

WESTERN-SAN BERNARDINO WATERMASTER
FOR
WESTERN MUNICIPAL WATER DISTRICT, et al
vs.
EAST SAN BERNARDINO COUNTY WATER DISTRICT, et al
CASE NO. 78426 - COUNTY OF RIVERSIDE

ANNUAL REPORT

OF THE

WESTERN-SAN BERNARDINO WATERMASTER

FOR
CALENDAR YEAR 1983



WESTERN-SAN BERNARDINO WATERMASTER

FOR
WESTERN MUNICIPAL WATER DISTRICT, ET AL
VS.
EAST SAN BERNARDINO COUNTY WATER DISTRICT, ET AL
CASE NO. 78426 - COUNTY OF RIVERSIDE

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August 1, 1984

TO: Clerk of Superior Court of Riverside County and All Parties

RE: Watermaster Report for Calendar Year 1983

Gentlemen:

We have the honor of submitting the Annual Report of the Western San Bernardino Watermaster for the Calendar Year 1983.

The provisions of Paragraph III and Paragraphs V through XII of the Judgment in Case No. 78426, entered April 17, 1969, became effective from and after January 1, 1971. The Judgment requires that the Watermaster report to the Court and to each Party in writing not more than seven months after the end of each year, or within such other time as the Court may fix, on each determination made by said Watermaster pursuant to the Judgment and such other items as the Parties may mutually request or the Watermaster may deem to be appropriate.

Accordingly, this report is submitted herewith under date of August 1, 1984, and presents the findings of the Watermaster for Calendar Year 1982 and summarizes the five-year period 1978 through 1982.

Provisions of the Judgment require that Western and San Bernardino Valley provide groundwater replenishment if certain base rights are exceeded. The determination of replenishment obligations for the five-year period 1978 through 1982 indicates that neither Western nor San Bernardino Valley is required to provide additional imported water for replenishment.

We, and each of us, hereby certify that this is a true and correct Report of the Watermaster work performed by us and under our supervision during 1983, pursuant to the requirements of the Judgment.

Respectfully submitted,

WESTERN - SAN BERNARDINO WATERMASTER

By


James C. Hanson


Donald L. Harriger

**WESTERN-SAN BERNARDINO WATERMASTER
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FOR

CALENDAR YEAR 1983

AUGUST 1, 1984

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CHAPTER I
INTRODUCTION

CHAPTER I INTRODUCTION

Provisions of the physical solution set forth in the Judgment in Case No. 78426, Western Municipal Water District of Riverside County, et al., vs. East San Bernardino County Water District, et al., entered April 17, 1969, in the Superior Court of the State of California in and for the County of Riverside, established the entitlements and obligations of the two major water districts overlying the San Bernardino, Riverside, and Colton ground water basins, namely San Bernardino Valley Municipal Water District (SBVMWD) and Western Municipal Water District of Riverside County (WMWD).

The Court appointed a Watermaster, composed of two persons, to administer and enforce the provisions of the Judgment and to report annually to the Court and the parties. James C. Hanson and Donald L. Harriger were appointed pursuant to nominations by the SBVMWD and WMWD, respectively.

The provisions of the Judgment became effective January 1, 1971; however, progress reports were filed with the Court for the calendar years 1969, 1970, and 1971 reporting on the progress of verifications and initial determinations required by the Judgment. The recordation filings obtained from the State Water Resources Control Board and required for determination of annual extractions from the various basins are not available to the Watermaster until seven or eight months after the end of the calendar year for which the filings are made. This report for the calendar year 1983 includes a description and summary of the work completed during 1983 and also includes the annual accounting of extractions from the San Bernardino, Colton, and Riverside Basin areas and the distribution of such extractions to the various service areas for the calendar year 1982. The scope of this report for 1983 and a history of the litigation leading to the physical solution settling the case are set forth in some detail in succeeding paragraphs.

Scope of Report

Paragraph XIII(e) of the Judgment requires the Watermaster to report to the Court and each Party not more than seven months after the end of each year.

The Annual Reports of the Western-San Bernardino Watermaster for the calendar years 1969 thru 1971 reported on the verifications and initial determinations required by

the Judgment including the safe yield of the San Bernardino Basin Area and the determination of the Adjusted Base Rights of the Plaintiffs. Beginning with the 1972 Report, the Watermaster began the annual accounting in accordance with the Judgment provisions. This report presents the activities of the Watermaster for the calendar year 1983 together with the annual accounting of extractions and deliveries for the calendar year 1982.

History of Litigation

Before the turn of the century, the various water service organizations diverting surface water from the Santa Ana River and pumping from the underground water basins supplied by the underflow of the Santa Ana River and its tributaries have from time to time engaged in litigation over water rights within the San Bernardino, Riverside, and Orange County areas.

On October 18, 1963, the Orange County Water District (OCWD) filed suit against the City of Chino and others, seeking an adjudication of water rights against more than 2,500 water users in the Santa Ana River Watershed tributary to Prado Dam. Included among the defendants were the Chino Basin Municipal Water District (CBMWD), Western Municipal Water District of Riverside County (WMWD), and San Bernardino Valley Municipal Water District (SBVMWD). Thirteen cross complaints were filed in 1968, which extended the adjudication to more than 1,500 water users in the area downstream from Prado Dam, which included OCWD. Thus, some 4,000 parties were involved in the suit, including the three upper districts and OCWD.

With a case of this magnitude, it became obvious that every effort should be made to arrive at an equitable settlement and a physical solution in order to obviate the enormous expense and unwieldy litigation which would be involved if the case were brought to trial.

Attorneys and engineers representing the four major districts and a large number of the defendants worked diligently in order to effect a settlement and some type of physical solution which would prove acceptable to all parties.

As a result, in May of 1968, an outline of a proposal for settlement of the case was prepared and a committee, composed of attorneys and engineers for the parties, commenced preparation of the settlement documents.

In June, 1968, the Court held a hearing on the motions which it had received requesting a preliminary injunction and an order of reference. The plaintiff OCWD, however, was concerned with the necessity of bringing the case to trial within the statutory

period, and therefore, on July 15, 1968, submitted a motion to set the complaint in the case for trial. On October 15, 1968, the trial was commenced and adjourned after a half day of testimony on behalf of the Plaintiff.

Shortly thereafter, the parties filed settlement documents with the Court, including a stipulation for Judgment, and on April 17, 1969, the Court entered the stipulated Judgment, thus terminating the many years of controversy over water rights along the Santa Ana River involving the issues and parties included in the case of Orange County Water District vs. City of Chino, et al.

During the settlement negotiations, it became apparent that the San Bernardino Valley entities would participate only in a part of the Orange County settlement, in the belief that they had no responsibility for the waters of the Santa Ana River downstream from the point of rising water at Riverside Narrows. Therefore, the settlement of the OCWD action established an obligation of SBVMWD for the delivery of 15,250 acre-feet of Base Flow annually at the Riverside Narrows, subject, however, to adjustment for quality.

As a result of the Orange County settlement, it became apparent that a second settlement would be necessary between the Riverside and San Bernardino entities who diverted water from the Santa Ana River surface and ground water sources supplied by the Santa Ana River and tributaries above the Riverside Narrows.

For some time, increasing withdrawals from ground water resources above Bunker Hill Dike (San Jacinto Fault), which supplied in large part the water requirements of San Bernardino and Redlands as well as the Riverside exporters, had been the cause of concern to the exporters in Riverside County. As a result, on March 1, 1963, a suit was filed by WMWD and others, seeking a general adjudication of water rights within the San Bernardino Basin Area. This suit preceded the filing of the Orange County suit, and it was decided that this suit could well be used as a vehicle for a physical settlement between Riverside and San Bernardino interests.

Following extensive negotiations between Riverside and San Bernardino interests, a physical settlement was completed and documents delineating the settlement were entered in the Superior Court of the State of California in and for the County of Riverside on April 17, 1969, being Judgment No. 78426.

Summary of Judgment No. 78426

The physical solution as agreed upon and as set forth in the Judgment states that all instructions and orders of the Court are to be administered and enforced by a Watermaster consisting of a committee of two persons, one of whom shall be nominated by SBVMWD and the other by WMWD and appointed by the Court.

The Judgment directed the Watermaster to make certain initial determinations and to verify the amounts of water diverted and pumped from streams and ground water basins embraced by the Judgment where such amounts had been assumed for purposes of the Judgment. Upon completion of the verifications and initial determinations compliance with the Judgment requires an annual accounting of the ground and surface water production within the various basins in order that the Watermaster may properly report to the Court the comparisons of the year-by-year operations with the verified entitlements and an accounting as to the replenishment obligations or credits indicated by such comparison. The items verified or determined initially and to be reported on annually are as follows:

<u>Watermaster Determination Required by Judgment</u>	<u>Verified for Five Calendar Years Ending with 1963</u>	<u>To Be Determined Annually From and After 1971</u>
1. Total actual average annual extractions from the San Bernardino Basin Area by entities other than plaintiffs for use within San Bernardino County.	X	X
2. The natural safe yield of the San Bernardino Basin Area based upon the cultural conditions equivalent to those existing during the five-calendar-year period ending with 1963.	1	1
3. The annual "adjusted right" of each Exporter (Plaintiff) to extract water from the San Bernardino Basin Area based upon the percentage of the natural safe yield determined by the methods used in Table B-2 of the Judgment.	X	
4. The annual production by plaintiffs for comparison with adjusted right determined in item 3 next preceding.		X

<u>Watermaster Determination Required by Judgment</u>	<u>Verified for Five Calendar Years Ending with 1963</u>	<u>To Be Determined Annually From and After 1971</u>
5. Annual discharge from the City of San Bernardino Water Quality Control Plant to the river as to quantity and quality.	2	X
6. Average annual extractions from the Colton Basin Area for use outside San Bernardino Valley.	X	X
7. Average annual extractions from the Riverside Basin Area within San Bernardino County for use outside San Bernardino Valley.	X	X
8. The average static water levels within the Colton Basin and Riverside Basin within San Bernardino County as determined by the three wells listed in Judgment.	3	X
9. The average annual extractions from that portion of the Riverside Basin Area in Riverside County which are tributary to the Riverside Narrows for use in Riverside County.	X	X
10. Annual amounts of water extracted for use within Western from the San Bernardino Basin and the area downstream therefrom to the Riverside Narrows which have been exported for use outside the area tributary to the Riverside Narrows.	X	X
11. Annual amount of water extracted for use within San Bernardino County from the San Bernardino Basin Area and Colton Basin Area for use on lands which are not tributary to the Riverside Narrows.	4	X

<u>Watermaster Determination Required by Judgment</u>	<u>Verified for Five Calendar Years Ending with 1963</u>	<u>To Be Determined Annually From and After 1971</u>
12. Reduction in return flow now contributing to base flows at Riverside Narrows which results from conversion of agriculture using water within Western to domestic or other uses connected to sewage or waste disposal system, the effluent from which is not tributary to the rising water at Riverside Narrows.	5	X

¹ Determined initially by supplemental order of the Court to be 232,100 acre-feet per annum. Such amount is subject to the continuing jurisdiction of the Court.

² Assumed for purposes of Judgment to be 16,000 acre-feet annually, verification not required.

³ Established at 822.04 feet above sea level, based on fall season of 1963.

⁴ Revised by Watermaster during preparation of the Annual Report for calendar year 1974.

⁵ Average for 5 years ending with 1963 established by Judgment to be 3,916 acres; verification not required.

The foregoing initial determinations and verifications required by the Judgment have been completed and were reported in the *Annual Report of the Western-San Bernardino Watermaster for Calendar Years 1971 and 1972*.

CHAPTER II
WATERMASTER ACTIVITIES

CHAPTER II WATERMASTER ACTIVITIES

The Watermaster activities have included principally the collection, tabulation, and analysis of data, the maintenance of records, and the preparation of the annual report which presents the determinations and findings of the Watermaster as required by the Judgment.

Ground Water Extractions

The most important data required for implementing the provisions of the Judgment are the annual tabulations of the ground water extractions and surface water diversions made within the San Bernardino, Colton, and Riverside Basin Areas. These extractions and diversions were initially determined and verified for the 1959-63 Base Period and were assembled and summarized in the Watermaster Report on Verification of Extractions, Volume 1 consisting of three parts, Volumes 2, 3, and 4 for the San Bernardino Basin Area, Colton Basin Area, Riverside Basin Area in San Bernardino County, and Riverside Basin Area in Riverside County, respectively. A program has been established for obtaining and tabulating annual notices of groundwater extractions and surface diversions filed with the State Water Resources Control Board. These data are verified by the Watermaster and provide the basis for the annual accounting of extractions as required by the Judgment. Such extractions have been determined for the calendar year 1982 and are summarized herein. Listings of the verified extractions by each individual owner for the calendar year 1982 are assembled in Report of Watermaster, Volumes 1-1982, 1A-1982, 1-1982, 3-1982, and 4-1982.

