2,424
1983	1,969	N/R	658	4,751	2,190	5,752	26	15,346	2,935	1,242	1,693	0	1029	2,722
1984	2,609	N/R	816	5,897	3,068	6,716	26	19,132	3,178	1,120	2,058	0	1058	3,116
1985	2,358	N/R	808	5,473	3,410	7,158	27	19,234	3,320	1,200	2,120	0	1086	3,206
1986	2,794	N/R	882	5,791	2,945	11,174	34	23,620	3,273	981	2,293	0	1112	3,405
1987	2,986	N/R	938	5,670	3,390	7,564	36	20,584	3,379	1,799	1,581	4	1155	2,740
1988	2,559	N/R	1,032	5,474	2,985	17,854	36	29,941	4,075	1,872	2,203	55	1180	3,438
1989	3,007	3,746	1,341	6,060	3,003	22,720	24	39,901	3,347	1,446	1,901	74	1,885	3,860

(1) Improvement District A - Rainbow Canyon Only (WR-13)

NR - Not Reported

TABLE 4.2

SANTA MARGARITA RIVER WATERSHED
IMPORTS/EXPORTS 1988-89
Quantities in Acre Feet

	IMPORTS								EXPORTS					
									CAMP PENDLETON			ELSINORE		
YEAR MONTH	DELUZ HEIGHTS MWD	EASTERN MWD	ELSINORE VALLEY MWD	FALLBROOK PUD	RAINBOW MWD	RANCHO CAL WD	WESTERN MWD	TOTAL IMPORTS	EXPORTS	IMPORTS	NET EXPORT	VALLEY MWD	FALLBROOK SD	TOTAL EXPORTS
1988														
OCT	321	313	78	601	325	2,183	2	3,823	335	92	243	4	157	404
NOV	147	138	78	339	175	1,679	1	2,557	200	115	85	5	157	247
DEC	111	97	43	295	169	1,506	2	2,224	179	103	77	6	157	240
1989														
JAN	90	82	42	252	90	834	1	1,391	194	112	82	6	157	245
FEB	67	87	60	201	69	518	3	1,005	179	101	78	6	157	240
MAR	141	154	61	350	180	1,561	1	2,448	245	144	101	6	157	265
APR	253	232	108	523	294	1,556	1	2,967	317	122	195	6	157	359
MAY	255	313	109	563	244	1,777	2	3,263	294	135	159	6	157	323
JUNE	358	475	186	677	369	2,037	3	4,105	291	130	161	6	157	324
JULY	476	610	187	775	381	3,086	3	5,517	361	134	227	7	155	389
AUG	399	646	195	781	414	3,688	3	6,126	383	128	254	7	160	422
SEPT	389	599	194	703	294	2,295	2	4,476	369	131	239	7	157	403
TOTAL	3,007	3,746	1,341	6,060	3,003	22,720	24	39,901	3,347	1,446	1,901	74	1,885	3,860

Camp Pendleton Imports and Fallbrook Sanitary District Exports are Estimated

The MOU also provides that local surface inflow which enters Lake Skinner will be released into Tucalota Creek. Local inflow is to be determined by using the hydrologic equation for Lake Skinner which is specified in the MOU. Unfortunately the local inflow is small compared to the large quantities of imported water inflow and outflow from Lake Skinner. The error of measurement for these large flows is larger than the local inflow in many instances. In addition, since 1986, an unmeasured bypass has been used with increasing frequency, which affects the accuracy of the calculations. MWD is currently proceeding with efforts to resolve these issues.

SECTION 5 - WATER USE

5.1 General

Water production and use data were obtained for the 1988-89 Water Year from two types of substantial water users: water purveyors and individual irrigation users.

5.2 Water Purveyors

In July, letters were sent to the major water purveyors in the Watershed listed below. These letters requested water production and use data for the 1988-89 Water Year and for the period between 1966 and 1988:

Anza Mutual Water Company
DeLuz Heights MWD
Eastern MWD
Elsinore Valley MWD
Fallbrook PUD
Fallbrook Sanitary District
Murrieta County WD
Ramona Water Company
Rancho California WD
Western MWD
U. S. Marine Corps, Camp Pendleton

Subsequently, similar letters were sent to the following:

Cahuilla Indian Reservation
Pechanga Indian Reservation
Thousand Trails (Aguanga)

Most water purveyors responded with water use information for both the 1988-89 Water Year and historic 1966-1988 information. The data received for the 1988-89 water year are summarized on tables which are attached to this report as Appendix A. Similar data for the period 1966-1988 Water Years are summarized in tables presented in Appendix B.

The status of data availability from each of the purveyors is summarized in the following sections.

Anza Mutual Water Company

Production is from two wells, one drilled in 1951 and cased to 264 feet and one drilled later to a depth of 287 feet. Monthly water production reports were filed for Water Year 1988-89. Production for 1988-89 totaled 32 acre feet. Annual production is also available for Water Year 1987-88. No production information has been reported for the prior period.

Cahuilla Indian Reservation

According to the Court records, the Cahuilla Indian Reservation occupies 18,292 acres of land of which 980 acres is outside the Santa Margarita River Watershed. Approximately 50 people reside on the Reservation. In 1988-89, 420 acres were leased for irrigation use. Crops included 100 acres of potatoes and 320 acres of grain. Water production was from a well believed to tap the deep aquifer which is outside the Court's jurisdiction. No reports of water production on the Reservation have been received.

DeLuz Heights MWD

Deluz Heights MWD supplies imported water as well as local production from three wells. Total production of 3,101 acre feet for 1988-89 is shown in Appendix A and historical annual production is shown in Appendix B. Water has been imported to the district since 1973 and supplied from district wells since 1977.

Eastern MWD

Eastern MWD is a member agency of MWD. In that capacity it wholesales water to Rancho California Water District. Water sold to Rancho California WD is listed in this report as imported water to the Rancho California WD service area.

In addition to wholesaling water, Eastern MWD also retails water directly to customers in that portion of its service area in the northern part of the Watershed. Water for that portion of their service area is imported or produced locally from one 345 foot deep well.

Production for the 1988-89 Water Year in the Santa Margarita River Watershed totaled 4,431 acre feet as shown in Appendix A.

In addition to water supply, Eastern MWD also reclaimed 2,694 acre feet of wastewater, of which 1,058 acre feet was reused and 1,636 acre feet was recharged into the groundwater basin.

The district is currently developing estimates of water production for the period 1966-1988.

Elsinore Valley MWD

Elsinore Valley MWD provides water to its service area around Lake Elsinore. A portion of that service area is within the Santa Margarita River Watershed. Elsinore Valley MWD obtains its supply from ten wells, as well as importing MWD water through Western MWD. One of the district's production wells is located very close to the Watershed topographic boundary. However, groundwater in that portion of the Santa Margarita River Watershed was found by the Court to flow toward Lake Elsinore and is therefore considered to be outside the Court's jurisdiction.

The district reports that 1,341 acre feet was imported into the portion of their service area which is inside the Santa Margarita River Watershed in 1988-89. Also during 1988-89 approximately 74 acre feet were exported from that same area.

Elsinore Valley is planning to obtain additional imported water through Eastern MWD for delivery to portions of their service area within the Santa Margarita River Watershed.

Fallbrook PUD

In 1988-89, Fallbrook PUD imported 13,172 acre feet through its contract with the San Diego County Water Authority as shown in Appendix A. Of this quantity, it is estimated that 46 percent, or 6,060 acre feet, was delivered to lands inside the Santa Margarita River Watershed. The remainder was delivered to lands in the San Luis Rey River Watershed.

Production during the period 1966 to 1988 included imported water as well as direct diversions from the Santa Margarita River for water years before 1972 as shown in Appendix B.

Fallbrook Sanitary District

Little measured data are available from the Fallbrook Sanitary District. Average wastewater production in July and August of 1989 were 155 and 160 million gallons per day respectively. Production was 440 acre feet in Water Year ending 1967, 386 acre feet in Water Year 1968 and 467 acre feet in Water Year 1969.

It was estimated that in 1989, about 64 percent of the wastewater came from lands in the Santa Margarita River Watershed and the rest from lands in the San Luis Rey River Watershed. That proportion compares with an estimated 79 percent of wastewater from Santa Margarita River Watershed lands under 1968-69 conditions.

Prior to 1983, the district discharged wastewater into Fallbrook Creek. Under those conditions some wastewater was imported from the San Luis Rey River Watershed. After 1983, the district has discharged wastewater into an ocean outfall. Under these conditions, wastewater is exported from the Santa Margarita River Watershed as shown in Appendix B.

Murrieta County Water District

Murrieta County Water District serves the area in the vicinity of the town of Murrieta which is located in the northeast part of the Watershed. The district obtains its supply from five wells although there was no service from one of the wells in 1989. Total production in 1988-89 was 340 acre feet, as shown in Appendix A. Production for the period between 1966 and 1988 is shown in Appendix B.

Pechanga Indian Reservation

Court records indicate that the Pechanga Indian Reservation occupies 3,787 acres of land within the Santa Margarita River Watershed. Additional lands have been added to the Reservation since the date of Interlocutory Judgment No. 41 in 1962. Approximately 421 people reside on the Reservation. No reports of water production for the 1988-89 water year on the Reservation have been received.

Rainbow Municipal Water District

Rainbow Municipal Water District is located in San Diego County in the south-central part of the Watershed. Only a portion of the district's service area is inside the Watershed. Most of the district is in the San Luis Rey River Watershed. As shown in Appendix A, total production, which is all imported water, in the Watershed amounted to 3003 acre feet.

Total imports to the district, in years prior to 1988-89 as well as the estimated portion served inside the Santa Margarita River Watershed, are shown in Appendix B.

Ramona Water Company

Ramona Water Company serves about 100 customers in the Anza Valley. The system includes seven wells, ranging in depth from 350 to 650 feet. No records of production and use are available.

Rancho California Water District

Rancho California Water District serves water to lands in the central portion of the Watershed previously belonging to the Vail Company, as well as lands adjacent to those properties. The District produces water from 59 wells as well as importing water, as shown in Appendix A. In Water Year 1988-89, 26,169 acre feet of local supplies were pumped and 22,720 acre feet were imported for total production of 48,889 acre feet.

Of this quantity, 852 acre feet were released into the Santa Margarita River to maintain flows between May 1 and October 31.

