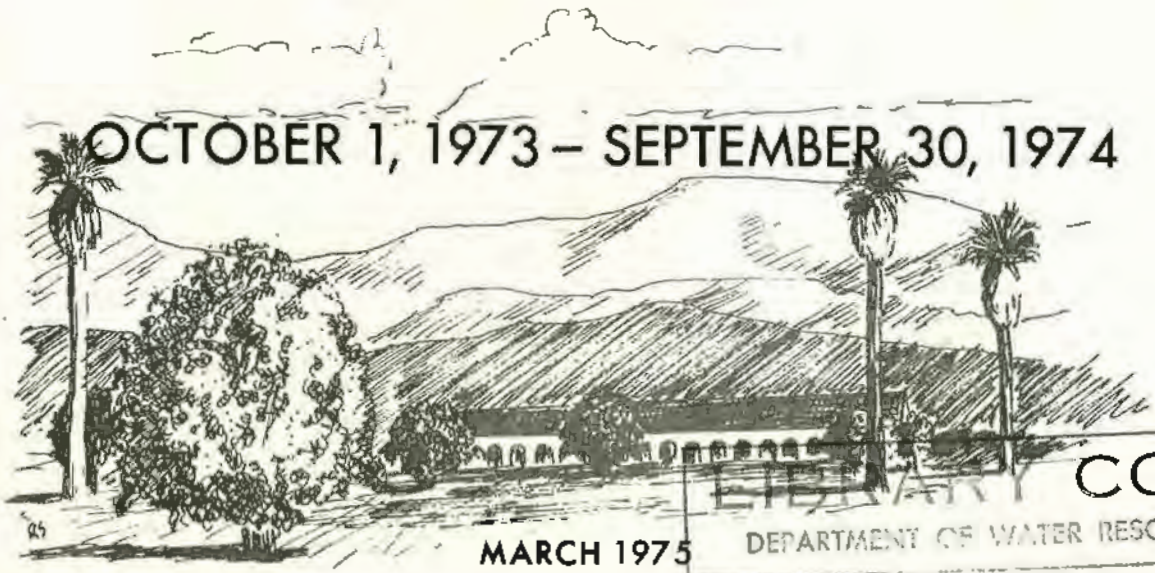
STATE OF CALIFORNIA
The Resources Agency

Department of Water Resources

BULLETIN No. 181-74

WATERMASTER SERVICE
IN THE
UPPER LOS ANGELES RIVER AREA
LOS ANGELES COUNTY



OCTOBER 1, 1973 – SEPTEMBER 30, 1974

MARCH 1975

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Secretary for Resources
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DEPARTMENT OF WATER RESOURCES
John R. Teerink, Director
Robert G. Eiland, Deputy Director

SOUTHERN DISTRICT

Jack J. Coe . . . . . District Engineer and Watermaster
Mitchell L. Gould . . . . . Chief, Operations Branch and Deputy Watermaster

Watermaster service in this area was conducted
and report prepared under the direction

of

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FOREWORD

The Department of Water Resources (DWR) as Watermaster for the Upper Los Angeles River Area (ULARA), submits this annual report as a comprehensive review of water supply conditions in ULARA during the 1973-74 water year. The report was prepared for the Superior Court in the County of Los Angeles, and for the parties to the ULARA Judgment, whose provisions authorize its publication.

ULARA is administered by DWR as a Watermaster Service Area in accordance with Part 4, Division 2, of the California Water Code. ULARA has been operated for six years under a well-defined management plan that limits and monitors ground water extractions.

This report contains information on ground water extractions, use of imported water, recharge operations, water quality conditions, a financial report on Watermaster Service during the 1973-74 fiscal year, and the tentative budget of the Watermaster for the 1975-76 fiscal year.

Jack J. Coe
District Engineer
Southern District
and Watermaster
Reg. C. E. No. 8075

TABLE OF CONTENTS

I. INTRODUCTION

Upper Los Angeles River Area (ULARA) encompasses all of the watershed of the Los Angeles River and its tributaries above a point in the River designated as Los Angeles County Flood Control District (LACFCD) Gaging Station F-57C, northwesterly of the junction of the surface channels of the Los Angeles River and the Arroyo Seco (Plate 1). The entire area consists of 330,000 acres, comprising 123,000 acres of valley fill, referred to as the ground water basins, and 207,000 acres of hills and mountains. ULARA is bounded on the north by the Santa Susana Mountains and on the east by the San Rafael Hills which separate it from the San Gabriel Basin. To the south, the Santa Monica Mountains separate it from the Los Angeles Basin and to the west, lie the Simi Hills.

ULARA, as defined in the Judgment, has four distinct hydrologic ground water basins. The water supplies of these basins are separate and independent and are replenished by deep percolation from rainfall and from a portion of the water that is delivered for use within these basins and which returns to the ground water body. The four ground water basins in ULARA are the San Fernando, Sylmar, Verdugo, and Eagle Rock Basins (Plate 1).

The San Fernando Basin, the largest of the four basins, consists of 112,000 acres and comprises 90.8 percent of the total valley fill. It is bounded on the east and northeast by the San Rafael Hills and Verdugo Mountains; on the south by the Santa Monica Mountains; and on the northwest and west by the Santa Susana Mountains and Simi Hills.

The Sylmar Basin, in the northerly part of ULARA, consists of 5,600 acres and comprises 4.5 percent of the total valley fill. It is bounded on the north and east by the San Gabriel Mountains; to the south it is divided by the eroded limb of the Little Tujunga syncline; and the topographic divide in the valley fill, lying between the Mission Hills and San Gabriel Mountains, divides it on the west.

The Verdugo Basin, north and east of the Verdugo Mountains in ULARA, consists of 4,400 acres and comprises 3.8 percent of the total valley fill. It is bounded on the north by the San Gabriel Mountains; on the east by the ground water divide between the Monk Hill Subarea of the Raymond Basin and the Verdugo Basin; on the southeast by the San Rafael Mountains; and on the south and southwest by Verdugo Mountains.

The Eagle Rock Basin, the smallest of the four basins, is in the extreme southeast corner of ULARA. It comprises 800 acres and consists of 0.6 percent of the total valley fill.

History of Adjudication

ULARA was established by the JUDGMENT AFTER TRIAL BY COURT in Superior Court Case No. 650,079, entitled The City of Los Angeles, A Municipal Corporation, Plaintiff, vs. City of San Fernando, et al., Defendants signed March 14, 1968 by the Honorable Edmund M. Moor, Judge of the Superior Court. Prior to the Judgment, numerous pretrials were held, subsequent to the filing of the action by the City of Los Angeles in 1955 and before the trial commenced on March 1, 1966.

On March 19, 1958, an Interim Order of Reference was entered by the Court directing the State Water Rights Board, now known as the State Water Resources Control Board (SWRCB), to study the availability of all public and private records, documents,

UPPER LOS ANGELES RIVER AREA

reports, and data relating to a proposed order of reference in the case. The Court subsequently entered on June 11 1958, an "Order of Reference to State Water Rights Board to Investigate and Report upon the Physical Facts (Section 2001, Water Code)".

A final Report of Referee was approved on July 27, 1962, and filed with the Court. The Report of Reference made a complete study of the geology, insofar as it affects the occurrence and movement of ground water, and the surface and ground water hydrology of the area. In addition, investigations were made of: the history of the horizontal and vertical location of the beds, banks and channels of the Los Angeles River and its tributaries; the areas, limits, and directions of flow of all ground water within the area; the quality of the ground water in the basins; all sources of water, whether they be diverted, extracted, or imported, etc. This was the basis for the Judgment.

The City of Los Angeles filed an appeal with the Court of Appeals which held a hearing on November 9, 1972, and issued its opinion on November 22, 1972. The opinion, prepared by Judge Compton and concurred by Judges Roth and Fleming, reversed, with direction, the original Judgment handed down by Judge Moor. In essence, the City of Los Angeles was given rights to all water within ULARA including the use of the underground basins. The defendants, however, were given the right to capture "return water", which is purchased MWD water that percolates into the basin.

A petition for rehearing was filed on December 7, 1972, but was denied by the Court of Appeals. On January 2, 1973, the defendants appealed to the State Supreme Court. The Court on March 2, 1973, advised the parties it would hear the case. A Court hearing was held on January 14, 1975, in which the plaintiff and defendants each were given one hour to present their oral arguments. A decision is expected by year's end.

Watermaster Service

Watermaster Service is administered by the Department of Water Resources (DWR) under Article 2, Chapter 2.5, Division 1 and Part 4, Division 2, of the California Water Code. Section 4025 authorizes DWR to form Watermaster Service Areas. Pursuant to Section 4026, such areas are created from time to time as rights to water are ascertained and determined. Particularly where ground water is concerned, such rights are usually ascertained or determined by court decree.

The first Watermaster Service Area was formed in September 1929 and the latest (ULARA) was formed on April 19, 1968. Currently, there are 20 such areas controlling surface water diversions in Northern California and four in Southern California controlling ground water use.

Under the Judgment, the Court appointed DWR as Watermaster to keep the Court fully advised in the premises, and to assist the Court in the administration and enforcement of the provisions of the Judgment.

A major task of the Watermaster in ULARA is that of monitoring ground water extractions. In accordance with the "General Information Policies and Procedures" of January 4, 1971, adopted by the Advisory Board, every ground water pumper reports his ground water extractions on a monthly basis on preprinted forms prepared and supplied by the Watermaster. This makes possible the updating of the water rights accounts (Watermaster Water Production Summary) by computing the amount pumped during the previous month, the total amount pumped to date, and the amount that can be legally pumped during the remainder of the water year. A copy of the updated account is then mailed to the pumper each month.

The Watermaster's field staff performs water-meter tests to verify ground

water production reported by the parties when requested by any party to the Judgment or at the discretion of the Watermaster.

Defective or inaccurate water measuring devices must be repaired within 30 days after receiving written notice of the results of the test from the Watermaster. A number of well site investigations were made during 1973-74, and six meter tests were performed.

The Watermaster keeps the Court apprised of hydrologic conditions within ULARA by means of annual reports and on special occasions by correspondence directed to the Court, both of which are reviewed by the Advisory Board before submittal. In preparing the annual report, the Watermaster collects and reports all information affecting and relating to the water supply and disposal within ULARA. Such information includes the following items:

1. Water supply
   a. Precipitation
   b. Imported water

2. Water use and disposal
   a. Extractions
      (1) Used in valley fill area
      (2) Exported from each basin
   b. Water outflow
      (1) Surface
      (2) Subsurface
      (3) Sewers

3. Water levels

4. Transfers of water rights

5. Watermaster administrative budgets and costs

6. Compliance and violation by any party in terms of the judgment

7. Ownership and locations of new wells

In addition to the above duties, the Watermaster also makes recommendations as he deems appropriate in connection with the proper utilization of the water supply in the underground storage capacities of ULARA.

Advisory Board

Section X, Paragraph 5 of the ULARA Judgment established an Advisory Board for the purpose of advising the Watermaster in the administration of its duties. The duly appointed members of the Board, as of September 30, 1974, are:

City of Los Angeles

Duane L. Georgeson
Wells O. Abbott, Jr. (Alternate)
Bruce W. Kuebler
Melvin L. Blevins, Secretary (Alternate)

City of Glendale

William H. Fell
Steven J. Meyerhofer (Alternate)

City of Burbank

Warren D. Hinchee
Martindale Kile, Jr. (Alternate)

City of San Fernando

Robert James, Chairman
Stuart E. Bergman (Alternate)

Crescenta Valley County Water District

Robert E. Blomquist
Robert K. Argenio (Alternate)

The Advisory Board may be convened by the Watermaster at any time in order to seek its advice. In addition, the Advisory Board is also responsible for reviewing with the Watermaster the proposed annual budget and annual report.

During the 1973-74 water year, the Advisory Board was convened twice, once on February 4, 1974, and once on September 19, 1974.

The meeting of February 4th was convened to discuss the following items:

1. Annual Report for 1972-73.

2. Budget for 1974-75.

3. Water Quality Report for ULARA.

4. Report from the Ad Hoc Committee of the Southern California Water Conference re: Ground Water Storage of State Water Project Supplies.

5. Progress report on abatement of gasoline pollution at Forest Lawn Cemetery.

The September 19th meeting was called to discuss the following items:

1. Further reports on the use of ULARA ground-water Basin for storing of surplus water from the State Water Project.

2. Annual report for 1973-74.

3. Requests for extension of time by parties to pump "Restricted Pumping Right" not pumped during the water year due to special problems.

4. Land Use Study of ULARA.

5. Appointment of Sub-Committee to investigate storage of water in ULARA from the State Water Project.

Summary of 1973-74 Operating Conditions

Rainfall in the valley fill area was almost normal (99 percent) and was 24 percent less than the year before. With the exception of 1972-73, the last five years have experienced below normal rainfall. Runoff decreased by 25 percent, reducing by 39 percent the amount of water conserved by LACFCD in its spreading basins.

Overall, extractions increased by 4 per cent and were slightly above the combined Restricted Rights of the three basins. Ground water extractions in Sylmar and Verdugo Basins did not exceed the Restricted Rights therein. Imports were down by 1 percent (5,000 acre-feet), as were exports which decreased by 3 percent (6,500 acre-feet).

Water levels at key wells reflect a slight drop and stabilization of levels throughout most of the Basin. Levels had dropped since the early 1940's from 0-10 feet in Canoga Park to 140 to 160 feet in the area between Cities of Glendale and Burbank. Levels have not changed as drastically at the Narrows and Verdugo Basin. Sylmar Basin levels have dropped by 50-60 feet for the same period.

Water quality in the Basins range from good to excellent. Recent data show the quality changes appear to have stabilized in the eastern portion of the San Fernando Basin and slowed in the western. This does not apply to Verdugo and Sylmar Basins and the L.A. Narrows.

Seven parties exceeded their Restricted Pumping rights in 1973-74. Four of the seven parties were in violation as a result of having a zero water right or having a deficit carryover from 1972-73. The Watermaster approved overextractions and carryover in excess of permissible limits in four cases after having received the Advisory Board's concurrence.

The Watermaster processed eleven assignments of water rights in ULARA. Expenditures for Watermaster Service increased by $5,000 and amounted to $0.24 per acre-feet of ground water extracted.

Table 1 compares statistics for this period of record and the prior water year.

TABLE I. SUMMARY OF OPERATING CONDITIONS
1972-73 and 1973-74

Item	Water Year 1972-73	Water Year 1973-74
Parties	27	27
Active pumpers	21	20
Active nonparties (within valley fill)	3	3
Restricted Pumping, in acre-feet	104,040	104,040
Watermaster expenses (fiscal year)	$ 20,587.80	25,678.28
Watermaster expenses per acre-foot pumped	$ 0.20	$ 0.24
Valley rainfall, in inches	20.65	15.75
Spreading Operations, in acre-feet		
LACFCD	16,886	10,283
Los Angeles, City of	7,456	6,205
Extractions, in acre-feet	100,907	105,208
Imports, in acre-feet		
Colorado River water	5,394	6,606
Owens River water	449,105	441,843
Northern California water	21,878	22,884
Delivered to hill and mountain areas, in acre-feet	49,500	48,190
Exports, in acre-feet		
Owens River water	238,858	232,350
Sewage	110,651	110,173

II. WATER SUPPLY CONDITIONS

ULARA depends on many water sources to meet demand brought on by rapid growth of industry and population. At present, the water supply of ULARA consists of: precipitation on the watershed which includes portions of the San Gabriel, Verdugo, Santa Monica, and Santa Susana Mountains; ground water that is in storage in the four basins; imports from the Mono Basin-Owens River system; imports from the Colorado River; and water from northern California made available by the State Water Project.

Precipitation

ULARA has the climate of an interior coastal valley and is hotter in the summer and wetter in the winter than the coastal areas which have a Mediterranean type climate.

Precipitation varies considerably throughout ULARA, depending on topography and elevation. Mean seasonal precipitation ranges from about 14 inches at the western end of the San Fernando Valley to 35 inches in the San Gabriel Mountains. Approximately 80 percent of the annual rainfall occurs from December through March.

Precipitation in the valley and in the hills and mountains is evaluated separately. The valley is made up of the four ground water basins, whereas the hills and mountains comprise the remaining areas in ULARA. Precipitation in the hills and mountains is evaluated to relate the runoff from the watersheds of Big Tujunga, Pacoima Creek, and Sycamore Canyon, to the runoff records which are included in this report and also to evaluate the ground water recharge. (See Plate 2 for location of precipitation stations.)

The 1973-74 water year experienced below average rainfall. Rainfall in ULARA decreased to 17.95 inches, a drop of 5 inches from last year. On the average, about 15.75 inches of rain fell on the valley floor, whereas the mountains received approximately 19.93 inches. The 90-year (1881-1971) average precipitation for the valley and mountains is 16.45 and 21.35 inches, respectively.

Table 2 presents a record of rainfall at 22 key precipitation stations which were used to develop the 90-year average rainfall and are described in the Report of Referee.

TABLE 2. PRECIPITATION [a]
(in inches)

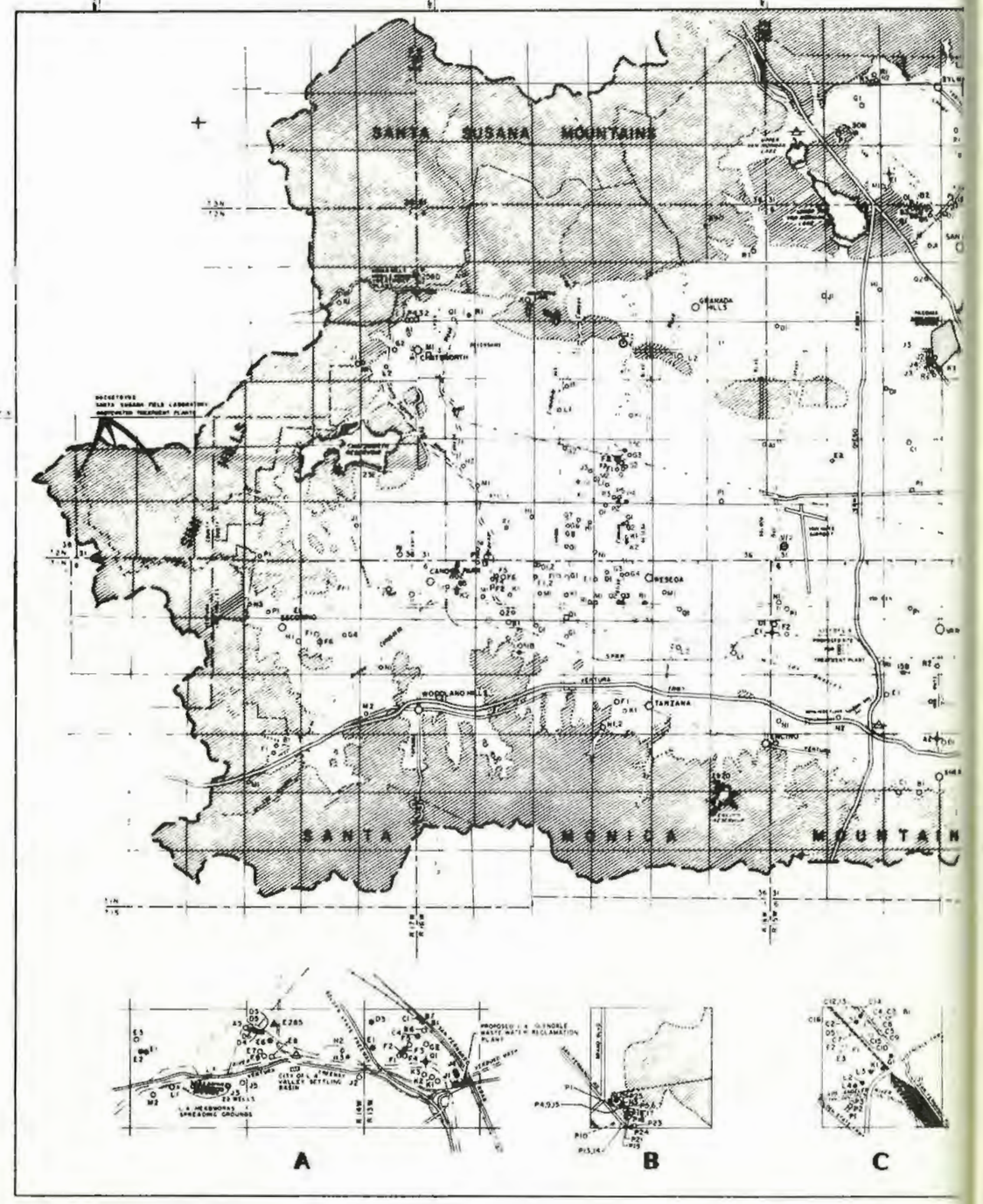
Station		90-year mean	1972-73 precipitation	1973-74	
LACFCD Number	Name			Precipitation	Percent of 90-year mean
11C	Upper Franklin Canyon Reservoir[b]	18.31	24.44	19.60	107
13B	North Hollywood[c]	16.69	21.78	17.48	105
14C	Roscoe-Magrill[c]	15.02	21.23	16.86	112
15A	Van Nuys[c]	15.07	19.35	15.27	101
17	Sepulveda Canyon	19.07	27.53	20.82	109
23B-E	Chatsworth Reservoir[c]	14.57	18.55	14.43	99
25C	Northridge-Andrews[c]	14.52	17.98	13.80	95
29D	Granada Pump Plant	17.33	21.55	17.22	99
30B	Sylmar[c]	16.66	22.26	16.89	101
33A-E	Pacoima Dam	18.72	27.04	16.91	90
47D	Clear Creek City School	30.59	38.68	28.15	92
53D	Colby's Ranch	29.75	32.74	21.29	72
54C	Loomis Ranch-Alder Creek	20.47	17.66	18.40	90
210B	Brand Park	18.71	23.51	18.36	98
251C	La Crescenta[c]	23.50	29.21	21.56	92
259D	Chatsworth Patrol	17.88	20.58	16.24	91
364	Haines Canyon-Lower	24.06	27.63	21.39	89
470	Tujunga-Mill Creek	16.94	17.59	13.96	82
703	Glendale-McIntyre[c,d]	17.65	22.61	16.68	95
705	Paradise Ranch-Alder Creek	18.93	26.00[e]	19.33	102
1051B	Canoga Park[c]	14.39	20.89[f]	15.79	110
1074	Little Gleason[g]	24.65	26.07	23.23	94

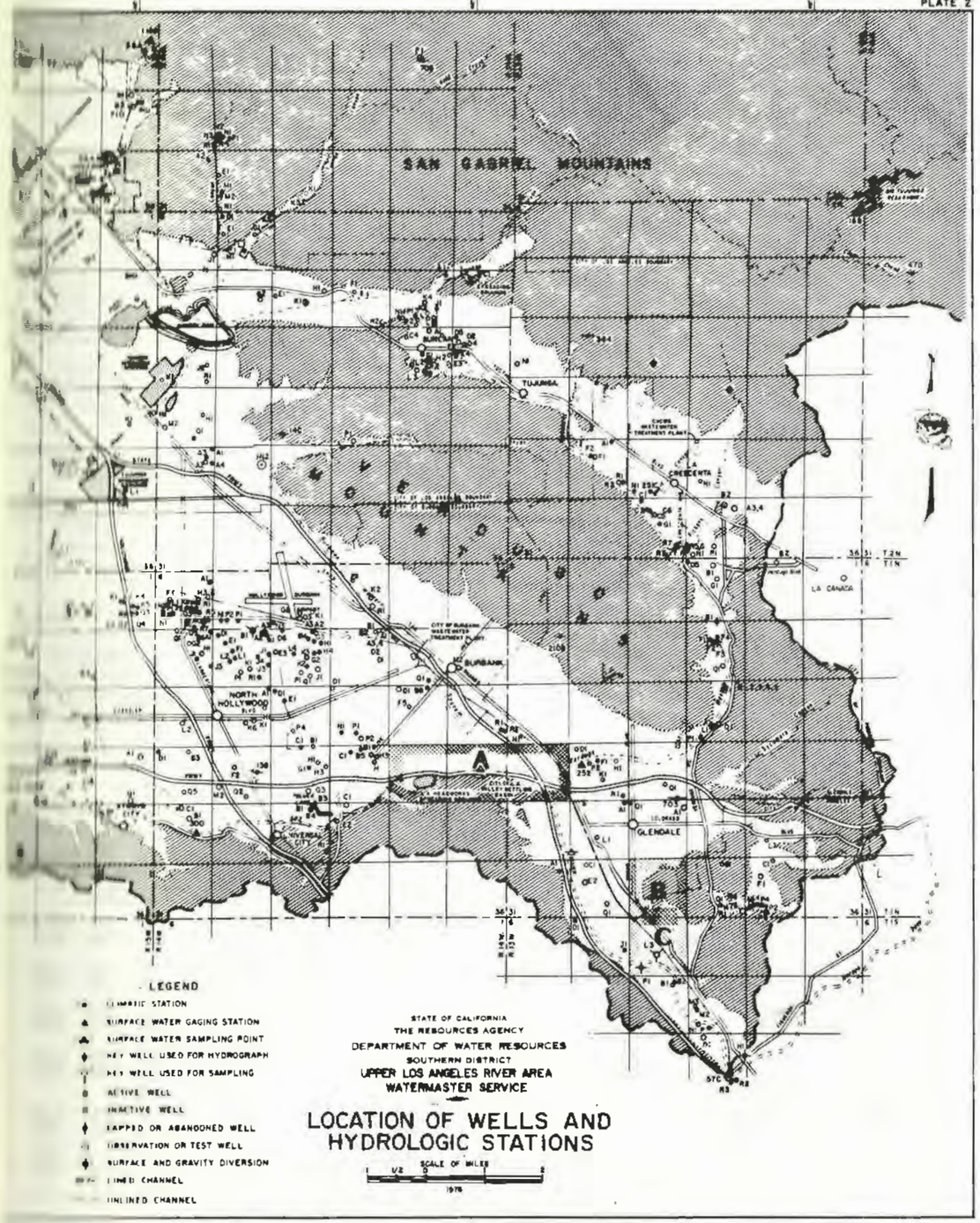
a/ Data furnished by Los Angeles County Flood Control District (LACFCD).
b/ Substituted for Franklin Canyon Station No. 12.
c/ Valley Station.
d/ Substituted for Glendale Station 295G.
e/ Substituted by Pacoima Canyon-Dutch Louie Canyon Station 466B.
f/ Substituted by Woodland Hills Station 21B.
g/ Substituted for Santa Clara Ridge Station No. 419.