Distribution of Extractions

In addition to the annual accounting of the extractions from each Basin, the Judgment also requires a determination as to the distribution of such extractions to the various service areas.

The distribution of verified extractions from the Colton and Riverside Basin Areas and the distribution of the Plaintiffs' extractions from the San Bernardino Basin Area were determined initially for the 1959-63 Base Period, and were reported in Report of Watermaster, Volume 5, entitled *Distribution of Extractions*. Such distribution has been

determined for the calendar year 1982 and is summarized herein. Detailed work sheets are assembled in Report of Watermaster, Volume 5-1982.

The Watermaster is also required to determine the amount of water extracted from each of the various Basin Areas and delivered to areas not tributary to Riverside Narrows. Such amounts fall into two classifications, described as follows:

- 1) Extractions from the San Bernardino Basin Area, Colton Basin Area, and Riverside Basin Area for use within Western on lands not tributary to the Riverside Narrows.
- 2) Extractions from the San Bernardino Basin Area and Colton Basin Area within the San Bernardino Valley Municipal Water District for use on lands not within Western nor tributary to the Riverside Narrows.

The amount of water extracted and delivered under Classification No. 1 was determined initially for the 1959-63 Base Period and was reported in the Report of Watermaster, Volume 6, dated June, 1972. The amount determined for the calendar year 1982 is summarized herein. Detailed work sheets are assembled in the Report of Watermaster, in Volume 6-1982.

The amount of water extracted and delivered under Classification No. 2 was determined for the 1959-63 Base Period and the additional years 1970 and 1971 and was published in the Report of Watermaster, Volume 7, dated February, 1973. The amount determined for the calendar year 1982 is summarized herein. Detailed work sheets are assembled in the Report of Watermaster, Volume 7-1982.

Ground Water Level Measurements

Ground water surface elevation data required for three key wells located in the Colton Basin Area and the Riverside Basin Area within San Bernardino County, are currently furnished by the City of Riverside and Western Municipal Water District (WMWD).

These data are shown in both tabular and graphical form for the calendar years 1963 thru 1982 in Volume 8 of previous Watermaster reports. The determination for the calendar year 1983 is shown in the Report of Watermaster, Volume 8-1982.

Stream Flow and Water Quality Measurements

The program of stream flow measurements conducted by the United States Geological Survey (USGS) in cooperation with the Watermaster has continued to provide basin inflow and stream diversion data.

The Western-San Bernardino Watermaster participates with the Santa Ana River Watermaster in part of the expense of the cooperative program with the USGS on surface water gages and water quality monitors at various locations. These expenses are presented in reports filed by the Santa Ana River Watermaster. The costs incurred for stream flow data collected and analyzed by the USGS on behalf of the Western-San Bernardino Watermaster are set forth in Table No. 1.

Field Inspections

During the verification of the 1982 extractions from the San Bernardino, Colton, and Riverside Basin Areas, many of the pumping facilities installed for extractions of groundwater and diversion of surface water were visited by the Watermaster or his representatives. Contact was made with many of the smaller extractors to review their methods of computing production for annual reports filed with the State Water Resources Control Board.

During the initial verification program in the San Bernardino Basin Area, it was found that many groundwater producers and several diverters of surface water did not file their extractions and diversions with the State Water Resources Control Board. This condition was found to exist in many locations during the current year, which again necessitated inspection trips and contacts with various owners by the Watermasters or their representatives.

TABLE NO. 1
COSTS TO THE PARTIES FOR USGS
SURFACE WATER MEASUREMENTS USED BY
WESTERN - SAN BERNARDINO WATERMASTER
October 1, 1983 to September 30, 1984

<u>Plunge Creek near East Highland</u>	\$ 7,040
<u>Waterman Canyon at Arrowhead Springs</u>	3,200
<u>Devil Canyon Creek near San Bernardino</u>	3,200
<u>East Twin Creek near Arrowhead Springs</u>	3,200
<u>City Creek near Highland</u>	3,200
<u>San Timoteo Creek near Loma Linda</u>	3,200
<u>Lytle Creek at Fontana Union Head Gates</u>	
Weir No. 1 – Discharge Upper Power House	1,920
Weir No. 2 – Infiltration Line	1,920
Weir No. 3 – Head Gate Diversion	1,920
Weir No. 4 – Breed Line Diversion	1,920
20-ft. Weir – Return to Creek	1,920
<u>Southern California Edison Lower Power House on Lytle Creek</u>	
20-ft. Weir – Discharge Lower Power House	1,920
Parshall Flume – Return to Creek from Afterbay	1,920
Fontana Diversion (20-ft. Weir, West)	<u>1,920</u>
SUBTOTAL FOR PARTIES AND WATERMASTER	\$38,400
United States Geological Survey	<u>\$38,400</u>
TOTAL	\$76,800

CHAPTER III
EXTRACTIONS FROM THE
SAN BERNARDINO BASIN AREA

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SAN BERNARDINO BASIN AREA

The extractions from the San Bernardino Basin Area have been classified as first, those extractions and diversions for use by other than Plaintiffs and second, those extractions and diversions for use by Plaintiffs.

The total verified extractions by other than Plaintiffs for calendar years 1971 through 1982, together with five-year totals, are shown on Table No. 2. The individual work sheets for the 1982 verifications are included in Report of Watermaster, Volume 1-1982.

The total verified extractions from the San Bernardino Basin Area by Plaintiffs for the calendar years 1971 through 1982 are shown on Table No. 3. The individual work sheets for the 1982 verifications and distribution of extractions by Plaintiffs are included in Report of Watermaster, Volume 1A-1982 and Volume 5-1982.

For reference, the Adjusted Base Rights of other than Plaintiffs and Plaintiffs are also shown on Tables 2 and 3.

Paragraph VII of the Judgment entitled *Water Discharged Across Bunker Hill Dike* recites as follows:

San Bernardino Valley shall keep in force an agreement with the City of San Bernardino that the present annual quantity of municipal sewage effluent discharged across Bunker Hill Dike, assumed for all purposes herein to be 16,000 acre-feet annually, shall be committed to the discharge of the downstream obligations imposed on San Bernardino Valley under this Judgment or under the Orange County Judgment, and that such effluent shall comply with the requirements of the Santa Ana River Basin Regional Water Quality Control Board in effect December 31, 1968.

The Judgment does not charge the Watermaster with verification of the 16,000 acre-foot amount, and the enforcement of the quality requirements is considered to be the responsibility of the California Regional Water Quality Control Board-Santa Ana Region.

Prior to December, 1972, sewage effluent was discharged across the Bunker Hill Dike via Warm Creek (Plant No. 1) and the Santa Ana River (Plant No. 2). With the completion of the new Water Quality Control Plant at the "E" Street site (Plant No. 2) the total effluent discharge of the City of San Bernardino Water Quality Control Plant accrues to the Santa Ana River immediately upstream from the "E" Street Bridge. In January,

1973, the Watermaster in cooperation with the USGS began operation of a gaging station on the plant outfall to obtain a continuous record of the quantity and mineral quality of the sewage effluent discharged to the Santa Ana River. This station has been discontinued and Watermaster now relies on the City of San Bernardino for these data.

The discharge to the Santa Ana River upstream from the Bunker Hill Dike has been determined by the Watermaster as shown on the following table:

<u>Calendar Year</u>	<u>Plant No. 1 (Acre-Feet)</u>	<u>Plant No. 2 (Acre-Feet)</u>	<u>Total (Acre-Feet)</u>
1971	5,705	8,925	14,630
1972	6,784	9,963	16,747
1973	0	17,640	17,640
1974	0	17,070	17,070
1975	0	16,820	16,820
1976	0	17,530	17,530
1977	0	17,720	17,720
1978	0	18,690	18,690
1979	0	19,350	19,350
1980	0	20,670	20,670
1981	0	21,120	21,120
1982	0	24,493	24,493

TABLE NO. 2
VERIFIED EXTRACTIONS FROM THE SAN BERNARDINO
BASIN AREA BY OTHER THAN PLAINTIFFS
 (All Values in Acre-Feet)

Calendar Year	Verified Extractions		Total	Adjusted Base Right
	By Owners Who Have Filed With SWRCB	By Owners Who Have Not Filed With SWRCB		
1971	154,836 ²	8,350 ²	163,186 ²	171,342 ¹
1972	159,628 ²	7,599 ²	167,227 ²	167,238
1973	152,604 ³	7,177 ³	159,781 ³	167,238
1974	153,099 ⁴	5,586 ⁴	158,685 ⁴	167,238
1975	147,199	4,482	151,681	167,238
1976	140,329 ⁵	3,988 ⁵	144,317 ⁵	167,238
1977	139,844	4,967	144,811	167,238
1978	132,439	4,601	137,040	167,238
1979	150,196	4,611	154,807	167,238
1980	153,918 ⁶	5,504	159,422 ⁶	167,238
1981	167,564	5,075	172,639	167,238
1982	147,609	4,790	152,399	167,238

¹Adjusted Base Right not effective until January 1, 1972; therefore, 1971 Base Right is as verified for five-year Base Period 1959-63.

²Amount corrected during verification of 1973 extractions.

³Amount corrected during verification of 1974 extractions.

⁴Amount corrected during verification of 1975 extractions.

⁵Amount corrected during verification of 1977 extractions.

⁶Amount corrected during verification of 1981 extractions.

Note: See Report of Watermaster, Volume 1.

TABLE NO. 2
VERIFIED EXTRACTIONS FROM THE SAN BERNARDINO
BASIN AREA BY OTHER THAN PLAINTIFFS
 (All Values in Acre-Feet)

Five-Year Period	Verified Extractions		Total	Adjusted Base Right
	By Owners Who Have Filed With SWRCB	By Owners Who Have Not Filed With SWRCB		
1971-75	767,366	33,194	800,560	840,294
1972-76	752,859	28,832	781,691	836,190
1973-77	733,075	26,200	759,275	836,190
1974-78	712,910	23,624	736,534	836,190
1975-79	710,007	22,649	732,656	836,190
1976-80	716,726	23,671	740,397	836,190
1977-81	743,961	24,758	768,719	836,190
1978-82	751,726	24,581	776,307	836,190

TABLE NO. 3
VERIFIED EXTRACTIONS FROM THE SAN BERNARDINO BASIN AREA
FOR USE BY PLAINTIFFS CLASSIFIED ACCORDING TO SERVICE AREA
 (All Values in Acre-Feet)

	Plaintiffs						Total
	City of Riverside (including those rights acquired as successor to the Riverside Water Company and the Gage Canal Company)	Riverside Highland Water Company	Agua Mansa Water Company and Meeks & Daley Water Co.	Regents of the University of California			
Total Extractions in San Bernardino Basin Area	52,199	4,294	7,833	536		64,862	
Adjusted Base Right ¹							
1971 Extractions	53,882	4,012	2,902	219		61,015	
1972 Extractions	45,694	4,532	3,527	239		53,992	
1973 Extractions	43,022	3,512	2,979	239		49,752	
1974 Extractions	43,367	4,088	4,504	267		52,226	
1975 Extractions	47,962	4,709	3,950	179		56,800	
Delivery to San Bernardino Basin Area	1,427	0	0	0		1,427	
Adjusted Base Right ¹							
1971 Extractions	98 ²	0	0	0		98 ²	
1972 Extractions	85	0	0	0		85	
1973 Extractions	156	0	0	0		156	
1974 Extractions	0	0	0	0		0	
1975 Extractions	0	0	0	0		0	
Delivery to Colton Basin Area and Riverside Basin Area in San Bernardino County	1,230	2,449	318	0		3,997	
Adjusted Base Right ¹							
1971 Extractions	669	2,388	383	0		3,440	
1972 Extractions	547	2,239	377	0		3,163	
1973 Extractions	512	1,751	250	0		2,513	
1974 Extractions	550	1,985	246	0		2,781	
1975 Extractions	498	2,002	168	0		2,668	
Delivery to Area Outside San Bernardino Valley	49,542	1,845	7,515	536		59,438	
Adjusted Base Right ¹							
1971 Extractions	53,115 ²	1,624	2,519	219		57,477 ²	
1972 Extractions	45,062	2,293	3,150	239		50,744	
1973 Extractions	42,354	1,761	2,729	239		47,083	
1974 Extractions	42,817	2,103	4,258	267		49,445	
1975 Extractions	47,464	2,707	3,782	179		54,132	

¹ Adjusted Base Right became effective on January 1, 1972; Base Right for Calendar Year 1971 is as shown in Table B-1 of the Judgment.

² 1971 amount corrected during verification of 1972 extractions.