The District is currently developing estimates of water sales to agricultural, municipal and commercial users in various hydro-geologic zones within its service area.

The District reclaimed 168 acre feet of wastewater during the year which was all reused within the Watershed.

Production for the period 1967 through 1988 is shown in Appendix B.

Thousand Trails

The Thousand Trails water system serves a recreational vehicle park in the Aguanga Valley. The park consists of campsites and related facilities. Water is provided by an eight inch well, 245 feet in depth, which is located within the Aguanga groundwater area. Total production in Water Year 1988-89 was about 42 acre feet, as shown in Appendix A.

Western Municipal Water District

Western MWD wholesales imported water from MWD to Rancho California WD. Those imports are listed in this report under Rancho California WD.

In addition, a small amount of water is imported annually to the district's Improvement District A located near Interstate 15 in Riverside County. In Water Year 1988-89, these imports amounted to approximately 24 acre feet.

Imported water deliveries to Improvement District A through turnout WR-13 for the period 1969 to 1989 are shown in Table 4.1

U. S. Marine Corps - Camp Pendleton

Camp Pendleton is located on the western side of the Santa Margarita River Watershed. Water is provided by 14 wells which produced 5,900 acre feet in Water Year 1988-89. Of this quantity, about 3,347 acre feet were exported out of the Watershed as shown in Appendix A.

A portion of the exported water was returned to the Santa Margarita River Watershed as wastewater. This amounted to 1,446 acre feet in 1988-89.

Production and estimated use inside and outside the Watershed, as well as wastewater returns, are shown in Appendix B.

5.3 Irrigation Water Users

During the water year, a definition of substantial water users was developed by comparing the previous list of substantial water users adopted by the Court as Exhibit A to an April 6, 1966, Court Order with data on substantial users compiled by the Office of Groundwater Resources at Camp Pendleton in 1962. It was learned that the minimum acreage irrigated by a substantial user in Exhibit A was eight acres. The quantity of water use required by such a user varies according to the crop water requirements. Crop requirements adopted by the Court in Interlocutory Judgment No. 41 are as follows:

	Irrigation Requirements Acre Feet Per Year
Row Crops	4.00
Irrigated Pasture	3.83
Alfalfa	3.00
Deciduous Fruit	1.07
Small Grains	1.75
Avocados	2.35
Citrus	1.86

These requirements do not include system delivery losses which could be 10 percent or more. Thus, water use on eight acres could range from about 8 acre feet if deciduous fruit trees were grown, to as much as 32 acre feet for row crops.

Following definition of substantial water users, a list of such users was prepared. The list was based primarily on a land use survey conducted by the State Department of Water Resources and published in October 1987. The Department based its survey on air photos taken in 1985 and 1979, and field verification. This source was supplemented by field observations. After the parcels were located on U.S.G.S. quadrangle maps, the assessor's

parcel number for the land was determined. From the parcel numbers, the names of the parcel owners were learned and a list of substantial users was developed.

After a list was developed, users were sent a letter describing the Watermaster Office and the need for information on water use. Subsequent letters requested that a water use form be completed and returned to this office in a self-addressed, stamped envelope.

Initially, 45 letters were mailed. Some response has been received from all but one water user as of March, 1990. This office will continue to contact those users who have not yet responded and those who have not yet reported crop use. The current list of substantial users is attached to this report as Appendix C.

Estimated irrigation water use in various hydrologic subunits in the Santa Margarita River Watershed is shown on Table 5.1, along with reported production by water purveyors. Total irrigation use was estimated to be 10,890 acre feet. This estimate was based on reported irrigated acreage as well as acreage reported by the State's 1987 land use survey for users who failed to report irrigated acreage. A uniform irrigation water use production of three acre feet per acre per year was used to prepare the estimate of water use.

It is noted that the Court Order gives the Watermaster the authority to require monthly reports from the substantial water users. To date, monthly reports are required only from major water purveyors. This office is currently requiring annual reports from local irrigation water users. An annual report is consistent with the current method of estimating water use using acreage irrigated and an annual irrigation crop requirement factor expressed as acre feet per acre per year. It is noteworthy that the State Water Resources Control Board requires

TABLE 5.1
SANTA MARGARITA RIVER WATERSHED
SANTA MARGARITA RIVER WATER PRODUCTION BY SUBSTANTIAL USERS

HYDROLOGIC AREA	WATER PURVEYOR PRODUCTION ACRE FEET	OTHER IRRIGATED ACRES	IRRIGATION PRODUCTION ACRE FEET (1)	TOTAL PRODUCTION ACRE FEET	ESTIMATED CONSUMPTIVE USE ACRE FEET (2)	ESTIMATED RETURN FLOW ACRE FEET (3)
1. Wilson Creek Above Aguanga GWA Includes Anza Valley	32 (ANZA MWC)	893	2,679	2,711	2,033	678
2. Temecula Creek Above Aguanga GWA	-----	1,154	3,462	3,462	2,596	866
3. Aguanga GWA	42 (THOUSAND TRAILS)	816	2,448	2,490	1,868	622
4. Upper Murrieta Creek	-----		-----	-----		
5. Lower Murrieta Creek	-----	-----	-----	-----		
6. Temecula-Murrieta GWA	27,194 (RCWD,MCWD,EMWD)	426	1,278	28,472	21,354	7,118
7. Santa Margarita River Below Gorge						
DeLuz Creek	94 (DHMWD)	195	585	679	509	170
Sandia Creek	-----	126	378	378	284	94
Rainbow Creek	-----	-----	-----	-----	-----	-----
Santa Margarita River	5,900 (USMC)	20	60	5,960	2,032	2,027
TOTAL	33,262	3,630	10,890	44,152	30,676	11,575

(1) Irrigation production estimated using 3 acre feet per acre

(2) Estimated consumptive use based on 75% of total production, except for Camp Pendleton. At Camp Pendleton net export of 1901 acre feet is excluded.

(3) Estimated Return Flow is based on 25% of total production except for Camp Pendleton where 95% of imports is assigned to recharge.

annual production reports from all pumpers of more than 25 acre feet per year in the counties of Los Angeles, Ventura, Riverside and San Bernardino. These reports are also accompanied by a $5 filing fee for each well reported.

5.4 Subsurface Water Production

Santa Margarita River Water production by substantial users shown on Table 5.1 is from subsurface sources except for an estimated 678 acre feet diverted from Temecula Creek and Wilson Creek in the Aguanga Groundwater Area as described in Section 3.2. Estimated consumptive use and return flows are also shown on Table 5.1. Consumptive use and return flows are estimated to comprise 75 percent and 25 percent of the production respectively. Losses are not included in the estimate since the production generally occurs near the point of use. These percentages were applied to all users except Camp Pendleton, where consumptive use was estimated to be 75 percent of the portion of production which is not exported and returns are estimated to equal 25 percent of the portion not exported plus 95 percent of the imports which are recharged.

5.5 List of All Water Users

The appointing Order indicates that a list of all water users within the Santa Margarita River Watershed is to be developed. Subsequently, this requirement has been interpreted to mean all water users subject to the Court's jurisdiction. There are many domestic users who have wells and whose properties are within the areas which have been found by the Court to support Santa Margarita River flows. As shown in Section 9, this task will be undertaken in Water Year 1990-91.

SECTION 6 - UNAUTHORIZED WATER USE

6.1 Unauthorized Small Storage Ponds

A major area of unauthorized water use may involve small storage reservoirs located throughout the watershed. Categories of ponds or reservoirs that are authorized are listed as follows:

1. Reservoirs constructed before 1914
2. Reservoirs constructed as part of a riparian diversion as described in Interlocutory Judgment No. 28
3. Reservoirs which have appropriative rights
4. Stockponds authorized under Section 1226 of the Water Code.

Unauthorized ponds are those where water is stored from season to season (more than 30 days) which are not included under one of the above categories.

The Water Commission Act went into effect on December 19, 1914. This Act created a method for appropriating unappropriated waters in the State and established a State agency to administer water rights. Prior to the Act no State agency regulated water appropriations (except for power) and water was appropriated in accordance with miner's customs or a procedure described in the Civil Code, enacted in 1872. Storage facilities in place and operating before the Water Commission Act went into effect on December 19, 1914, are considered to be outside the jurisdiction of the State Water Resource Control Board. Such facilities are described in the Court's Interlocutory Judgments for various areas in the Santa Margarita River Watershed.

An example of a pre-1914 right is Lake O'Neill at Camp Pendleton which has a 1883 priority date. That right is described as a non-statutory appropriative storage right.

Conclusion of Law I to Interlocutory Judgment No. 28 states, in part, as follows:

> The impoundment by riparian owners of limited quantities of surface runoff for the purpose of providing stock water is a proper riparian use of water.

Conclusion of Law II states, in part, as follows:

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

From the foregoing, it can be concluded that in the Santa Margarita River Watershed, limited quantities may be stored by riparian users for more than 30 days provided the purpose is stock watering. Alternatively, if the water is to be used for irrigation, riparian diversions can be made to temporary or non-seasonal storage but not for more than 30 days.

Reservoirs which have appropriative rights under the jurisdiction of the State Water Resources Control Board are listed in Table 3.3 along with all other SWRCB appropriative rights.

Section 1226 of the State Water Code grants owners of stock ponds constructed before January 1, 1969, valid water rights subject to certain limitations:

1. The stockponds had to be built before January 1, 1969;

2. There had to be no record of litigation between private parties prior to January 1, 1974;

3. Stockpond storage capacity had to be less than 10 acre feet on January 1, 1975; and

4. The stored water had to be for stock use (which includes domestic and recreational use incidental to stock watering use).

Two owners of stockponds in the Santa Margarita River have filed for these rights as shown on Table 3.3. The priority date for the right is the date of construction of the dam for those who filed before December 31, 1977, and the date of filing for those who filed after that date.

With the foregoing in mind, this office will consider stockponds with less than 10 acre feet to be a valid use of riparian water responsive to Conclusion of Law I to Interlocutory Judgment No. 28. Criteria for determining non-seasonal storage of irrigation water have yet to be developed.

The first step in dealing with this issue is to develop an inventory of impoundments on the streams of the Santa Margarita River Watershed.

6.2 Lake Skinner Releases

As discussed in Section 4.4, the MOU provides for two types of releases from Lake Skinner. MWD is required to release water from Lake Skinner when water levels in Well AV-28 are below a depth of 22.76 feet. MWD is also required to release local surface runoff which enters Lake Skinner.