Runoff and Outflow from ULARA

The drainage area of ULARA contains 329,137 acres, of which 205,709 acres are hills and mountains. The drainage system, in turn, is made up of the Los Angeles River and its tributaries. Surface flow in spring originates as: storm runoff from the hills and mountains; storm runoff

PLATE 2





LEGEND

- CLIMATIC STATION
- SURFACE WATER GAGING STATION
- SURFACE WATER SAMPLING POINT
- KEY WELL USED FOR HYDROGRAPH
- KEY WELL USED FOR SAMPLING
- ACTIVE WELL
- INACTIVE WELL
- CAPPED OR ABANDONED WELL
- OBSERVATION OR TEST WELL
- SURFACE AND GRAVITY DIVERSION
- LINED CHANNEL
- UNLINED CHANNEL

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT
UPPER LOS ANGELES RIVER AREA
WATERMASTER SERVICE

LOCATION OF WELLS AND HYDROLOGIC STATIONS

SCALE OF MILES
1 1/2 0 1 2

1978

from the impervious areas of the valley; operational spills of imported water; industrial and sanitary waste discharges; and rising water.

Urbanization of the area has rapidly increased the flow discharge rates in much of ULARA and it is important to keep abreast of such change and its effect on the ground water basins.

A number of stream-gaging stations are maintained throughout ULARA, either by LACFCD or U.S. Geological Survey (USGS). The Watermaster has selected six key gaging stations which, in effect record major runoff from hydrologic areas in ULARA.

Table 3 summarizes the monthly flows for each gaging station and compares the 1972-73 water year with the 1973-74 year. The former was a very wet year and the latter below normal, as evidenced by the runoff quantities.

The records presented herein will keep the parties informed as to the magnitude of runoff from these various areas. The stations selected for this purpose are:

Station 57C registers all surface outflow from ULARA.

Station 118B registers all releases from Pacoima Dam that originate in Pacoima Canyon. Runoff below this point flows to the Lopez and Pacoima spreading grounds and on down to the Los Angeles River.

Station 168 registers all releases from Big Tujunga Dam, which collects runoff from Tujunga Canyon northeasterly of the Dam. Runoff below this point flows to Hansen Dam.

Station 252 registers flow from Verdugo Canyon plus flows from Dunsmore and Pickens Canyons.

Station E-285 registers flow from the westerly slopes of Verdugo Mountains and some flow east of Lankershim Boulevard. It also records any releases of reclaimed waste water discharged by the City of Burbank.

Station 300 registers all flow west of Lankershim Boulevard plus outflow from Hansen Dam that is not spread. These records also include releases from Sepulveda Dam, which may include extractions from Reseda Wells.

TABLE 3. MONTHLY RUNOFF AT SELECTED GAGING STATIONS [a/]
(in acre-feet)

Station	Water Year	Month												Total
		Oct.	Nov.	Dec.	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	
57C-R	1972-73	1672	15936	5699	17855	50510	13964	1393	1688	1388	1782	1152	920	113959
(Los Angeles River)	1973-74	1240	7310	3510	53030	827	17550	1560	956	762	700	727	639	88811
252-R	1972-73	124	1120	644	1357	3850	1513	102	154	138	144	141	121	9408
(Verdugo Channel)	1973-74	132	779	347	3420	218	1460	280	147	149	199	120	132	7383
E285-R	1972-73	541	1415	826	1485	3204	1248	493	332	522	471	493	638	11668
(Burbank Storm Drain)	1973-74	412	930	481	3720	360	1910	492	557	489	460	437	473	10721
300-R	1972-73	1104	6325	3190	13027	36092	8354	972	853	847	755	689	895	73103
(L. A. River at Tujunga Ave.)	1973-74	713	3940	2710	30150	789	10000	949	807	775	725	638	631	52827
168-R	1972-73	265	221	14	13	4542	3280	1376	88	42	54	3661	1024	14580
(Big Tujunga Dam)	1973-74	485	119	12	1641	537	747	995	453	349	273	172	473	5856
118B-R	1972-73	12	8	6	6	3069	2680	1326	763	6	6	6	6	7894
(Pacoima Dam)	1973-74	63	55	69	1730	264	1270	357	173	99	6	12	53	4151

a/ Figures shown are rounded off; for details see Appendix C.

The locations of these key gaging stations are shown on Plate 2. The mean daily discharge rates for these six gaging stations during 1973-74 are summarized in Appendix C.

At the request of the Advisory Board, the Watermaster has attempted to compute the surface flow of the Los Angeles River at gaging station F-57C as to the sources, i.e., storm runoff from precipitation, Owens River water, rising water, or industrial and reclaimed waste water discharges. The Watermaster utilized the procedures outlined in the Report of Referee for estimating the approximate flow rates and sources of water passing gaging station F-57C. A similar request was made for station F-252. A summary of the procedures used follows and a tabulation of the computed flows is shown in Table 4.

The base low flows were separated from the surface runoff by the use of the hydrographs of Station F-57C. Base flows consist of rising water and industrial waste plus sewage. The separation of these two components is based on the following assumptions:

Rising water equals base low flow minus the sum of industrial waste and sewage. Industrial wastes are estimated from City of Los Angeles waste permits and the low flows in the Burbank-Western storm drain.

When the City of Los Angeles diverts water at the Headworks, all the rising water is diverted. When there is no diversion, all the rising water percolates upstream from Station F-57C.

The surface runoff obtained from the hydrographs of Station F-57C consists of net storm runoff and Owens River water. The separation of surface runoff into these two components is based on the following assumptions:

Net storm runoff equals surface runoff minus Owens River water.

If the Headworks diverts, all releases of Owens River waters are diverted to the Headworks spreading grounds. If the Headworks does not divert, all releases of Owens River waters are considered as passing station F-57C.

TABLE 4. SEPARATION OF SURFACE FLOW AT STATIONS F-57C AND F-252
(in acre-feet)

Period	Base low flow		Surface Runoff		Total Measured Outflow
	Rising Water	Waste Discharge	Owens River	Net Storm	
Station F57C-R					
1969-70	4,180	6,565	0	36,775	47,520
1970-71	2,556[a]	8,856	12,978	68,920	93,310
1971-72	3,602[a]	8,219	0	35,049	46,870
1972-73	4,596[a]	8,776	0	100,587	113,959
1973-74	2,694[a]	6,366	0	79,818	88,878
29-year average 1929-57	6,810	770	1,580	30,790	39,940
Station F252-R					
1969-70	3,452	0	0	2,639	6,091
1970-71	2,881	0	0	4,805	7,686
1971-72	2,050	0	0	2,513	4,563
1972-73	1,706	0	0	7,702	9,408
1973-74	1,772	0	0	5,613	7,385

a/ Includes rising water past rubber dam at Headworks Spreading Grounds and from Verdugo Channel.

Ground Water Recharge

Local precipitation can have a marked influence on the ground water supply and water in storage. However, there is a wide variation in the annual amount of runoff as a result of changes in both precipitation and retentive characteristics of the watershed.

The accelerated urban development in ULARA has resulted in much of the rainfall being collected and routed into paved channels which discharge into the Los Angeles River and subsequently is carried out of the Basin. Plate 2 depicts the lined channels in ULARA.

To somewhat overcome the rapid outflow due to urbanization, Pacoima and Hansen Dams originally built for flood protection, are currently being utilized to regulate storm flows to recapture the flow in spreading basins operated by LACFCD as well as the City of Los Angeles.

LACFCD operates the Branford, Hansen, Lopez, and Pacoima spreading grounds. The City of Los Angeles, in turn, operates the Tujunga and Headworks spreading grounds. Plate 2 shows the location of these spreading basins. The spreading grounds operated by LACFCD are utilized for spreading native water, whereas the spreading grounds operated by the City of Los Angeles are utilized to spread Owens River and native water, spillage from the Chatsworth Reservoir, ground water effluent, and the discharge from the Reseda wells. Table 5 summarizes the spreading operations for the 1973-74 water year.

TABLE 5. SPREADING OPERATIONS
(in acre-feet)

Month	Native water spread by Los Angeles County Flood Control District				Water Spread by City of Los Angeles				
	Spreading Basins				Tujunga Spreading Grounds		Headworks Spreading Grounds		
	Branford	Hansen	Lopez	Pacoima	Native water	Owens River water	Owens River releases	Reseda wells	Ground water effluent in L.A. River[a/]
Oct. 1973	2	0	0	0	0	0	0	86	443
Nov.	63	0	0	149	0	0	0	96	446
Dec.	28	0	0	79	0	0	0	0	455
Jan. 1974	426	2,751	249	1,377	0	0	0	0	344
Feb.	5	1,314	24	0	0	0	0	0	578
Mar.	148	1,044	539	773	0	0	0	0	49
Apr.	+	1,178	131	0	0	0	0	0	434
May	+	0	1	0	0	0	0	0	670
June	+	0	0	0	0	0	0	0	613
July	+	0	0	0	0	0	0	0	683
Aug.	+	0	0	0	0	0	0	0	695
Sept.	+	0	2	0	0	0	0	0	613
Totals	672	6,287	946	2,378	0	0	0	182	6,023

a/ Includes industrial discharge, ground water effluent, and surface runoff diverted from Los Angeles River to Headworks Spreading Grounds.

+ Denotes insignificant amount.

Ground Water Table Elevations

During the 1973-74 water year, the Water-master collected and processed data to determine prevailing ground water conditions in ULARA during the spring and fall of 1974 (Plates 3 and 4). Data for lines of equal ground water elevation for Sylmar, Chatsworth, and Santa Susana foothills were obtained from the City of Los Angeles and for the remaining area, from LACFCD.

Change in ground water surface elevation from fall of 1973 to fall of 1974 as presented in Plate 5 reflects the effects of variations in spreading, ground water extractions, and rainfall.

The areas around Hansen, Pacoima, and Tujunga spreading basins show a drop in ground water elevation because of the increase in the amount of water spread in 1973-74. On the other hand, the drop in water levels north of San Fernando and North Hollywood is attributed to the increase in ground water extractions. The same holds true for the Pollock Field, halfway between Glendale and Station F-57C, which has also resulted in a drop in water levels in that area. Curtailment in ground water extractions has resulted in a rise in water levels near Reseda, North Hollywood and the City of Burbank.

Figures 1 and 2 depict the water levels at key wells and Plate 2 shows their location.

Waste Water Reclamation

The reclamation of waste water can provide a relatively economical source of water for irrigation, industrial, recreational, and possibly, domestic use. Seven waste water treatment plants are in operation in ULARA, one is under construction and another is being considered (Plate 2). A tabulation of the operating waste water reclamation plants is shown in Table 6.

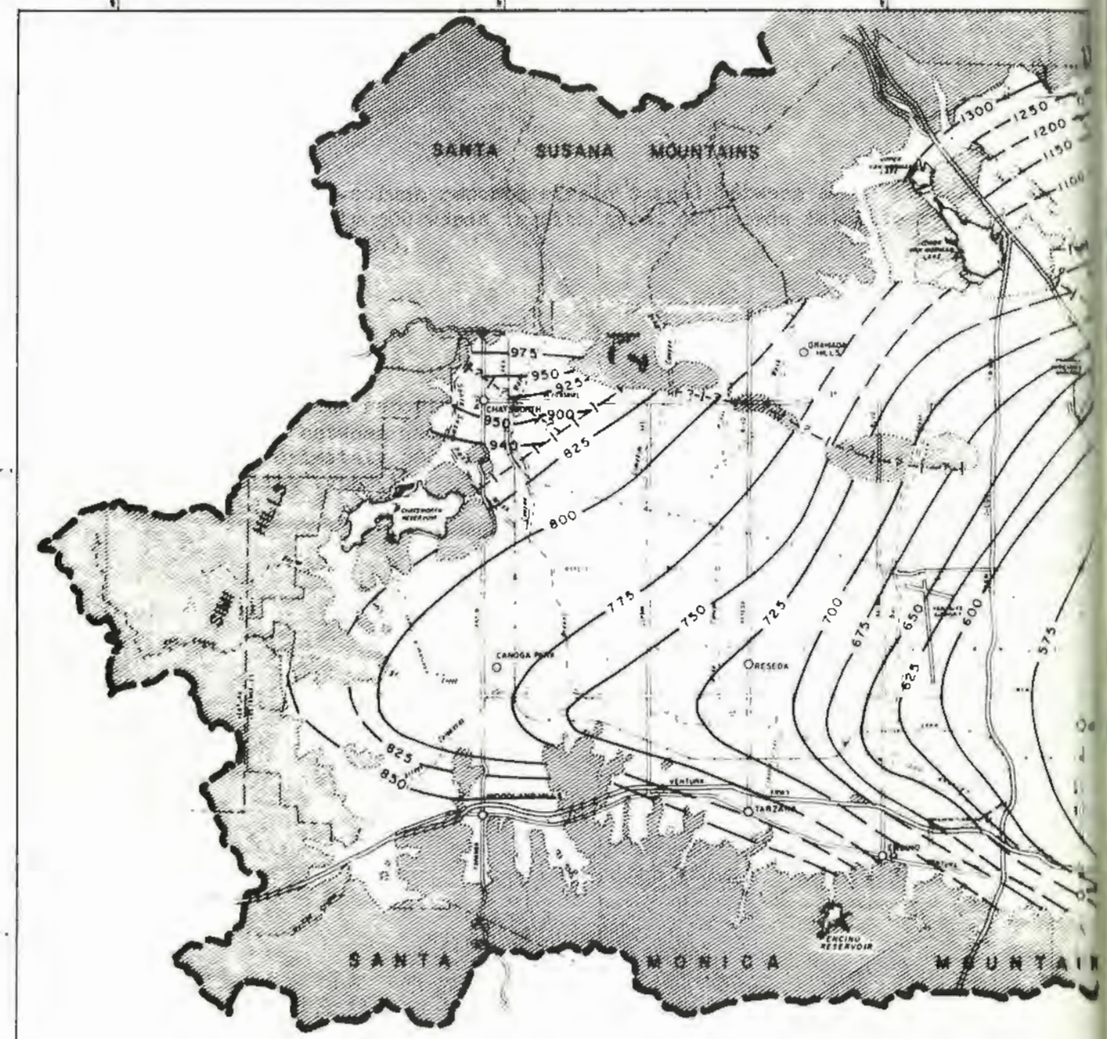
The Los Angeles-Glendale Waste Water Reclamation Plant project is currently under construction. As of December 31, 1974, it was approximately 95 percent completed, with completion expected sometime in the late spring of 1975, and an on-line target date of summer 1975. Treatment capacity will be 20 million gallons per day (mgd), with 7.5 mgd for irrigation and fire protection, 2.5 mgd to the City of Glendale for its steam plant cooling water, and 10 mgd discharged into the Los Angeles River.

The design of the Sepulveda Basin Water Reclamation plant has been completed. It provides for an initial module of 40 mgd capacity, with treated effluent being used for recharge and irrigation of the Sepulveda Basin recreation area. The design allows expansion to an ultimate capacity of five modules of 40 mgd each. These would be constructed as future demand increased. At the beginning of calendar year 1975, the Los Angeles City Engineer's office reports that no schedule has been set for construction. The project will not proceed until the Environmental Protection Agency completes an assessment of facilities' needs and approval of State and Federal construction grants has been received.

TABLE 6. WASTE WATER RECLAMATION PLANTS

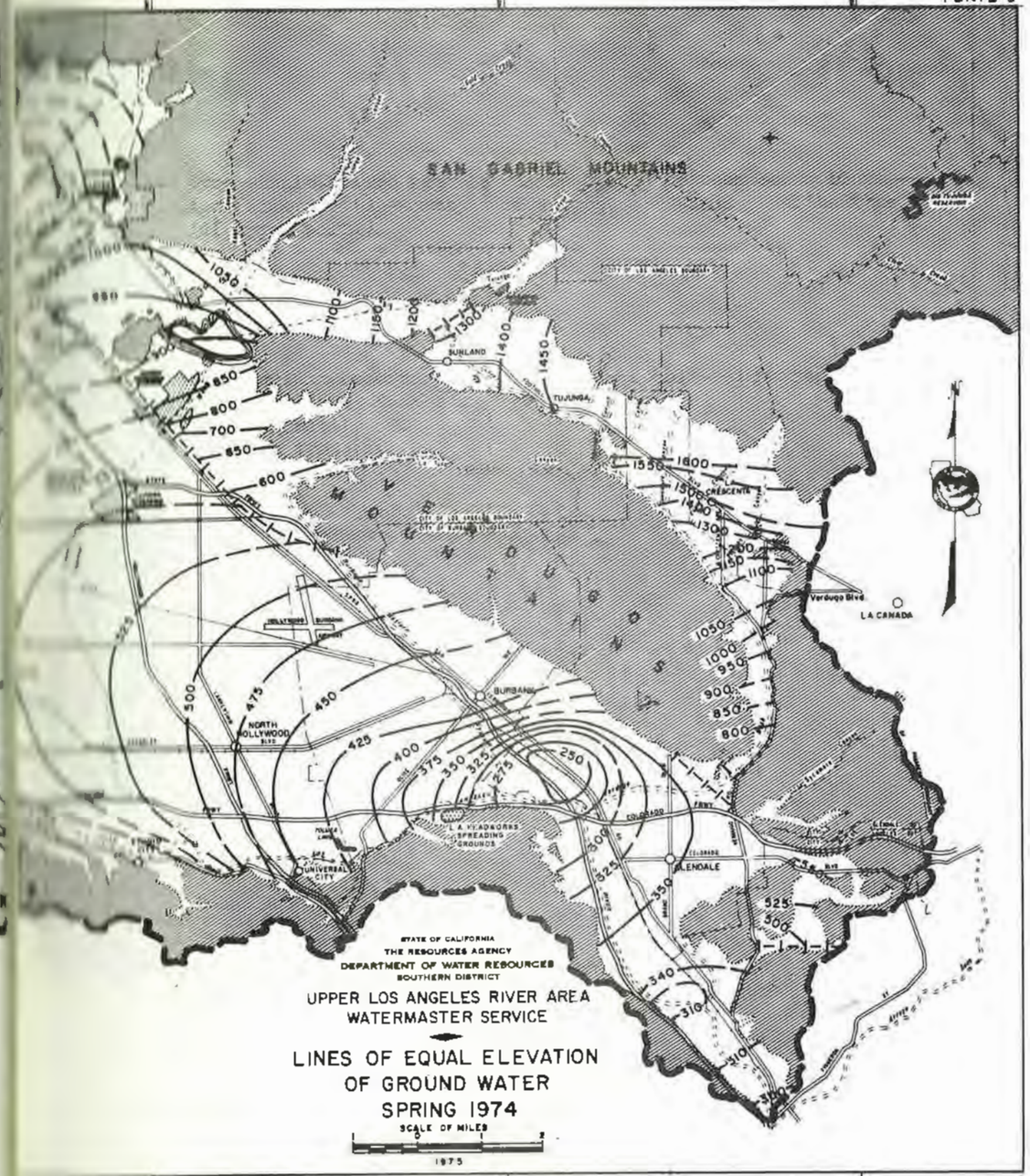
Plant	Quantity Treated in Acre-Feet
<u>San Fernando Basin</u>	
City of Burbank	5,342[a]
City of Los Angeles Valley Settling Basin	595[b]
Indian Hills Mobil Homes	21[c]
Rocketdyne (Santa Susana Field Laboratory)	13[d]
<u>Verdugo Basin</u>	
Crescenta Valley County Water District	105[c]

a/ Cooling towers used 1,936 acre-feet, balance to Los Angeles River.
b/ Applied 1.46 acre-feet to irrigation, balance to city sewer.
c/ Used for land irrigation.
d/ Plant 1: 0.3 acre-feet, Plant 2: 12.3 acre-feet.