Note: See Report of Watermaster, Volume 1A and Volume 5.

TABLE NO. 3
VERIFIED EXTRACTIONS FROM THE SAN BERNARDINO BASIN AREA
FOR USE BY PLAINTIFFS CLASSIFIED ACCORDING TO SERVICE AREA
 (All Values in Acre-Feet)

	Plaintiffs					Total
	City of Riverside (including those rights acquired as successor to the Riverside Water Company and the Gage Canal Company)	Riverside Highland Water Company	Agua Mansa Water Company and Meeks & Daley Water Co.	Regents of the University of California	Total	
Total Extractions in San Bernardino Basin Area	52,199	4,294	7,833	536	64,862	
Adjusted Base Right ¹	51,374	4,519	5,393	245	61,531	
1976 Extractions	50,999	3,583	4,220	87	58,889	
1977 Extractions	45,384	1,350	2,254	183	49,171	
1978 Extractions	52,377	3,369	3,930	83	59,759	
1979 Extractions	50,756	3,677	2,333	7	56,773	
1980 Extractions						
Delivery to San Bernardino Basin Area	1,427	0	0	0	1,427	
Adjusted Base Right ¹	0	0	0	0	0	
1976 Extractions	0	0	0	0	0	
1977 Extractions	646 ²	0	0	0	646 ²	
1978 Extractions	0	0	0	0	0	
1979 Extractions	0	0	0	0	0	
1980 Extractions	383	0	0	0	383	
Delivery to Colton Basin Area and Riverside Basin Area in San Bernardino County	1,230	2,449	318	0	3,997	
Adjusted Base Right ¹	523	2,050	182	0	2,755	
1976 Extractions	346	1,820	146	0	2,312	
1977 Extractions	301	1,051	161	0	1,513	
1978 Extractions	415	1,781	166 ³	0	2,362 ³	
1979 Extractions	0	2,060	323	0	2,383	
1980 Extractions						
Delivery to Area Outside San Bernardino Valley	49,542	1,845	7,515	536	59,438	
Adjusted Base Right ¹	50,851	2,469	5,211	245	58,776	
1976 Extractions	50,653	1,763	4,074	87	56,577	
1977 Extractions	44,437 ²	299	2,093	183	47,012 ²	
1978 Extractions	51,962	1,588	3,764 ³	83	57,397 ³	
1979 Extractions	50,373	1,617	2,010	7	54,007	
1980 Extractions						

¹ Adjusted Base Right became effective on January 1, 1972; Base Right for Calendar Year 1971 is as shown in Table B-1 of the Judgment.

² Amount corrected during verification of 1980 extractions.

³ Amount corrected during preparation of report for Calendar Year 1982.

Note: See Report of Watermaster, Volume 1A and Volume 5.

TABLE NO. 3
VERIFIED EXTRACTIONS FROM THE SAN BERNARDINO BASIN AREA
FOR USE BY PLAINTIFFS CLASSIFIED ACCORDING TO SERVICE AREA
 (All Values in Acre-Feet)

	Plaintiffs					Total
	City of Riverside (including those rights acquired as successor to the Riverside Water Company and the Gage Canal Company)	Riverside Highland Water Company	Agua Mansa Water Company and Meeks & Daley Water Co.	Regents of the University of California		
Total Extractions in San Bernardino Basin Area	Adjusted Base Right ¹	52,199	4,294	7,833	536	64,862
	1981 Extractions	52,157	3,604	3,092	143	58,996
	1982 Extractions	49,599	2,795	3,716	48	56,158
	1983 Extractions					
	1984 Extractions					
	1985 Extractions					
Delivery to San Bernardino Basin Area	Adjusted Base Right ¹	1,427	0	0	0	1,427
	1981 Extractions	724	0	0	0	724
	1982 Extractions	16	0	0	0	16
	1983 Extractions					
	1984 Extractions					
	1985 Extractions					
Delivery to Colton Basin Area and Riverside Basin Area in San Bernardino County	Adjusted Base Right ¹	1,230	2,449	318	0	3,997
	1981 Extractions	0	1,775	169	0	1,944
	1982 Extractions					
	1983 Extractions					
	1984 Extractions					
	1985 Extractions					
Delivery to Area Outside San Bernardino Valley	Adjusted Base Right ¹	49,542	1,845	7,515	536	59,438
	1981 Extractions	51,433	1,453	2,734	143	55,763
	1982 Extractions	49,583	1,020	3,547	48	54,198
	1983 Extractions					
	1984 Extractions					
	1985 Extractions					

¹ Adjusted Base Right became effective on January 1, 1972; Base Right for Calendar Year 1971 is as shown in Table B-1 of the Judgment.

Note: See Report of Watermaster, Volume 1A and Volume 5.

CHAPTER IV
NATURAL SAFE YIELD OF THE
SAN BERNARDINO BASIN AREA AND ADJUSTED BASE
RIGHTS OF PLAINTIFF EXPORTERS

CHAPTER IV
NATURAL SAFE YIELD OF THE
SAN BERNARDINO BASIN AREA
AND ADJUSTED BASE RIGHTS
OF PLAINTIFF EXPORTERS

The Watermaster has determined the natural safe yield of the water supply accruing to the San Bernardino Basin Area at 232,100 acre-feet per annum from which the Adjusted Base Rights of Plaintiff exporters were also determined. Such determination of safe yield and Adjusted Base Rights of Plaintiff exporters was set forth in detail in Report of Watermaster, Volume 9, entitled *Determination of Natural Safe Yield of the San Bernardino Basin Area and Adjusted Base Rights of Plaintiff Exporters*.

The Adjusted Base Rights of Plaintiffs' extractions from the San Bernardino Basin Area, classified according to service areas and based on the natural safe yield of 232,100 acre-feet per annum have been summarized on the following table for ease of reference. The Adjusted Base Right of other than Plaintiffs was also based on the natural safe yield of the San Bernardino Basin Area and was determined to be 167,238 acre-feet. Such base rights were not effective until January 1, 1972; therefore, the 1971 base rights for both Plaintiffs and other than Plaintiffs are based on the actual average annual extractions from the San Bernardino Basin Area during the five-year base period 1959-63.

The Judgment provides for continuing jurisdiction of the Court in the following matters:

- 1) The hydrologic condition of any one or all of the separate basins described in this Judgment in order to determine from time to time the safe yield of the San Bernardino Basin Area, and
- 2) The adjusted rights of the Plaintiffs as required to comply with the provisions hereof with respect to changes in the natural safe yield of the San Bernardino Basin Area. If such changes occur, the Court shall adjudge that the adjusted rights and replenishment obligations of each party shall be changed proportionately to the respective base rights.

In order to provide a basis for future determination of safe yield, the Watermaster maintains a continuing program of collecting and analyzing current hydrologic data pertinent to the annual water supply to, and utilization of water from, the San Bernardino Basin Area.

Such data will be summarized and reported from time to time in subsequent supplemental reports of the Watermaster.

**ADJUSTED RIGHTS FOR EXTRACTIONS BY PLAINTIFFS
FROM THE SAN BERNARDINO BASIN AREA BASED ON NATURAL
SAFE YIELD OF 232,100 ACRE-FEET PER ANNUM¹**

**CLASSIFIED ACCORDING TO SERVICE AREA
(All Values in Acre-Feet)**

Plaintiffs	Total Extractions in San Bernardino Basin Area	Delivery to San Bernardino Basin Area	Delivery to Colton Basin and Riverside Basin Area in San Bernardino County	Delivery to Areas Outside San Bernardino Valley
City of Riverside (including those rights acquired as successor to the Riverside Water Company and the Gage Canal Company)	52,199 ²	1,427	1,230	49,542 ²
Riverside Highland Water Company	4,294	0	2,449	1,845
Agua Mansa Water Company and Meeks & Daley Water Company	7,833	0	318	7,515
Regents of the University of California	<u>536²</u>	<u>0</u>	<u>0</u>	<u>536²</u>
TOTAL	64,862	1,427	3,997	59,438

¹Effective January 1, 1972.

²The Adjusted Base Rights allocated to the City of Riverside and the Regents of the University of California were established at 52,169 and 566 acre-feet per annum respectively. On the basis of an amended recordation filing for the 1959-63 Base Period, the adjusted right for the Regents of the University of California was reduced to 536 acre-feet, and the City of Riverside adjusted right was increased to 52,199 acre-feet.

CHAPTER V
EXTRACTIONS FROM COLTON BASIN AREA
AND RIVERSIDE BASIN AREA IN SAN BERNARDINO COUNTY

CHAPTER V
EXTRACTIONS FROM THE COLTON BASIN AREA AND
RIVERSIDE BASIN AREA IN SAN BERNARDINO COUNTY

For Use Outside San Bernardino
Valley Municipal Water District

The extractions from the Colton Basin Area and that portion of the Riverside Basin Area within San Bernardino County for use outside San Bernardino Valley during the 1982 calendar year have been verified by the Watermaster as 981 acre-feet and 8,457 acre-feet, respectively. The individual work sheets for these determinations are included in Report of Watermaster, Volume 2-1982, Volume 3-1982, and Volume 5-1982 entitled *Verified Extractions From Colton Basin Area, Verified Extractions From Riverside Basin Area Within San Bernardino County and Distribution of Extractions From the San Bernardino Basin Area, Colton Basin Area, and Riverside Basin Area for Use Outside the San Bernardino Valley Municipal Water District*, respectively.

For Use Within San Bernardino
Valley Municipal Water District

Provided minimum water surface elevations within the Colton Basin and that portion of Riverside Basin Area within San Bernardino County are maintained by San Bernardino Valley Municipal Water District, extractions from the Colton Basin Area and that portion of the Riverside Basin Area within San Bernardino County for use within San Bernardino Valley are not limited and therefore verification of such amounts are not specifically required by the Judgment. However, proper allocation of the total extractions from these areas for use on areas outside San Bernardino Valley necessitates the verification of these extractions. The individual work sheets for the 1982 verification and distribution of extractions are also included in Report of Watermaster, Volumes 2-1982, 3-1982 and 5-1982.

The extractions from the Colton Basin Area and the Riverside Basin Area in San Bernardino County for the calendar years 1971 through 1982 are summarized in Tables 4 and 5 following.

TABLE NO. 4

Page 1 of 2

**VERIFIED EXTRACTIONS FROM COLTON BASIN AREA
BY SAN BERNARDINO AND RIVERSIDE COUNTY
ENTITIES FOR USE WITHIN EACH COUNTY**
(All Values in Acre-Feet)

Extractions for Calendar Years	Total from Basin	Extracted by San Bernardino County Entities	Extracted by Riverside County Entities			Base Right for Use in Riverside County ¹
			Total	Used in San Bernardino County	Used in Riverside County	
Five-Year Base Period 1959-63 Avg.	11,731 ³	8,235 ³	3,496	115	3,381	3,381
1971	11,388 ²	8,363 ²	3,025	248	2,777	3,381
1972	10,414	7,532	2,882	271	2,611	3,381
1973	7,844	6,982	862	247	615	3,381
1974	8,906	7,169	1,737	273	1,464	3,381
1975	11,083	6,821	4,262	389	3,873	3,381
1976	11,558 ⁴	8,605 ⁴	2,953	270	2,683	3,381
1977	8,777	6,061	2,716	447	2,269	3,381
1978	7,663	6,430	1,233	338	895	3,381
1979	7,194	5,224	1,970	288	1,682	3,381
1980	5,681 ⁵	5,610 ⁵	71	0	71	3,381
1981	6,348	6,175	173	0	173	3,381
1982	6,499	5,450	1,049	68	981	3,381

¹Extractions for use in Riverside County are limited to the verified extractions for the five-year Base Period 1959-63.

²Amount corrected during verification of 1972 extractions.

³Amount corrected during verification of 1972 and 1973 extractions.

⁴Amount corrected during verification of 1977 extractions.

⁵Amount corrected during verification of 1981 extractions.

Note: See Report of Watermaster, Volume 2 and Volume 5.

TABLE NO. 4

Page 2 of 2

**VERIFIED EXTRACTIONS FROM COLTON BASIN AREA
BY SAN BERNARDINO AND RIVERSIDE COUNTY
ENTITIES FOR USE WITHIN EACH COUNTY
(All Values in Acre-Feet)**

Five-Year Period	Total from Basin	Extracted by San Bernardino County Entities	Extracted by Riverside County Entities			Base Right for Use in Riverside County ¹
			Total	Used in San Bernardino County	Used in Riverside County	
Base Period 1959-63	58,655	41,175	17,480	575	16,905	16,905
1971-75	49,635	36,867	12,768	1,428	11,340	16,905
1972-76	49,805	37,109	12,696	1,450	11,246	16,905
1973-77	48,168	35,638	12,530	1,626	10,904	16,905
1974-78	47,987	35,086	12,901	1,717	11,184	16,905
1975-79	46,275	33,141	13,134	1,732	11,402	16,905
1976-80	40,873	31,930	8,943	1,343	7,600	16,905
1977-81	35,663	29,500	6,163	1,073	5,090	16,905
1978-82	33,385	28,889	4,496	694	3,802	16,905

¹Extractions for use in Riverside County are limited to the verified extractions for the five-year Base Period 1959-63.