According to water level records of Well AV-28 supplied by MWD the water level in Well AV-28 was 25.01 on September 28, 1988, a date near the beginning of the 1988-89 Water Year.

Data show that the depth to water in Well AV-28 declined over the Water Year to 26.70 feet on August 24, 1989. On August 24, 1989, MWD responded to a written request from this office to initiate releases. By September 30, 1989, the end of the Water Year, the depth of water in Well AV-28 had risen to 21.50 feet. Although water levels in AV-28 had risen above the trigger depth called for in the MOU, MWD continued to release water because the MOU specifies that releases to recharge the groundwater immediately downstream of Lake Skinner will continue "...until resurfacing flow becomes visible at the bedrock constriction." The bedrock constriction is located 1.4 miles downstream of the Dam on Tucalota Creek. Between August 24, 1989, and September 30, 1989, MWD released 111.2 acre feet to recharge the groundwater basin.

The MOU contains a provision that the water level of 22.76 feet, which triggers releases, may be adjusted downward if pumping from the groundwater basin downstream of Lake Skinner by others, is increased. MWD has retained a consultant to determine if there is a basis for such a revision.

As described in Section 4.4 all local surface water inflows to Lake Skinner are to be released into Tucalota Creek. There were no such releases in 1988-89. The current method of determining local surface inflow cannot accurately compute runoff related to moderate duration low intensity rainfall. The problem is exacerbated by the increasing use of an unmeasured bypass in Lake Skinner operation.

The consultant retained by MWD to review the subsurface flow provision is also to review the surface water inflow calculation and offer recommendations for dealing with this issue.

Representatives of MWD and the consultant have met with the Watermaster to discuss the scope of the investigation.

6.3 Camp Pendleton Claims

By letter to Rancho California Water District dated September 28, 1987, the Marine Corps Base, Camp Pendleton claimed that the District had violated the terms of the 1940 Stipulated Judgment. Camp Pendleton contended that the District had exceeded the allotment of water provided in the Stipulated Judgment in at least 21 of 44 years analyzed and that the three cfs minimum flow requirement specified in the Stipulated Judgment had not been met since 1956. Camp Pendleton noted that the District was following a water management operational plan which called for production quantities which exceed that apportioned under the Judgment. Camp Pendleton's letter noted that projections indicate an increasing need for water and that violations of the 1940 Stipulated Judgment were unacceptable.

In its 1987 response, Rancho California Water District disagreed that the terms of the Judgment had been violated. The District indicated its willingness to work with Camp Pendleton to jointly develop and manage a program involving use of upper basin assets to assure the adequate water quantity and quality for all involved agencies. The District contends that: (1) except for Vail Lake and a limited number of wells, the District is not a successor to Vail Ranch; (2) the District has not violated the Judgment because not all the water produced by the District is subject to the Judgment; and (3) the 1940 Stipulated Judgment should not be applied without taking into consideration changed circumstances and reasonable and beneficial use principles. The Watermaster continues to collect applicable water use data from both parties.

SECTION 7 - THREATS TO WATER SUPPLY

7.1 General

At present, insufficient data have been collected and insufficient analyses have been conducted to identify conditions which may pose a threat to the long term water supply of the Santa Margarita River Watershed. However, three conditions may be present and will be investigated in future years. These conditions include:

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

2. Potential overdraft conditions at various locations in the Santa Margarita River Watershed.

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

In addition to the foregoing conditions, there are other concerns. Representatives of the Pechanga Indian Reservation have expressed their concerns over recent development of areas adjacent to the Reservation lands. They are concerned that the development will affect their reserved water rights and/or the quality of their water supply. Because of these concerns, the Pechanga Band of Luiseno Indians has engaged the U. S. Geological Survey to conduct a study of groundwater conditions in Wolf Valley.

Another concern involves a Class III landfill which is proposed by San Diego County to be located along Rainbow Creek about two miles upstream from where it joins the Santa Margarita River. Representatives from Camp Pendleton are concerned that the landfill may eventually leak and contaminate their groundwater basin.

7.2 High Nitrate Concentrations

Water samples are collected from Rainbow Creek at Willow Glen Road by the Natural Resources Office at Camp Pendleton as

part of their surface water quality monitoring program. In 1988-89, this site was sampled three times. Analysis of the water quality samples indicated nitrate concentrations as shown below:

Rainbow Creek at Willow Glen Road
Nitrate Concentration as Nitrate

	Mg/l
May 1989	8.9
June 1989	96.6
July 1989	105.0

The drinking water limit for nitrate is 45 mg/l as nitrate.

In 1989, the U.S.G.S. initiated stream gaging at the site so that next year it can be determined how nitrate concentrations vary with flow rates and how serious a threat this source of nitrate is to downstream water quality.

In 1988, the U.S.G.S., in their report entitled, "Ground-Water Conditions in the Anza-Terwilliger Area, with Emphasis on the Cahuilla Indian Reservation, Riverside County, California, 1973-86" reported that the EPA drinking water limit of 10 mg/l nitrate as nitrogen was exceeded in 8 of 30 wells sampled in 1986. The U.S.G.S. attributed the high concentrations mainly to animal wastes (three wells) and septic systems which had affected wells perforated in the weathered consolidated rocks. Except for one sample, concentrations were less than 10 mg/l for wells in the main agricultural areas of Anza and Terwilliger Valleys.

7.3 Potential Overdraft Conditions

The Water Year 1988-89 is the third year of drier than normal conditions in the Santa Margarita River Watershed. Although groundwater levels throughout the Watershed have not been collected and analyzed, there are reports of lowered water levels in wells and wells going dry in various parts of the Watershed, including DeLuz Creek and Tucalota Creek.

In 1989-90, water level data will be collected to determine the extent of water in storage underground. This data will also assist in determining the magnitude of changes in storage for recent years and whether overdraft conditions are present in the Santa Margarita River Watershed.

7.4 Salt Balance in Upper Santa Margarita River Watershed

During the mid-seventies, considerable effort was expended in analysis of water quality in the Santa Margarita River

Watershed. The following three reports specifically addressed the question of salt balance in the Upper Santa Margarita River Watershed.

1. U.S.G.S. February, 1975, "Salt Balance Study of the Pauba Valley, Upper Santa Margarita River Area, Riverside County, California, Water Resource Investigations 43-74."

2. California, Department of Water Resources, January 1975, "Impact of Waste Treatment and Disposal on the Quality of Water Supplies, Santa Margarita Watershed."

3. Comprehensive Planning Organization of the San Diego Region, March 30, 1978, "Areawide Water Quality Management Plan - Water Quality Problems and Management Responsibilities, Part III, Salt Balance."

The most recent of the foregoing reports, which references the other two, concludes that under 1975 conditions, net extractions from the Murrieta-Temecula groundwater area were about 39,000 acre feet annually compared to a safe yield estimated to be 16,000 acre feet per year. Under the estimated 23,000 acre feet per year overdraft conditions, groundwater was estimated to mineralize at a basin-wide average rate of 4 mg/l per year. The report also noted that if imported water from the Colorado River were used to bring the basin to a safe yield, the average basin-wide mineralization rate would increase to 22 mg/l per year. The report indicated that the major contributors to increasing groundwater salinity are irrigation return flows and fertilizer leaching.

Future projections were prepared for a baseline condition and three alternative groundwater management scenarios.

All of these future projections were based on safe yield operation. The baseline case was based on importing a blended supply averaging 495 mg/l and with 100% reuse of wastewater then projected for Eastern MWD's treatment plant.

Alternative 1 was based on controls on irrigation efficiency and fertilizer application as well as export of all of the municipal and industrial wastewater.

Alternative 2 included the irrigation controls but all of the municipal and industrial wastewater was considered to be reused.

Alternative 3 was the same as Alternative 1 except that only northern California water at a total dissolved solids of 240 mg/l would be imported into the Watershed.

Average basin-wide groundwater quality (mg/l) for the baseline condition and for the alternatives examined is shown below along with the associated estimates for rising water quality for the Santa Margarita River at Temecula Gorge.

Year	Baseline	Management Alternative		
Basin-Wide Average Groundwater Quality		Alt 1	Alt 2	Alt 3
1990	510	460	465	400
1995	630	545	550	450
Rising Water				
1990	920	870	975	810
1995	1040	955	960	860

The following measures were recommended:

1. Reduce overdraft or increase recharge of imported water
2. Use imported water on the Santa Rosa Rancho area
3. Increase irrigation efficiency
4. Try to import only Northern California water
5. Use of reclaimed wastewater was encouraged because it was found to have little impact on groundwater quality
6. Recharge imported water when available in wet years downstream of Vail Dam.

Some of these recommended measures have been partially implemented. There is a need to update the previous estimates and to determine if there are any other actions which are appropriate. This work is planned for Water Year 1991-92 following collection of water level data and water quality data.

SECTION 8 - WATER QUALITY

In the past, water quality samples have been collected and analyzed at various locations in the Watershed. These records are available in Federal, State and local agency reports, as well as in files of various organizations in the Santa Margarita River Watershed. In 1988-89, surface water quality in the Watershed was monitored by the Camp Pendleton Natural Resources Office at ten locations. These stations are listed on Table 8.1 which also shows the available period of record at these locations.

Santa Margarita River water quality was also monitored during 1988-89 by the Fallbrook PUD at its infiltration gallery site.

In addition, samples of groundwater from various wells in the Watershed were collected in 1988-89 by various water purveyors.

Water quality data collected during the 1988-89 water year is not included in this annual report but efforts will be made to include it in future reports.

Additional water quality monitoring may be included as part of current proposals to discharge treated wastewater into the Santa Margarita River. However, that program has not been developed as yet.