LEGEND

- AREA AND DRAINAGE DIVIDE
- IMPEDIMENT TO GROUND WATER FLOW
- EDGE OF ALLUVIUM
- CITY BOUNDARY
- —850— LINES OF EQUAL ELEVATION OF GROUND WATER

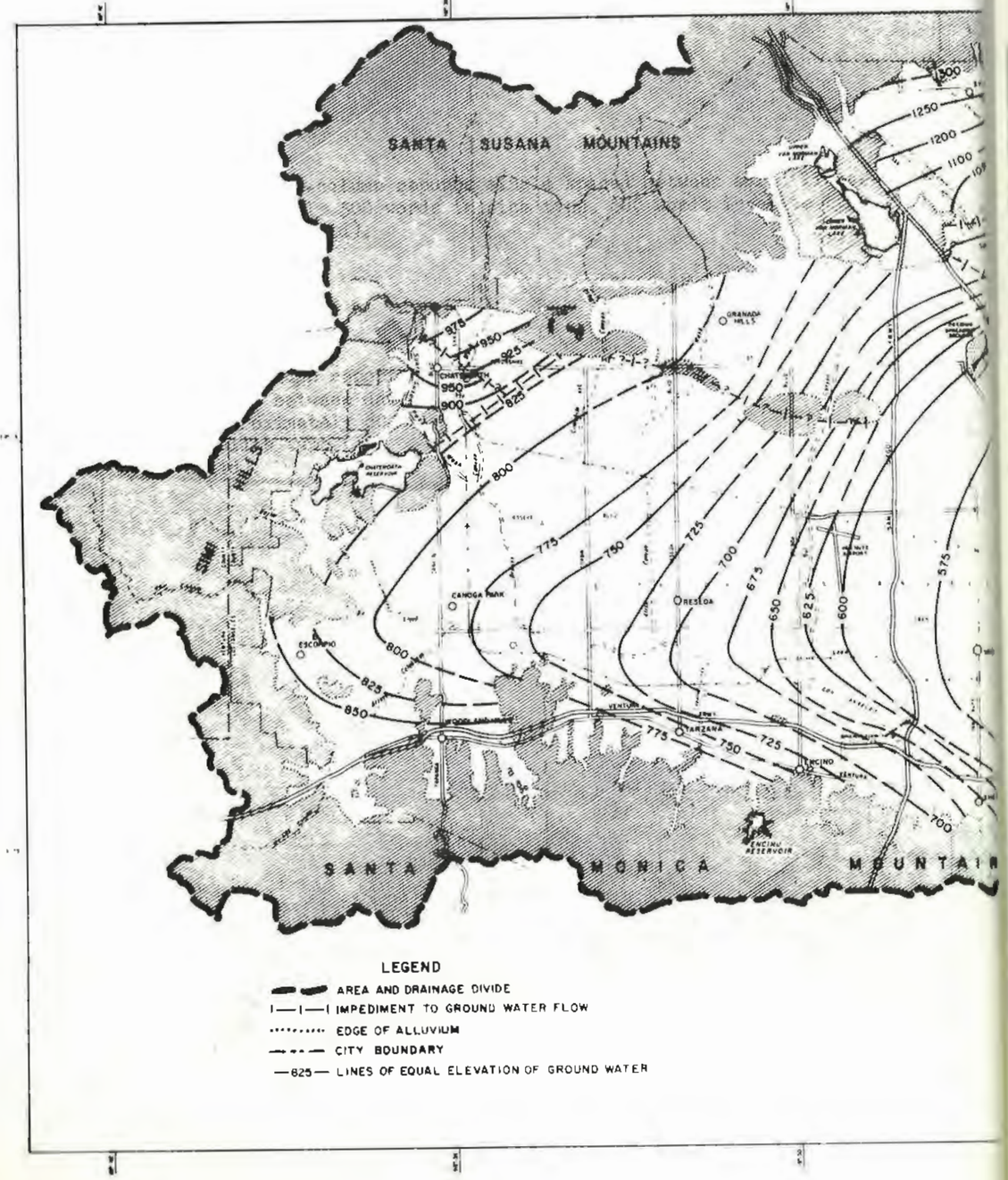


UPPER LOS ANGELES RIVER AREA
WATERMASTER SERVICE

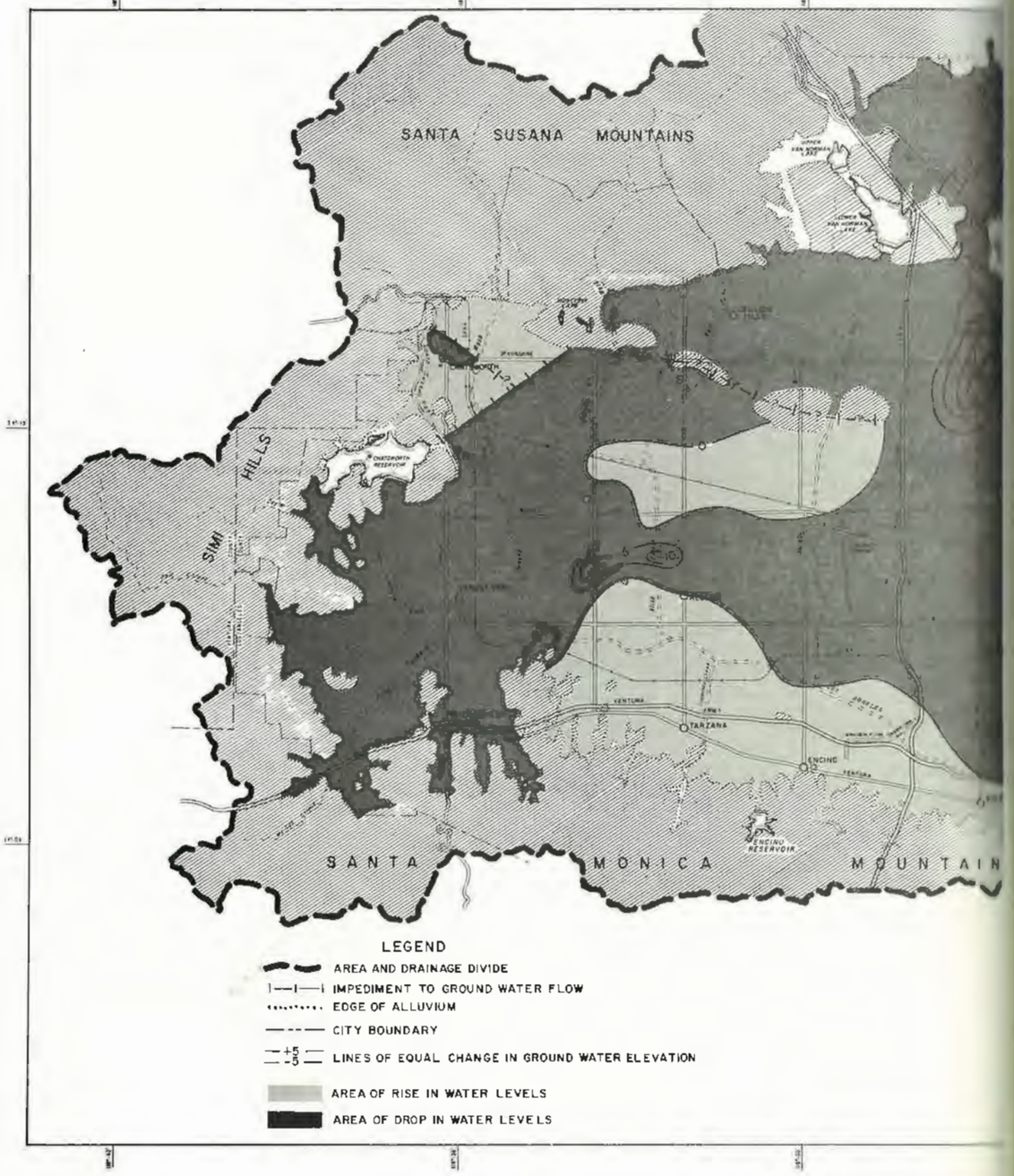
LINES OF EQUAL ELEVATION OF GROUND WATER SPRING 1974

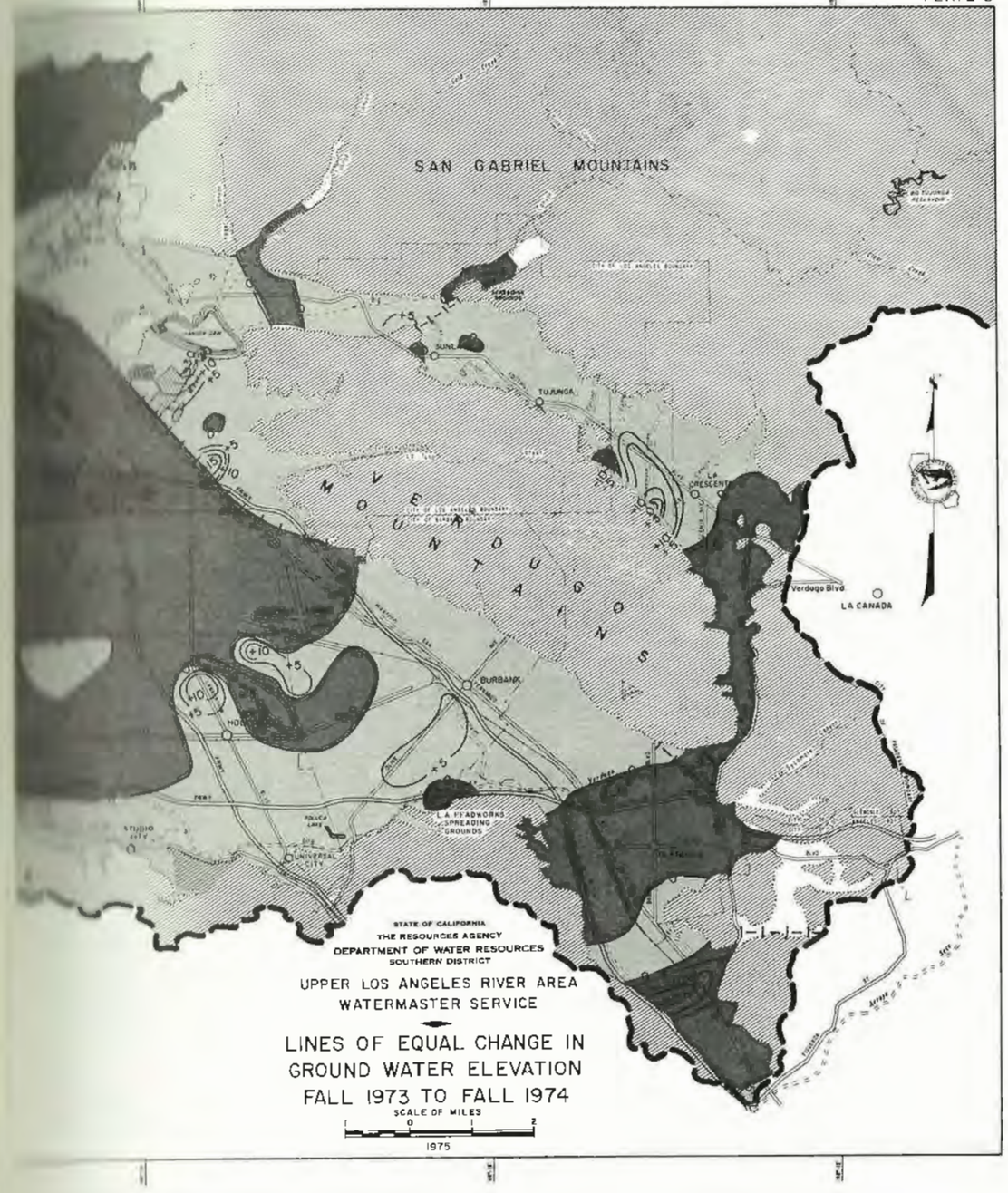
SCALE OF MILES 0 1 2

1975


SANTA SUSANA MOUNTAINS
SIMI HILLS
SANTA MONICA MOUNTAINS
GRANADA HILLS
CHATSWORTH RESERVOIR
CANOGA PARK
RESEDA
ESCORPIO
TARZANA
ENCINO
ENCINO RESERVOIR
VENTURA
LEGEND
AREA AND DRAINAGE DIVIDE
IMPEDIMENT TO GROUND WATER FLOW
EDGE OF ALLUVIUM
CITY BOUNDARY
—825— LINES OF EQUAL ELEVATION OF GROUND WATER


SAN GABRIEL MOUNTAINS
HOLLYWOOD
TUJUNGA
CRESCENTA
LA CANADA
Verdugo Blvd
BURBANK
NORTH HOLLYWOOD
STUDIO CITY
UNIVERSAL CITY
L.A. HEADWORKS SPREADING GROUNDS
GLENDALE
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT
UPPER LOS ANGELES RIVER AREA
WATERMASTER SERVICE
LINES OF EQUAL ELEVATION
OF GROUND WATER
FALL 1974
SCALE OF MILES
1975


SANTA SUSANA MOUNTAINS
SIMI HILLS
CHATSWORTH RESERVOIR
TARZANA
ENCINO
ENCINO RESERVOIR
SANTA MONICA MOUNTAIN
VENTURA
LEGEND
AREA AND DRAINAGE DIVIDE
IMPEDIMENT TO GROUND WATER FLOW
EDGE OF ALLUVIUM
CITY BOUNDARY
LINES OF EQUAL CHANGE IN GROUND WATER ELEVATION
AREA OF RISE IN WATER LEVELS
AREA OF DROP IN WATER LEVELS


SAN GABRIEL MOUNTAINS
SUNLAND
TUJUNGA
LA CRESCENTA
Verdugo Blvd
LA CANADA
BURBANK
HOLLYWOOD
STUDIO CITY
UNIVERSAL CITY
POLICE LAKE
L.A. FLOODWORKS SPREADING GROUNDS
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT
UPPER LOS ANGELES RIVER AREA
WATERMASTER SERVICE
LINES OF EQUAL CHANGE IN GROUND WATER ELEVATION
FALL 1973 TO FALL 1974
SCALE OF MILES
1975

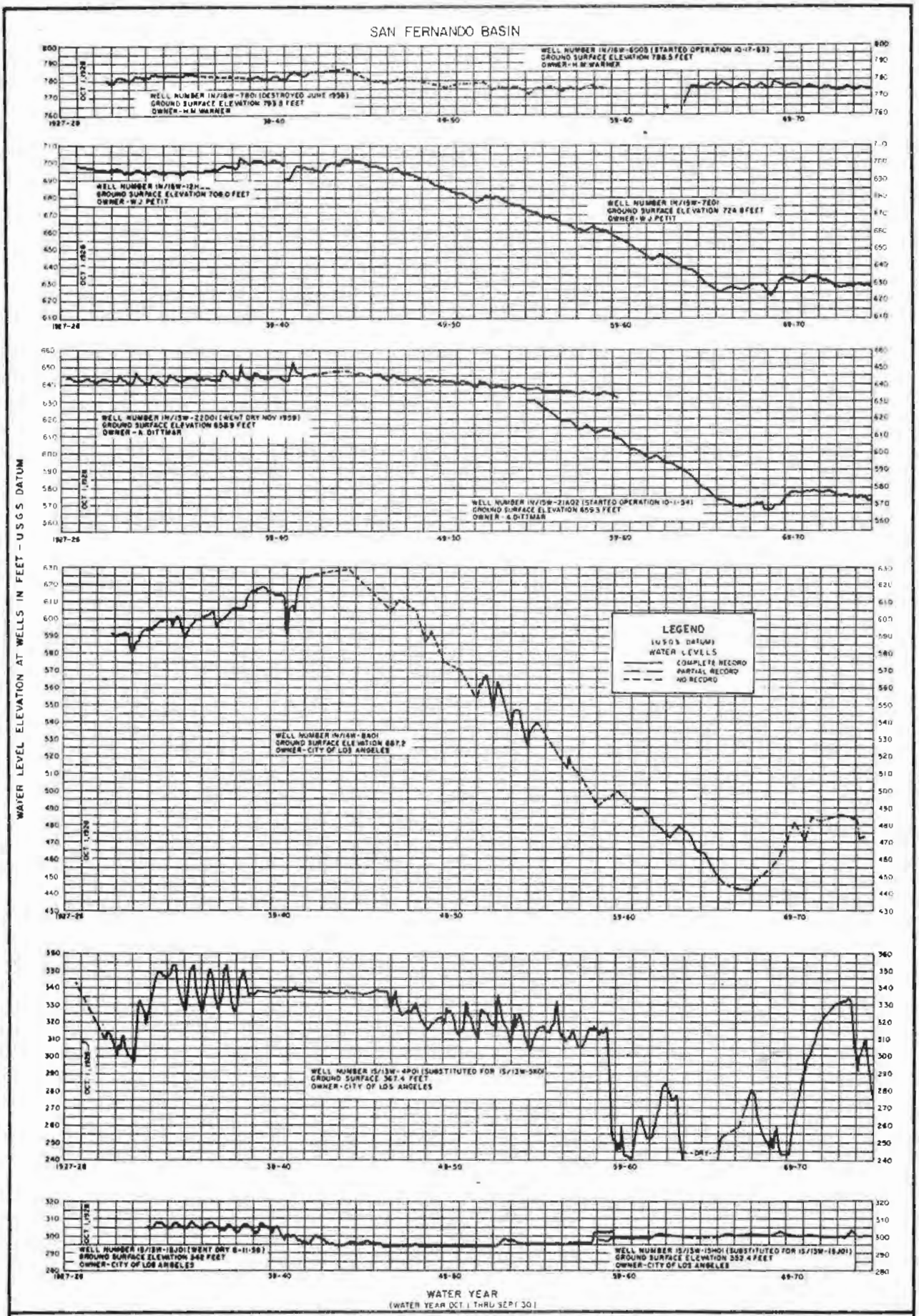


Figure 1—FLUCTUATION OF WATER LEVEL ELEVATION AT WELLS IN THE SAN FERNANDO BASIN

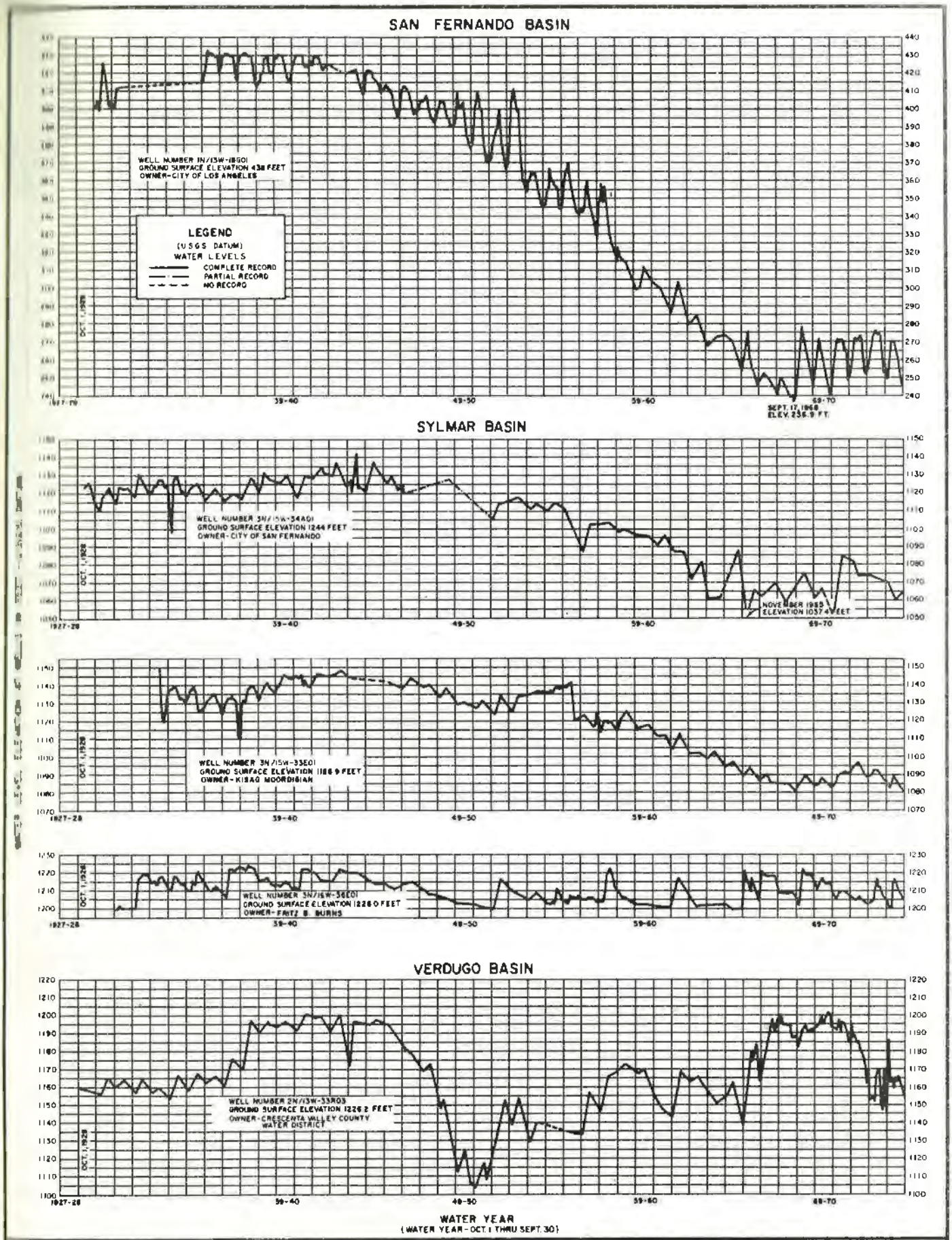


Figure 2 – FLUCTUATION OF WATER LEVEL ELEVATION AT WELLS IN THE SAN FERNANDO, SYLMAR AND VERDUGO BASINS

Water Quality

Water resources management must take into account water quality in analyzing water supply factors. Water quality is in constant flux as a result of changes in the water supply environment. Monitoring changes in water quality is important because it serves as a measure of natural phenomena and the effectiveness of management plans.

Imported Water

A. Owens River and Mono Basin water is of excellent quality, being sodium-calcium bicarbonate in character. Its total dissolved solids (TDS) averaged about 214 parts per million (ppm) for 30 years before 1969, the highest record being 322 ppm, on April 1, 1946, and the lowest, 149 ppm, on September 17, 1941. The three-year downward TDS trend which was reversed in 1972-73, continued in 1973-74.

B. Colorado River water is predominately sodium-calcium sulfate in character, changing to sodium sulfate after treatment to reduce total hardness. Samples taken at the Burbank turnout between 1941 and 1973 indicated a TDS high of 875 ppm in August 1955 and a low of 625 ppm in April 1959. The average over the 32-year period is approximately 743 ppm.

C. Northern California water is of sodium-calcium bicarbonate-chloride-sulfate in character. It generally contains less TDS and will be softer than local and Colorado River water. TDS averaged 322 ppm and hardness averaged 160 ppm during 1973-74, slightly better in quality than the prior year. Water quality should improve as storage in Castaic Reservoir is increased.

Surface Water

Surface runoff contains salts dissolved from rocks in the tributary areas. Surface water is calcium bicarbonate in character. In 1973-74, low flows above the Los Angeles Narrows had an average TDS content of 805 and a total hardness of 335 ppm.

Ground Water

The character of ground water from the major water-bearing formations is of two general types, each reflecting the composition of the surface runoff in the area. In the western part of ULARA, it is calcium sulfate in character, while in the eastern part, including Sylmar and Verdugo Basins, it is calcium bicarbonate. Ground water in ULARA is moderately hard to very hard.

Ground water is generally within the recommended limits of the USPHS Drinking Water Standards, except perhaps for wells in the western end of the valley having excess concentrations of sulfate and those in the lower part of the Verdugo Basin having abnormally high concentrations of nitrate.

Water quality studies indicate that, except for short periods, the quality of imported water from Owens River and Mono Basin and northern California is superior to local water. Representative mineral analyses of imported, surface, and ground waters for 1973-74 are contained in Table 7. A comparison of the various water sources as to TDS, sulfate, and chloride content is shown in Figure 3. (Note: Records for water from the State Water Project are shown on a monthly basis since use commenced in May of 1972.)

City of Los Angeles' water quality data indicate that the long term trend of increasing TDS in groundwater has changed significally since the inception of Watermaster management. Water quality changes appear to have stabilized in the eastern portion at the San Fernando Basin and slowed in the western portion.