TABLE NO. 5

**VERIFIED EXTRACTIONS FROM RIVERSIDE BASIN AREA
IN SAN BERNARDINO COUNTY BY SAN BERNARDINO AND
RIVERSIDE COUNTY ENTITIES FOR USE WITHIN EACH COUNTY
(All Values in Acre-Feet)**

Extractions for Calendar Years	Total from Basin	Extracted by San Bernardino County Entities	Extracted by Riverside County Entities			Base Right for Use in Riverside County ¹
			Total	Used in San Bernardino County	Used in Riverside County	
Five-Year Base Period 1959-63 Avg.	33,729	9,609	24,120	3,035	21,085	21,085
1971	29,070	8,748	20,322	2,214	18,108	21,085
1972	28,148	7,963	20,185	1,597	18,588	21,085
1973	21,809	6,490	15,319	1,333	13,986	21,085
1974	21,881	6,899	14,982	1,399	13,583	21,085
1975	22,701	6,513	16,188	1,225	14,963	21,085
1976	24,705	6,898	17,807	1,666	16,141	21,085
1977	23,506	7,089	16,417	1,985	14,432	21,085
1978	17,216	6,261	10,955	1,900	9,055	21,085
1979	20,024	7,062	12,962	2,370	10,592	21,085
1980	18,533	5,932 ²	12,601 ²	3,410	9,191 ²	21,085
1981	23,611	6,811	16,800	3,733	13,067	21,085
1982	17,406	5,409	11,997	3,540	8,457	21,085

¹Extractions for use in Riverside County are limited to the verified extractions for five-year Base Period 1959-63.

²Amounts corrected during verification of 1981 extractions.

Note: See Report of Watermaster, Volume 3 and Volume 5.

TABLE NO. 5

VERIFIED EXTRACTIONS FROM RIVERSIDE BASIN AREA
 IN SAN BERNARDINO COUNTY BY SAN BERNARDINO AND
 RIVERSIDE COUNTY ENTITIES FOR USE WITHIN EACH COUNTY
 (All Values in Acre-Feet)

Five-Year Period	Total from Basin	Extracted by San Bernardino County Entities	Extracted by Riverside County Entities			Base Right for Use in Riverside County ¹
			Total	Used in San Bernardino County	Used in Riverside County	
Base Period 1959-63	168,645	48,045	120,600	15,175	105,425	105,425
1971-75	123,609	36,613	86,996	7,768	79,228	105,425
1972-76	119,244	34,763	84,481	7,220	77,261	105,425
1973-77	114,602	33,889	80,713	7,608	73,105	105,425
1974-78	110,009	33,660	76,349	8,175	68,174	105,425
1975-79	108,152	33,823	74,329	9,146	65,183	105,425
1977-81	103,984	33,242	70,742	11,331	59,411	105,425
1978-82	96,790	31,475	65,315	14,953	50,362	105,425

¹Extractions for use in Riverside County are limited to the verified extractions for the five-year Base Period 1959-63.

Minimum Water Surface Elevations

Extractions from the Colton Basin Area and that portion of the Riverside Basin Area within San Bernardino County for use in San Bernardino Valley are not limited, provided that the average static water surface elevation as measured at wells numbered 1S/4W-21Q3, 1S/4W-29H1, and 1S/4W-29Q1 is not less than 822.04 feet, as set forth in the Judgment. This elevation is determined each year by averaging the lowest static water level occurring in each of the three wells at or near the same time of the year.

Hydrographs of the 1983 static water surface elevations in the three key wells are shown on Figures 1, 2, and 3 which follow. Data pertinent to the key wells as well as the records of historic water surface measurements are included in Report of Watermaster, Volume 8-1982 entitled *Ground Water Surface Elevations in Wells Numbered 1S/4W-21Q3, 1S/4W-29H1, and 1S/4W-29Q1 Located Within the Colton Basin Area and Riverside Basin Area in San Bernardino County through December, 1983.*

The lowest static water surface elevation measured in each of the three wells during the fall of 1983 is as follows:

<u>Well Number</u>	<u>Date of Measurement</u>	<u>Elevation of Water Surface</u>
1S/4W-21Q3	1/04/83	916.56
1S/4W-29H1	1/18/83	909.98
1S/4W-29Q1	1/18/83	906.63
	Average	911.05

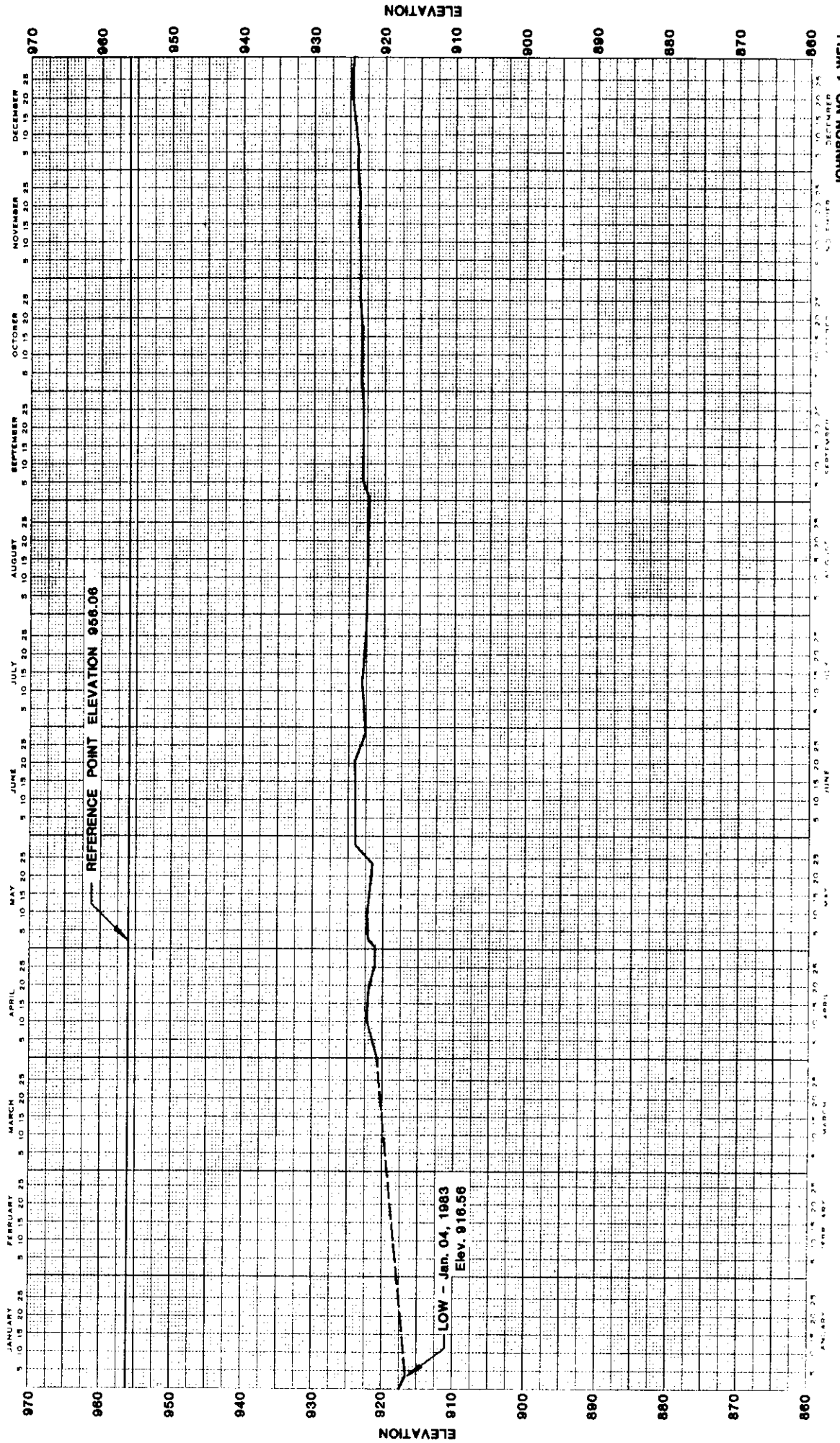
Thus, the lowest average fall water surface elevation for the calendar year 1983 is 2.36 feet higher than the 1982 average of 908.69 and 89.01 feet higher than the 1963 average of 822.04.