TABLE 8.1
SANTA MARGARITA RIVER WATERSHED
CURRENT WATER QUALITY MONITORING STATIONS (1)

STATION	SAMPLING FREQUENCY	PERIOD FROM	PERIOD TO	PERIOD OF RECORD
Fallbrook Creek/NWS	Periodically	1968	Present	XXXXXXXXXXXXXXXXXXXX
Santa Margarita River Near FPUD Sump	Periodically	1951	Present	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
DeLuz Creek at DeLuz/ Murrieta Road	Periodically	1953	Present	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Murrieta Creek Near Temecula	Periodically	1968	Present	XXXXXXXXXXXXXXXXXXXX
Temecula Creek at Hwy 395	Periodically	1961	Present	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
Fallbrook Creek at Lake O'Neill	Periodically	1965	Present	XXXXXXXXXXXXXXXXXXXXXXXX
Lake O'Neill	Periodically	1952	Present	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Rainbow Creek at Willow Glen Road	Periodically	1970	Present	XXXXXXXXXXXXXXXXXX
Sandia Creek Near Santa Margarita River	Periodically	1989	Present	X
Santa Margarita River at Temecula Gorge	Periodically	1989	Present	X

YEAR 1950 1960 1970 1980 1990

(1) All stations maintained by USMC, Camp Pendleton

SECTION 9 - FIVE YEAR PROJECTION OF WATERMASTER OFFICE TASKS, EXPENDITURES AND REQUIREMENTS

9.1 General

Primary Watermaster tasks are listed in Table 9.1 together with the estimated hours of time to be devoted to each task during the current 1989/90 Water Year and over the five future Water Years 1990-91 through 1994-95.

9.2 Task Description

These tasks are briefly described in the following paragraphs.

1. Update List of Substantial Users - The major development of the list is underway during the current Water Year. Activities in future will include adding new users to the list and monitoring the users on the current list.

2. Collect Water Consumption Data - This task includes collection of the amount of water diverted, extracted, impounded, exported, imported, used or reclaimed by water districts as well as by other substantial users. As shown in Appendices A and B, water use is categorized among agricultural, domestic and commercial uses. This task specifically includes data on surface diversions, and related consumptive use, return flows and losses. A major effort on this task is underway in the current year which includes collection of information for the 1966 to 1988 period as well as current data.

3. Collect Well Location, Construction and Water Level Data - Determination of changes in groundwater storage and trends in water levels requires collection of well water level information. It is also necessary to collect well construction information, including perforated intervals of the well casings and the location of seals, to properly interpret the water level data. Some well information is contained in Watermaster Office files and reports by others. Additional more recent data are available from Federal, State and local agencies. This work, already underway, will continue into the 1990-91 Water Year.

TABLE 9.1
SANTA MARGARITA RIVER WATERSHED
PROJETED WATERMASTER TASKS
Estimated Hours per Water Year

WATERMASTER TASKS	CURRENT YEAR	PROJECTED FUTURE YEARS				
	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
1. Update List of Substantial Users	150	100	50	50	50	50
2. Collect Water Production, Use, Import and Availability Data	150	100	100	100	100	100
3. Collect Well Construction and Water Level Data	150	100	50	50	50	50
4. Determine Historic Changes in Storage and Safe Yields	100	200	50	50	50	50
5. Collect Water Quality Data	50	50	100	30	30	30
6. Determine Salt Balance	0	0	150	40	40	40
7. Prepare List of All Water Users under Court Jurisdiction	0	200	200	50	50	50
8. Attend Meetings	150	150	150	150	150	150
9. Administer Lake Skinner MOU	120	90	60	30	30	30
10. Administer Steering Committee Matters	150	150	150	150	150	150
11. Prepare Court Reports/Budgets	150	150	150	100	100	100
12. Miscellaneous Computer Operation	80	60	40	40	40	40
13. Monitor Streamflow and Water Quality Measuring Stations	50	50	50	50	50	50
14. Monitor Water Quality Activities and Water Right Appropriations	50	50	50	50	50	50
15. Miscellaneous Administrative Services	400	400	300	200	200	200
16. Data Management	1,000	2,000	2,000	1,500	1,500	1,500
17. Prepare Inventory of Stockponds and Reservoirs	0	100	50	30	30	30
18. Contingency for Currently Unforeseen Tasks	150	200	200	150	150	150
19. TOTAL	2,900	4,150	3,900	2,820	2,820	2,820
20. ESTIMATED BUDGET	$168,100	$172,956	$181,600	$161,240	$169,050	$177,500

4. Determine Historic Changes in Storage - Following collection of the well data, the water levels for similar aquifers will be entered into the computer. This will allow plots of data to determine trends in levels, as well as calculation of change in storage volumes and safe yields in various hydrologic subunits. This will include preparation of estimates of quantities of water in storage and the source and quantity of recharge.

5. Collect Water Quality Data - Determination of basin salt balance begins with the collection of water quality data. Such data are needed for historic surface water supplies, historic outflows and exports as well as groundwater in storage. Collection of water quality data is currently underway, but will be emphasized in the 1991-92 Water Year.

6. Determine Salt Balance - Following collection of water quality data in Water Years 1989-90 through 1991-92, salt balances for various hydrologic subunits will be determined in the 1991-92 Water Year. This work is scheduled to follow the water level and storage change analysis. In this way, there will be a good understanding of the various aquifers in the Watershed before attempting to determine the disposition of salt loads in the Watershed.

7. Prepare List of Water Users Under Court Jurisdiction - This major task has been deferred until 1990-91 Water Year because it involves preparing a list of all private water users within certain areas in the Watershed. It can best be prepared using the assessor rolls as a starting point and then determining if there is any water use on the property. This list will also include a description of vested rights and appropriative priority dates if required.

8. Attend Meetings - In order to remain apprised of activities which affect water matters in the Santa Margarita River Watershed, it is necessary to attend meetings scheduled by various entities. These include meetings of various wholesale and retail water purveyors in the Watershed, regulatory agencies such as the Regional Water Quality Control Board, planning agencies and federal, state and local flood control organizations.

9. Administer Lake Skinner MOU - This task provides for monitoring the operation of Lake Skinner to ensure that Mwd is in compliance with the provisions of the Memorandum of Understanding on the Operation of Lake Skinner. It is anticipated that additional time will be required during the current Water Year and the 1990-91 year to review improved procedures to measure/calculate local surface inflows which must be released from the Lake.

10. Administer Steering Committee Matters - This task involves administration of quarterly Steering Committee meetings, including distribution of notices and agendas, preparation of minutes, attendance at meetings, and dealing with various Steering Committee matters.

11. Prepare Court Reports/Budgets - Each year an annual report, which includes a budget and projected tasks, is required to be forwarded to the Court.

12. Miscellaneous Computer Operations - Efficient operation of the Watermaster Office is based on maximizing the use of computers. This requires periodic attendance at training sessions, classes and/or acquisition and use of new software and computer equipment.

13. Monitor Streamflow and Water Quality Measuring Stations Operation and maintenance of existing stream gaging stations and water quality monitoring stations are handled by others, however the Watermaster Office relies on the data from these stations and assists in interpretation of station data and in the maintaining or improving the quality of station records and data. This task includes determining source of flows measured at gaging stations.

14. Monitor Water Quality and Water Right Activities - This task is to provide for investigating unauthorized water appropriations and water quality violations in the Watershed.

15. Miscellaneous Administrative Services - This task provides for those tasks associated with office administration, operation and correspondence.

16. Data Management - This task provides for assistance to the Watermaster with handling the data management, correspondence and report requirements of the Watermaster Office.

17. Prepare Inventory of Ponds and Reservoirs - In recent years numerous small ponds and reservoirs have been constructed along streams in the Watershed. Some of these store water appropriated using State Water Resource Control Board procedures. Others may constitute unauthorized water appropriation. In this task an inventory of ponds would be developed as a first step in determining which are authorized and which are not. Completion of this task provides an opportunity to check surface water diversions and substantial users.

18. Contingency for Currently Unforeseen Tasks - This task provides for tasks that cannot be foreseen two or three years ahead. For example, MWD may locate its Eastside Reservoir project in the Watershed, which would require some effort in developing an MOU. Alternatively, some time could be required to deal with issues raised in connection with the 1940 Stipulated Judgment or other matters.

SECTION 10 - WATERMASTER OFFICE BUDGET 1990-91

A proposed Watermaster Office Budget for the Water Year ending September 30, 1991, is included in this report as Table 10.1. A total cost of $172,956 is proposed for the 1991 Water Year. Under current procedures, Fallbrook PUD will send out requests in August, 1990, to members of the Steering Committee for proportional shares of the first quarter costs. It may be possible to reduce this budget at that time because by August, 1990, the office will have over a year of operating experience. In addition, a credit for funds not spent during the 1988-89 Water Year may be available.

In preparing the 1990-91 budget, items subject to price changes such as utility costs, printing costs and accounting services were increased by ten percent over the 1989-90 budget.

Other items, including rent, insurance, publications, data management, auditing services and equipment were not increased because they are not subject to general price level increases or because the budgeted amount appears to be sufficient.

The basic Watermaster Consulting Fee has been increased by five percent, and the overhead allowance was increased by 12 percent to provide for increased premiums for health, dental, life and disability insurance.

Budgeted travel reimbursements were reduced by 20 percent.

TABLE 10.1
SANTA MARGARITA RIVER WATERSHED
PROPOSED WATERMASTER OFFICE BUDGET
Water Year Ending September 30, 1991

	Approved Budget Current Year 1989-1990		Proposed Budget 1990-1991	
	Monthly	Total	Monthly	Total
Watermaster Office	$	$	$	$
Rent	200	2,400	200	2,400
Accounting Services	200	2,400	220	2,640
Supplies	150	1,800	165	1,980
Insurance				
General Liability & Professional	435	5,220	435	5,220
Printing	100	1,200	110	1,320
Audit	220	2,640	220	2,640
Publications	50	600	50	600
Clerical/Data Management	2,600	31,200	2,600	31,200
Utilities				
Telephone	200	2,400	220	2,640
Sanitation	65	780	75	900
Electric	100	1,200	110	1,320
Miscellaneous Operating	200	2,400	200	2,400
Watermaster				
Basic Consulting Fee	6,000	72,000	6,300	75,600
Overhead Allowance	1,958	23,496	2,073	24,876
Automobile Expense	400	4,800	400	4,800
Travel Reimbursements	500	6,000	400	4,800
Equipment				
Computer	125	1,500	125	1,500
Software	100	12	100	1,200
Furniture	80	960	80	960
Copier	25	300	30	360
Contingency	300	3,600	300	3,600
TOTAL	$14,008	$138,096	$14,413	$172,956