TABLE 7. REPRESENTATIVE MINERAL ANALYSES OF WATER

Well number of source	Date sampled	EC x 10^6 at 25°C	pH	Mineral constituents in Parts per million (ppm) / Equivalents per million (epm)											Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm
				Ca	Mg	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F	B		
IMPORTED WATER																
Colorado River Water at Eagle Rock Reservoir	1973-74 Average	1219	8.09	32 / 1.60	12 / 0.99	213 / 9.26	5.0 / 0.13	0.8 / 0.02	149 / 2.4	320 / 6.66	100 / 2.82	1.5 / 0.02	0.34 / 0.02	0.22 / 0.06	768	130
Owens River Water at Upper Van Norman Res. Inlet	1973-74 Average	280	8.13	22 / 1.10	3.8 / 0.31	28 / 1.22	2.7 / 0.07	0.7 / 0.02	106 / 1.7	25 / 0.52	11 / 0.31	0.9 / 0.01	0.51 / 0.03	0.15 / 0.10	171	70
State Project Water at Joseph Jensen Filtration Plant	1973-74 Average	561	8.40	37 / 1.86	16.2 / 1.34	51 / 2.23	2.8 / 0.08	3.0 / 0.10	118 / 1.89	82 / 1.72	62 / 1.74	0.6 / 0.01	0.3 / 0.02	0.19 / --	322	160
SURFACE WATER																
Los Angeles River at Sepulveda Blvd.	12-5-73	1420	8.21	149 / 7.44	48 / 3.95	50 / 2.17	4.9 / 0.13	1.8 / 0.06	334 / 5.48	365 / 7.60	101 / 2.85	26 / 0.42	----	----	1004	570
	5-1-74	1460	9.02	101 / 5.04	41 / 3.37	152 / 6.61	66 / 0.17	8.7 / 0.29	166 / 2.72	327 / 6.81	176 / 4.96	15 / 0.24	----	----	1070	420
Los Angeles River at Burbank-Western Wash	12-5-73	841	7.74	56 / 2.79	18 / 1.48	79 / 3.44	98 / 0.24	0.6 / 0.02	212 / 3.48	120 / 2.50	67 / 1.89	22 / 0.35	----	----	518	216
	5-1-74	876	7.93	46 / 2.30	18 / 1.48	88 / 3.83	12 / 0.31	1.1 / 0.04	262 / 4.30	113 / 2.35	63 / 1.83	9.7 / 0.16	----	----	1714	188
Los Angeles River at Brazil Street	12-5-73	986	8.36	90 / 4.49	27 / 2.22	76 / 3.31	6.1 / 0.16	2.3 / 0.08	204 / 3.34	198 / 4.12	78 / 2.20	26 / 0.42	----	----	452	336
	5-1-74	1090	8.84	90 / 4.49	34 / 2.80	92 / 4.00	4.9 / 0.13	7.4 / 0.24	215 / 3.52	211 / 4.39	105 / 2.96	22 / 0.35	----	----	762	364
GROUND WATER																
(SAN FERNANDO BASIN - WESTERN PORTION)																
2N/16W-27F02 (Reseda No. 8)	9-74	1210	7.20	156 / 7.80	32 / 2.67	67 / 2.91	1.6 / 0.04	0.3 / 0.01	196 / 2.56	304 / 6.33	50 / 1.41	20 / 0.32	0.3 / 0.02	----	762	520
(SAN FERNANDO BASIN - EASTERN PORTION)																
1N/14W-08B01 (North Hollywood No. 19)	7-31-74	617	7.54	72 / 3.59	18 / 1.48	29 / 1.26	3.1 / 0.08	0.4 / .013	215 / 3.52	97 / 2.08	20 / 0.56	19 / 0.31	0.47 / 0.02	----	389	252
(SAN FERNANDO BASIN - L. A. NARROWS)																
1S/13W-04L03 (Pollock No. 6)	9-23-74	1220	7.02	112 / 5.59	39 / 3.21	85 / 3.70	3.2 / 0.08	0.14 / .005	292 / 4.79	230 / 4.79	91 / 2.57	17 / 0.27	0.28 / 0.01	----	769	440
(SYLMAR BASIN)																
2N/15W-04B09 (Mission No. 5)*	2-26-74	674	7.63	78 / 3.89	18 / 1.48	36 / 1.57	4.2 / 0.11	0.3 / 0.01	236 / 3.87	80 / 1.67	40 / 1.13	10 / 0.16	0.30 / 0.02	----	425	268
(VERDUGO BASIN)																
1N/13W-10FC3 (Glorietta No. 3)	5-1-74	650	7.00	74 / 1.79	0.01 / 0.001	57 / 3.30	....	0 / 0	189 / 11.0	74 / 4.29	62.4 / 3.62	69 / 4.00	0.5 / 0.03	---	500	295

* Substituted for Mission No. 1.

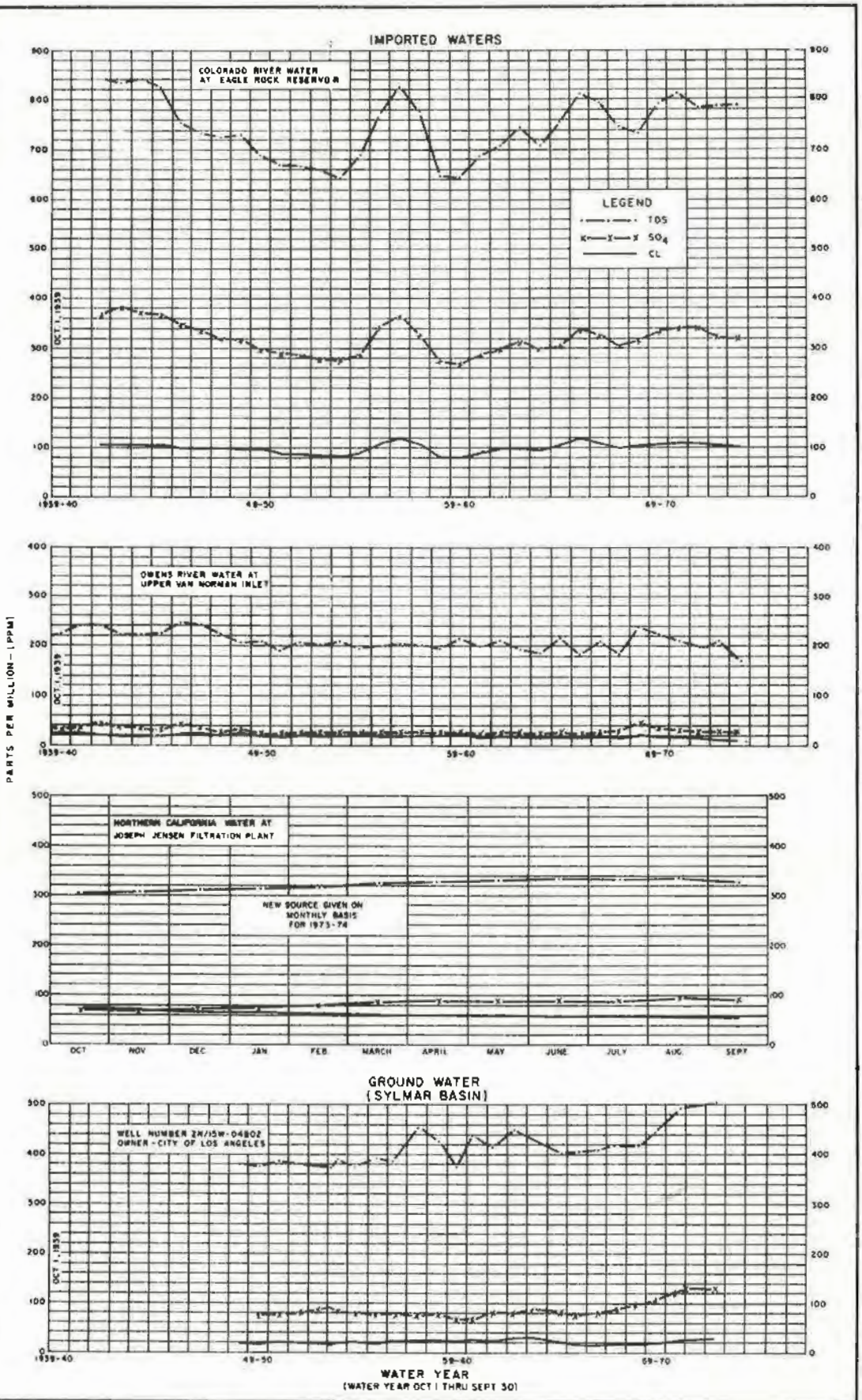


Figure 3 - TOTAL DISSOLVED SOLIDS, SULFATE, AND CHLORIDE OF WATER SOURCES IN ULARA

DEPARTMENT OF WATER RESOURCES, SOUTHERN DISTRICT, 1975

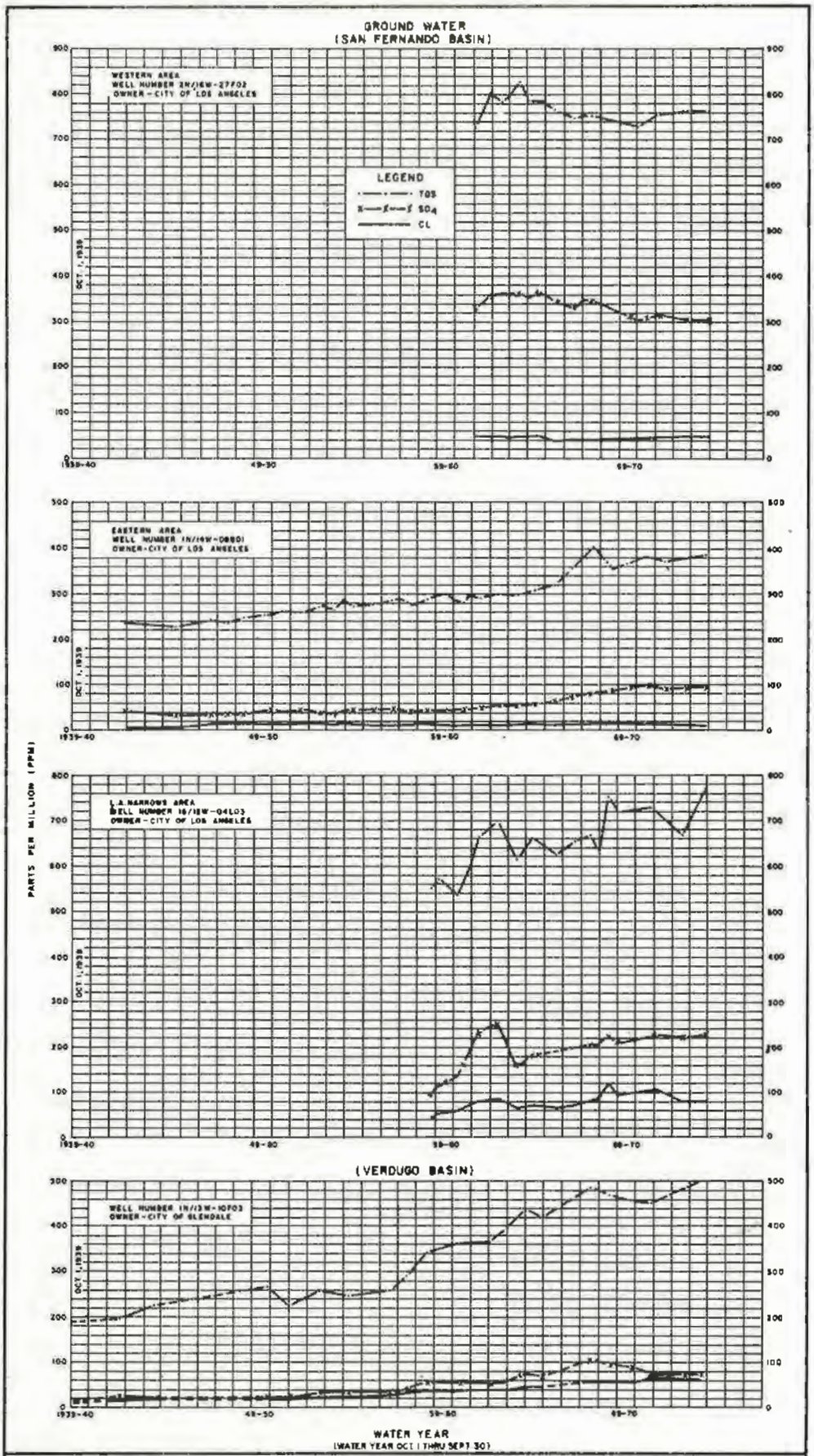


Figure 3 (Cont.) - TOTAL DISSOLVED SOLIDS, SULFATE, AND CHLORIDE OF WATER SOURCES IN ULARA

DEPARTMENT OF WATER RESOURCES, SOUTHERN DISTRICT, 1975

Ground Water Contamination by Gasoline

During the 1973-74 water year, progress continued toward abating gasoline pollution near Forest Lawn Cemetery. (The history of this major water quality problem was described in the 1968-69 and 1969-70 Watermaster reports.)

The Western Oil and Gas Association (WOGA) has continued its efforts to abate the pollution. California Regional Water Quality Control Board (CRWQCB), Los Angeles Region, and SWRCB are playing leading roles in ensuring effective, expeditious abatement. DWR has advised the Boards regarding the technical aspects of abatement; and the City of Los Angeles' Department of Water and Power (LADWP) and WOGA have effectively monitored the polluted area.

Seven progress reports have been submitted to WOGA to CRWQCB, Los Angeles Region, the most recent describing progress to date.[1/] Locations and other features currently related to the monitoring and pumping programs are shown in Figure 4. The cleanup program was discussed in the Watermaster's 1971-72 report.

Plans were initiated in 1972-73 to reduce the number of wells being pumped and monitored, and 8 have been destroyed in 1973-74 with the approval of CRWQCB, Los Angeles Region (Appendix D).

The monitoring situation as of July 1, 1974 is summarized as follows: There was no measurable free gasoline in any wells during May and June. Slight traces of liquid gasoline (too thin to measure on the testing tape) were observed about half the time at W-4 and W-53; and on every day tested in the upper part of FL-4. Faint traces also occurred occasionally in W-3, W-37, W-48, W-52, and W-63; but for most of the time those wells exhibited only a slight gasoline odor, as did W-2, W-35, W-47, W-50, W-51, and W-63. All other monitored wells were free of gasoline odor.

Traces of free gasoline began to appear in W-54 on August 14, 1973, although there had been no measurable gasoline in this well since October 4, 1970. By bailing, skimming, pumping, and eventually establishing gradients from W-54 toward W-37 and W-53, the free gasoline and traces of gasoline in W-54 were removed in mid-April and the well was plugged on April 30, 1974.

When tests for hydrocarbons have shown a continuing good quality of water from Forest Lawn wells arrangements have been made to return these wells to service. On June 13, 1973, FL-2 was returned to Forest Lawn control and has been used in its system every month since then. Negotiations are now under way to return to service FL-3 and FL-6, inasmuch as hydrocarbon analyses for the past several months show that water has acceptable good quality.

In an attempt to accelerate final cleanup of pellicular gasoline by aerobic biodegradation, compressed air has been injected for most of the past six months (and longer) into W-32, W-35, W-47, W-48, and HD. The air is bubbled through a hose below the water surface, but the well is not put under any pressure. Air has also been injected periodically by a hand pump into wells 28, 29, 30, 45, 46, 57, and 60 in an attempt to stimulate bacterial activity.

For the period from January 1 to June 30, 1974, WOGA has continued to pursue the four objectives established by

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1/ "Seventh Progress Report to Los Angeles Regional Water Quality Control Board on Amelioration of Ground Water Contamination by Gasoline near San Fernando Road in Glendale and Los Angeles". July 1, 1974.

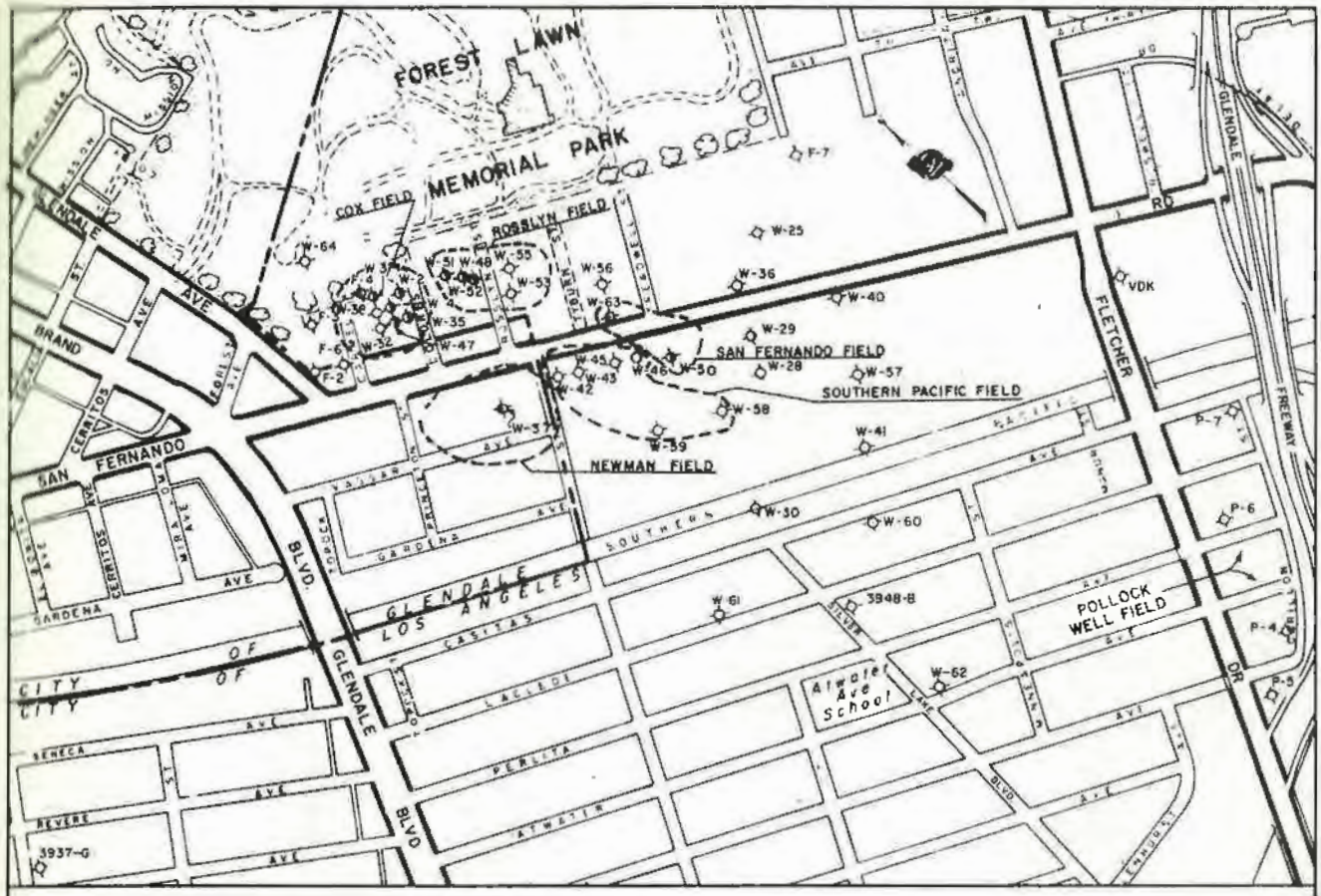


Figure 4- GASOLINE POLLUTION- FOREST LAWN, GLENDALE, LOS ANGELES

DEPARTMENT OF WATER RESOURCES, SOUTHERN DISTRICT, 1975

CRWQCB, viz, to monitor the areal extent of gasoline contamination, to remove any free gasoline that might occur, to contain the spread of gasoline and its vapors, and to attempt to accelerate the final cleanup. The first three objectives have been well attained and work continues on the fourth. Indeed, the general situation was better in mid-1974 than it had been at any time since cleanup commenced.

The general cleanup program is continuing with wells being monitored in compliance with directives from the staff of the Regional Board. Several wells have been plugged and sealed as authorized by the staff and requests for permission to seal other wells not needed for monitoring have been submitted.

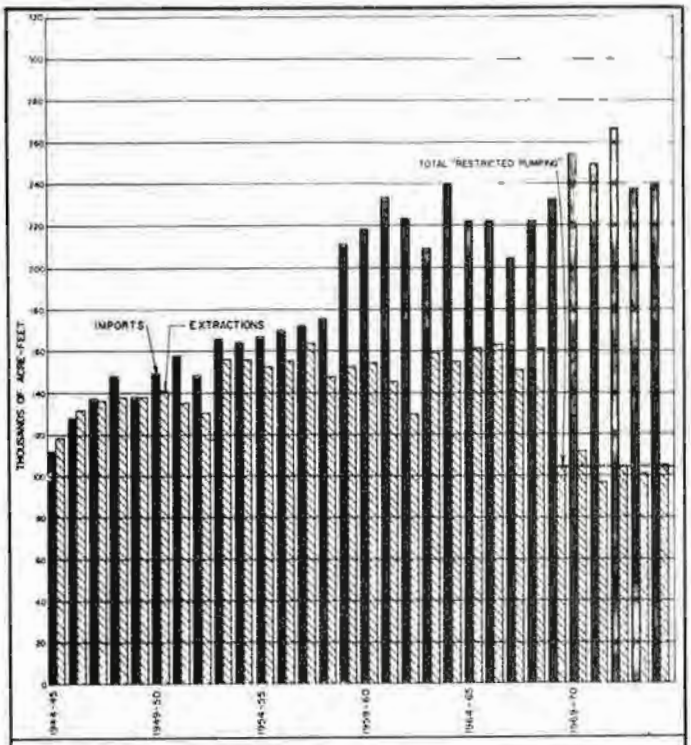


Figure 5 - GROUND WATER EXTRACTIONS AND USE OF IMPORTED WATER IN UPPER LOS ANGELES RIVER AREA

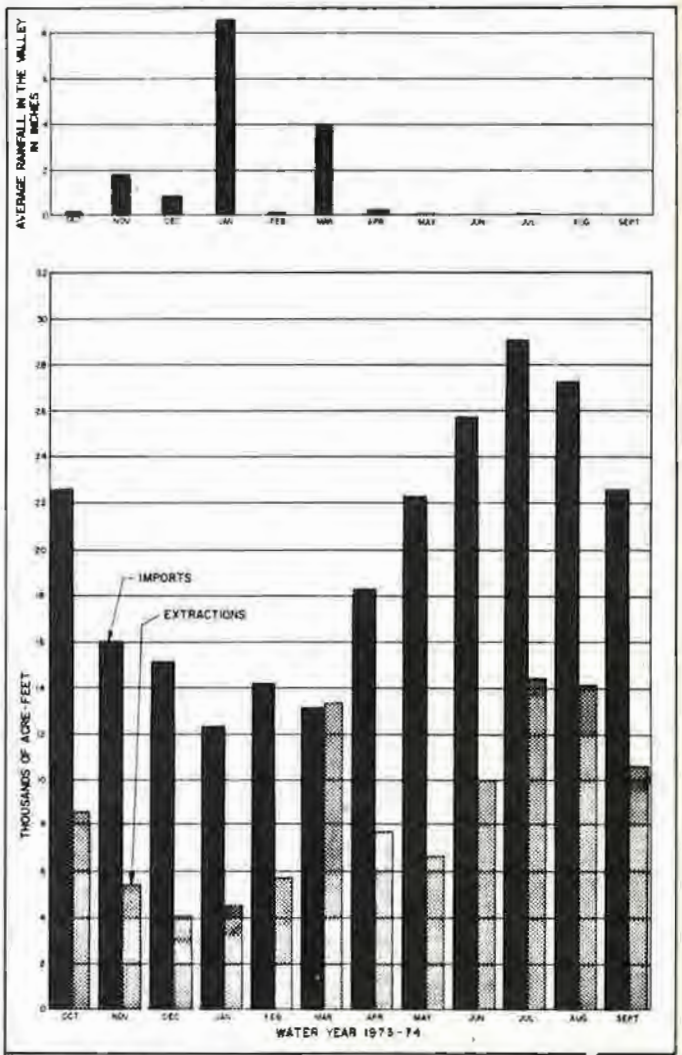


Figure 6 — MONTHLY WATER DEMAND AND AVERAGE RAINFALL IN UPPER LOS ANGELES RIVER AREA

III. WATER USE AND DISPOSAL

Water delivered for use in ULARA is either imported water, local ground water, local surface diversions, or a mixture, depending on the area and water system operation. During the 1973-74 water year, water purveyors in ULARA served approximately 344,000 acre-feet to their customers. Of this total, approximately 105,000 acre-feet were extracted and the remaining 239,000 acre-feet were imported. The Basin contains 557 wells, of which 171 are active and 386 are observation, test, capped, etc. Five wells were drilled and 15 were destroyed in 1973-74 (Appendix D).