GROUNDWATER SURFACE ELEVATION

JOHNSON NO. 1 WELL

1983

STATE WELL NUMBER 1S/4W - 21Q3
RECORDATION NUMBER 36 - 01480
BASIN COLTON
OWNER CITY OF RIVERSIDE



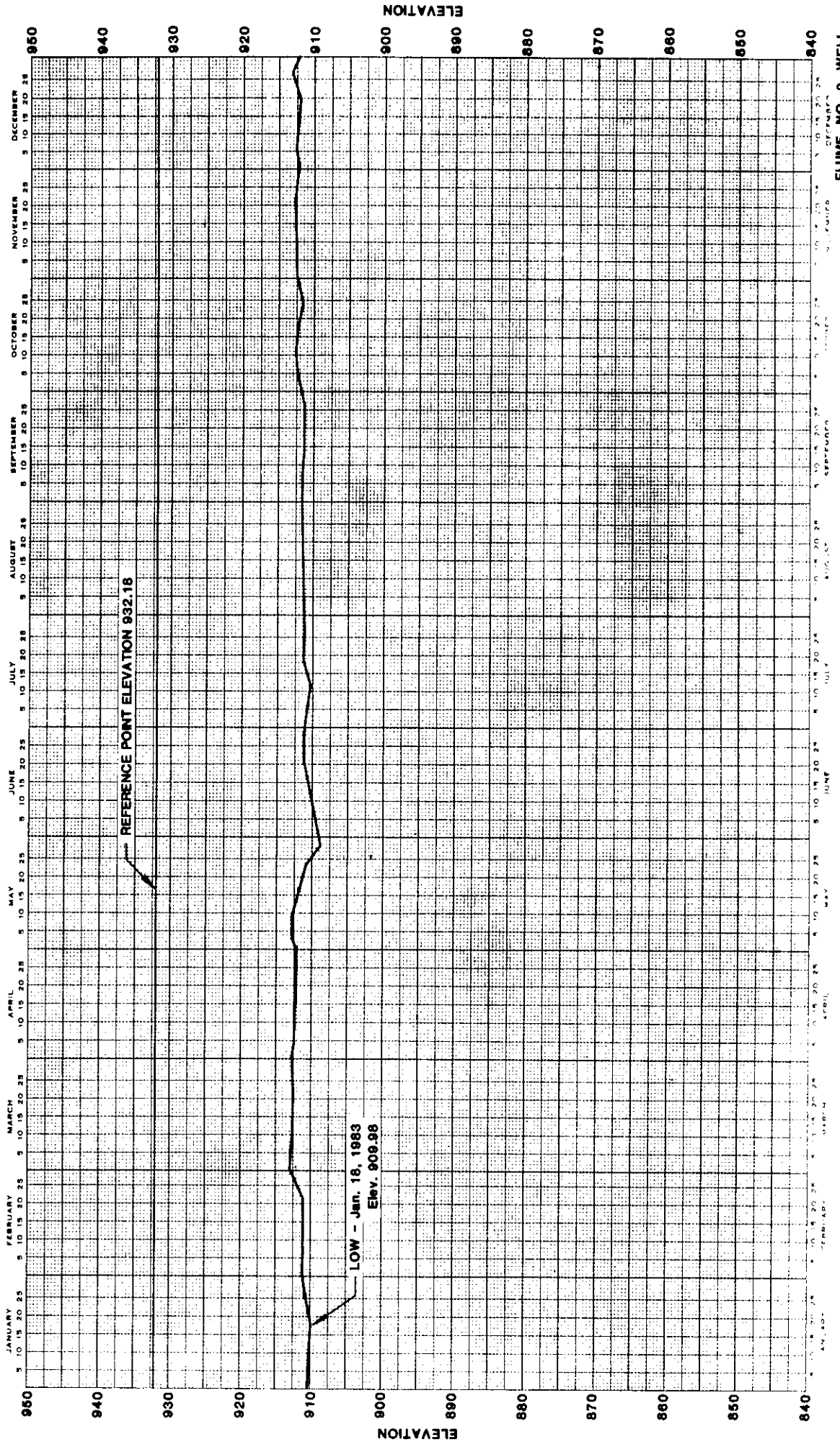
JOHNSON NO. 1 WELL
FIGURE NO. 1

GROUNDWATER SURFACE ELEVATION

FLUME NO. 2 WELL

1983

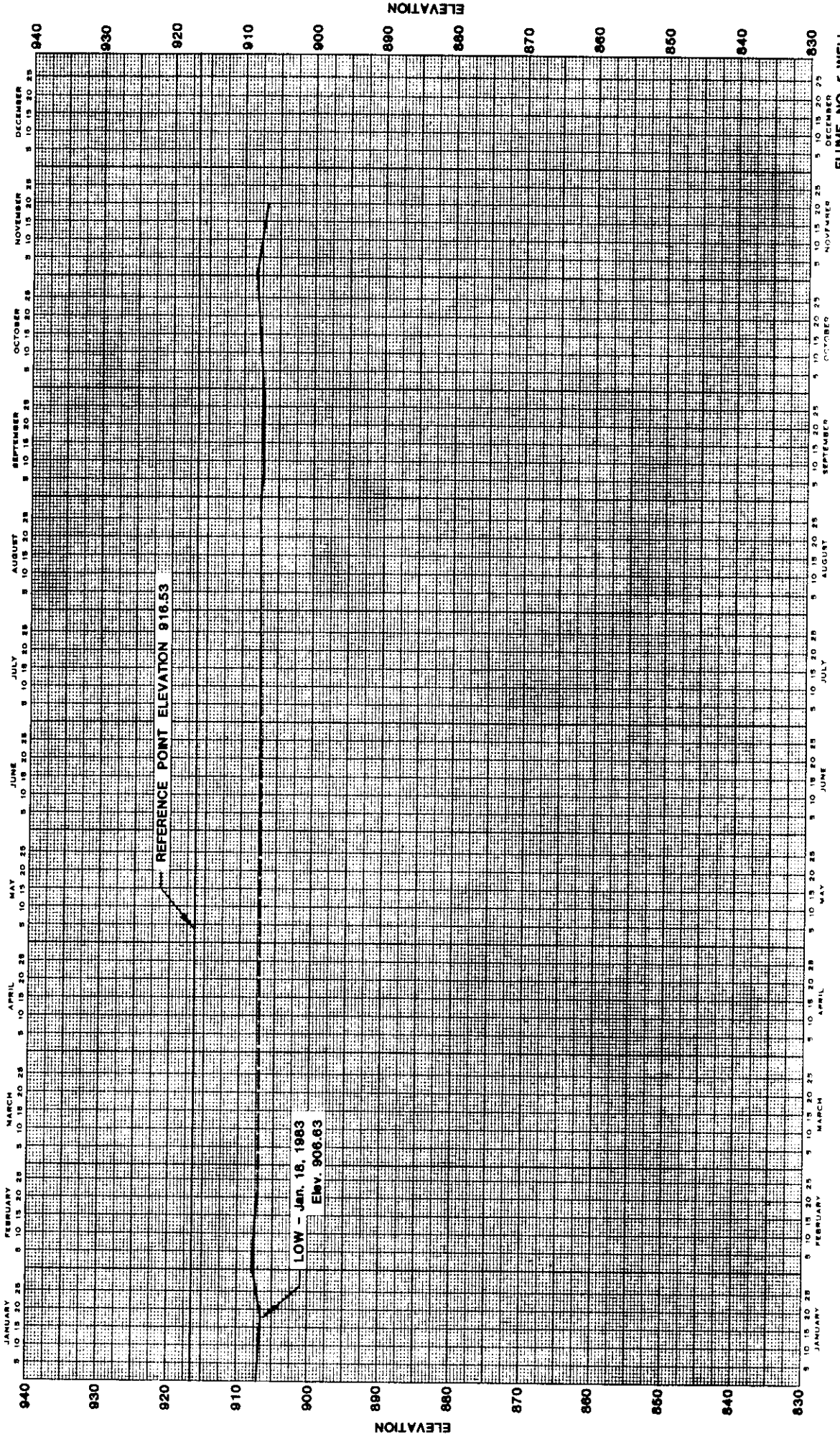
STATE WELL NUMBER 18/4W - 20H1
RECORDATION NUMBER 36 - 01484
BASIN RIVERSIDE
OWNER CITY OF RIVERSIDE



FLUME NO. 2 WELL
FIGURE NO. 2

GROUNDWATER SURFACE ELEVATION FLUME NO. 5 WELL 1983

STATE WELL NUMBER 1S/4W - 20Q1
 RECORDATION NUMBER 36 - 01487
 BASIN RIVERSIDE
 OWNER CITY OF RIVERSIDE



FLUME NO. 5 WELL
FIGURE NO. 3

CHAPTER VI
EXTRACTIONS FROM THE PORTION OF
RIVERSIDE BASIN AREA IN RIVERSIDE COUNTY
WHICH IS TRIBUTARY TO THE RIVERSIDE NARROWS

CHAPTER VI
EXTRACTIONS FROM THE PORTION OF
RIVERSIDE BASIN AREA IN RIVERSIDE COUNTY
WHICH IS TRIBUTARY TO THE RIVERSIDE NARROWS

Extractions

The extractions from that portion of the Riverside Basin area in Riverside County which is tributary to the Riverside Narrows for use within Riverside County for the calendar year 1982 have been verified by the Watermaster as 21,032 acre-feet. The individual work sheets are included in Report of Watermaster, Volume 4-1982, entitled *Verified Extractions from Riverside Basin Area Within Riverside County* and are summarized in Table No. 6 following.

TABLE NO. 6

**VERIFIED EXTRACTIONS FROM THE RIVERSIDE BASIN AREA
IN RIVERSIDE COUNTY FOR USE IN RIVERSIDE COUNTY**
(All Values in Acre-Feet)

Calendar Year	Total Verified Extractions	Base Right for Use in Riverside County
Five-Year Base Period 1959-63 Avg.	29,633	29,633
1971	30,942 ¹	29,633
1972	37,804 ²	29,633
1973	33,094	29,633
1974	38,304 ²	29,633
1975	28,285	29,633
1976	31,565	29,633
1977	28,226	29,633
1978	24,878 ³	29,633
1979	25,512	29,633
1980	30,215	29,633
1981	30,441 ⁴	29,633
1982	21,032	29,633

¹Amount corrected during verification of 1972 extractions.

²These extractions exceeded the Base Right plus peaking allowance of 20% by 2,244 acre-feet in 1972, and 2,744 acre-feet in 1974.

³Amounts corrected during verification of 1980 extractions.

⁴Amount corrected during verification of 1982 extractions.

Note: See Report of Watermaster, Volume 4.

TABLE NO. 6

VERIFIED EXTRACTIONS FROM THE RIVERSIDE BASIN AREA
 IN RIVERSIDE COUNTY FOR USE IN RIVERSIDE COUNTY
 (All Values in Acre-Feet)

Five-Year Period	Total Verified Extractions	Base Right for Use in Riverside County
Base Period 1959-63	148,165	148,165
1971-75	168,429	148,165
1972-76	169,052	148,165
1973-77	159,474	148,165
1974-78	151,258	148,165
1975-79	138,466	148,165
1976-80	140,396	148,165
1977-81	139,272	148,165
1978-82	132,078	148,165

Return Flows

The Judgment provides for additional replenishment by Western if the urbanization of the Riverside Basin Area results in a diminution of the return flow accruing from the extractions described above and which would have otherwise accrued to the rising water at Riverside Narrows. The extent of such diminution is determined by the permanent reduction in the irrigated areas within the various water service organizations delivering water to the area as compared to the areas served at the time the Judgment was entered. To the extent that such reduction causes an increase in the urban uses requiring sewage disposal through the Riverside Treatment Plant (the effluent which bypasses the Riverside Narrows), Western may, from time to time, be required to provide replenishment. Such irrigated acreages in the Riverside Basin Area in Riverside County at the time the Judgment was entered, from which return flow was tributary to Riverside Narrows, are set forth in Table D-5 of Appendix "D" of the Judgment and are as follows:

APPENDIX D

TABLE D-5

**IRRIGATED ACREAGE IN RIVERSIDE BASIN AREA
IN RIVERSIDE COUNTY PRESENTLY TRIBUTARY TO
RIVERSIDE NARROWS WHICH UPON CONVERSION
TO URBAN USES REQUIRING SEWAGE DISPOSAL
THROUGH THE RIVERSIDE TREATMENT PLANT WILL
BE DISCHARGED TO THE RIVER BELOW
RIVERSIDE NARROWS**

<u>Entity Serving Acreage</u>	<u>Acres</u>
Gage Canal Company	1,752
Alta Mesa Water Company	65
East Riverside Water Company	926
Riverside Highland Water Company	<u>1,173</u>
TOTAL	3,916

The service areas of the companies listed in Table D-5 were investigated and re-mapped in June, 1983. These maps showing the current irrigated acreage were compared to the 1968 maps used to determine the acreages shown on Table D-5. This comparison indicated those lands no longer being irrigated and the present use of the converted land. Additional study of these converted lands indicated the date irrigation ceased and the date

such lands were connected to a sewage disposal system discharging to the river below Riverside Narrows.

The number of dwelling units connected to the City of Riverside wastewater disposal system and a discharge unit factor of 0.22 acre-feet per year per dwelling unit was used to determine the wastewater discharged to the river from the converted lands. These data have been summarized for the years 1978 through 1982 and are shown on Table No. 7.

TABLE NO. 7
REDUCTION IN RETURN FLOW CONTRIBUTING TO BASE FLOW
AT RIVERSIDE NARROWS
RESULTING FROM CONVERSION OF AGRICULTURAL USES
OF WATER TO DOMESTIC USES CONNECTED TO A SEWAGE SYSTEM
DISCHARGING TO THE RIVER BELOW RIVERSIDE NARROWS
 (All Values in Acre-Feet)

<u>Calendar Year</u>	<u>Gage Canal</u>	<u>Alta Mesa</u>	<u>East Riverside</u>	<u>Riverside Highland</u>	<u>Total</u>
1978	131	19	147	0	297
1979	178	38	177	0	393
1980	197	38	178	0	413
1981	197	38	179	0	414
1982	<u>197</u>	<u>38</u>	<u>182</u>	<u>0</u>	<u>417</u>
TOTAL 1978-82	900	171	863	0	1,934

Table No. 7 shows that in 1982, the reduction in return flow contributing to Base Flow at Riverside Narrows resulting from the conversion of land from agricultural use to urban uses in the Riverside Basin Area was 417 acre-feet. Western's obligation associated with the land use conversion and resulting replenishment requirements are shown on summary Tables 16 and 18.

CHAPTER VII

**EXTRACTIONS FROM THE SAN BERNARDINO BASIN AREA,
COLTON BASIN AREA AND RIVERSIDE BASIN AREA
FOR USE WITHIN WESTERN ON LANDS THAT ARE NOT
TRIBUTARY TO THE RIVERSIDE NARROWS**

CHAPTER VII
**EXTRACTIONS FROM THE SAN BERNARDINO BASIN AREA,
COLTON BASIN AREA AND RIVERSIDE BASIN AREA
FOR USE WITHIN WESTERN ON LANDS THAT ARE NOT
TRIBUTARY TO THE RIVERSIDE NARROWS**

The extractions from the San Bernardino, Colton and Riverside Basin Areas which were delivered for use within Western on lands not tributary to the Riverside Narrows during the calendar year 1982 were verified by the Watermaster to be 29,537 acre-feet. Said amount is summarized by entity on Table No. 8.

The detailed work sheets for this determination are contained in Report of Watermaster, Volume 6-1982, entitled *Verified Extractions from the San Bernardino Basin Area, Colton Basin Area, and Riverside Basin Area for Use Within Western on Lands Not Tributary to the Riverside Narrows.*

TABLE NO. 8
VERIFIED EXTRACTIONS FROM
THE SAN BERNARDINO BASIN AREA,
THE COLTON BASIN AREA, AND THE RIVERSIDE BASIN AREA,
FOR USE WITHIN WESTERN ON LANDS THAT ARE NOT TRIBUTARY
TO THE RIVERSIDE NARROWS
(All Values in Acre-Feet)

Entities Within WMWD	Annual 1959-63 Average	Calendar Years				
		1978 Verified Delivery	1979 Verified Delivery	1980 Verified Delivery	1981 Verified Delivery	1982 Verified Delivery
City of Riverside, including Irrigation Division water extracted by the Gage Canal Company and former Riverside Water Company	23,836	28,172	30,892	32,485	29,977	23,489
Meeks & Daley Water Company, Agua Mansa Water Company, and Temescal Water Company, including water received from City of Riverside	13,229	4,012	5,570	6,210	5,974	4,690
Extractions delivered by West Riverside Canal received from Twin Buttes Water Company, La Sierra Water Company, Agua Mansa Water Company, Salazar Water Company, West Riverside 350 Inch Water Company, and Jurupa Water Company	4,903	1,981	2,707	2,506	3,146	1,106
Rubidoux Community Services District	531	610	550	3	0	0
Jurupa Hills Water Company	36	213	244 ¹	254	261	252
TOTAL	42,535	37,113	34,988	39,963¹	41,458	29,537

¹ Amounts corrected during verification of 1980 extractions.