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 1988-89

APPENDIX A

WATER PRODUCTION AND USE

WATER YEAR 1988-89

MARCH 1990

TABLE A-1

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

DELUZ HEIGHTS MUNICIPAL WATER DISTRICT
Quantities in Acre Feet

	PRODUCTION			USE					
MONTH YEAR	LOCAL	IMPORT	TOTAL	AG	DOM	COMM	TOTAL	LOSS*	TOTAL USE
1988									
OCT	9	321	330	299	7	0	306	24	330
NOV	8	147	155	134	6	0	140	15	155
DEC	8	111	119	106	6	0	112	7	119
1989									
JAN	9	90	99	68	5	0	73	26	99
FEB	7	67	74	77	5	0	82	(8)	74
MAR	8	141	149	130	6	0	136	13	149
APR	9	253	262	208	7	0	215	47	262
MAY	6	255	261	212	7	0	219	42	261
JUNE	8	358	366	361	7	0	368	(2)	366
JULY	8	476	484	367	7	0	374	110	484
AUG	7	399	406	411	7	(CONSTR)5	423	(17)	406
SEPT	7	389	396	336	7	(CONSTR)5	348	48	396
TOTAL	94	3,007	3,101	2,709	77	10	2,796	305	3,101

*LOSS = TOTAL PRODUCTION MINUS TOTAL USE

NO COMMERCIAL USE IN DISTRICT

TABLE A-2

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

EASTERN MUNICIPAL WATER DISTRICT
Quantities in Acre Feet

	PRODUCTION			USE						RECLAIMED WASTE WATER			
MONTH YEAR	WELLS	IMPORTED (1)	TOTAL	AG (2)	COMM	DOM (3)	TOTAL	LOSS	TOTAL USE+LOSS	REUSE IN SMRW	EXPORT	RECHARGED	TOTAL
1988													
OCT	24	313	337	124	0	197	320	17	337	96	0	89	185
NOV	60	138	198	61	0	127	188	10	198	51	0	133	184
DEC	72	97	169	37	0	124	161	8	169	34	0	165	199
1989													
JAN	52	82	134	42	0	86	127	7	134	83	0	121	204
FEB	66	87	153	34	0	111	145	8	153	97	0	97	194
MAR	63	154	217	67	0	140	206	11	217	90	0	132	222
APR	67	232	299	88	0	196	284	15	299	84	0	138	222
MAY	49	313	362	102	0	242	344	18	362	106	0	131	237
JUNE	67	475	542	130	0	385	515	27	542	98	0	141	239
JULY	63	610	673	135	0	504	639	34	673	115	0	142	257
AUG	55	646	701	154	0	512	666	35	701	108	0	164	272
SEPT	47	599	646	173	0	441	614	32	646	96	0	183	279
TOTAL	685	3746	4431	1146	0	3064	4209	222	4431	1058	0	1636	2694

(1) Does not include deliveries to Rancho California Water District or Elsinore Valley Water District

(2) Figures are 95% of water pumped to allow for 5% loss

(3) Figures are 95% of water pumped to allow for 5% loss

TABLE A-3

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

FALLBROOK PUBLIC UTILITY DISTRICT
Quantities in Acre Feet

	PRODUCTION				USE					
MONTH YEAR	LOCAL	IMPORT	TOTAL	TOTAL IN SMRW	AG	COMM	DOM	TOTAL IN SMRW	LOSS*	TOTAL USE IN SMRW
1988										
OCT	0	1,306	1,306	601	310	19	252	581	20	601
NOV	0	738	738	339	254	21	168	443	(104)	339
DEC	0	642	642	295	165	19	156	340	(45)	295
1989										
JAN	0	547	547	252	43	13	99	155	97	252
FEB	0	436	436	201	105	17	121	243	(42)	201
MAR	0	760	760	350	106	18	116	240	110	350
APR	0	1,137	1,137	523	202	22	172	396	127	523
MAY	0	1,223	1,223	563	291	26	191	508	55	563
JUNE	0	1,472	1,472	677	289	27	255	571	106	677
JULY	0	1,684	1,684	775	375	33	238	646	129	775
AUG	0	1,698	1,698	781	398	34	322	754	27	781
SEPT	0	1,529	1,529	703	373	30	250	653	50	703
TOTAL	0	13,172	13,172	6,060	2,911	279	2,340	5,530	530	6,060

*LOSS = TOTAL PRODUCTION LESS TOTAL USE

TABLE A-4

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

MURRIETA COUNTY WATER DISTRICT
Quantities in Acre Feet

	PRODUCTION	USE					
MONTH YEAR	WELLS	AG	COMM	DOM	TOTAL DELIVERED	LOSS**	TOTAL USE
1988							
OCT	NO RECORD	2	4	27	33	------	33
NOV	NO RECORD	1	2	18	21	------	21
DEC	17	1	2	13	16	1	17
1989							
JAN	15	*	2	10	12	3	15
FEB	14	*	3	9	12	2	14
MAR	22	*	12	12	24	-2	22
APR	32	1	3	22	26	6	32
MAY	37	1	12	21	34	3	37
JUNE	47	1	11	33	45	2	47
JULY	22	1	6	33	40	-18	22
AUG	41	2	7	34	43	-2	41
SEPT	39	1	7	30	38	1	39
TOTAL	286	11	72	262	344	-4	340

* - AMOUNT USED IS LESS THAN 1/2 ACRE FOOT AND IS NOT INCLUDED IN THE TOTAL

**LOSS = TOTAL PRODUCTION LESS TOTAL DELIVERED EXCEPT FOR OCTOBER AND NOVEMBER 1988.

TABLE A-5

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

RAINBOW MUNICIPAL WATER DISTRICT
WITHIN WATERSHED
Quantities in Acre Feet

	PRODUCTION			USE				
MONTH YEAR	LOCAL	IMPORT	TOTAL	AG	COMM/DOM	TOTAL DELIVERIES	LOSS*	TOTAL USE
1988								
OCT	0	325	325	264	31	295	30	325
NOV	0	175	175	136	23	159	16	175
DEC	0	169	169	132	22	154	15	169
1989								
JAN	0	90	90	62	20	82	8	90
FEB	0	69	69	44	19	63	6	69
MAR	0	180	180	143	21	164	16	180
APR	0	294	294	235	32	267	27	294
MAY	0	244	244	194	28	222	22	244
JUNE	0	369	369	301	34	335	34	369
JULY	0	381	381	302	44	346	35	381
AUG	0	414	414	337	39	376	38	414
SEPT	0	294	294	235	32	267	27	294
WATER YEAR TOTAL	0	3,003	3,003	2,385	345	2,730	273	3,003

*LOSS = 10% OF USE

TABLE A-6

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

RANCHO CALIFORNIA WATER DISTRICT
Quantities in Acre Feet

	PRODUCTION					USE						RECLAIMED WASTE WATER		
	LOCAL			IMPORT	TOTAL	AG	COMM	DOM	SMR RELEASE	LOSS*	TOTAL PRODUCTION	REUSE IN SMRW	EXPORT	RECHARGED
MONTH YEAR	WELLS IN GWA	WELLS OUT GWA	VAIL RELEASE											
1988														
OCT	2,210	0	0	2,183	4,393	2,876	268	1,476	92	(318)	4,393	9	0	0
NOV	840	0	0	1,679	2,519	1,869	217	1,048	0	(615)	2,519	8	0	0
DEC	413	0	0	1,506	1,919	1,349	219	646	0	(295)	1,919	6	0	0
1989														
JAN	625	0	0	834	1,459	373	167	477	0	442	1,459	10	0	0
FEB	739	0	0	518	1,257	727	173	394	0	(36)	1,257	10	0	0
MAR	1,397	0	0	1,561	2,958	602	170	405	0	1,780	2,958	14	0	0
APR	2,870	0	0	1,556	4,426	1,633	200	747	0	1,846	4,426	9	0	0
MAY	2,819	0	0	1,777	4,596	2,313	232	1,066	143	842	4,596	9	0	0
JUNE	4,058	0	0	2,037	6,095	2,453	301	1,328	185	1,827	6,095	20	0	0
JULY	4,060	0	0	3,086	7,146	3,598	331	1,634	148	1,435	7,146	21	0	0
AUG	2,768	0	0	3,688	6,456	4,266	581	2,044	129	(563)	6,456	27	0	0
SEPT	3,370	0	0	2,295	5,665	3,474	457	1,934	155	(355)	5,665	25	0	0
TOTAL	26,169	0	0	22,720	48,889	25,533	3,316	13,198	852	5,989	48,889	168	0	0

*LOSS = TOTAL PRODUCTION LESS TOTAL USE

TABLE A-7

SANTA MARGARITA RIVER WATERSHED
MONTHLY WATER PRODUCTION AND USE

CAMP PENDLETON
Quantities in Acre Feet

	PRODUCTION			USE						RECLAIMED WASTE WATER		
				AGRICULTURE (1)		CAMP SUPPLY (2)		TOTAL	TOTAL*		IMPORT	TOTAL
MONTH YEAR	AG	CAMP SUPP	TOTAL	IN-SMRW	OUT-SMRW	IN-SMRW	OUT-SMRW	EXPORT	IN-SMRW	RECHARGED IN-SMR	RECHARGED IN SMRW	RECHARGED IN SMRW
1988												
OCT	135	451	586	53	82	198	252	335	251	102	92	194
NOV	21	334	356	8	13	147	187	200	155	104	115	219
DEC	2	318	320	1	1	140	178	179	141	115	103	217
1989												
JAN	8	338	346	3	5	149	189	194	152	115	112	227
FEB	11	307	318	4	7	135	172	179	139	101	101	202
MAR	12	425	437	5	7	187	238	245	192	110	144	254
APR	87	472	559	34	53	208	264	317	242	107	122	229
MAY	66	453	519	26	40	199	254	294	225	114	135	249
JUNE	58	455	514	23	36	200	255	291	223	106	130	236
JULY	129	505	633	50	78	222	283	361	272	109	134	243
AUG	158	511	669	62	97	225	286	383	286	115	128	243
SEPT	170	475	644	66	103	209	266	369	275	103	131	234
TOTAL	856	5,043	5,900	334	522	2,219	2,824	3,347	2,553	1,301	1,446	2,747

* ASSUMES NO LOSSES

(1) Agricultural water use is divided with 39% used inside the SMRW and 61% used outside

(2) Camp Supply water use is divided with 44% used inside the SMRW and 56% used outside