The adjudication of ground water rights in ULARA restricted all ground water extractions, effective October 1, 1968. On that date, extractions were restricted to approximately 104,000 acre-feet per water year. This amounted to a reduction of approximately 50,000 acre-feet below the previous 6-year average.

Under the Judgment, no determination was made regarding overdraft or surplus in the Eagle Rock Basin. Therefore, no restrictions on ground water extractions have been imposed on that Basin.

Except for the Sparkletts Drinking Water Corporation and Deep Rock Water Company, there are no parties to the Judgment that extract water from Eagle Rock Basin. The safe yield of the Basin, under 1964-65 conditions, was set at 70 acre-feet.

The restriction on ground water extractions has been a great factor in the increase of imported water to ULARA during the past five years.

Figure 5 illustrates the annual ground water extractions and total water imported in ULARA, beginning with the 1944-45 water year. Note the change from 1968-69 through 1973-74.

It can also be noted that for 10 years before pumping was restricted, imports exceeded extractions by from 50,000 to 60,000 acre-feet per year and that for the six water years, 1968-69 - 1973-74, the difference jumped to between 120,000 and 160,000 acre-feet. Due to restricted pumping in ULARA, any substantial increase in water demand in the future will show an increase of imports only.

Figure 6 provides an analysis of the monthly relationship between rainfall, ground water extractions, and imported supply. Data relates to all of ULARA and not to any one specific ground water basin therein. The precipitation values were obtained from stations on the valley floor (Table 1).

Ground Water Extractions

On April 26, 1968, the Watermaster wrote to all parties known to be active that ground water extractions in ULARA would be reduced and controlled by him. Control would be in accordance with the Judgment, which limits the amount of ground water each party can extract annually from each of the separate basins to an amount referred to as "Restricted Pumping".

Table 8 presents a balance sheet which summarizes each party's water account by listing its Restricted Pumping allowable carryover from 1972-73; (see Appendix A for changes); any additional allowable pumping as the result of a water

TABLE 8. RESTRICTED PUMPING AND QUANTITIES EXTRACTED AND ASSIGNED
(in acre-feet)

Party	(1) Restricted Pumping	(2) Allowable carryover from 1972-73	(3) Assignments in Restricted Pumping[a]	(4) Allowable extraction 1973-74 (1)±(2)±(3)=4	(5) Amount extracted	(6) Balance (4)-(5)=(6)	(7) Allowable carryover into 1974-75
SAN FERNANDO BASIN							
Bartholomaus, William O. and Ellen S. Dubois	15.00	0.00	- 15.00	0.00	0.00	0.00	0.00
Burbank, City of	13,649.00	125.23	+ 196.00	13,970.23	13,926.03	44.20	44.20
Conrock Company	0.00	0.00	1,600.00[b]	1,600.00	1,878.63	- 278.63[c]	0.00
Forest Lawn Memorial Park Assoc.	814.00	19.46	- 71.00	762.46	324.04	438.42	438.42[d]
Glendale, City of	12,405.00	1,558.32[a]	0.00	13,963.32	11,124.23	2,839.09	2,839.09[d]
Harper, Cecilia DeMille	0.00	1.87	+ 6.00	7.87	5.25	2.62	0.60
Livingston-Graham, Inc.	0.00	0.00	+ 600.00[b]	600.00	518.46	81.54[c]	0.00
Lockheed Aircraft Corporation	239.00	0.00	- 239.00	0.00	0.00	0.00	0.00
Los Angeles, City of	63,257.00	- 299.62[g]	-4,350.00	58,607.38	58,607.38[h]	0.00	447.86[d]
(Pursuant to "Stipulation for Emergency Spreading and Extraction")		- 978.92[j]		- 978.92	4,659.60[k]	-5,638.52	-5,638.52[j]
McCabe, Celeste Louise	1.00	0.10	---	1.10	0.00	1.10	.10
Mena, John and Barbara	0.00	- 4.80	---	- 4.80	0.96	- 5.76	- 5.76
Monteria Lake Association	0.00	- 13.46	---	- 13.46	0.00	- 13.46	- 13.46
Riverwood Ranch Mutual Water Co.	0.00	3.20	+ 32.00	35.20	29.42	5.78	3.20
Sears, Roebuck and Company	0.00	0.00	+ 300.00[b]	300.00	191.66	108.34[c]	0.00
Southern Service Company, Ltd.	0.00	7.50	+ 55.00	62.50	50.94	11.56	5.50
Sportsmen's Lodge, Inc.	0.00	1.60	+ 16.00	17.60	2.31	15.29	1.60
Toluca Lake Property Owners' Association	23.00	0.71	+ 7.00	30.71	25.66	5.05	3.00
Valhalla Memorial Park	184.00	8.10	+ 20.00	212.10	203.22	8.88	8.88
Van de Kamp's Holland Dutch Bakers, Inc.	93.00	9.30	- 7.00	95.30	5.59	89.71	8.60
Walt Disney Productions	0.00	0.00	+1,850.00[b]	1,850.00	1,313.39	536.61[c]	0.00
Subtotals	90,680.00	438.59	0.00	91,118.59	92,866.77	-1,748.18	-1,856.69
SYLMAR BASIN							
Brown, Charles T.	0.00	- 6.00	----	- 6.00	1.38	- 7.38	- 7.38
Church of Jesus Christ of the Latter Day Saints	0.00	-1,004.68	----	- 1,004.68	0.00	-1,004.68	-1,004.68
Fidelity Federal Savings and Loan Association	609.00	60.90	----	669.90	0.76	669.14	60.90
Los Angeles, City of	2,818.00	16.64	----	2,834.64	2,839.49	- 4.85	- 4.85
Moordigian, Kisag	46.00	0.60	- 40.00	6.60	0.00	6.60	0.60
San Fernando, City of	2,737.00	1,010.52	+ 40.00	3,787.52	3,102.86	684.66	684.66[m]
Subtotals	6,210.00	77.98	0.00	6,287.98	5,944.49	343.49	- 270.75
VERDUGO BASIN							
Crescenta Valley County Water District	3,294.00	3.61	----	3,297.61	3,611.95	- 314.34	- 314.34
Glendale, City of	3,856.00	385.60	----	4,241.60	2,784.86	1,456.74	385.60
Subtotals	7,150.00	389.21	----	7,539.21	6,396.81	1,142.40	71.26
ULARA TOTALS	104,040.00	905.78	0.00	104,945.78	105,208.00	- 262.22	-2,056.18

a/ Refer to Table 11 and Appendix A for information concerning assignments of Restricted Pumping or prior ownership.
b/ Reduction in City of Los Angeles extraction pursuant to separate Stipulated Judgment.
c/ Reverts to City of Los Angeles as a carryover.
d/ Includes 364.17 acre-feet, authorized by the Advisory Board and Watermaster. See Chapter IV.
e/ Includes 282.82 acre-feet, authorized by the Advisory Board and Watermaster.
f/ Includes 1,598.59 acre-feet, authorized by the Advisory Board and Watermaster. See Chapter IV.
g/ Includes year-end balance of parties to Stipulated Judgments.
h/ Excludes extractions from Reseda Wells which totaled 181.49 acre-feet and 4,659.60 acre-feet authorized by the Advisory Board and Watermaster pursuant to the "Stipulation for Emergency Spreading and Extraction". See Chapter IV.
j/ Amount to be returned to basin by spreading imported water or foregoing right to extract water or by combination of both.
k/ See footnote (h).
m/ Allowable carryover by special Watermaster authorization. Amount to be extracted in following two years. See Chapter IV of this report for details.

right assignment; amount of ground water extracted during the 1973-74 water year; and the amount that can be carried forward to the succeeding water year.

To provide flexibility in the control of ground water extractions, the Judgment contains various provisions which allow parties to carry over into the succeeding water year a portion of their unused water right and, in some cases, to overextract. This flexibility clause was provided to assist the parties in meeting unforeseen emergencies in water demands. One provision allows parties to carry over from one water year to another any unused Restricted Pumping up to an amount not to exceed 10 percent of their Restricted Pumping.

The flexibility clause also allows parties to overextract up to an amount equal to 10 percent of their Restricted Pumping. However, any overextraction will be deducted from the Restricted Pumping in the succeeding water year. Chapter IV contains additional information on this provision.

In addition to the flexibility clause, the City of San Fernando is allowed, by the Judgment, to exceed its assigned Restricted Pumping in Sylmar Basin. The additional allowance for the City of San Fernando is described in the Judgment as "Physical Solution-Sylmar Basin". This provision allows the City of San Fernando to extract up to 850 acre-feet of water per year in addition to the amount that it has received under its Restricted Pumping. If the City of San Fernando takes, diverts, or extracts water in addition to its Restricted Pumping, it must immediately notify the City of Los Angeles and the Watermaster in writing, and the City of Los Angeles must reduce its extractions in an amount equal to the amount that the City of San Fernando has exceeded its rights. Chapter IV describes the 1973-74 operation.

The Judgment, in Section IV, also allows various parties to divert and extract water from the San Fernando Basin in accordance with the terms and conditions of the stipulated Judgments between the City of Los Angeles and said parties (Case No. 650,079). The City of Los Angeles, in turn, shall deduct from its Restricted Pumping for each year the aggregate amount of water extracted pursuant to the separate stipulated Judgments.

At the commencement of each water year, the City of Los Angeles advises the Watermaster of the estimated amount of water each party to the stipulated Judgments will pump during the water year (Appendix A). The City then reduces its extractions in the San Fernando Basin in an amount equal to the estimates. For each subsequent year, the City of Los Angeles will reduce its extractions by the amount of water that said stipulated parties' extractions exceeded the estimates for the preceding year. Should the stipulated parties' extractions be less than the estimate for that year, the City of Los Angeles may increase its extractions by that amount in the next succeeding year.

The February 1971 earthquake resulted in such heavy damage to the City of San Fernando's water facilities and the City of Los Angeles' terminal storage complex at Van Norman Reservoir that changes in allowable ground water extractions for these two parties were required. As a result, the City of Los Angeles was allowed to exceed its Restricted Pumping in the San Fernando Basin pursuant to the "Stipulation for Emergency Spreading and Extraction" (Appendix A, 1970-71 report). Table 8 shows a separate accounting of this item. The City of San Fernando, in turn, was allowed to extract the unused 1970-71 water right balance of 1,526.06 acre-feet in the ensuing

three water years. A further explanation of this authorization and extension is discussed in Chapter IV.

The metered ground water production from each active well is listed by basin and by party in Appendix B, Table B-1. This tabulation presents the total ground water production as reported by each party. Plates 6 and 7 depict the service area wherein each party delivers its water supply.

Extractions by Nonparties

In order to keep the parties and the Court apprised of all the ground water extractions within ULARA, the Watermaster has attempted to collect information on nonparty ground water extractions.

A nonparty is an entity which was not named in the ULARA water right suit. These nonparties and parties which were dismissed by the court do not come under the jurisdiction of the Watermaster.

To the best of the Watermaster's knowledge, WOGA, The Metropolitan Water District of Southern California (MWD), and Glen A. Berry are the only nonparties extracting ground water in ULARA.

No report on ground water extractions is made as to the parties dismissed from the action: Glenhaven Memorial Park, Incorporated; Los Angeles County Waterworks District No. 21, etc., which are still active pumpers in the hill and mountain areas of ULARA.

Ground water extracted by MWD and WOGA is also shown in Table B-1. Extractions by Glen A. Berry are estimated at 3 acre-feet per year (see Chapter IV) and are not shown in Table B-1.

Water Wells in ULARA

The Report of Referee described the wells in ULARA according to a number-location identification system devised by the Los Angeles County Flood Control District. However, the Watermaster has redesignated the wells in accordance with his recording system.

A State Well Numbering system was adopted by the State several years ago that utilizes the U. S. Public Land Survey System. A graphical illustration and description of the coding system in ULARA is shown in Figure 7.

Each water well in ULARA was assigned a State Well Number to simplify the administration of the Judgment and the monitoring of ground water extractions. A cross-index between State Well Numbers and county numbers was completed in March 1972 and made available to all interested parties.

Plate 2 on page 17 shows the location of all wells (party and nonparty) known to be in existence by the Watermaster as of September 30, 1974. The wells are plotted and coded in accordance with the above procedure and that shown in Figure 7.

Wells reported to the Watermaster as having been drilled or destroyed in 1973-74 are listed in Appendix D.

As a matter of course, the Watermaster locates all new wells by survey and assigns a new State Well Number. The parties that submit detailed information as to the location of the well will preclude the Watermaster's requirement for a survey. Each party is required to notify the Watermaster whenever a new well is drilled or a well is destroyed.

State well numbers that identify each water well in ULARA are derived from a system based on the U.S. Public Land Survey. Each number consists of township and range designation, a section number, a letter representing the 40-acre tract in which the well is situated, a sequence number indicating the chronological order in which the well number was assigned, and a letter representing the base and meridian. The last letter is frequently omitted from well numbers in a single area because all wells there share a single base and meridian. Well numbers are assigned by the Watermaster.

The components of well No. 1N/14W-12C03S, for example, are identified in the following breakdown:

Township	Range	Section	Tract	Sequence number	Base and meridian
1N	14W	12	C	03	S

The derivation of the components is illustrated below:

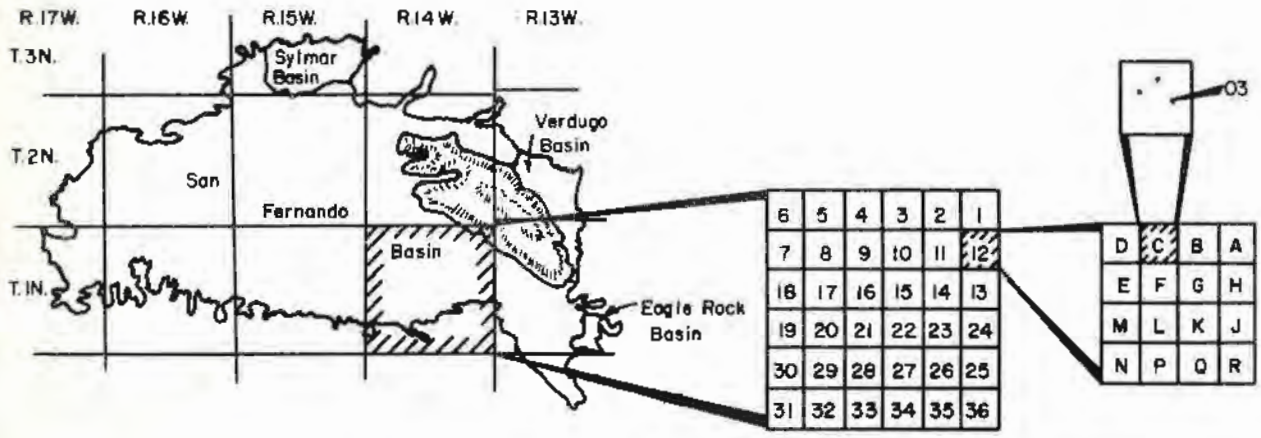
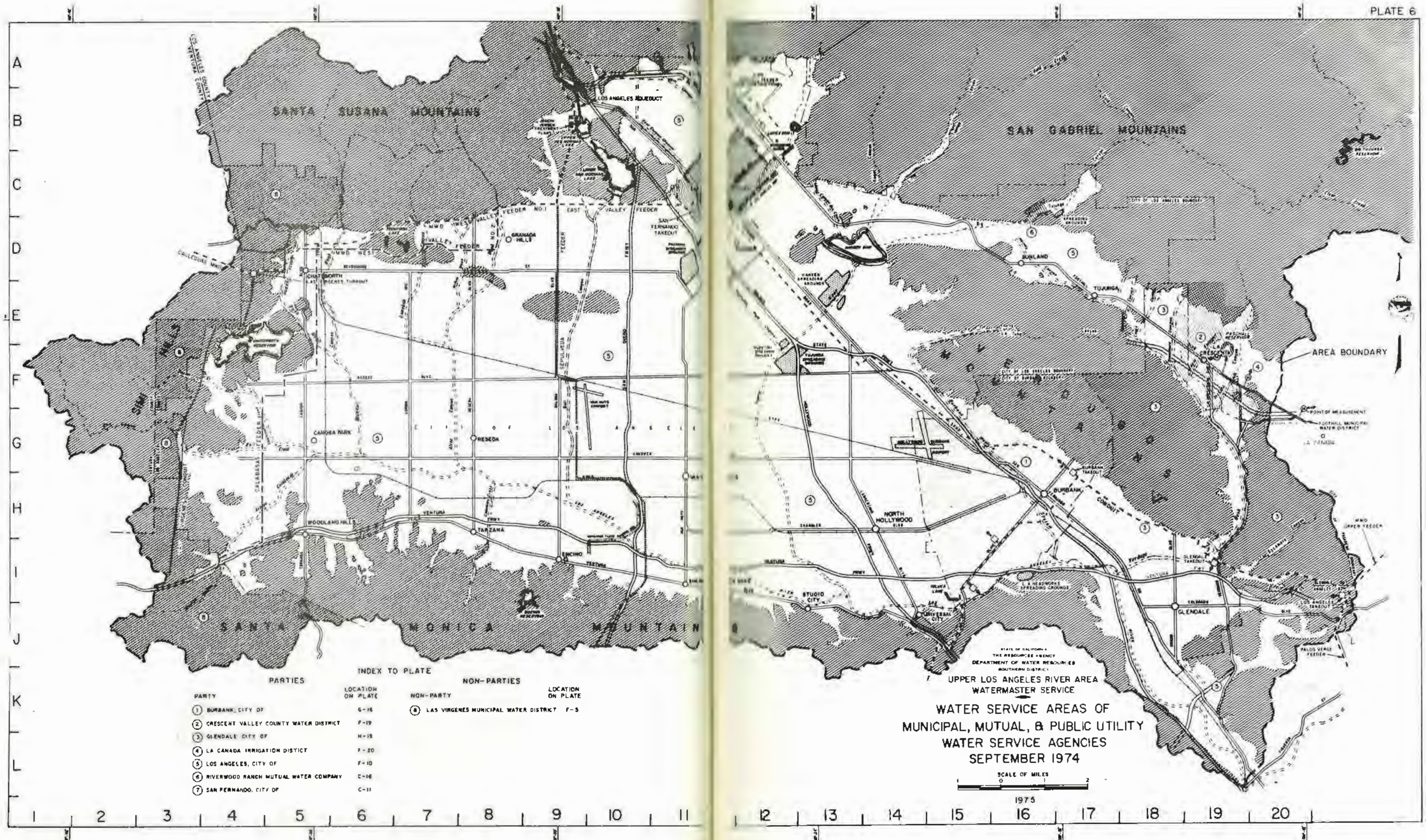
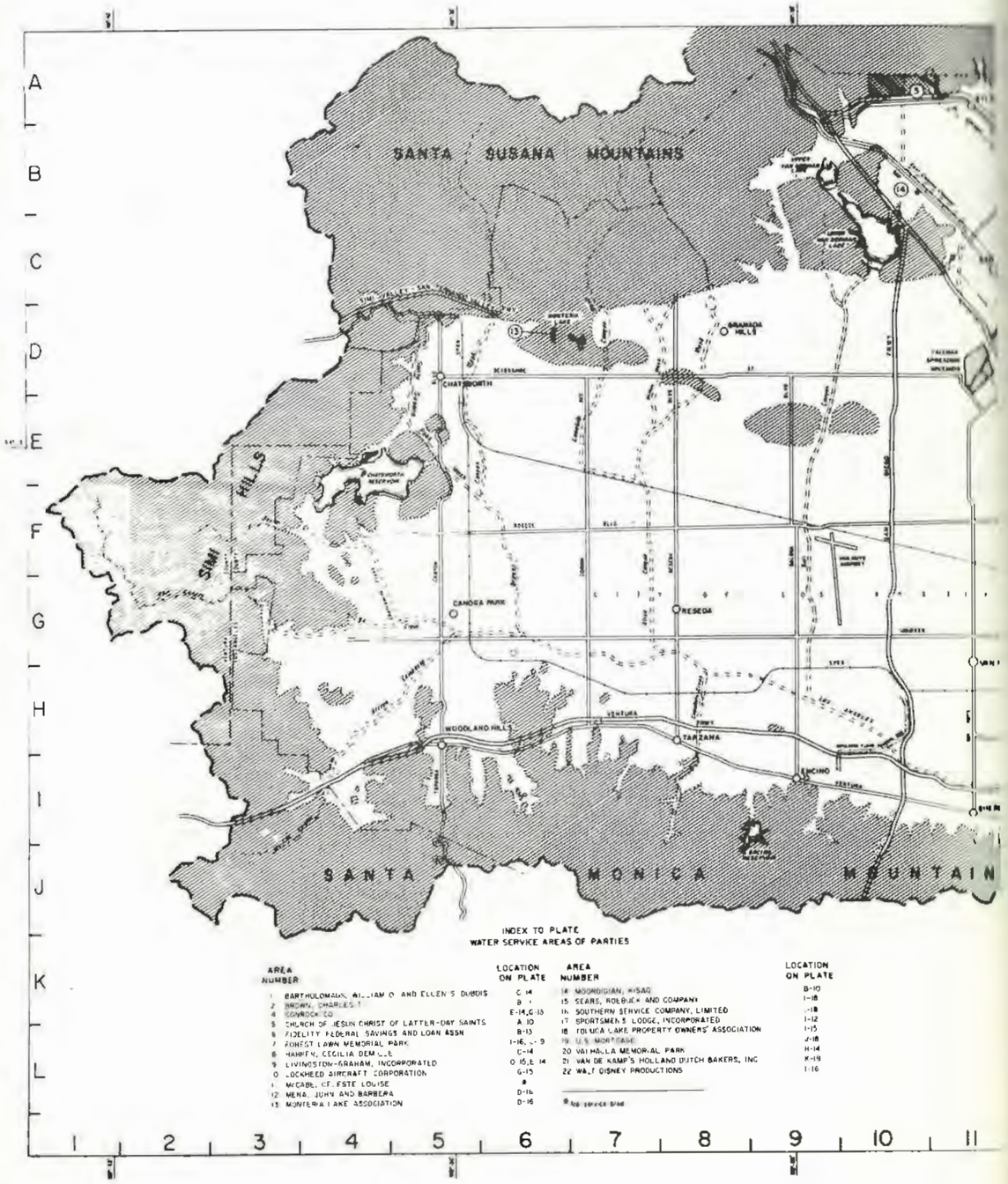


Figure 7. SYSTEM FOR WATER WELL IDENTIFICATION

PLATE 6


SANTA SUSANA MOUNTAINS
SAN GABRIEL MOUNTAINS
SANTA MONICA MOUNTAINS
SIMI HILLS
LOS ANGELES AQUEDUCT
CHATSWORTH
CANOGA PARK
RESEDA
GRANADA HILLS
WOODLAND HILLS
TARZANA
ENCINO
BURBANK
NORTH HOLLYWOOD
STUDIO CITY
UNIVERSAL CITY
GLENDALE
SUNLAND
TUJUNGA
CRESCENTA
AREA BOUNDARY
INDEX TO PLATE
PARTIES
PARTY
LOCATION ON PLATE
(1) BURBANK, CITY OF G-16
(2) CRESCENT VALLEY COUNTY WATER DISTRICT F-19
(3) GLENDALE CITY OF H-19
(4) LA CANADA IRRIGATION DISTICT F-20
(5) LOS ANGELES, CITY OF F-10
(6) RIVERWOOD RANCH MUTUAL WATER COMPANY C-16
(7) SAN FERNANDO, CITY OF C-11
NON-PARTIES
NON-PARTY
LOCATION ON PLATE
(8) LAS VIRGENES MUNICIPAL WATER DISTRICT F-5
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT
UPPER LOS ANGELES RIVER AREA
WATERMASTER SERVICE
WATER SERVICE AREAS OF
MUNICIPAL, MUTUAL, & PUBLIC UTILITY
WATER SERVICE AGENCIES
SEPTEMBER 1974
SCALE OF MILES
1975