Note: See Report of Watermaster, Volume 6.

CHAPTER VIII

**VERIFICATION OF EXTRACTIONS FROM THE
SAN BERNARDINO BASIN AREA AND COLTON BASIN AREA
WITHIN THE SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
FOR USE ON LANDS NOT WITHIN WESTERN
NOR TRIBUTARY TO THE RIVERSIDE NARROWS**

CHAPTER VIII
VERIFICATION OF EXTRACTIONS FROM THE
SAN BERNARDINO BASIN AREA AND COLTON BASIN AREA
WITHIN THE SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
FOR USE ON LANDS NOT WITHIN WESTERN
NOR TRIBUTARY TO THE RIVERSIDE NARROWS

Deliveries to Chino Basin

The extractions from the Colton and San Bernardino Basin Areas which were delivered for use on lands not within Western nor tributary to the Riverside Narrows (Chino Basin) during the calendar year 1982, were verified by the Watermaster to be 19,837 acre-feet. Said amount is summarized by entity on Table No. 9.

Deliveries to Areas Other Than Chino Basin

Paragraph X of the Judgment also provides for replenishment by San Bernardino Valley to the extent exports are made from the San Bernardino Basin Area for use in the Yucaipa, San Timoteo, Oak Glen, and Beaumont Basins.

The results of the verification of the base period production from the San Bernardino Basin Area indicated that such exports were not made during the five calendar years ending with 1963. The verification of production for the 1982 calendar year indicated that during 1982 San Bernardino Valley Municipal Water District diverted 625 acre-feet of water from Mill Creek and delivered such water to the Yucaipa Basin as shown on Table No. 9. During 1982, no water was exported to the San Timoteo, Oak Glen or Beaumont Basins.

TABLE NO. 9
**VERIFIED EXTRACTIONS FROM THE
 SAN BERNARDINO BASIN AREA AND COLTON BASIN AREA
 WITHIN THE SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
 FOR USE ON LANDS NOT WITHIN WESTERN
 NOR TRIBUTARY TO THE RIVERSIDE NARROWS**
 (All Values in Acre-Feet)

Entities	Annual 1959-63 Average	Calendar Years				
		1978 Verified Delivery	1979 Verified Delivery	1980 Verified Delivery	1981 Verified Delivery	1982 Verified Delivery
Fontana Union Water Company	10,170 ¹	16,830	20,768	22,152	20,564	16,333
West San Bernardino County Water District	1,806	1,914	1,950	2,442	2,649	2,989
City of Rialto	551 ¹	473	625	749	727	515
Subtotal (Delivery to Chino Basin)	12,527	19,217	23,343	25,343	23,940	19,837
San Bernardino Valley Municipal Water District	0	0	0	119 ²	8 ²	625 ²
Subtotal (Delivery to areas other than Chino Basin)	0	0	0	119	8	625
TOTAL	12,527¹	19,217	23,462	25,351	24,118	20,462

¹ Amount corrected during verification of 1973 deliveries.

² Water diverted from Mill Creek and delivered to the Yucaipa Regional Park by SBVMWD.

Note: See Report of Watermaster, Volume 7.

CHAPTER IX
**ANNUAL ACCOUNTING OF EXTRACTIONS,
DELIVERIES, AND REPLENISHMENT OBLIGATIONS**

CHAPTER IX
**ANNUAL ACCOUNTING OF EXTRACTIONS,
DELIVERIES, AND REPLENISHMENT OBLIGATIONS**

The Judgment requires the annual determination of extractions from the San Bernardino, Colton, and Riverside Basin Areas by Plaintiffs as well as Non-Plaintiffs, and further requires that a determination be made as to that portion of such extractions delivered to each of the service areas tributary to the Riverside Narrows as well as the deliveries to those areas not tributary to the Riverside Narrows. A comparison of the annual extractions and deliveries with the verified five-year Base Period amounts provides the basis for the annual accounting of replenishment obligations, if any, which accrue by reason of production or deliveries in excess of such amounts.

Plaintiffs' Extractions from San Bernardino Basin Area

The Judgment specifically defines the Adjusted Base Right of the City of Riverside, Gage Canal Company, Riverside Highland Water Company, Agua Mansa Water Company, Meeks and Daley Water Company and the Regents of University of California to produce water from the San Bernardino Basin Area for use in three specific service areas. These rights, expressed in terms of the five-year total allowable production and the maximum allowable production in any one year, are shown on Tables 10 through 13.

Tables 10 through 13 also show the actual extractions for use by the Plaintiffs in the specific service areas. A comparison of the Plaintiffs' Adjusted Base Rights to actual extractions and deliveries indicates that actual extractions from the San Bernardino Basin Area and deliveries to the specified service areas by all Plaintiffs during the five-year period 1978-82 were less than their respective Adjusted Base Rights.

Non-Plaintiffs' Extractions from San Bernardino Basin Area

The Judgment provides that the Non-Plaintiffs as a group can produce a specific amount of water from the San Bernardino Basin Area without incurring an obligation to replenish the basin with imported water. During the period 1978 through 1982, the Non-Plaintiffs' production did not exceed the Adjusted Base Right. (See Table 17.)

A comparison of Adjusted Base Rights to actual production by Plaintiffs and Non-Plaintiffs for the period 1978 through 1982 is as follows:

(All Values in Acre-Feet)

	<u>Adjusted Base Right 1978-1982</u>	<u>Actual Extractions</u>	<u>Difference</u>
Plaintiffs	324,310	280,857	43,453
Non-Plaintiffs	<u>836,190</u>	<u>776,307</u>	<u>59,883</u>
TOTAL	1,160,500	1,057,164	103,336

Exports to Areas Not Tributary to Riverside Narrows

The Judgment limits the amount of water that can be extracted from the various basins for use on lands that are not tributary to the Riverside Narrows. Western and San Bernardino Valley are responsible for any obligation that may result from excess exports to these nontributary lands located in Riverside County and San Bernardino County, respectively.

Tables 14 and 15 indicate the Base Right and actual export for use on lands in Riverside County and San Bernardino County not tributary to the Riverside Narrows. Table 14 shows that during the period 1978 through 1982 the export by entities within Western was 27,371 acre-feet less than the Base Right.

Table 15 shows that exports from San Bernardino Valley for use in San Bernardino County exceeded the Base Right for the period 1971-82 by 86,598 acre-feet. The obligation of San Bernardino Valley resulting from this excess export is shown on Table 17.

Summary of Western's Credits and Obligations

Table 16 summarizes Western's credits and obligations in the Colton and Riverside Basin Areas. The actual extractions in these areas during the five-year period 1978 through 1982 were 84,716 acre-feet less than the total five-year Base Right. This under-extraction results in extraction credits for the five-year period 1978-82 as shown on Table 16.

In addition to extraction credits, Western receives credit for return flows resulting from imported water used in areas that are tributary to the Riverside Narrows. Western's accumulated credit resulting from under-extraction and return of imported water is 86,474 acre-feet.

Since actual extractions have not exceeded the Base Right during the period 1978 through 1982, Western has not incurred an excess extraction obligation. As indicated on Table 14 and as discussed in the previous section, Western has not incurred an obligation due to excess exports to areas not tributary to the Riverside Narrows. However, land conversion from agricultural uses to urban uses within Western during the period 1978-82 has resulted in an obligation of 1,934 acre-feet. (See Table 7.) Therefore, Western's total accumulated obligation during the period 1978 through 1982 is 1,934 acre-feet.

In summary, Table 16 shows that during the five-year period 1978 through 1982 Western's accumulated credits exceeded its accumulated obligations by 84,540 acre-feet.

Summary of San Bernardino Valley's Credits and Obligations

Table 17 summarizes San Bernardino Valley's credit and obligations in the San Bernardino, Colton and Riverside Basins. Paragraph VI of the Judgment entitled *San Bernardino Basin Area Rights and Replenishment* states in part that:

San Bernardino shall also receive credit against any future replenishment obligations for all replenishment which it provides in excess of that required herein, and for any amounts which may be extracted without replenishment obligation, which in fact are not extracted.

The Judgment provides that SBVMWD can carry forward to the current five-year period credits accumulated prior thereto. Obligations incurred by SBVMWD have also been carried forward to the current five-year period. Accordingly the accumulated values shown on Tables 15 and 17 include amounts accumulated prior to 1978.

As indicated previously, the actual extractions from the San Bernardino Basin Area were less than the Base Right during the period 1978 through 1982. Hence, San Bernardino Valley incurred an extraction credit as shown on Table 17. San Bernardino Valley receives credit for imported water that is used for replenishment in the San Bernardino Basin Area as previously discussed. Accumulated credits for such replenishment and from the under-extraction through 1982 total 279,360 acre-feet.

Since actual extractions exceeded the Base Right in 1981, San Bernardino Valley incurred an excess extraction obligation of 5,401 acre-feet as shown on Table 17. Table 15 shows that the exports from San Bernardino, Colton and Riverside Basin Areas to areas not tributary to the Riverside Narrows exceeded the Base Right for the period 1971 through 1982 by 86,598 acre-feet. The accumulated obligation resulting from the excess extractions in 1982 and excess export during the period 1971 through 1982 is 91,999 acre-feet as shown on Table 17.

In summary, Table 17 shows that at the end of the five-year period 1978 through 1982 San Bernardino Valley's accumulated credits exceeded its accumulated obligations by 187,361 acre-feet.

Chapter V indicates that extractions in the Colton Basin Area and Riverside Basin Area in Riverside County for use in San Bernardino Valley are not limited provided that San Bernardino Valley maintains a specified minimum static water surface elevation in these Basins. During the five-year period 1978 through 1982 the actual water surface elevation remained higher than the specified minimum; therefore, no additional water is required for maintenance of these Basins.

Replenishment Requirements

Table 18 summarizes the accumulated credits and obligations of both Western and San Bernardino Valley. The credits exceeded the obligations for both parties during the five-year period 1978 through 1982. The Table also indicates that if a net accumulated obligation is incurred by either party, the replenishment required by that party would be reduced by the return flow resulting from any excess extraction. Since the extraction credits exceeded the excess extraction obligations for both parties as shown on Tables 16 and 17, no credit has been allowed for excess extraction return.

In summary, Table 18 shows that neither Western nor San Bernardino Valley is required to provide additional replenishment for obligations incurred during the five-year period 1978 through 1982.

TABLE NO. 10

ANNUAL ACCOUNTING OF EXTRACTIIONS FROM THE SAN BERNARDINO BASIN AREA
AND DELIVERIES TO EACH SERVICE AREA BY THE CITY OF RIVERSIDE
(INCLUDING THOSE RIGHTS ACQUIRED AS SUCCESSOR TO THE
RIVERSIDE WATER COMPANY AND THE GAGE CANAL COMPANY)
(All Quantities in Acre-Feet)

Calendar Year	Verified Extractions from the San Bernardino Basin Area			Delivery to the San Bernardino Basin Area			Delivery to Colton Basin and Riverside Basin Areas in San Bernardino County			Delivery to Areas Outside San Bernardino Valley		
	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³
1971	53,448 ⁴	69,482	53,882	1,462 ⁴	1,901	98	1,260 ⁴	1,638	669	50,726 ⁴	65,944	53,115
1972	52,199 ⁵	67,859	45,694	1,427	1,855	85	1,230	1,599	547	49,542 ⁵	64,405	45,062
1973	52,199 ⁵	67,859	43,022	1,427	1,855	156	1,230	1,599	512	49,542 ⁵	64,405	42,354
1974	52,199 ⁵	67,859	43,367	1,427	1,855	-0-	1,230	1,599	550	49,542 ⁵	64,405	42,817
1975	52,199 ⁵	67,859	47,962	1,427	1,855	-0-	1,230	1,599	498	49,542 ⁵	64,405	47,464
1976	52,199 ⁵	67,859	51,374	1,427	1,855	-0-	1,230	1,599	523	49,542 ⁵	64,405	50,851
1977	52,199 ⁵	67,859	50,999	1,427	1,855	-0-	1,230	1,599	346	49,542 ⁵	64,405	50,653
1978	52,199 ⁵	67,859	45,384	1,427	1,855	646	1,230	1,599	301	49,542 ⁵	64,405	44,437
1979	52,199 ⁵	67,859	52,377	1,427	1,855	-0-	1,230	1,599	415	49,542 ⁵	64,405	51,962
1980	52,199 ⁵	67,859	50,756	1,427	1,855	383	1,230	1,599	-0-	49,542 ⁵	64,405	50,373
1981	52,199 ⁵	67,859	52,157	1,427	1,855	724	1,230	1,599	-0-	49,542 ⁵	64,405	51,433 ⁶
1982	52,199 ⁵	67,859	49,599	1,427	1,855	16	1,230	1,599	-0-	49,542 ⁵	64,405	49,583

¹ Adjusted Right as determined and reported to the Court in the Annual Report of the Western-San Bernardino Watermaster for Calendar Year 1971 in Table No. 9, page 27.