TABLE A-8

SANTA MARGARITA RIVER WATERSHED
MISCELLANEOUS WATER PRODUCTION AND IMPORTS
Quantities in Acre Feet

MONTH YEAR	ANZA MUTUAL WATER CO. PRODUCTION	WESTERN MWD IMPORTS TO IMPROVEMENT DISTRICT A	RAMONA WATER CO	THOUSAND TRAILS	PECHANGA INDIAN RESERVATION	CAHUILLA INDIAN RESERVATION
1988						
OCT	4	2	N/R	4	N/R	N/R
NOV	3	1	|	3	|	|
DEC	1	2	|	3	|	|
1989						
JAN	1	1	|	2	|	|
FEB	1	3	|	2	|	|
MAR	1	1	|	3	|	|
APR	2	1	|	6	|	|
MAY	3	2	|	3	|	|
JUNE	4	3	|	4	|	|
JULY	5	3	|	4	|	|
AUG	5	3	|	2	|	|
SEPT	2	2	|	6	|	|
TOTAL	32	24	N/R	42	N/R	N/R

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 1988-89

APPENDIX B

WATER PRODUCTION AND USE

WATER YEAR 1965-66 TO WATER YEAR 1987-88

MARCH 1990

TABLE B-1

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

DELUZ HEIGHTS MUNICIPAL WATER DISTRICT
Quantities in Acre Feet

	PRODUCTION			USE				
WATER YEAR	LOCAL	IMPORT	TOTAL	AG	DOM	TOTAL DELIVERIES	LOSS*	TOTAL USE
1966	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0
1973	0	38	38	24	10	34	4	38
1974	0	134	134	105	16	121	13	134
1975	0	213	213	170	21	192	21	213
1976	0	431	431	360	28	388	43	431
1977	20	587	607	514	33	546	61	607
1978	97	651	748	641	32	673	75	748
1979	187	961	1,148	996	37	1,033	115	1,148
1980	192	1,191	1,383	1,195	50	1,245	138	1,383
1981	87	1,994	2,081	1,820	52	1,873	208	2,081
1982	0	1,805	1,805	1,577	47	1,625	180	1,805
1983	0	1,969	1,969	1,717	55	1,772	197	1,969
1984	0	2,609	2,609	2,294	54	2,348	261	2,609
1985	0	2,358	2,358	2,067	55	2,122	236	2,358
1986	0	2,794	2,794	2,452	63	2,515	279	2,794
1987	0	2,986	2,986	2,626	62	2,687	299	2,986
1988	28	2,559	2,587	2,258	70	2,328	259	2,587

*LOSS = 10% OF PRODUCTION

NO COMMERCIAL USE IN DISTRICT

TABLE B-2

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

FALLBROOK PUBLIC UTILITY DISTRICT
Quantities in Acre Feet

	PRODUCTION				USE				
WATER YEAR	LOCAL	IMPORT	TOTAL	TOTAL IN SMRW	AG	COMM/DOM	TOTAL DELIVERED	LOSS*	TOTAL USE IN SMRW
1966	176	11,169	11,345	3,404	2,735	328	3,063	341	3,404
1967	16	9,508	9,524	2,857	2,253	319	2,572	285	2,857
1968	13	11,411	11,424	3,427	2,554	531	3,085	342	3,427
1969	178	9,458	9,636	2,891	1,787	814	2,601	290	2,891
1970	305	11,794	12,099	3,630	2,649	617	3,266	364	3,630
1971	7	11,350	11,357	3,407	2,386	681	3,067	340	3,407
1972	0	13,054	13,054	3,916	2,749	775	3,524	392	3,916
1973	0	10,572	10,572	3,172	2,132	722	2,854	318	3,172
1974	0	12,777	12,777	3,833	2,598	852	3,450	383	3,833
1975	0	11,279	11,279	3,384	2,250	795	3,045	339	3,384
1976	0	12,716	12,716	4,196	2,840	937	3,777	419	4,196
1977	0	12,848	12,848	4,625	3,022	1,141	4,163	462	4,625
1978	0	11,975	11,975	4,551	2,863	1,233	4,096	455	4,551
1979	0	11,904	11,904	4,762	2,824	1,461	4,285	477	4,762
1980	0	12,411	12,411	5,213	3,063	1,628	4,691	522	5,213
1981	0	14,884	14,884	6,549	3,868	2,092	5,960	589	6,549
1982	0	11,465	11,465	5,274	3,037	1,815	4,852	422	5,274
1983	0	10,329	10,329	4,751	2,603	1,816	4,419	332	4,751
1984	0	12,820	12,820	5,897	3,520	2,023	5,543	354	5,897
1985	0	11,898	11,898	5,473	3,120	2,080	5,200	273	5,473
1986	0	12,589	12,589	5,791	3,246	2,256	5,502	289	5,791
1987	0	12,327	12,327	5,670	3,167	2,219	5,386	284	5,670
1988	0	11,901	11,901	5,474	2,923	2,278	5,201	273	5,474

*LOSS = Total Production -- Total Use

TABLE B-3

SANTA MARGARITA RIVER WATERSHED
ANNUAL WASTEWATER PRODUCTION AND DISPOSITION

FALLBROOK SANITARY DISTRICT
Quantities in Acre Feet

WATER YEAR	TOTAL WASTEWATER PRODUCTION	% FROM SMRW	WASTEWATER FROM SMRW	WASTEWATER EXPORTED FROM SMRW	WASTEWATER IMPORTED FROM SLR WATERSHED	% WASTEWATER FROM SLR WATERSHED
1966	395	81	320	0	75	19
1967	460	80	368	0	92	20
1968	524	80	419	0	105	20
1969	588	79	465	0	123	21
1970	652	78	509	0	143	22
1971	717	78	559	0	158	22
1972	782	77	602	0	180	23
1973	847	76	644	0	203	24
1974	912	75	684	0	228	25
1975	976	75	732	0	244	25
1976	1,040	74	770	0	270	26
1977	1,105	73	807	0	298	27
1978	1,170	72	842	0	328	28
1979	1,234	72	888	0	346	28
1980	1,298	71	922	0	376	29
1981	1,363	70	954	0	409	30
1982	1,428	69	985	0	443	31
1983	1,492	69	1,029	1,029	0	0
1984	1,556	68	1,058	1,058	0	0
1985	1,621	67	1,086	1,086	0	0
1986	1,685	66	1,112	1,112	0	0
1987	1,750	66	1,155	1,155	0	0
1988	1,815	65	1,180	1,180	0	0

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

TABLE B-4

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

MURRIETA COUNTY WATER DISTRICT
Quantities in Acre Feet

	PRODUCTION	USE					
WATER YEAR	WELLS	AG	COMM	DOM	TOTAL DELIVERED	LOSS*	TOTAL USE
1966	41	0	0	37	37	4	41
1967	45	0	0	41	41	4	45
1968	54	0	0	49	49	5	54
1969	54	0	0	49	49	5	54
1970	73	0	0	66	66	7	73
1971	83	3	0	72	75	8	83
1972	111	10	0	91	101	10	111
1973	92	11	0	72	84	8	92
1974	132	14	0	107	120	12	132
1975	153	18	0	121	139	14	153
1976	117	22	0	84	106	11	117
1977	170	21	0	134	155	15	170
1978	169	19	0	135	154	15	169
1979	197	19	0	160	179	18	197
1980	218	20	0	178	198	20	218
1981	265	30	0	211	241	24	265
1982	230	21	0	188	209	21	230
1983	216	14	0	182	196	20	216
1984	304	26	0	250	276	28	304
1985	308	19	0	261	280	28	308
1986	305	22	0	255	277	28	305
1987	326	23	0	273	296	30	326
1988	303	13	35	262	275	28	303

* LOSSES ASSUMED TO BE 10% OF USE

TABLE B-5

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

RAINBOW MUNICIPAL WATER DISTRICT
Quantities in Acre Feet

	PRODUCTION			USE				
WATER YEAR	LOCAL	IMPORT TO DISTRICT	TOTAL IN WATERSHED(1)	AG(2)	COMMERCIAL/ DOMESTIC(3)	TOTAL DELIVERIES	ESTIMATE LOSS (4)	TOTAL USE
1966	0	14,538	1,308	1,049	140	1,189	119	1,308
1967	0	12,167	1,095	878	117	995	100	1,095
1968	0	15,301	1,377	1,104	147	1,252	125	1,377
1969	0	13,917	1,253	1,005	134	1,139	114	1,252
1970	0	18,764	1,689	1,354	181	1,535	154	1,689
1971	0	18,338	1,650	1,324	177	1,500	150	1,650
1972	0	22,633	2,037	1,634	218	1,852	185	2,037
1973	0	17,955	1,616	1,296	173	1,469	147	1,616
1974	0	22,768	2,049	1,643	219	1,863	186	2,049
1975	0	13,856	1,247	1,000	133	1,134	113	1,247
1976	0	24,878	2,239	1,796	240	2,035	204	2,239
1977	0	26,038	2,343	1,879	251	2,130	213	2,343
1978	0	24,312	2,188	1,755	234	1,989	199	2,188
1979	0	26,084	2,348	1,883	251	2,134	213	2,347
1980	0	27,660	2,489	1,997	266	2,263	226	2,489
1981	0	35,036	3,153	2,529	337	2,866	287	3,153
1982	0	27,334	2,460	1,973	263	2,236	224	2,460
1983	0	24,957	2,190	1,735	256	1,991	199	2,190
1984	0	32,526	3,068	2,483	306	2,789	279	3,068
1985	0	28,612	3,410	2,798	302	3,100	310	3,410
1986	0	29,023	2,945	2,353	324	2,677	268	2,945
1987	0	29,449	3,390	2,765	317	3,082	308	3,390
1988	0	29,070	2,985	2,372	342	2,714	271	2,985