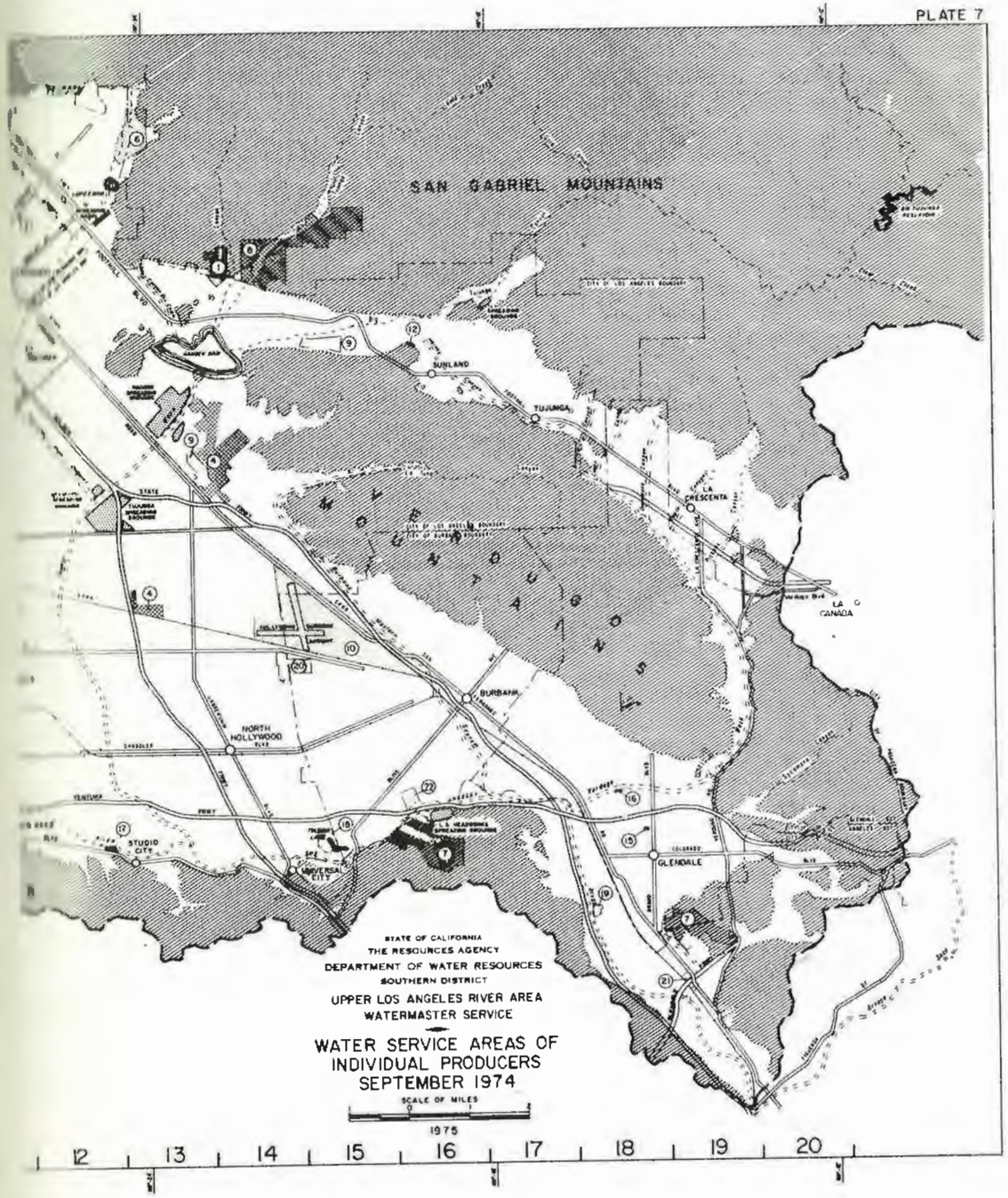


INDEX TO PLATE
WATER SERVICE AREAS OF PARTIES

AREA NUMBER		LOCATION ON PLATE
1	BARTHOLOMAEI, WILLIAM O. AND ELLEN S. DUBOIS	C-14
2	BROWN, CHARLES T.	B-1
3	CONROCK CO.	E-14, G-13
4	CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS	A-10
5	FIDELITY FEDERAL SAVINGS AND LOAN ASSN.	B-13
7	FOREST LAWN MEMORIAL PARK	I-16, J-9
8	HARIFF, CECILIA DEMILLE	C-14
9	LIVINGSTON-GRAHAM, INCORPORATED	O-15, E-14
10	LOCKHEED AIRCRAFT CORPORATION	G-15
11	MCCABE, CRESTE LOUISE	A
12	MENA, JOHN AND BARBERA	D-16
13	MONTEREY LAKE ASSOCIATION	D-16
14	MOORDIGIAN, KISAG	B-10
15	SEARS, ROEBUCK AND COMPANY	I-18
16	SOUTHERN SERVICE COMPANY, LIMITED	J-18
17	SPORTSMEN'S LODGE, INCORPORATED	I-12
18	TOLUCA LAKE PROPERTY OWNERS' ASSOCIATION	I-15
19	U.S. MORTGAGE	J-18
20	VALHALLA MEMORIAL PARK	H-14
21	VAN DE KAMP'S HOLLAND DUTCH BAKERS, INC.	K-19
22	WALT DISNEY PRODUCTIONS	I-16

* No service area

PLATE 7



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT
UPPER LOS ANGELES RIVER AREA
WATERMASTER SERVICE

WATER SERVICE AREAS OF INDIVIDUAL PRODUCERS SEPTEMBER 1974

SCALE OF MILES
0 1
1975

Imports and Exports of Water

Residential, commercial, and industrial expansion in ULARA requires the importation of additional water supplies to supplement that provided by the ground water basins. The City of Los Angeles and MWD have kept abreast of this demand by continuing to expand their facilities for the importation of water.

The City of Los Angeles now has a second aqueduct capable of bringing in an additional supply of Owens River and Mono Basin water at the rate of more than 130 million gallons a day.

In addition to the City's aqueducts, MWD's Colorado River aqueduct delivers water to the Cities of Burbank, Glendale, Los Angeles, and San Fernando. On November 9, 1971, by unanimous approval of a resolution by MWD's Board of Directors, the City of San Fernando became a member agency of MWD. Thus, San Fernando can now obtain supplemental water on a permanent basis from MWD supplies and participate in all programs for the future development and distribution of such water.

The Crescenta Valley County Water District and La Canada Irrigation District also import Colorado River water through the facilities of the Foothill Municipal Water District, which is a member agency of MWD.

The State Water Project now delivers water from northern California to MWD at Castaic Reservoir, thence through the MWD Foothill Feeder to the Joseph Jensen Water Filtration Plant in ULARA.

Exports from ULARA, exclusive of sewage, are limited to the City of Los Angeles, which exports imported and ground water. Table 9 summarizes the nontributary imports and exports from ULARA. Ground water imports and exports in and out of ULARA are listed in Table 10.

Facilities for importing nontributary water are depicted on Plate 6, Page 43.

The 54-inch Calabasas Feeder from Chatsworth to Calabasas was completed during 1973-74. In addition, the 18-foot San Fernando Tunnel was completely excavated and is being prepared for tunnel-concreting operations.

Physical Data by Basins

To comply with the Court's directive, the Watermaster has collected and summarized data in Table 10 which show the water supply and disposal in each of the basins.

The information for Table 10 was submitted by the parties. In instances where estimates were made, such as water delivered to hill and mountain areas, sewage exported, etc., estimates were made by the parties and based upon methods consistent with previous estimates computed by SWRCB for the San Fernando Valley Reference. The Watermaster likewise made computations of subsurface outflows based on similar computations made by SWRCB.

Some of the figures submitted for Table 10 are partially estimated, due to lack of information at the time of submittal. However, the actual figures based on measured values are subsequently submitted to the Watermaster for his permanent records. The revised data are available from the Watermaster on request.

TABLE 9. ULARA IMPORTS AND EXPORTS

Source and Agency	Quantity, in acre-feet			
	1972-73		1973-74	
IMPORTS				
Colorado River Water				
Burbank, City of	0		0	
Crescenta Valley County Water District	1,030		1,046	
Glendale, City of	182		80	
Los Angeles, City of	3,306		4,621	
La Canada Irrigation District	819		837	
Las Virgenes Municipal Water District (nonparty)	57[a/]		0	
San Fernando, City of	0		22	
		5,394		6,606
Northern California Water				
Burbank, City of	10,700		11,127	
Glendale, City of	8,972		8,951	
Las Virgenes Municipal Water District (nonparty)	2,130[a/]		2,806	
San Fernando, City of	76		0	
		21,878		22,884
Owens River Water				
Los Angeles, City of		449,105[a,b/]		441,843[b/]
Total		476,377		471,333
EXPORTS				
Owens River Water				
Loa Angeles, City of		-238,858[a/]		-232,350
Net Import		237,519		238,983

a/ Last year's figure was updated.

b/ This value represents the summation of the gross amount of water delivered to and exported from ULARA. It does not include operational releases, reservoir evaporation, and water spread during the year.

TABLE 10. SUMMARY OF WATER SUPPLY AND DISPOSAL BY BASINS
(in acre-feet)

Water source and use	City of Burbank	City of Glendale	City of Los Angeles	City of San Fernando	All others	Total
SAN FERNANDO BASIN						
Extractions						
Total quantity	13,926	11,124	63,267[a]	0	5,071[b]	93,388[a]
Used in valley fill	13,314	5,765	8,855	0	4,550[b]	32,484[b]
Imports						
Colorado River Water	0	53	2,164	22	-	2,239
Owens River Water	-	-	435,011	-	-	435,011
Northern Calif. Water	11,127	5,908	0	0	2,806	19,841
Ground water from Sylmar Basin	-	-	2,839	2,510	0	5,349
Exports						
Ground water:						
to Verdugo Basin	-	4,466	0	-	0	4,466
out of ULARA	-	-	57,251	-	0	57,251
Owens River Water:						
out of ULARA	-	-	232,350	-	-	232,350
to Eagle Rock Basin	-	-	1,252	-	0	1,252
Colorado River:						
to Verdugo Basin	-	27	0	-	0	27
Northern Calif. Water:						
to Verdugo Basin	-	3,043	-	-	-	3,043
Water delivered to hill and mountain areas						
Ground water	612	893	0	0	0	1,505
Owens River Water	-	-	32,404	-	-	32,404
Colorado River Water	0	53	1,223	0	-	1,276
Northern Calif. Water	460	980	0	0	7,851	9,191
Water outflow						
Surface						88,811[c]
Subsurface						339
Sewers	11,553[d]	16,343	75,830	1,605		105,331
SYLMAR BASIN						
Extractions						
Total quantity	-	-	2,839	3,103	475	6,417
Used in Valley Fill	-	-	0	248	2[e]	250
Imports						
Owens River Water	-	-	5,905	-	-	5,905
Exports						
Ground water:						
to San Fernando Basin	-	-	2,839	2,510	0	5,349
Water delivered to hill and mountain areas						
Owens River Water	-	-	320	-	-	320
Water outflow						
Surface						5,000[f]
Subsurface:						
to San Fernando Basin						412
Sewers	-	-	760	149	0	909

TABLE 10. SUMMARY OF WATER SUPPLY AND DISPOSAL BY BASINS (Continued)
(in acre-feet)

VERDUGO BASIN

Water source and use	Crescenta Valley County Water District	City of Glendale	La Canada Irrigation District	City of Los Angeles	Total
Extractions					
Total quantity	3,612	2,785	0	0	6,397
Used in Valley Fill	3,498	2,488	0	0	5,986
Imports					
Colorado River Water	1,046	27	837	0	1,910
Owens River Water	-	-	-	927	927
Northern Calif. Water	0	3,043	0	0	3,043
Ground water from:					
San Fernando Basin	-	4,466	-	0	4,466
Exports	0	0	0	0	0
Water delivered to hill and mountain areas					
Colorado River Water	33	27	0	0	60
Owens River Water	-	-	-	296	296
Northern Calif. Water	0	304	0	0	304
Ground water from:					
Verdugo Basin	114	297	-	0	411
San Fernando Basin	-	485	0	0	485
Water outflow					
Surface					7,383[e/]
Subsurface:					
to Monk Hill Basin					300[h/]
to San Fernando Basin					65
Sewage	0	1,873	0	0	1,873

EAGLE ROCK BASIN

Water source and use	City of Los Angeles	Deep Rock Water Company	Sparkletts Drinking Water Corporation	Total
Extractions				
Total quantity	0	7	139	146
Used in Valley Fill	0	0	0	0
Imports				
Owens River	1,252	-	-	1,252
Colorado River	2,457	-	-	2,457
Ground water	0	0	0	0
Exports				
Ground water	0	7	139	146
Water delivered to hill and mountain areas				
Colorado River Water	1,396	-	-	1,396
Owens River Water	542	-	-	542
Water outflow				
Surface				[j/]
Subsurface				50[k/]
Sewers	2,060	0	0	2,060

a/ Excludes production from Reseda wells which amounted to 181 acre-feet.
b/ Excludes production of 521 acre-feet by Western Oil and Gas Association (nonparty).
c/ Measured at Station F-57C where the 29-year mean (1929-57) base low flow is 7,580 acre-feet.
d/ Includes reclaimed waste water which infiltrates into the ground water basin after being discharged in L.A. River and while on route to gaging station F-57C.
e/ Excludes 473 acre-feet of water from San Fernando Tunnel which is being built by MWD.
f/ Surface outflow is not measured. Calculated average surface outflow by Mr. Laverty - SF Exhibit 57.
g/ Information obtained from Station F-252R.
h/ Based on 29-year average (1929-57).
j/ Information not available.
k/ Estimated in Supplemental No. 2 to Report of Referee for dry years 1960-61. Currently, data not available for direct evaluation.

IV. ADMINISTRATION OF THE JUDGMENT

The Department of Water Resources, as Watermaster of ULARA, administers the Judgment and keeps the Court fully apprised of any violations or changes in administration.

Assignments of Restricted Pumping

In accordance with the provisions of the Judgment, the Watermaster records all changes of ownership, transfer, or assignment of Restricted Pumping rights. Table 11 lists all assignments, parties, and amounts involved. Appendix A records the documents used to assign Restricted Pumping rights by each of the parties as of September 30, 1974. During the 1973-74 water year, the City of Los Angeles submitted estimates on the amounts to be extracted by those parties having separate stipulated Judgments with the City. The clause that allows the parties with stipulated Judgments to extract ground water under the City of Los Angeles' Restricted Pumping right is covered by Section V, Paragraph 2 of the Judgment. The City of San Fernando did not exercise its right to purchase water from the City pursuant to the "Physical Solution-Sylmar Basin", which is described in Section VII, Paragraph 2 of the Judgment.

TABLE 11. ASSIGNMENTS OF RESTRICTED PUMPING

Party	Assignment and amount (in acre-feet)			Party
		San Fernando Basin		
Pursuant to Stipulated Judgments				
Conrock Company	Stipulated	1,600.00[a]	from	Los Angeles, City of
Livingston-Graham, Inc.	Stipulated	600.00[a]	from	Los Angeles, City of
Sears, Roebuck and Company	Stipulated	300.00[a]	from	Los Angeles, City of
Walt Disney Productions	Stipulated	1,850.00[a]	from	Los Angeles, City of
Pursuant to License				
Burbank, City of	Licensed	15.00	from	Bartholomaus, William O. and Dubois, Ellen S.
Burbank, City of	Licensed	181.00	from	Lockheed Aircraft Corporation
Harper, Cecilia de Mille	Licensed	6.00	from	Forest Lawn Memorial Park Association
Riverwood Ranch	Licensed	32.00[b]	from	Lockheed Aircraft Corporation
Southern Service Company	Licensed	55.00	from	Forest Lawn Memorial Park Association
Sportsmen's Lodge, Inc.	Licensed	10.00	from	Forest Lawn Memorial Park Association
Sportsmen's Lodge, Inc.	Licensed	6.00	from	Lockheed Aircraft Corporation
Toluca Lake Property Owners Ass'n	Licensed	7.00	from	Van de Kamps H. D. Bakers, Inc.
Valhalla Memorial Park	Licensed	20.00	from	Lockheed Aircraft Corporation
		Sylmar Basin		
Pursuant to License				
San Fernando, City of	Licensed	40.00	from	Moordigian, Kisag

a/ Estimate submitted by City of Los Angeles, see Appendix A.
b/ License shown in Appendix A for the water years 1972-73 and 1973-74 was inadvertently omitted from the 1972-73 annual report.

In addition to the Cities of Los Angeles and San Fernando, a number of parties availed themselves of the opportunity to license water rights to meet their water demand.

In order that a water right license or sale agreement be in force during the water year, it will be the Watermaster's policy that it be signed before or during the water year in question. Failure to submit a license or sale document to the Watermaster by August 31 of the water year in question may be considered evidence that such an agreement was never consummated during such water year.

Overextractions

In restricting ground water extractions in ULARA, it was foreseen that there would be unavoidable fluctuations in water use occurring from year to year. Therefore, the flexibility clause was included in the Judgment allowing each party to vary its extractions within reasonable limits so that it could pump more or less than its Restricted Pumping with equivalent debits or credits being applied to its extractions in the subsequent water year.

The provisions of Section VIII of the Judgment allows each party a flexibility of 10 percent of its Restricted Pumping right. In other words, a party may underpump or overpump by 10 percent of its Restricted Pumping and in the succeeding water year increase or decrease (whichever is applicable) its pumping by the same amount. Table 12 summarizes all overextractions and violations of the Judgment.

Of the 8 parties that exceeded their allowable extractions for 1973-74, four were in violation of the Judgment.

TABLE 12. OVEREXTRACTIONS
(in acre-feet)

Party	(1) Restricted Pumping[a/]	(2) Allowable carryover from 1972-73	(3) Allowable extraction 1973-74 (1)+(2)-(3)	(4) Amount extracted	Overextractions (5) Amount (3)-(4)-(5)	(6) Allowable[b/] (1)x10%	(7) In percent [(5)÷(1)]100÷(7)
San Fernando Basin							
Conrock Company	1,600.00	0.00	1,600.00	1,878.63	-278.63	---[c/]	
Los Angeles, City of	58,907.00	-1,278.54[d/]	57,628.46	63,266.98[e/]	-5,638.52[f/]	6,325.70[g/]	9.61[g/]
Mena, John and Barbara	0.00	-4.80	-4.80	0.96	-5.76	0.00	---[h/]
Monterie Lake Association	0.00	-13.46	-13.46	0.00	-13.46	0.00	---[h/]
Subtotals	60,507.00	-1,296.80	59,210.20	65,146.57	-5,936.37		
Sylmar Basin							
Brown, Charles T.	0.00	-6.00	-6.00	1.38	-7.38	0.00	---[h/]
Church of Jesus Christ of the Latter Day Saints	0.00	-1,004.68	-1,004.68	0.00	-1,004.68	0.00	---[h/]
Los Angeles, City of	2,818.00	16.64	2,834.64	2,839.49	-4.85	281.80	
Subtotals	2,818.00	- 994.04	1,823.96	2,840.87	-1,016.91		
Verdugo Basin							
Crescenta Valley County Water District	1,294.00	3.61	1,297.61	1,611.95	-314.34	129.40	9.54
TOTALS	66,619.00	-2,287.23	64,331.77	71,599.39	-7,267.62		

a/ Refer to Column (1)+(3), Table 8.
b/ Computed as 10 percent of Column (1) unless otherwise noted.
c/ Party entitled to extract ground water per Stipulated Judgment with City of Los Angeles. The City will, in succeeding water year, decrease its extractions by the amount of the overextraction shown under Column (5).
d/ Includes 978.92 acre-feet overextracted in 1970-71 pursuant to "Stipulation for Emergency Spreading and Extraction".
e/ Includes 4,659.60 acre-feet overextracted pursuant to "Stipulation for Emergency Spreading and Extraction".
f/ Not to be considered an overextraction per se, as the "Stipulation for Emergency Spreading and Extraction" permitted the City of Los Angeles to overextract.
g/ For City of Los Angeles, the allowable overextraction is 10 percent of its Restricted Pumping shown in Column (1) of Table 8.
h/ Party in violation of the Judgment as it has a zero water right or Restricted Pumping.

The parties in violation are subject to possible court action. Recommendations are discussed under "Findings, Determinations, and Recommendations by the Watermaster."

Table 12 also lists Conrock Company a party that is subject to a Stipulated Judgment with the City of Los Angeles. This party's extraction, in excess of the estimate submitted by the City, will be adjusted against the City's Restricted Pumping right during the 1974-75 water year. As such, the party in question is not considered to be in violation of the Judgment.

Findings, Determinations, and Recommendations by the Watermaster

The Watermaster finds four parties in violation of the Judgment as a result of overextractions during the 1973-74 water year. The parties in violation are John and Barbara Mena, Monteria Lake Association, Charles T. Brown, and The Church of Jesus Christ of Latter-Day Saints. All four parties have zero water rights.

John and Barbara Mena extract approximately 1 acre-foot a year for domestic purposes; they have not been requested by the Watermaster to lease water rights to make up their overextractions; however, since their accumulated carryover deficit is now approximately 5 acre-feet, it would be desirable that they lease sufficient water rights during the 1974-75 water year to offset the deficit.

Monteria Lake Association has not extracted any water since the 1968-69 water year; however, the Association's account continues to show an accumulated carryover deficit since they have not leased any water rights to offset the accumulated overextractions. They were advised on March 5, 1971 that they eliminate their deficit; to date the Association has not taken any action. Therefore: THE WATERMASTER DOES HEREBY RECOMMEND THAT THE COURT TAKE ACTION AGAINST MONTERIA LAKE ASSOCIATION FOR NONCOMPLIANCE.

Charles T. Brown's overextraction was an inadvertent action since he had assumed he had an ongoing lease. He has now taken action to lease sufficient rights to cover the overextraction and his 1974-75 water needs. The Watermaster recommends no action be brought against Charles T. Brown.

The Church of Jesus Christ of Latter-Day Saints did not report any extractions of ground water during 1973-74 and did not appear to make any effort to eliminate its accumulated overextractions. At the conclusion of the 1971-72 water year, it was advised by the Watermaster of the considerably large amount of overextraction and was asked to please advise the Watermaster what action it would take to correct the cited deficiency. As of January 15, 1975, no notification has been received by the Watermaster. Therefore: THE WATERMASTER DOES HEREBY RECOMMEND THAT THE COURT TAKE ACTION AGAINST THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS FOR NONCOMPLIANCE.

During the 1970-71 water year, the City of Los Angeles extracted a total of 2,055.92 acre-feet in accordance with the provisions of the "Stipulation for Emergency Spreading and Extractions", which was entered into by parties of ULARA as a result of the February 9, 1971 earthquake.

A total of 1,077.00 acre-feet of Owens River water was spread during the 1970-71 water year to return to the ground water basin a portion of the water previously extracted. This left 978.92 acre-feet remaining to be returned (see Table 8). Owens River water was not available for

spreading during the 1973-74 water year. Thus, the amount of water remaining to be paid back remains the same (978.92 acre-feet).

On February 26, 1974, the City had to shut down completely the First Los Angeles Aqueduct in order to repair 65 feet of tunnel sidewall and 315 feet of invert which had extensive cracking and breaking. The area affected was between Elsmere and City Limits Canyons. The repair work, which extended over a 37-day shut-down of the Aqueduct, was completed and the First Aqueduct went back into service on April 4, 1974.

During the February 26 to April 4, outage, the City had to depend on its ground water to meet water demand and requested the Watermaster to permit it to extract under an emergency condition pursuant to the provisions of the Stipulation for Emergency Spreading and Extraction. The Watermaster gave tentative approval on April 15, 1974, based on the City's report on the First Aqueduct's failure and an inspection of the damage. The Watermaster's approval was contingent on the ULARA Advisory Board's approval.