² Maximum Allowable for any one year, not to exceed 30% of Adjusted Right.

³ Actual verified extractions from Table No. 3 of Watermaster Report.

⁴ Adjusted Right was not effective until January 1, 1972; thus the Adjusted Right for 1971 is as shown in Appendix B, Table B-1 of the Judgment.

⁵ See Footnote 2 of Table on Page 19.

⁶ Includes 1,148 acre-feet of additional extraction which is allowable under provisions of the December 22, 1981, Western-San Bernardino agreement prepared in accordance with paragraph VI (b) 6 of the Judgment.

Note: Annual Accounting of Extractions as required in Paragraphs V and VI of the Judgment.

TABLE NO. 10
ANNUAL ACCOUNTING OF EXTRACTIIONS FROM THE SAN BERNARDINO BASIN AREA
AND DELIVERIES TO EACH SERVICE AREA BY THE CITY OF RIVERSIDE
(INCLUDING THOSE RIGHTS ACQUIRED AS SUCCESSOR TO THE
RIVERSIDE WATER COMPANY AND THE GAGE CANAL COMPANY)
(All Quantities in Acre-Feet)

Calendar Year	Verified Extractions from the San Bernardino Basin Area			Delivery to the San Bernardino Basin Area			Delivery to Colton Basin and Riverside Basin Areas in San Bernardino County			Delivery to Areas Outside San Bernardino Valley		
	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³
1971-75	262,244 ⁴	262,244	233,927	7,170	7,170	339	6,180	6,180	2,776	248,894	248,894	230,735
1972-76	260,995	260,995	231,419	7,135	7,135	241	6,150	6,150	2,630	247,710	247,710	228,548
1973-77	260,995	260,995	236,724	7,135	7,135	156	6,150	6,150	2,429	247,710	247,710	234,139
1974-78	260,995	260,995	239,086	7,135	7,135	646	6,150	6,150	2,218	247,710	247,710	236,222
1975-79	260,995	260,995	248,096	7,135	7,135	646	6,150	6,150	2,083	247,710	247,710	245,367
1976-80	250,995	260,995	250,890	7,135	7,135	1,029	6,150	6,150	1,585	247,710	247,710	248,276
1977-81	260,995	260,995	251,673	7,135	7,135	1,753	6,150	6,150	1,062	247,710	247,710	248,858
1978-82	260,995	260,995	250,273	7,135	7,135	1,769	6,150	6,150	716	247,710	247,710	245,640 ⁵
Excess Extraction 1978-82		(10,722)*			(5,366)*			(5,434)*			(1,070)*	

¹ Adjusted Right as determined and reported to the Court in the Annual Report of the Western-San Bernardino Watermaster for Calendar Year 1971 in Table No. 9, page 27.
² Maximum Allowable for the five-year period is the same as the five-year-period Adjusted Right.
³ Actual verified extractions from Table No. 3 of Watermaster Report.
⁴ Adjusted Right was not effective until January 1, 1972; thus the Adjusted Right for the period 1971-75 is more than the Adjusted Right for subsequent five-year periods.
⁵ Excludes the 1,148 acre-feet of additional extraction in 1981 which is allowable under provisions of the December 22, 1981, Western-San Bernardino agreement prepared in accordance with paragraph VI (b) 6 of the Judgment.
 * Parentheses indicate that actual extractions are less than Adjusted Base Right.

TABLE NO. 11
ANNUAL ACCOUNTING OF EXTRACTIIONS FROM THE SAN BERNARDINO BASIN AREA
AND DELIVERIES TO EACH SERVICE AREA BY RIVERSIDE HIGHLAND WATER COMPANY
 (All Quantities in Acre-Feet)

Calendar Year	Verified Extractions from the San Bernardino Basin Area			Delivery to the San Bernardino Basin Area			Delivery to Colton Basin and Riverside Basin Areas in San Bernardino County			Delivery to Areas Outside San Bernardino Valley		
	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³
1971	4,399 ⁴	5,719	4,012	-1 ⁴	-0-	-0-	2,509 ⁴	3,262	2,388	1,890 ⁴	2,457	1,624
1972	4,294	5,582	4,532	-0-	-0-	-0-	2,449	3,184	2,239	1,845	2,398	2,293
1973	4,294	5,582	3,512	-0-	-0-	-0-	2,449	3,184	1,751	1,845	2,398	1,761
1974	4,294	5,582	4,088	-0-	-0-	-0-	2,449	3,184	1,985	1,845	2,398	2,103
1975	4,294	5,582	4,709	-0-	-0-	-0-	2,449	3,184	2,002	1,845	2,398	2,707
1976	4,294	5,582	4,519	-0-	-0-	-0-	2,449	3,184	2,050	1,845	2,398	2,469
1977	4,294	5,582	3,583	-0-	-0-	-0-	2,449	3,184	1,820	1,845	2,398	1,763
1978	4,294	5,582	1,350	-0-	-0-	-0-	2,449	3,184	1,051	1,845	2,398	299
1979	4,294	5,582	3,369	-0-	-0-	-0-	2,449	3,184	1,781	1,845	2,398	1,588
1980	4,294	5,582	3,677	-0-	-0-	-0-	2,449	3,184	2,060	1,845	2,398	1,617
1981	4,294	5,582	3,604	-0-	-0-	-0-	2,449	3,184	2,151	1,845	2,398	1,453
1982	4,294	5,582	2,795	-0-	-0-	-0-	2,449	3,184	1,775	1,845	2,398	1,020

¹ Adjusted Right as determined and reported to the Court in the Annual Report of the Western-San Bernardino Watermaster for Calendar Year 1971 in Table No. 9, page 27.

² Maximum Allowable for any one year, not to exceed 30% of Adjusted Right.

³ Actual verified extractions from Table No. 3 of Watermaster Report.

⁴ Adjusted Right was not effective until January 1, 1972; thus the Adjusted Right for 1971 is as shown in Appendix B, Table B-1 of the Judgment.

Note: Annual Accounting of Extractions as required in Paragraphs V and VI of the Judgment.

TABLE NO. 11
ANNUAL ACCOUNTING OF EXTRACTIIONS FROM THE SAN BERNARDINO BASIN AREA
AND DELIVERIES TO EACH SERVICE AREA BY RIVERSIDE HIGHLAND WATER COMPANY
 (All Quantities in Acre-Feet)

Calendar Year	Verified Extractions from the San Bernardino Basin Area			Delivery to the San Bernardino Basin Area			Delivery to Colton Basin and Riverside Basin Areas in San Bernardino County			Delivery to Areas Outside San Bernardino Valley		
	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³
1971-75	21,575 ⁴	21,575	20,853	-0-	-0-	-0-	12,305	12,305	10,365	9,270	9,270	10,488
1972-76	21,470	21,470	21,360	-0-	-0-	-0-	12,245	12,245	10,027	9,225	9,225	11,333
1973-77	21,470	21,470	20,411	-0-	-0-	-0-	12,245	12,245	9,608	9,225	9,225	10,803
1974-78	21,470	21,470	18,249	-0-	-0-	-0-	12,245	12,245	8,908	9,225	9,225	9,341
1975-79	21,470	21,470	17,530	-0-	-0-	-0-	12,245	12,245	8,704	9,225	9,225	8,826
1976-80	21,470	21,470	16,498	-0-	-0-	-0-	12,245	12,245	8,762	9,225	9,225	7,736
1977-81	21,470	21,470	15,583	-0-	-0-	-0-	12,245	12,245	8,863	9,225	9,225	6,720
1978-82	21,470	21,470	14,795	-0-	-0-	-0-	12,245	12,245	8,818	9,225	9,225	5,977

Excess Extraction 1978-82 (6,675)* -0- (3,427)* (3,248)*

¹ Adjusted Right as determined and reported to the Court in the Annual Report of the Western-San Bernardino Watermaster for Calendar Year 1971 in Table No. 9, page 27.

² Maximum Allowable for the five-year period is the same as the five-year-period Adjusted Right.

³ Actual verified extractions from Table No. 3 of Watermaster Report.

⁴ Adjusted Right was not effective until January 1, 1972; thus the Adjusted Right for the period 1971-75 is more than the Adjusted Right for subsequent five-year periods.

* Parentheses indicate that actual extractions are less than Adjusted Base Right.

TABLE NO. 12
ANNUAL ACCOUNTING OF EXTRACTIIONS FROM THE SAN BERNARDINO BASIN AREA
AND DELIVERIES TO EACH SERVICE AREA BY
AGUA MANSA WATER COMPANY AND MEEKS & DALEY WATER COMPANY
 (All Quantities in Acre-Feet)

Calendar Year	Verified Extractions from the San Bernardino Basin Area			Delivery to the San Bernardino Basin Area			Delivery to Colton Basin and Riverside Basin Areas in San Bernardino County			Delivery to Areas Outside San Bernardino Valley		
	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³
1971	8,026 ⁴	10,434	2,902	-0 ⁴	-0	-0	326 ⁴	424	383	7,700 ⁴	10,010	2,519
1972	7,833	10,183	3,527	-0	-0	-0	318	413	377	7,515	9,770	3,150
1973	7,833	10,183	2,979	-0	-0	-0	318	413	250	7,515	9,770	2,729
1974	7,833	10,183	4,504	-0	-0	-0	318	413	246	7,515	9,770	4,258
1975	7,833	10,183	3,950	-0	-0	-0	318	413	168	7,515	9,770	3,782
1976	7,833	10,183	5,393	-0	-0	-0	318	413	182	7,515	9,770	5,211
1977	7,833	10,183	4,220	-0	-0	-0	318	413	146	7,515	9,770	4,074
1978	7,833	10,183	2,254	-0	-0	-0	318	413	161	7,515	9,770	2,093
1979	7,833	10,183	3,930	-0	-0	-0	318	413	166	7,515	9,770	3,764
1980	7,833	10,183	2,333	-0	-0	-0	318	413	323	7,515	9,770	2,010
1981	7,833	10,183	3,092	-0	-0	-0	318	413	358	7,515	9,770	2,734
1982	7,833	10,183	3,716	-0	-0	-0	318	413	169	7,515	9,770	3,547

¹ Adjusted Right as determined and reported to the Court in the Annual Report of the Western-San Bernardino Watermaster for Calendar Year 1971 in Table No. 9, page 27.

² Maximum Allowable for any one year, not to exceed 30% of Adjusted Right.

³ Actual verified extractions from Table No. 3 of Watermaster Report.

⁴ Adjusted Right was not effective until January 1, 1972; thus the Adjusted Right for 1971 is as shown in Appendix B, Table B-1 of the Judgment.

Note: Annual Accounting of Extractions as required in Paragraphs V and VI of the Judgment.

TABLE NO. 12
ANNUAL ACCOUNTING OF EXTRACTIIONS FROM THE SAN BERNARDINO BASIN AREA
AND DELIVERIES TO EACH SERVICE AREA BY
AGUA MANSA WATER COMPANY AND MEEKS & DALEY WATER COMPANY
 (All Quantities in Acre-Feet)

Calendar Year	Verified Extractions from the San Bernardino Basin Area			Delivery to the San Bernardino Basin Area			Delivery to Colton Basin and Riverside Basin Areas in San Bernardino County			Delivery to Areas Outside San Bernardino Valley		
	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³
1971-75	39,358 ⁴	39,358	17,862	-0-	-0-	-0-	1,598	1,598	1,424	37,760	37,760	16,438
1972-76	39,165	39,165	20,353	-0-	-0-	-0-	1,590	1,590	1,223	37,575	37,575	19,130
1973-77	39,165	39,165	21,046	-0-	-0-	-0-	1,590	1,590	992	37,575	37,575	20,054
1974-78	39,165	39,165	20,321	-0-	-0-	-0-	1,590	1,590	903	37,575	37,575	19,418
1975-79	39,165	39,165	19,747	-0-	-0-	-0-	1,590	1,590	823	37,575	37,575	18,924
1976-80	39,165	39,165	18,130	-0-	-0-	-0-	1,590	1,590	978	37,575	37,575	17,152
1977-81	39,165	39,165	15,829	-0-	-0-	-0-	1,590	1,590	1,154	37,575	37,575	14,675
1978-82	39,165	39,165	15,325	-0-	-0-	-0-	1,590	1,590	1,177	37,575	37,575	14,148
Excess Extraction 1978-82		(23,840)*		-0-				(413)*			(23,427)*	

¹ Adjusted Right as determined and reported to the Court in the Annual Report of the Western-San Bernardino Watermaster for Calendar Year 1971 in Table No. 9, page 27.
² Maximum Allowable for the five-year period is the same as the five-year-period Adjusted Right.
³ Actual verified extractions from Table No. 3 of Watermaster Report.
⁴ Adjusted Right was not effective until January 1, 1972; thus the Adjusted Right for the period 1971-75 is more than the Adjusted Right for subsequent five-year periods.
 * Parentheses indicate that actual extractions are less than Adjusted Base Right.