(1) 1966 THROUGH 1982 ESTIMATED TO BE 9% OF TOTAL DISTRICT IMPORTS

(2) 1966 THROUGH 1982 ESTIMATED TO BE 80.2% OF TOTAL DELIVERIES TO WATERSHED

(3) 1966 THROUGH 1982 ESTIMATED TO BE 10.7% OF TOTAL DELIVERIES TO WATERSHED

(4) LOSS = 10% OF USE

TABLE B-6

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

RANCHO CALIFORNIA WATER DISTRICT
Quantities in Acre Feet

	PRODUCTION					USE						RECLAIMED WASTE WATER		
	LOCAL			IMPORT	TOTAL	AG	COMM	DOM	SMR RELEASE	LOSS*	TOTAL	REUSE IN SMRW	EXPORT	RECHARGED
WATER YEAR	WELLS IN GWA	WELLS OUT GWA	VAIL DRAFT											
1966		0	185	0										
1967	4,288	0	1,136	0	5,424						5,424	0	0	0
1968	5,100	0	398	0	5,498						5,498	0	0	0
1969	3,617	0	697	0	4,314						4,314	0	0	0
1970	6,721	0	840	0	7,561						7,561	0	0	0
1971	7,960	0	203	0	8,163						8,163	0	0	0
1972	8,369	0	1,541	0	9,910						9,910	0	0	0
1973	7,726	0	524	0	8,250						8,250	0	0	0
1974	10,163	0	1,066	0	11,229						11,229	0	0	0
1975	10,357	0	369	0	10,726						10,726	0	0	0
1976	11,809	0	50	119	11,978						11,978	0	0	0
1977	10,522	0	0	1,845	12,367						12,367	0	0	0
1978	8,930	0	0	5,774	14,704						14,704	0	0	0
1979	11,371	0	0	7,009	18,380						18,380	0	0	0
1980	12,621	0	0	10,126	22,747						22,747	0	0	0
1981	15,612	0	0	15,282	30,894						30,894	0	0	0
1982	12,631	0	0	13,378	26,009						26,009	0	0	0
1983	16,577	98	0	5,752	22,427						22,427	0	0	0
1984	25,660	4	0	6,716	32,380						32,380	0	0	0
1985	24,373	0	0	7,158	31,531						31,531	0	0	0
1986	26,997	0	0	11,174	38,171						38,171	0	0	0
1987	33,735	0	0	7,564	41,299						41,299	48	0	0
1988	21,367	0	0	17,854	39,221						39,221	82	0	0

* LOSS = TOTAL PRODUCTION LESS TOTAL USE

TABLE B-7

SANTA MARGARITA RIVER WATERSHED
ANNUAL WATER PRODUCTION AND USE

CAMP PENDLETON
Quantities in Acre Feet

	PRODUCTION			USE						RECLAIMED WASTE WATER		
WATER YEAR	AG	CAMP SUPPLY	TOTAL	AGRICULTURE(1) IN-SMRW	AGRICULTURE(1) OUT-SMRW	CAMP SUPPLY(2) IN-SMRW	CAMP SUPPLY(2) OUT-SMRW	TOTAL EXPORT	TOTAL* IN-SMRW	RECHARGED IN-SMR(3)	IMPORT (4) RECHARGED IN SMRW	TOTAL RECHARGED IN SMRW
1966	1,101	4,692	5,793	429	672	2,064	2,628	3,299	2,494	919	974	1,893
1967	796	4,903	5,699	310	486	2,157	2,746	3,231	2,468	914	1,243	2,156
1968	986	5,046	6,032	385	601	2,220	2,826	3,427	2,605	866	1,214	2,080
1969	940	4,959	5,899	367	573	2,182	2,777	3,350	2,549	1,019	1,170	2,189
1970	1,106	5,633	6,739	431	675	2,479	3,154	3,829	2,910	1,032	1,113	2,145
1971	819	5,330	6,149	319	500	2,345	2,985	3,484	2,665	921	1,090	2,011
1972	817	5,323	6,140	319	498	2,342	2,981	3,479	2,661	900	1,168	2,068
1973	1,003	5,121	6,124	391	612	2,253	2,868	3,480	2,644	949	1,187	2,137
1974	909	5,202	6,111	355	554	2,289	2,913	3,468	2,643	915	1,140	2,055
1975	757	4,593	5,350	295	462	2,021	2,572	3,034	2,316	989	1,530	2,519
1976	885	5,384	6,269	345	540	2,369	3,015	3,555	2,714	949	1,497	2,447
1977	994	4,506	5,500	388	606	1,983	2,523	3,130	2,370	942	1,416	2,358
1978	176	5,177	5,353	69	107	2,278	2,899	3,006	2,347	1,164	1,283	2,446
1979	1,070	7,213	8,283	417	653	3,174	4,039	4,692	3,591	1,065	1,427	2,493
1980	835	5,495	6,330	326	509	2,418	3,077	3,587	2,743	1,101	1,405	2,506
1981	1,464	5,240	6,704	571	893	2,306	2,934	3,827	2,877	1,119	1,249	2,368
1982	1,447	5,024	6,471	564	883	2,211	2,813	3,696	2,775	982	1,273	2,254
1983	942	4,215	5,157	367	575	1,855	2,360	2,935	2,222	1,252	1,242	2,494
1984	1,078	4,501	5,579	420	658	1,980	2,521	3,178	2,401	1,323	1,120	2,443
1985	1,069	4,764	5,833	417	652	2,096	2,668	3,320	2,513	1,419	1,200	2,619
1986	953	4,807	5,760	372	581	2,115	2,692	3,273	2,487	1,259	981	2,240
1987	1,098	4,838	5,936	428	670	2,129	2,709	3,379	2,557	1,367	1,799	3,166
1988	1,223	5,944	7,168	477	746	2,616	3,329	4,075	3,093	1,523	1,872	3,396

* Assumes No Losses

(1) Agricultural water use is divided with 39% used inside the SMRW and 61% used outside

(2) Camp Supply water use is divided with 44% used inside the SMRW and 56% used outside

(3) Wastewater Recharged in SMRW equals effluent from Plants 3, 8 and 13 (partial).

(4) Wastewater Import Recharged in SMRW equals effluent from Plant 1 plus the portion of the effluent from Plant 2 returned to the SMRW via Pond 2 plus the portion of the effluent from Plant 13 not included in (3).
No record available for effluent from Plant 2 returned to SMRW for 1966-1974 and after 1982.
Calculation of import recharged in Santa Margarita River from Plant 2 is based on zero when no record is available.

SANTA MARGARITA RIVER WATERSHED

ANNUAL WATERMASTER REPORT

WATER YEAR 1988-89

APPENDIX C

SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS

MARCH 1990

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS
WATER YEAR 1988-89

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED
AGUANGA GROUNDWATER AREA				
Clawson, Gary A. 714-925-1765 714-925-2636(Sundance)	43425 Sage Road Aguanga, CA 92302	917-050-09 917-050-07 581-07-13 581-07-14 581-15-13 581-15-16	309.74	Not Reported (250 e)
Cottle, Thomas C.	42551 Hwy 79 Aguanga, CA 92302	583-040-28 583-040-29 583-040-024-6 583-040-025-7 583-040-026-8 583-040-027-9	25.52 19.89 23.48 23.12 23.16 22.64	61 (Total)
Strange, Owen W. & Elizabeth G. Trustees, Strange Living Trust of 4-15-88 756-3437	m/t P.O. Box 1974 Rancho Santa Fe, CA 92067 43023 Hwy 79 42551 Hwy 79 Aguanga	583-040-22 583-040-21 583-130-001-3 583-120-001-2 583-060-003-9	97.78 13.45 80 120 41.6	101 (Total)
Mason, Chester M. Family Trust 714-658-8424	m/t 37525 Los Alimos Murietta, CA 92362 44201 Hwy 79 Aguanga	583-120-84	179.39	40
Mason, Chester W. and George Mason	m/t 28 Buccaneer Wy Coronado, CA 92118 44735 Hwy 79 Aguanga	583-140-15 583-150-01	40 80	0 0
Benjamin & Ione Levin	m/t 19021 Sunrise Place Yorba Linda, CA 92686 45455 Hwy 371 Aguanga	583-240-01	12.74	Not Reported (10 e)
Vrieling, Gerrit J. & Betty J.	m/t 15015 Cheshire La Mirada, CA, 90638 45203 Hwy 371 Aguanga	583-240-22	10	9
Harris, Homer N. & Dolores G.	44444 Sage Road Aguanga, CA 92302	581-16-14	17.73	10
Missionary Foundation, Inc.	m/t 5169 Harriett Cir Riverside, CA 92505 44200 Sage Rd Aguanga, CA 92302	581-17-004 581-18-009 581-19-001 581-120-006	310 120 320 200	105 110 100 20
TOTAL ACRES IRRIGATED				816

 e = estimated

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS
WATER YEAR 1988-89

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED
TEMECULA CREEK ABOVE AGUANGA GROUNDWATER AREA				
Agri-Empire	m/t P. O. Box 398 San Jacinto, Ca 92383	113-090-05	541.22	140
Agri-Empire	m/t P. O. Box 398 San Jacinto, Ca 92383	113-090-01	377.07	25
Agri-Empire	m/t P. O. Box 398 San Jacinto, Ca 92383	113-140-04 113-140-05 113-140-06	503.24 45.09 93.94	250 45 93.94
Bergman, Arlie W. and Coral R.	37126 Hwy 79 Aguanga, Ca 92302	113-140-01 113-140-02	358.62 38.75	Not Reported Not Reported (350 e)
Agri-Empire	m/t P. O. Box 398 San Jacinto, Ca 92383	113-140-03	196.54	120
Bergman, Arlie W. and Coral R.	37126 Hwy 79 Aguanga, Ca 92302	114-020-12 114-030-10	108.78 41.51	Not Reported Not Reported (60e)
Agri-Empire	m/t P. O. Box 398 San Jacinto, Ca 92383	114-030-08	331.79	70
TOTAL ACRES IRRIGATED				1154

 e = estimated

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS
WATER YEAR 1988-89

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED
ANZA VALLEY				
Agri-Empire	m/t P.O. Box 398 San Jacinto, CA 92383	575-050-44 575-050-45	14.36 14.36	0 0
Agri-Empire	m/t P.O. Box 398 San Jacinto, CA 92383	575-110-21	143.75	143.75
Agri-Empire	m/t 630 W. 17th St. San Jacinto, CA 92383	575-110-27	54.45	0
Agri-Empire	m/t P.O. Box 398 San Jacinto, CA 92383	575-310-2 575-310-11 575-310-12 575-310-13 575-310-27 575-120-12 575-080-14 575-080-15 575-080-17 575-080-19 575-080-21 575-080-22 575-080-24 575-080-27	39.09 80 80 17.46 17.46 88.03 9.92 4.35 9.75 10.13 31.29 20 20 20	39.09 0 0 17.46 17.46 88.03 9.92 4.35 9.75 10.13 20 20 20 20
Agri-Empire	m/t P.O. Box 398 San Jacinto, CA 92383	576-060-33 576-060-37 576-070-03 576-070-05	79.45 41.41 80 116.57	79.45 41.41 80 116.57
Greenwald, Alvin G. 213-653-3973	m/t Greenwald, Baim & Hendler 6300 Wilshire Blvd 1200 Los Angeles, CA, 90048	573-180-01	156.38	156
TOTAL ACRES IRRIGATED				893