The ULARA Advisory Board met on September 19 to take under submission the City of Los Angeles' request. It recommended approval. Accordingly, the City's extraction of 4,659.60 acre-feet was charged to a special account pursuant to the Stipulation for Emergency Spreading and Extraction. As of September 30, 1974, the City had 5,638.52 acre-feet under the special account, all subject to repayment by either spreading or curtailment of ground water extraction in future years. Although no repayment was made during 1973-74 for water used under those provisions, the City started to spread imported water on December 19, 1974 to offset a portion of the water used under this special account.

(A copy of the Stipulation for Emergency Spreading and Extraction is shown in Appendix A of the 1970-71 Watermaster report.)

During the February 4 ULARA Advisory Board meeting, a motion was approved for the City of San Fernando to be allowed to extract its unused water right during the subsequent three water years. The Watermaster concurred in view of the emergency resulting from the 1971 earthquake, which prevented the City from pumping its share of ground water from the Sylmar Basin.

The Watermaster subsequently approved, subject to the continuing jurisdiction of the Court, the City of San Fernando's allowable carryover of extraction during the three subsequent water years, amounting to the 1,526.06 acre-feet it was unable to use in 1970-71. During the 1971-72 and 1972-73 water years, the City extracted 288.43 and 227.11 acre-feet of carryover, respectively, leaving 1,010.52 acre-feet which it could have extracted during the 1973-74 water year. On September 5, 1974, the City asked for an additional extension of two years through the 1975-76 water year to complete the extraction of its water right entitlement, since it could not fully utilize it in 1973-74.

That request was submitted to the Advisory Board on September 19, and was approved. The Watermaster has therefore extended the 1973-74 balance of 684.66 acre-feet to be used during the water years 1974-75 and 1975-76.

On July 16, 1974, the Forest Lawn Memorial Park Association also asked for an extension so that it might fully utilize its 1973-74 year-end balance of 400 acre-feet during the

next water year. The Association was unable to extract its full water right in 1973-74 because of its continuing inability to use its ground-water pumping system which had been drastically curtailed due to gasoline contamination of the ground water basin. The Advisory Board approved the request on September 19, and the Watermaster allowed the Association to carryover its water right in excess of the permissible 10 percent (Table 8).

On August 9, 1974, the City of Glendale requested the Watermaster to grant it an extension so it could pump an estimated 1,680 acre-feet that it had been unable to pump, due to delays caused by major repairs of the water supply pumping units, which resulted from the unavailability of parts. The Watermaster studied the City's problems and reported on them at the September 19 ULARA Advisory Board meeting. The Board recommended approval and Table 8 shows a carryover for the City of Glendale into 1974-75 in excess of the 10 percent permitted by the Judgment. Information about the Watermaster's study can be obtained in his office.

As mentioned in Chapter III, to the best of the Watermaster's knowledge and information on hand, Glen A. Berry, WOGA, and MWD are the only nonparties extracting ground water in the three ground water basins. The Watermaster has approved the latter two operations which are necessary for the control of gasoline pollution at Forest Lawn and the construction of the San Fernando Tunnel of the MWD Foothill Feeder.

Glen A. Berry drilled a well at his residence in Chatsworth on March 3, 1972, and is currently extracting ground water for his lawns, shrubs, and trees. He was informed on June 20, 1972 of the ULARA Judgment, which restricts ground water use in ULARA and places the use thereof under the Court's jurisdiction. The Watermaster has not tested the well capacity and at this time estimates the water use at approximately 3 acre-feet per year, based on water use of 2.8 acre-feet per acre per year used for lawns and shrubs.

V. ADMINISTRATIVE COSTS

ULARA was established as a "Watermaster Service Area" in accordance with Part 4, Division 2, of the California Water Code. Pursuant to the provisions of its Section 4201, the cost of Watermaster Service is payable one-half by the State and one-half by the parties. Thus, the parties are assisted by the State in distributing the water economically.

On the other hand, the Judgment describes the procedures for apportioning the costs among the parties and how it should be collected. It requires that each year the Watermaster prepare a tentative budget covering the forthcoming July 1 to June 30 fiscal year. (Watermaster Service and the annual report are on a water year basis, i.e., October 1 through September 30.)

The Judgment also provides that the parties' share of the budget be borne by each party in the proportion that its "Mutual Prescriptive Right" bears to the total "Mutual Prescriptive Right" of all parties in ULARA. However, no party having 50 acre-feet or less of "Mutual Prescriptive Right" shall be assessed any charges.

The Watermaster is required to include the tentative budget and its apportionment in the annual report, so that it may be reviewed and approved by the Advisory Board on or about February 1 of each year. The tentative budget is subsequently mailed to the parties as part of the annual report on or before March 1 of each year. If there are any objections to the budget, they must be presented in writing to the Court and to the Watermaster within 30 days (on or before March 31) after the mailing of the annual report. If no objections are received, the budget becomes final.

Invoices are mailed on or about April 1 and all payments must be received, whether objections are filed or not, within 60 days (on or before May 1) after mailing of the annual report.

Approved Budget for 1973-74

In accordance with the Judgment, the Watermaster submitted a budget for the fiscal year July 1, 1973 through June 30, 1974 as part of its 1971-72 annual report. The tentative budget and annual report were reviewed and approved by the Advisory Board on February 5, 1973.

The parties had 30 days after the mailing of the annual report to submit their objections to the tentative budget. No objections were received by March 31, 1973 and the budget became final. Table 13 presents the 1973-74 budget as approved by the Advisory Board and parties.

TABLE 13. APPROVED BUDGET FOR 1973-74

ULARA Watermaster Service Area

Salaries and wages	$17,304	
Operating expenses	8,696	
TOTAL BUDGET		$26,000
One-half payable by State		$13,000
One-half payable by parties to Judgment		$13,000
Less estimated funds on hand July 1, 1973		5,000
Amount to be billed		$ 8,000

APPROVED:

UPPER LOS ANGELES RIVER AREA ADVISORY BOARD

By _____
Robert James
Chairman

Date Feb. 5, 1973

STATE OF CALIFORNIA
The Resources Agency
DEPARTMENT OF WATER RESOURCES
Southern District

By _____
James J. Doody
District Engineer
Southern District
and Watermaster

Date JAN 19 1973

Invoices for each party's proportionate share of the budget were mailed on or about April 1 and all payments were received prior to the deadline of May 1, 1973. Each party's proportionate share of the 1973-74 budget is shown in Table 14. A recapitulation for the Cities of Glendale and Los Angeles is made since they are billed in two separate basins.

During the sixth year of Watermaster Service, the work load increased slightly. As a result, the expenditures in 1973-74 were higher when compared with the 1972-73 fiscal year.

Income and expenditures for Watermaster Service during the 1973-74 fiscal year are shown in Table 15. In accordance with the California Water Code, any credit or debit balance remaining at the end of the fiscal year is carried forward into the succeeding fiscal year. The parties' share of the carryover into the 1974-75 fiscal year totaled $2,966.00.

TABLE 14. APPORTIONMENT OF PARTIES' SHARE OF 1973-74 BUDGET

Party	Mutually Prescriptive Right, in acre-feet	Apportionment to be paid
San Fernando Basin		
Burbank, City of	17,760	$ 1,113.54
Forest Lawn Memorial Park Association	1,060	66.46
Glendale, City of	16,141	1,012.03
Lockheed Aircraft Corporation	310	19.44
Los Angeles, City of	82,310	5,160.79
Valhalla Memorial Park	240	15.05
Van de Kamp's Holland Dutch Bakers, Inc.	120	7.52
Verdugo Basin		
Crescenta Valley County Water District	1,988	124.64
Glendale, City of	2,327	145.90
Sylmar Basin		
Fidelity Federal Savings and Loan Association	527	33.04
Los Angeles, City of	2,440	152.99
San Fernando, City of	2,370	148.60
TOTALS	127,593	$ 8,000.00
Recapitulation for:		
Glendale, City of	18,468	$ 1,157.93
Los Angeles, City of	84,750	$ 5,313.78

TABLE 15. STATEMENT OF JULY 1, 1973 – JUNE 30, 1974 INCOME AND EXPENDITURES

Item	Parties		State		Parties and State
Income					
From 1973-74 budget	$8,000.00		$13,000.00		$21,000.00	
Balance from 1972-73	7,805.14		0.00		7,805.14	
TOTAL INCOME		$15,805.14		$13,000.00		$28,805.14
Expenditures					
Salaries and wages	$9,230.97		$ 9,230.98		$18,461.95	
Operating expenses					
Miscellaneous indirect cost[a]	2,897.62		2,897.62		5,795.24	
Truck rental	186.45		186.45		372.90	
Printing annual report	176.55		176.54		353.09	
Electronic machine computing	224.22		224.22		448.44	
Other[b]	123.33		123.33		246.66	
TOTAL EXPENDITURES		$12,839.14		$12,839.14		$25,678.28
BALANCE		$ 2,966.00 [c]		$ 160.86		$ 3,126.86

a/ Rent, utilities, auto rental, communications, retirement, employee's health plan, and workmen's compensation insurance.
b/ General supplies, mobile equipment operation, engineering contracts.
c/ Total credit to parties in 1974-75 fiscal year, subject to delayed charges or credits.

Approved Budget for 1974-75

The tentative budget for the fiscal year July 1, 1974, through June 30, 1975, was submitted by the Watermaster for review and approval by the Advisory Board on February 4, 1974. The parties had 30 days after the mailing of the annual report for submitting their objections to the 1974-75 budget which was made a part of the report.

No objections were received by March 31, 1974, and the budget became final. Invoices for each party's proportionate share of the budget were mailed on April 1 and all payments were made before May 1, 1974. Table 16 presents the 1974-75 budget as approved by the Advisory Board on February 4, 1974. Each Party's share of the 1974-75 budget is shown in Table 17.

Tentative Budget for 1975-76

In accordance with the Judgment, the Watermaster hereby submits a budget for the fiscal year July 1, 1975 through June 30, 1976. The tentative budget submitted herewith was reviewed and approved by the Advisory Board on February 3, 1975. The parties will have 30 days after the mailing of the annual report for submitting their objections to this budget.

If no objections are received by March 31, 1975, the budget will become final. Invoices for each party's proportionate share of the budget will be mailed on or about April 1 and payments will be due on or before May 1, 1975. Table 18 presents the 1975-76 budget as approved by the Advisory Board. Each party's share of the 1975-76 budget is shown in Table 19.

TABLE 16. APPROVED BUDGET FOR THE FISCAL YEAR JULY 1, 1974 THROUGH JUNE 30, 1975

ULARA Watermaster Service Area

Salaries and wages	$19,085	
Operating expenses	7,113	
TOTAL BUDGET		$26,198
One-half payable by State		$13,099
One-half payable by parties to Judgment		$13,099
Less estimated funds on hand July 1, 1974		1,099
Amount to be billed		$12,000

APPROVED:

UPPER LOS ANGELES RIVER AREA ADVISORY BOARD

By _____
Robert James
Chairman

Date Feb. 4, 1974

STATE OF CALIFORNIA
The Resources Agency
DEPARTMENT OF WATER RESOURCES
Southern District

By _____
Jack J. Coe
District Engineer
Southern District
and Watermaster

Date Feb. 1, 1974

TABLE 17. APPORTIONMENT OF PARTIES' SHARE OF 1974-75 BUDGET

Party	Mutually Prescriptive Right, in acre-feet	Apportionment to be paid
San Fernando Basin		
Burbank, City of	17,760	$ 1,670.31
Forest Lawn Memorial Park Association	1,060	99.69
Glendale, City of	16,141	1,518.05
Lockheed Aircraft Corporation	310	29.16
Los Angeles, City of	82,310	7,741.17
Valhalla Memorial Park	240	22.57
Van de Kamp's Holland Dutch Bakers, Inc.	120	11.29
Verdugo Basin		
Crescenta Valley County Water District	1,988	186.97
Glendale, City of	2,327	218.85
Sylmar Basin		
Fidelity Federal Savings and Loan Association	527	49.56
Los Angeles, City of	2,440	229.48
San Fernando, City of	2,370	222.90
TOTALS	127,593	$ 12,000.00
Recapitulation for:		
Glendale, City of	18,468	$ 1,736.90
Los Angeles, City of	84,750	$ 7,970.65

TABLE 18. TENTATIVE BUDGET FOR THE FISCAL YEAR JULY 1, 1975 THROUGH JUNE 30, 1976

ULARA Watermaster Service Area

Salaries and wages	$21,814	
Operating expenses	8,926	
TOTAL BUDGET		$30,740
One-half payable by State		15,370
One-half payable by parties to Judgment		15,370
Less estimated funds on hand July 1, 1975		- 1,870
Amount to be billed		$13,500

APPROVED:

UPPER LOS ANGELES RIVER
AREA ADVISORY BOARD

By Robert James /woa
Robert James
Chairman

Date Feb 10, 1975

STATE OF CALIFORNIA
The Resources Agency
DEPARTMENT OF WATER RESOURCES
Southern District

By Jack J. Coe
Jack J. Coe
District Engineer
Southern District
and Watermaster

Date Jan 21 1975

TABLE 19. APPORTIONMENT OF PARTIES' SHARE OF 1975-76 BUDGET

Party	Mutually Prescriptive Right, in acre-feet	Apportionment to be paid
San Fernando Basin		
Burbank, City of	17,760	$ 1,879.10
Forest Lawn Memorial Park Association	1,060	112.15
Glendale, City of	16,141	1,707.80
Lockheed Aircraft Corporation	310	32.80
Los Angeles, City of	82,310	8,708.82
Valhalla Memorial Park	240	25.39
Van de Kamp's Holland Dutch Bakers, Inc.	120	12.70
Verdugo Basin		
Crescenta Valley County Water District	1,988	210.34
Glendale, City of	2,327	246.21
Sylmar Basin		
Fidelity Federal Savings and Loan Association	527	55.76
Los Angeles, City of	2,440	258.17
San Fernando, City of	2,370	250.76
TOTALS	127,593	$ 13,500.00
Recapitulation for:		
Glendale, City of	18,468	$ 1,954.01
Los Angeles, City of	84,750	8,966.99

APPENDIX A

RESTRICTED PUMPING OF
UPPER LOS ANGELES RIVER AREA PARTIES
SEPTEMBER 1974

AND

COPIES OF LEGAL DOCUMENTS

APPENDIX A
TABLE OF CONTENTS

RESTRICTED PUMPING OF UPPER LOS ANGELES RIVER AREA PARTIES SEPTEMBER 1974

Party [a]	Restricted Pumping, in acre-feet per year
SAN FERNANDO BASIN	
Bartholomaus, William O. and Ellen S. Dubois	15.00
Burbank, City of	13,649.00
Conrock Formerly Known as Consolidated Rock Products Company Successor of California Materials Company	0.00 [b]
Forest Lawn Memorial Park Association Includes: American Security and Fidelty Company Forest Lawn Cemetery Association Forest Lawn Company	814.00
Glendale, City of	12,405.00
Harper, Cecilia DeMille Successor of Estate of Cecil B. DeMille	0.00
Livingston–Graham, Incorporated Successor of Livingston Rock and Gravel Company	0.00 [b]
Lockheed Aircraft Corporation	239.00
Los Angeles, City of	63,257.00
McCabe, Celeste Louise	1.00
Mena, John and Barbara Successor of Neva Bartlett Holmgrin	0.00
Monteria Lake Association	0.00
Riverwood Ranch Mutual Water Company	0.00
Sears, Roebuck & Company	0.00 [b]
Southern Service Company, Limited	0.00
Sportsmen's Lodge, Incorporated Formerly known as Sportsmen's Lodge Banquet Corporation	0.00
Tolucá Lake Property Owners' Association	23.00
U. S. Mortgage Successor of Wright, Marion J. and Alice M.	00.00
Valhalla Memorial Park Includes: Valhalla Mausoleum Park Valhalla Properties	184.00
Van de Kamp's Holland Dutch Bakers, Incorporated	93.00
Walt Disney Productions	00.00 [b]
SUBTOTALS (SAN FERNANDO BASIN)	90,680.00

RESTRICTED PUMPING OF UPPER LOS ANGELES RIVER AREA PARTIES SEPTEMBER 1974

(Continued)

Party [a]	Restricted Pumping, in acre-feet per year	
SYLMAR BASIN		
Brown, Charles T. Successor of Stella M. Brown	0.00	
Church of Jesus Christ of the Latter Day Saints Successor of Henry G. Stetson	0.00	
Fidelity Federal Savings and Loan Association Successor of Boise Cascade Building Company Successor of The Wellesley Company Successor of Maxine Duckworth and John E. Mullin	609.00	
Los Angeles, City of	2,818.00	
Moordigian, Kisag	46.00	
San Fernando, City of	2,737.00	
SUBTOTALS (SYLMAR BASIN)		6,210.00
VERDUGO BASIN		
Crescenta Valley County Water District	3,294.00	
Glendale, City of	3,856.00	
SUBTOTALS (VERDUGO BASIN)		7,150.00
TOTAL (ULARA)		104,040.00

[a] Parties that are not listed on this table have zero "Restricted Pumping."

[b] Party is allowed to extract ground water pursuant to Stipulated Judgment with City of Los Angeles.

COPIES OF LEGAL DOCUMENTS, TRANSFERS OF RESTRICTED PUMPING

WATER USE LICENSE AGREEMENT

ELLEN S. DuBOIS and WILLIAM O. BARTHOLOMAUS (hereinafter referred to as "Licensors") hereby grant to CITY OF BURBANK, a municipal corporation, (hereinafter referred to as "Licensee") a license to extract fifteen (15) acre-feet of water of Licensors' Restricted Pumping allocated to Licensors under and pursuant to Judgment dated March 14, 1968, and entered in Los Angeles Superior Court, Case Number 650 079, entitled "The City of Los Angeles, plaintiff, vs. City of San Fernando, et al.,defendants," during the period commencing October 1, 1973, and continuing to and including September 30, 1974.

Said License is granted subject to the following conditions:

1) Licensee shall exercise said rights and extract the same on behalf of Licensors during the period above specified and put the same to beneficial use, and Licensee shall not by the exercise hereunder of said right acquire any right to extract water independent of the rights of Licensors.

2) Licensee shall notify the watermaster that said pumping was done pursuant to this License and provide the watermaster with a copy of this License.

3) Licensee shall note, in any recording of water production for the period of this License, that said pumping was done pursuant to this License.

4) Licensors warrant that they have fifteen (15) acre-feet of Restricted Pumping and that they have not pumped and will not pump or permit or license any other person to pump any part of the fifteen (15) acre-feet granted by this License during the period of October 1, 1973, through September 30, 1974.

This License is entered into as of the 29th day of August, 1974.

LICENSORS:

Ellen S. DuBois

Ellen S. DuBois

William O. Bartholomaus by

Ellen S. DuBois

William O. Bartholomaus by Ellen S. DuBois, Attorney in Fact

LICENSEE:

CITY OF BURBANK,
a municipal corporation,

By _____
City Manager

ATTEST: DATE:

City Clerk of the City of Burbank

By _____

UPPER LOS ANGELES RIVER AREA (ULARA)
REDUCTION OF EXTRACTIONS BY CITY OF LOS ANGELES
October 1, 1973

I. ESTIMATED GROUND WATER PRODUCTION BY PARTIES TO STIPULATED JUDGMENTS

WATER YEAR 1973 - 74

STIPULATED PARTIES	Extracted prior year, in acre-feet 1972 - 1973	Estimated extractions* current water year, in A.F. 1973 - 1974
1. Conrock Company	1782*	[illegible]
2. Livingston-Graham, Incorporated	663	[illegible]
3. Sears, Roebuck and Company	320	320
4. Walt Disney Productions	2038	1850
TOTAL	4803	4350

*Amounts greater or less than 10% of the amount extracted during the prior year shall be justified under remarks.

II. The completion and filing of this notice with the Watermaster fulfills the requirement of notification by the City of Los Angeles to the Watermaster pursuant to paragraph V of "Policies and Procedures

III. Remarks:

(*) California Materials Co. included in Conrock.

Note: California Materials Co. merged with Conrock on Dec. 31, 1972. This was acknowledged by the Watermaster on Feb 9, 1973

DUANE L. GEORGESON
Engineer Los Angeles Aqueduct

By _____ (Designee)

Date November [illegible], 1973

Phone No. 481-[illegible]

INFORMATION REQUIRED BY THIS FORM MUST BE FILED WITH THE WATERMASTER ON OR BEFORE NOVEMBER 15

WATER LICENSE AGREEMENT

FOREST LAWN COMPANY (licensor) grants to CECILIA DE MILLE HARPER, (Licensee): a license to extract 6 acre-feet of Licensor's Restricted Pumping allocated to Licensor (or predecessors in interest) under and pursuant to Judgement dated March 14, 1968, and entered in Los Angeles Superior Court Case No 650,079 entitled "The City of Los Angeles, Plaintiff, vs City of San Fernando, et al., Defendants", during the period commencing October 1, [illegible], and continuing to and including September 30, 1974

Said License is granted, subject to the following conditions:

(1) Licensee shall exercise said right and extract the same on behalf of Forest Lawn Company during the period above specified and put the same to beneficial use and Licensee shall not by the exercise hereunder of said rights acquire any right to extract water independent of the rights of Licensor

(2) Licensee shall notify the Watermaster that said pumping was done pursuant to this License and provide the Watermaster with a copy of the document.

(3) Licensee shall note, in any recording of water production for the period of agreement, that said pumping was done pursuant to this License

FOREST LAWN COMPANY warrants that it has 6 acre-feet of Restricted Pumping and that it has not pumped and will not pump or permit or License any other person to pump any part of said 6 acre-feet during period of October 1, 1973, through September 30, 1974.

DATED: 8/20/74

FOREST LAWN COMPANY

By _____

Title: Vice President

CECILIA DE MILLE HARPER

By: Cecilia de Mille Harper

Title: _____

SUPPLEMENTAL LICENSE AGREEMENT

This Supplemental License Agreement between RIVERWOOD RANCH MUTUAL WATER COMPANY (hereinafter referred to as "Licensee") and LOCKHEED AIRCRAFT CORPORATION (hereinafter referred to as "Licensor") was entered into as of February 1, 1970 and pursuant to the "Water Use License Agreement" between the same parties hereunder and of the same date hereunder.

In consideration of Licensor granting a license reflected in said Water Use License Agreement, Licensee hereby assumes the following obligations and liabilities:

(1) Licensee shall pay to Licensor in advance on a quarterly basis during the term of said Water Use License Agreement the sum of Four Hundred Dollars ($400.00) which is based on $12.50 per acre-foot of water during each quarter. This rental shall be prorated for the first quarter since the water-year commences October 1. All payments shall be made to Lockheed Aircraft Corporation, Cashier's Office, P. O. Box 551, Burbank, California 91503.

(2) The term of the said License Agreement shall expire on September 30, 1972. Licensee is hereby granted an option to renew the term of this Agreement for a period of two (2) years upon giving Licensor ninety (90) days advance written notice of the Licensee's intention to extend the term hereunder. Licensee understands that no further options will be granted.

(3) In the event the Judgment referred to in said Water Use License Agreement is reversed or Licensor is denied Restricted Pumping rights pursuant to said Court action or any other Court action, the Water Use License Agreement shall terminate forthwith without liability to Licensor. In the event the said Judgment is modified, reversed or in any way altered so as to require Licensor to pay damages for Licensee's use of water which exceeds Fifty Dollars ($50.00) per acre-foot per year, Licensee shall pay to Licensor such excess per acre-foot cost for each acre-foot Licensee used during the term of said Water Use License Agreement.

(4) Licensee hereby agrees to comply with all rules and regulations of the Watermaster in the upper Los Angeles River area and shall make all reports and keep all records required by said Watermaster. Licensee shall forward to Licensor a copy of each report, letter, or other correspondence which Licensee sends to or is required to send to the Watermaster.