TABLE NO. 13
ANNUAL ACCOUNTING OF EXTRACTIIONS FROM THE SAN BERNARDINO BASIN AREA
AND DELIVERIES TO EACH SERVICE AREA BY
THE REGENTS OF UNIVERSITY OF CALIFORNIA
 (All Quantities in Acre-Feet)

Calendar Year	Verified Extractions from the San Bernardino Basin Area			Delivery to the San Bernardino Basin Area			Delivery to Colton Basin and Riverside Basin Areas in San Bernardino County			Delivery to Areas Outside San Bernardino Valley		
	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³
1971	5814	755	219	-0.4	-0-	-0-	-0.4	-0-	-0-	5814	755	219
1972	5365	697	239	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	239
1973	5365	697	239	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	239
1974	5365	697	267	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	267
1975	5365	697	179	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	179
1976	5365	697	245	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	245
1977	5365	697	87	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	87
1978	5365	697	183	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	183
1979	5365	697	83	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	83
1980	5365	697	7	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	7
1981	5365	697	143	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	143
1982	5365	697	48	-0-	-0-	-0-	-0-	-0-	-0-	5365	697	48

¹ Adjusted Right as determined and reported to the Court in the Annual Report of the Western-San Bernardino Watermaster for Calendar Year 1971 in Table No. 9, page 27.

² Maximum Allowable for any one year, not to exceed 30% of Adjusted Right.

³ Actual verified extractions from Table No. 3 of Watermaster Report.

⁴ Adjusted Right was not effective until January 1, 1972; thus the Adjusted Right for 1971 is as shown in Appendix B, Table B-1 of the Judgment.

⁵ See Footnote 2 of Table on Page 19.

Note: Annual Accounting of Extractions as required in Paragraphs V and VI of the Judgment.

TABLE NO. 13
ANNUAL ACCOUNTING OF EXTRACTIIONS FROM THE SAN BERNARDINO BASIN AREA
AND DELIVERIES TO EACH SERVICE AREA BY
THE REGENTS OF UNIVERSITY OF CALIFORNIA
 (All Quantities in Acre-Feet)

Calendar Year	Verified Extractions from the San Bernardino Basin Area			Delivery to the San Bernardino Basin Area			Delivery to Colton Basin and Riverside Basin Areas in San Bernardino County			Delivery to Areas Outside San Bernardino Valley		
	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³	Adjusted Right ¹	Maximum Allowable ²	Actual ³
1971-75	2,725 ⁴	2,725	1,143	-0-	-0-	-0-	-0-	-0-	-0-	2,725	2,725	1,143
1972-76	2,680	2,680	1,169	-0-	-0-	-0-	-0-	-0-	-0-	2,680	2,680	1,169
1973-77	2,680	2,680	1,017	-0-	-0-	-0-	-0-	-0-	-0-	2,680	2,680	1,017
1974-78	2,680	2,680	961	-0-	-0-	-0-	-0-	-0-	-0-	2,680	2,680	961
1975-79	2,680	2,680	777	-0-	-0-	-0-	-0-	-0-	-0-	2,680	2,680	777
1976-80	2,680	2,680	605	-0-	-0-	-0-	-0-	-0-	-0-	2,680	2,680	605
1977-81	2,680	2,680	503	-0-	-0-	-0-	-0-	-0-	-0-	2,680	2,680	503
1978-82	2,680	2,680	464	-0-	-0-	-0-	-0-	-0-	-0-	2,680	2,680	464
Excess Extraction 1978-82		(2,216)*			-0-			-0-			(2,216)*	

¹ Adjusted Right as determined and reported to the Court in the Annual Report of the Western-San Bernardino Watermaster for Calendar Year 1971 in Table No. 9, page 27.

² Maximum Allowable for the five-year period is the same as the five-year-period Adjusted Right.

³ Actual verified extractions from Table No. 3 of Watermaster Report.

⁴ Adjusted Right was not effective until January 1, 1972; thus the Adjusted Right for the period 1971-75 is more than the Adjusted Right for subsequent five-year periods.

* Parentheses indicate that actual extractions are less than Adjusted Base Right.

TABLE NO. 14
ANNUAL ACCOUNTING FOR
WESTERN MUNICIPAL WATER DISTRICT
EXPORT OF EXTRACTIONS FROM SAN BERNARDINO BASIN AREA,
COLTON BASIN AREA, AND RIVERSIDE BASIN AREA
FOR USE WITHIN WESTERN ON LANDS THAT ARE NOT TRIBUTARY
TO THE RIVERSIDE NARROWS
(All Values in Acre-Feet)

	Calendar Years				
	1978	1979	1980	1981	1982
<u>EXPORTS</u>					
Base Right	42,535	42,535	42,535	42,535	42,535
Actual Export ¹	34,988	39,963	41,458	39,358	29,537
ACCUMULATED EXPORT	34,988	74,951	116,409	155,767	185,304
<u>OBLIGATIONS</u>					
Excess Export ²	(7,547)	(2,572)	(1,077)	(3,177)	(12,998)
ACCUMULATED EXCESS EXPORT	(7,547)	(10,119)	(11,196)	(14,373)	(27,371)

¹See Table 8 of Watermaster Report.

²Actual Export minus Base Right. Parentheses indicate that the Actual Export is less than the Base Right.

TABLE NO. 15
ANNUAL ACCOUNTING FOR
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
EXPORT OF EXTRACTIONS FROM SAN BERNARDINO BASIN AREA
AND COLTON BASIN AREA FOR USE ON LANDS
NOT WITHIN WESTERN NOR TRIBUTARY
TO THE RIVERSIDE NARROWS
(All Values in Acre-Feet)

	Calendar Years				
	1978	1979	1980	1981	1982
<u>EXPORTS</u>					
Base Right	12,527	12,527	12,527	12,527	12,527
Actual Export ¹	19,217	23,462	25,351	24,118	20,462
ACCUMULATED EXPORTS	143,529³	166,991	192,342	216,460	236,922
<u>OBLIGATIONS</u>					
Excess Export ²	6,690	10,935	12,824	11,591	7,935
ACCUMULATED EXCESS EXPORT	43,313³	54,248	67,072	78,663	86,598

¹See Table 9 of Watermaster Report.

²Actual Export minus Base Right.

³Accumulated values beginning in 1978 include amounts accumulated through 1977.

TABLE NO. 16
ANNUAL ACCOUNTING FOR
WESTERN MUNICIPAL WATER DISTRICT
EXTRACTIONS FROM COLTON BASIN AREA
AND RIVERSIDE BASIN AREA
IN RIVERSIDE AND SAN BERNARDINO COUNTIES
FOR USE OUTSIDE SAN BERNARDINO VALLEY
(All Values in Acre-Feet)

	Calendar Years				
	1978	1979	1980	1981	1982
<u>EXTRACTIONS</u>					
Base Right ¹	54,099	54,099	54,099	54,099	54,099
Actual Extractions ¹	34,365	37,786	39,477	43,681	30,470
ACCUMULATED EXTRACTIONS	34,365	72,151	111,628	155,309	185,779
<u>CREDITS</u>					
Extraction ²	19,734	16,313	14,622	10,418	23,629
Return from Imported Water	255	302	398	458	345
Total Credits	19,989	16,615	15,020	10,876	23,974
ACCUMULATED CREDITS	19,989	36,604	51,624	62,500	86,474
<u>OBLIGATIONS</u>					
Excess Extractions ³	0	0	0	0	0
Excess Export ⁴	0	0	0	0	0
Land Use Conversion ⁵	297	393	413	414	417
Total Obligations	297	393	413	414	417
ACCUMULATED OBLIGATIONS	297	690	1,130	1,517	1,934
NET ACCUMULATED (CREDIT) OR OBLIGATION	(19,692)	(35,914)	(50,521)	(60,983)	(84,540)

¹See Tables 4, 5, and 6.

²Amounts which may be extracted without replenishment obligation, which in fact are not extracted. Equal to Base Right minus Actual Extraction.

³Actual Extraction minus Base Right.

⁴Reference Table 14. Note that Excess Export is shown as zero when Accumulated Export is less than Base Right.

⁵Reference Table 7.

TABLE NO. 17
ANNUAL ACCOUNTING FOR
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
EXTRACTIONS FROM THE SAN BERNARDINO BASIN AREA
 (All Values in Acre-Feet)

	Calendar Years				
	1978	1979	1980	1981	1982
EXTRACTIONS					
Base Right ¹	167,238	167,238	167,238	167,238	167,238
Actual Extractions ¹	137,040	154,807	159,422	172,639	152,399
ACCUMULATED EXTRACTIONS	1,226,728	1,381,535	1,540,957	1,713,596	1,865,995
CREDITS					
Extraction ²	30,198	12,431	7,816	-0-	14,839
Replenishment ¹⁰	4,035 ⁶	-0- ⁷	-0-	15,339 ⁸	8,343 ⁹
Total Credits	34,233	12,431	7,816	15,339	23,182
ACCUMULATED CREDITS	220,592⁵	233,023	240,839	256,178	279,360
OBLIGATIONS					
Excess Extractions ³	-0-	-0-	-0-	5,401	-0-
Excess Export ⁴	6,690	10,935	12,824	11,591	7,935
Total Obligations	6,690	10,935	12,824	16,992	7,935
ACCUMULATED OBLIGATIONS	43,313	54,248	67,072	84,064	91,999
NET ACCUMULATED (CREDIT) OR OBLIGATIONS	(177,279)⁵	(178,775)	(173,767)	(172,114)	(187,361)

¹ See Table 2.

² Amounts which may be extracted without replenishment obligation, which in fact are not extracted. Equal to Base Right minus Actual Extraction.

³ Actual Extraction minus Base Right.

⁴ Reference Table 15.

⁵ Accumulated values beginning in 1977 include amounts accumulated through 1976.

⁶ Total import of State Project Water by SBVMWD was 4,055 acre-feet. However, 20 acre-feet of this amount were delivered directly into the North Fork Canal.

⁷ Total import of State Project Water by SBVMWD was 18 acre-feet. However, the entire amount was delivered directly into the North Fork Canal.

⁸ Total import of State Project Water by SBVMWD was 16,021 acre-feet. However, 682 acre-feet of this amount were delivered directly into the North Fork Canal.

⁹ Total import of State Project Water by SBVMWD was 8,409 acre-feet. However, 66 acre-feet of this amount were delivered directly into the North Fork Canal.

¹⁰ Amounts corrected during verification of 1982 extractions.

TABLE NO. 18
SUMMARY OF REPLENISHMENT OBLIGATIONS
WESTERN AND SAN BERNARDINO VALLEY
FIVE-YEAR PERIOD 1978 THROUGH 1982
(All Values in Acre-Feet)

WESTERN MUNICIPAL WATER DISTRICT

	<u>San Bernardino Basin Area</u>	<u>Colton and Riverside Basins</u>
Accumulated Credits ¹	(See Tables 10-13)	86,474
Accumulated Obligations ¹	--	1,934
Net Accumulated (Credit) or Obligation	--	(84,540)
Excess Extraction Return Credit ²	--	0
REPLENISHMENT REQUIRED	--	0

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

	<u>San Bernardino Basin Area</u>	<u>Colton Basin and Riverside Basin in San Bernardino County</u>
Accumulated Credits ³	279,360 ⁴	--
Accumulated Obligations ³	91,999 ⁴	0
Net Accumulated (Credit) or Obligation ³	(187,361) ⁴	0
Excess Extraction Return Credit ²	0	--
REPLENISHMENT REQUIRED	0	0

¹Reference Table 16 for Colton and Riverside Basins.

²When a net accumulated obligation exists, excess extraction returns are computed as 36% of the excess extraction and are subtracted from the net accumulated obligation to determine the required replenishment.

³Reference Table 17.

⁴Includes amounts accumulated prior to 1978.