 e = estimated

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS
WATER YEAR 1988-89

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED
MURRIETA-TEMECULA GROUNDWATER AREA				
Poyorena, Thomas J. 714-678-1229 714-678-3468 (business)	m/t 22145 Grand Ave Wildomar, CA 92395 21853 Palomar St.	369-510-22	18.79	14
Murrieta Stud	m/t P. O. Box 1187 Arcadia, CA 91006			
	42670 Juniper	906-240-006	38.18	32
	42680 Kalmia	906-250-013	53.83	50
	42660 Ivy	909-140-001	20	18
	Murrieta, CA 92362			
Mitchell Stock Farm, Inc. 714-677-6838	m/t 42125 Elm St Murrieta, CA. 92362 25849 Washington Ave Murrieta, CA 92362	909-100-007	40	11.5
Jane M. Delaney 714-677-7057	m/t 41820 Hawthorne Murrieta, CA 92362 42551 Guava St Murrieta, CA 92362	909-090-034	12.36	Not Reported (10e)
International Immunology	m/t 25549 Adams Ave Murrieta, CA 92362	909-060-020	9.33	0
		909-170-010	9.55	0
		909-170-011	27.77	10
Temecula Ranchos c/o Milo D. Rowell 209-264-5768	m/t 2100 Tulare St #405 Fresno, CA 93271 45055 Rio Linda Rd Temecula, CA	926-200-06	429.43	Not Reported
		926-430-06	48.92	Not Reported (120e)
Lassalette, Henry J. FI & McMillan, Richard C & McMillian, Gary L	c/o McMillan Farm Mgt. 29379 Rancho Cal. Rd #201 Temecula, CA 92390	942-180-02	40.28	161 (Total)
		942-240-03	40.83	
		942-240-04	40.83	
		942-240-05	39.31	
TOTAL ACRES IRRIGATED				426

 e = estimated

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS
WATER YEAR 1988-89

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED
DOWNSTREAM OF MURRIETA-TEMECULA GROUNDWATER AREA				
DE LUZ CREEK				
Ezor, Albert E. and Sylvia L.	m/t 31421 Cavendish Dr. Los Angeles, Ca 90064	101-271-17	47.79	22
Woosley, Donna J. 728-7422	Rt 6, Box 49-B Fallbrook, Ca 92028 40710 DeLuz Rd, Fbk	101-271-13	42.28	8
Durling, Robert G. and Eleanor J.	m/t 4040 DeLuz Rd Fallbrook, Ca 92028 40401 DeLuz Rd	101-271-08	25.60	9.75
Durling, R.G. & Eleanor and Don & Margaret	41500 DeLuz Road Fallbrook, CA 92028	101-210-28-00 101-180-05-00	260 Total	20
Matthews, Richard R. Baum, Mary J.	7950 S. Alamedas St Huntington Park, Ca 90256 m/t Stephen Lopardo, Esq. POBox 427, Fbk.92028	101-210-53	50.44	12
Durlings Nursery (Corporation)	41500 DeLuz Rd Fallbrook, Ca 92028	101-210-42	53.14	53
Raley, Harold R and Mary E.	41321 DeLuz Creek Rd Fallbrook, Ca 92028	101-210-11	15.23	9
Herbel, John & Jeraldine Whitehurst, David C. and Helen P.	m/t 24861 Alicia Pkwy No. C-304 Laguna Hills, Ca 92653	101-210-12	30.28	30
Durling, Don R. and Margaret A. R. G & Eleanor	41500 DeLuz Rd Fallbrook, Ca 92028	101-210-41	15.16	13
Wagner, Wilbur A. & Shirley A. HWJT	m/t 14539 San Dieguito La Mirada, CA 90638 DeLuz Road, Fbrk.	101-210-23 101-210-22	17.19 6	18
TOTAL ACRES IRRIGATED				195

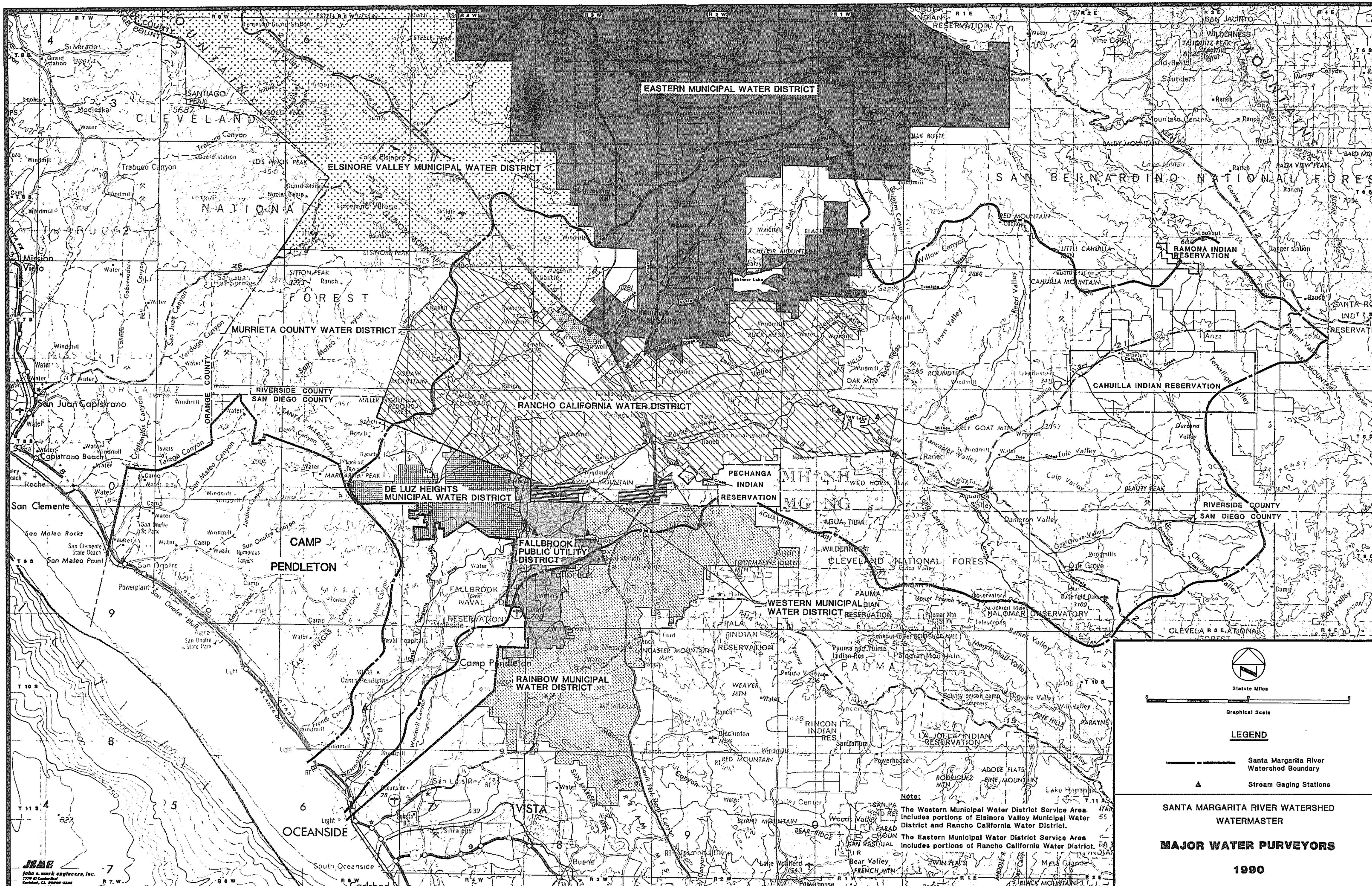
 e = estimated

APPENDIX C

SANTA MARGARITA RIVER WATERSHED
SUBSTANTIAL USERS OUTSIDE ORGANIZED WATER SERVICE AREAS
WATER YEAR 1988-89

CURRENT OWNER	ADDRESS	ASSESSOR PARCEL NO.	PARCEL ACREAGE	ACRES IRRIGATED
SANDIA CREEK				
Cal June, Inc. 714-637-1873	P. O. Box 9551 No. Hollywood, CA 91609 40376 Sandia Creek, Fbrk	101-360-40	126.32	126
SANTA MARGARITA RIVER				
Leland Henderson	m/t Margarita Land & Development PO Box 584, Fbk.92028 47981 & 47991 Willow Glen Rd Temecula, CA 92390	918-040-10 918-060-17	Total 240	20

 e = estimated


EASTERN MUNICIPAL WATER DISTRICT
ELSINORE VALLEY MUNICIPAL WATER DISTRICT
MURRIETA COUNTY WATER DISTRICT
RANCHO CALIFORNIA WATER DISTRICT
DE LUZ HEIGHTS MUNICIPAL WATER DISTRICT
FALLBROOK PUBLIC UTILITY DISTRICT
RAINBOW MUNICIPAL WATER DISTRICT
WESTERN MUNICIPAL WATER DISTRICT
PECHANGA INDIAN RESERVATION
CAHUILLA INDIAN RESERVATION
RAMONA INDIAN RESERVATION
CAMP PENDLETON
RIVERSIDE COUNTY
SAN DIEGO COUNTY
ORANGE COUNTY
SAN BERNARDINO NATIONAL FOREST
CLEVELAND NATIONAL FOREST
San Clemente
San Juan Capistrano
Mission Viejo
OCEANSIDE
VISTA
Fallbrook
Sun City
Carlsbad
Statute Miles
Graphical Scale
LEGEND
Santa Margarita River Watershed Boundary
Stream Gaging Stations
Note:
The Western Municipal Water District Service Area includes portions of Elsinore Valley Municipal Water District and Rancho California Water District.
The Eastern Municipal Water District Service Area includes portions of Rancho California Water District.
SANTA MARGARITA RIVER WATERSHED WATERMASTER
MAJOR WATER PURVEYORS
1990
JSME
John S. Murk Engineers, Inc.