(5) In the event Licensee fails to use the full number of acre-feet granted in said Water Use License Agreement during any year of the term of the said Water Use License Agreement, Licensee, at Licensor's option, agrees to modify the Water Use License Agreement to reflect the smaller extraction of water for each succeeding year of the term of said Water Use License Agreement.

(6) Licensee covenants and agrees that it will release and indemnify Licensor, its officers, agents, and employees, and will save and hold them, and each of them, harmless from any and all claims, damages, losses and/or liabilities of every kind or description arising out of or based upon the use by Licensee of the water rights granted in said Water Use License Agreement at any time during the term or extension of said Water Use License Agreement.

(7) Licensee expressly covenants and agrees that it will not transfer, assign, hypothecate or encumber said Water Use License Agreement or any part thereof or any rights or any interests therein without the written consent of Licensor first had and obtained.

(8) In the event the real property taxes for any year during the term of the said Water Use License Agreement increase from the base year of 1969-1970, the per acre-foot rental during the option period shall be proportionately increased to reflect such increased tax cost to Licensor.

(9) Any notices required to be sent to Licensor shall be sent to P. O. Box 551, Burbank, California 91503, Attention: Manager, Finance Department. Any notices required to be sent to Licensee shall be sent to P. O. Box 146, Sunland, California.

The said parties have executed this Supplemental Agreement as of February 1, 1970.

LOCKHEED AIRCRAFT CORPORATION

By _____
Attorney-in-Fact

RIVERWOOD RANCH MUTUAL WATER COMPANY

By _____
President

By _____
Secretary

Riverwood Ranch Mutual Water Co.
11350 Oro Vista Ave.
Sunland, California 91040
June 27, 1972

Mr. Ronald Keeler
Associated Counsel
Lockheed California Company
P.O. Box551
Burbank, California 91503

Dear Mr. Keeler:

This letter will verify our intention of picking up our option on our water lease agreement with Lockheed California Company.

Sincerely yours,

Seymour Soll

SEYMOUR SOLL, President
Riverwood Ranch Mutual Water Co.

WATER LICENSE AGREEMENT

FOREST LAWN COMPANY (Licensor) grants to SOUTHERN SERVICE COMPANY, LTD. (Licensee): a license to extract 55 acre-feet of Licensor's Restricted Pumping allocated to Licensor (predecessors in interest) under and pursuant to Judgment dated March 14, 1968, and entered in Los Angeles Superior Court Case No. 650,079 entitled "The City of Los Angeles, Plaintiff vs. City of San Fernando, et al., Defendants", during the period commencing October 1, 1973, and continuing to and including September 30, 1974.

Said license is granted, subject to the following conditions:

(1) Licensee shall exercise said right and extract the same on behalf of Forest Lawn Company during the period above specified and put the same to beneficial use and licensee shall not by the exercise hereunder of said right acquire any right to extract water independent of the rights of Licensor.

(2) Licensee shall notify the Watermaster that said pumping was done pursuant to this License and provide the Watermaster with a copy of the document.

(3) Licensee shall note, in any recording of water production for the period of agreement, that said pumping was done pursuant to this License.

FOREST LAWN COMPANY warrants that it has 55 acre-feet of Restricted Pumping and that it has not pumped and will not pump or permit or license any other person to pump any part of said 55 acre-feet during period of October 1, 1973, through September 30, 1974.

DATED: June 21, 1974.

SOUTHERN SERVICE COMPANY, LTD.	FOREST LAWN COMPANY
By: [signature]	By: [signature]
TITLE: [illegible]	TITLE: Vice President

INVOICE

LOCKHEED-CALIFORNIA COMPANY

SEPTEMBER 12, 1973

9-7061

SOLD TO

SPORTSMAN'S LODGE CORP.
12833 VENTURA BOULEVARD
NORTH HOLLYWOOD, CALIFORNIA 91604

PAYMENT REC'D.

ITEM NO.	DESCRIPTION	QUANTITY	UNIT NET	TOTAL NET
	USE OF WATER RIGHTS IN THE UPPER LOS ANGELES RIVER AREA IN ACCORDANCE WITH LICENSE AGREEMENT AND SUPPLEMENTAL AGREEMENT THERETO DATED DECEMBER 1, 1969 BETWEEN LOCKHEED AIRCRAFT CORPORATION AND SPORTSMAN'S LODGE CORP.: OCTOBER 1, 1973 THROUGH SEPTEMBER 30, 1974 — 6 ACRE FEET			$300.00
	A/C 9131			

PAYMENT RECEIVED
LOCKHEED AIRCRAFT CORPORATION

PLEASE DIRECT ANY COMMUNICATIONS ABOUT THIS INVOICE TO THE FINANCE DEPARTMENT

WATER LICENSE AGREEMENT

FOREST LAWN COMPANY (Licensor) grants to SPORTSMAN'S LODGE, INC. (Licensee): a license to extract 10 acre-feet of Licensor's Restricted Pumping allocated to Licensor (predecessors in interest) under and pursuant to Judgment dated March 14, 1968, and entered in Los Angeles Superior Court Case No. 650,079 entitled "The City of Los Angeles, Plaintiff vs. City of San Fernando, et al., Defendants", during the period commencing October 1, 1973, and continuing to and including September 30, 1974.

Said license is granted subject to the following conditions:

(1) Licensee shall exercise said right and extract the same on behalf of Forest Lawn Company during the period above specified and put the same to beneficial use and licensee shall not by the exercise hereunder of said rights acquire any right to extract water independent of the rights of Licensor.

(2) Licensee shall notify the Watermaster that said pumping was done pursuant to this License and provide the Watermaster with a copy of the document.

(3) Licensee shall note, in any recording of water production of the period of agreement, that said pumping was done pursuant to this License.

FOREST LAWN COMPANY warrants that it has 10 acre-feet of Restricted Pumping and that it has not pumped and will not pump or permit or license any other person to pump any part of said 10 acre-feet during period of October 1, 1973, through September 30, 1974.

DATED: June 21, 1974

SPORTSMAN'S LODGE, INC.	FOREST LAWN COMPANY
By: [signature]	By: [signature]
TITLE: President	TITLE: Vice President

Van de Kamp's

HOLLAND DUTCH BAKERS

WATER USE LICENSE AGREEMENT

VAN DE KAMP'S HOLLAND DUTCH BAKERS, a Division of General Host Corporation, hereby grants to TOLUCA LAKE PROPERTY ASSOCIATION, INC., a license to extract 7 acre-feet of licensor's Restricted Pumping allocated to licensor (or predecessors in interest) under and pursuant to Judgment dated March 14, 19 68 and entered in Los Angeles Superior Court Case No. 650,079 entitled "The City of Los Angeles, Plaintiff vs City of San Fernando, et al., Defendants", during the period commencing October 1, 19 73 and continuing to and including Sept. 30, 19 74.

Said license is granted, subject to the following conditions:

(1) Licensee shall exercise said right and extract the same on behalf of VAN DE KAMP'S HOLLAND DUTCH BAKERS during the period above specified and put the same to beneficial use and licensee shall not by the exercise here under of said right acquire any right to extract water independent of the rights of licensor.

(2) Licensee shall notify the Watermaster that said pumping was done pursuant to this license and provide the Watermaster with a copy of the document.

(3) Licensee shall note, in any recording of water production for the period of agreement, that said pumping was done pursuant to this license.

VAN DE KAMP'S HOLLAND DUTCH BAKERS warrants that he has 7 acre-feet of Restricted Pumping and that he has not pumped and will not pump or permit or license any other person to pump any part of said 7 acre-feet during period of Oct. 1, 19 73 through Sept. 30, 19 74.

DATED: [illegible]

VAN DE KAMP'S HOLLAND DUTCH BAKERS	TOLUCA LAKE PROPERTY ASSOCIATION, INC.
By [signature]	By [signature]
Title [illegible]	Title [illegible]

(Notary)

SUGGESTED SAMPLES OF DOCUMENTS FOR TRANSFERRING WATER RIGHTS

YEARLY ASSIGNMENTS

WATER USE LICENSE AGREEMENT

JOHN DOE hereby grants to BILL SMITH: a license to extract _____ acre-feet of licensor's Restricted Pumping allocated to licensor (or predecessors in interest) under and pursuant to Judgment dated March 14, 1968, and entered in Los Angeles Superior Court Case No. 650,079 entitled "The City of Los Angeles, Plaintiff vs. City of San Fernando, et al., Defendants", during the period commencing October 1, 19__ and continuing to and including September 30, 19__.

Said License is granted, subject to the following conditions:

(1) Licensee shall exercise said right and extract the same on behalf of JOHN DOE during the period above specified and put the same to beneficial use and licensee shall not by the exercise hereunder of said right acquire any right to extract water independent of the rights of licensor.

(2) Licensee shall notify the Watermaster that said pumping was done pursuant to this license and provide the Watermaster with a copy of the document.

(3) Licensee shall note, in any recording of water production for the period of agreement, that said pumping was done pursuant to this license.

JOHN DOE warrants that he has _____ acre-feet of Restricted Pumping and that he has not pumped and will not pump or permit or license any other person to pump any part of said _____ acre-feet during period of October 1, 19__ through September 30, 19__.

DATED: _____

JOHN DOE

By _____

Title _____

(NOTARY)

BILL SMITH

By _____

Title _____

PERMANENT TRANSFERS

DEED OF WATER RIGHTS

For a valuable consideration, BILL SMITH hereby sells and transfers to the JOHN DOE COMPANY:

The Right to extract _____ acre-feet of grantor's Mutually Prescriptive Right (_____ acre-feet of Restricted Pumping) allocated to grantor (or predecessors in interest) under and pursuant to Judgment dated March 14, 1968, and entered in Los Angeles Superior Court Case No. 650,079 entitled "The City of Los Angeles, Plaintiff vs. City of San Fernando, et al., Defendants".

DATED: _____

JOHN DOE COMPANY

By _____

Title _____

(NOTARY)

BILL SMITH

By _____

Title _____

APPENDIX B

GROUND WATER EXTRACTIONS

TABLE B-I. GROUND WATER EXTRACTIONS
(in acre-feet)

STATE WELL NUMBER	OWNERS DESIG-NATION	PRODUCTION 1973 OCT	1973 NOV	1973 DEC	1974 JAN	1974 FEB	1974 MAR	1974 APR	1974 MAY	1974 JUNE	1974 JULY	1974 AUG	1974 SEPT	TOTAL
SAN FERNANDO BASIN														
BURBANK, CITY OF														
1N/14W-09A03S	14A	329.39	0	0	50.00	42.71	0	0	0	0	307.99	329.64	323.68	1383.41
1N/14W-09B04S	17	203.52	0	211.37	9.89	82.95	115.71	129.40	205.62	142.20	192.81	201.98	161.64	1657.09
1N/14W-09G02S	12	166.94	73.13	228.03	233.58	211.06	230.65	88.90	144.80	200.13	148.25	99.83	194.35	2019.65
1N/14W-09G03S	9	28.57	112.27	115.09	39.78	0	0	0	0	31.80	39.31	42.31	95.17	504.30
1N/14W-09H01S	10AR	88.21	204.49	21.69	175.69	84.69	174.92	86.04	0	152.98	188.40	62.76	92.81	1332.68
1N/14W-09H04S	11A	220.18	0	0	0	2.77	36.04	212.08	149.78	99.92	126.71	239.25	217.49	1324.22
1N/14W-09K02S	13A	258.74	172.47	0	64.37	40.68	0	250.44	218.86	227.81	204.77	251.89	189.04	1879.07
1N/14W-09L04S	18	221.57	0	0	0	0	0	10.44	228.75	221.27	221.13	217.61	212.32	1333.09
1N/14W-09Q01S	6A	53.79	277.39	5.00	198.74	240.31	292.22	295.50	270.78	173.37	202.25	281.80	170.48	2459.63
1N/14W-11Q01S	7	14.30*	0	0	0	0	0	0	0	0	0	0	0	14.30
1N/14W-14B08S	15	18.59	0	0	0	0	0	0	0	0	0	0	0	18.59
TOTALS		1603.80	839.75	581.18	770.05	705.17	849.54	1072.80	1298.59	1249.48	1631.62	1727.07	1656.98	13926.03
COMPOCK CO.														
2N/14W-30A01S	4926	26.28	30.54	27.16	10.48	21.57	25.47	29.15	24.08	22.66	14.20	23.96	19.53	275.08
2N/14W-30A03S	2	91.14	64.32	68.33	55.99	65.79	59.64	49.91	62.69	52.93	51.89	50.73	60.03	733.39
2N/14W-30A04S	3	148.95	68.28	83.66	49.30	70.01	43.61	64.13	81.47	67.66	21.11	106.67	65.29	870.16
TOTALS		266.37	163.14	179.15	115.77	157.37	128.72	143.19	168.24	143.25	87.22	181.36	144.85	1878.63
FOREST LAWN CEMETERY ASSN ET AL														
1N/13W-33N01S	2	17.45	8.11	6.73	1.73	6.40	7.77	13.32	18.08	18.80	5.86	.08	0	104.33
1N/13W-33N03S	4	21.69	8.58	6.55	1.40	7.08	6.77	22.23	30.61	28.38	29.33	26.97	30.12	219.71
TOTALS		39.14	16.69	13.28	3.13	13.48	14.54	35.55	48.69	47.18	35.19	27.05	30.12	324.04
GLENDALE, CITY OF														
	GVFNT	877.09	863.58	476.29	437.32	384.22	438.85	753.10	844.56	1194.72	1223.26	1367.19	1304.28	10164.46
1N/13W-19J01S	STPT1	2.08	.07	0	4.56	30.60	21.37	29.66	40.87	.80	5.27	.65	2.52	138.45
1N/13W-19J04S	STPT2	132.10	108.33	70.72	70.24	4.29	38.39	12.30	.84	76.16	94.90	105.24	107.81	821.32
TOTALS		1011.27	971.98	547.01	512.12	419.11	498.61	795.06	886.27	1271.68	1323.43	1473.08	1414.61	11124.23
HARPER, CECILIA DE MILLE														
2N/14W-05A02S	CFREG	1.50*	.13*	.13*	.05*	1.00*	.07*	.14*	.21*	.37*	.54*	.19*	.92*	5.25
LIVINGSTON-GRAHAM, INC.														
2N/14W-19Q01S	SNVAL	55.33	47.19	41.14	41.36	40.04	33.97	18.96	18.79	47.41	44.01	58.70	51.36	518.46
LOS ANGELES, CITY OF (RESEDA)**														
1N/16W-03Q03S	R-2	30.60	34.25	0	0	0	0	0	0	0	0	0	0	64.85
2N/16W-27F02S	R-8	23.90	26.19	0	0	0	0	0	0	0	0	0	0	50.09
2N/16W-27P02S	R-6	10.49	11.04	0	0	0	0	0	0	0	0	0	0	21.53
2N/16W-34G02S	R-9	7.76	10.17	0	0	0	0	0	0	0	0	0	0	17.93
2N/16W-34K02S	R-5	13.13	13.96	0	0	0	0	0	0	0	0	0	0	27.09
TOTALS		85.88	95.61	0	0	0	0	0	0	0	0	0	0	181.49
LOS ANGELES, CITY OF														
1N/13W-19 S	CS-CM	352.62	343.43	305.31	120.87	364.10	352.62	0	0	0	0	0	0	1838.97
1N/13W-19F02S	CS-45	0	0	0	0	0	0	0	99.52	74.95	68.64	53.87	33.52	330.46
1N/14W-05N01S	NH-16	0	.34	0	0	30.07	22.71	55.47	0	141.17	0	0	0	250.16
1N/14W-05P01S	NH-18	0	.28	0	0	0	0	62.35	0	218.37	0	0	0	281.00
1N/14W-05P02S	NH-17	.30	0	0	0	10.33	342.19	0	0	0	0	0	0	352.82
1N/14W-06K01S	NH-39	.23	0	0	214.42	101.47	0	0	0	0	0	0	240.36	556.48
1N/14W-06K02S	NH-40	72.93	0	0	0	0	0	0	0	269.05	16.51	0	212.58	569.07
1N/14W-06K03S	NH-41	110.81	0	46.21	99.43	0	0	0	0	45.91	478.24	395.34	0	1175.96
1N/14W-06K04S	NH-42	.28	0	0	0	0	406.18	0	0	0	0	0	0	406.46
1N/14W-06L01S	NH-24	.18	0	0	21.12	124.95	0	49.59	0	14.68	298.51	306.18	0	835.19
1N/14W-06N01S	NH-2	75.00	0	.05	0	7.58	319.90	0	0	0	0	0	79.61	482.14
1N/14W-06N02S	NH-30	.18	0	.05	0	21.81	23.88	57.60	0	205.00	11.55	0	0	320.07
1N/14W-06P01S	NH-5	.18	0	.07	0	22.27	9.83	0	0	98.48	122.29	65.48	95.73	414.25
1N/14W-06P02S	NH-31	.32	0	.09	0	0	112.00	49.33	0	14.21	12.51	0	144.37	392.85
1N/14W-06Q01S	NH-13	0	.11	0	0	0	195.16	0	0	0	19.05	151.84	0	366.16
1N/14W-06Q02S	NH14A	0	0	0	0	0	290.06	0	0	0	71.85	201.38	0	563.29
1N/14W-06Q03S	NH-14	0	0	.21	0	7.35	0	0	0	0	0	0	0	7.56
1N/14W-06Q05S	NH-29	0	.21	0	0	33.75	276.63	.07	0	0	85.40	239.07	0	635.13
1N/14W-06Q07S	NH-38	118.25	0	0	0	348.92	520.64	0	20.36	0	505.51	430.88	0	1944.56
1N/14W-06R01S	NH-11	.14	0	0	0	7.12	190.31	.02	0	0	119.44	0	0	317.03
1N/14W-06V05S	NH-27	.05	0	0	0	8.49	18.82	94.79	0	127.64	9.23	0	54.87	313.89
1N/14W-06W07S	NH-28	.25	0	0	0	11.02	296.83	.02	0	96.73	283.61	266.69	0	875.15
1N/14W-07A01S	W-1	0	.21	0	0	67.26	77.36	114.95	0	193.85	54.24	156.06	188.93	856.86
1N/14W-07J01S	F-10	129.13	8.52	0	0	22.04	230.03	7.37	0	25.23	215.77	192.65	0	830.74
1N/14W-07J07S	F-6	104.91	8.59	0	0	16.07	230.03	7.07	0	0	104.44	31.34	0	502.45
1N/14W-08A01S	NH-21	0	1.56	0	0	107.87	212.01	0	0	0	81.23	198.41	0	601.08

TABLE B-1. GROUND WATER EXTRACTIONS (Continued)
(in acre-feet)

STATE WELL NUMBER	OWNERS DESIG-NATION	PRODUCTION												TOTAL
		1973			1974									
		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	
LOS ANGELES, CITY OF (CONTINUED)														
1N/14W-08A02S	NH-20	0	.16	0	0	9.26	175.71	0	0	0	142.10	191.41	0	517.64
1N/14W-08A03S	NH-35	0	.09	0	0	0	46.83	29.40	0	0	0	0	0	75.32
1N/14W-08B01S	NH-19	0	.09	0	0	31.22	185.95	0	0	70.71	105.46	229.22	0	624.72
1N/14W-08D01S	W-2	0	.21	0	0	66.35	225.90	171.65	0	201.97	80.90	287.88	196.97	1231.83
1N/14W-08E01S	W-3	0	0	0	0	19.74	293.85	105.72	0	0	184.89	247.47	129.71	981.38
1N/14W-08F01S	W-4	44.51	.21	0	0	96.24	188.36	184.57	0	0	180.19	2.69	297.52	994.29
1N/14W-08J01S	E-5	0	.18	0	0	11.48	276.58	156.47	0	44.31	176.97	74.06	143.25	833.30
1N/14W-08J03S	E-3	0	.16	0	0	0	0	0	0	0	135.79	35.81	122.59	294.35
1N/14W-08J04S	E-1	32.62	.14	0	0	9.41	266.53	8.33	0	35.81	220.50	150.99	122.13	846.46
1N/14W-08L01S	W-5	0	.09	0	72.68	79.25	13.09	175.64	0	0	193.99	47.96	315.66	898.36
1N/14W-08L02S	E-4	182.87	9.80	0	0	8.95	280.30	9.14	0	30.00	107.55	121.53	0	750.14
1N/14W-08R01S	W-7	1.38	0	0	0	0	0	0	0	0	0	0	0	1.38
1N/14W-15N01S	V-2	70.20	22.02	201.17	214.39	30.53	241.74	225.67	118.94	120.29	227.94	227.96	211.20	1912.05
1N/14W-15P01S	V-4	200.64	21.67	127.36	29.16	110.56	234.39	224.75	114.05	227.41	216.64	217.63	203.86	1928.12
1N/14W-16Q01S	W-9	49.29	17.19	0	14.92	4.59	136.16	0	0	94.93	110.28	1.15	65.20	493.71
1N/14W-16F01S	W-10	0	.05	0	0	56.24	136.23	58.31	45.55	9.85	73.97	64.74	62.44	507.38
1N/14W-17A01S	W-8	1.54	0	0	0	0	0	0	0	0	0	0	0	1.54
1N/14W-19F03S	CS-96	0	0	0	0	0	0	300.85	306.36	283.52	280.30	241.92	215.11	1630.06
1N/14W-21C01S	V-16	61.07	18.34	13.31	80.81	16.30	116.62	106.75	60.15	105.37	99.56	190.74	92.06	871.12
1N/14W-21G01S	V-24	200.94	8.10	0	12.95	0	0	0	87.63	235.97	236.46	232.09	223.83	1237.97
1N/14W-22R01S	V-11	0	0	0	0	169.19	297.06	282.83	132.81	251.26	286.04	279.16	267.91	1966.26
1N/14W-22C01S	V-1	17.63	0	0	0	0	0	0	0	0	0	0	0	17.63
1N/14W-24D03S	H-26	189.28	192.38	209.83	203.40	164.26	219.70	206.73	211.66	196.17	198.69	191.27	179.[illegible]	2362.51
1N/14W-24D04S	H-27	196.85	198.12	221.19	200.87	153.24	206.15	194.56	201.33	191.57	199.95	165.75	186.75	2316.33
1N/14W-24D05S	H-28	374.66	287.76	210.86	480.95	349.52	467.63	448.00	462.24	442.28	453.86	450.07	431.82	4859.63
1N/14W-24D06S	H-29	380.74	370.06	386.59	344.47	273.30	358.36	325.64	337.70	301.65	294.54	288.80	259.18	3921.03
1N/14W-24F06S	H-25	173.09	174.47	188.71	185.95	154.84	203.17	184.34	191.00	173.21	174.36	169.65	160.47	2133.26
1N/14W-24H03S	CS-52	92.44*	95.26*	55.13*	29.91*	13.34*	16.61*	19.37*	11.95*	8.69*	3.41*	0*	0*	346.11
1N/15W-01K01S	NH-15	.11	0	0	0	0	0	0	0	82.16	0	0	73.46	155.73
1N/15W-01K02S	NH-34	.21	0	0	0	0	0	0	0	30.53	11.13	0	157.48	199.35
1N/15W-01K04S	NH-36	216.12	0	0	0	129.02	451.03	0	0	0	405.44	377.41	0	1579.02
1N/15W-01K05S	NH-37	.28	0	0	0	0	0	150.28	0	0	436.64	379.59	0	966.79
1N/15W-01P04S	NH-25	.25	52.60	0	0	21.35	400.85	0	0	0	0	0	0	475.14
1N/15W-01Q02S	NH-22	66.60	0	0	0	0	237.60	.32	0	72.77	263.68	94.05	0	735.02
1N/15W-01Q03S	NH-23	.28	0	0	0	0	174.47	48.92	0	34.44	12.17	0	0	270.28
1N/15W-01Q04S	NH-26	.11	0	0	0	26.86	0	61.82	0	166.67	12.35	47.47	0	315.28
1N/15W-02Q01S	NH-7	52.13	0	0	0	0	144.40	7.69	0	108.68	159.55	147.73	0	620.18
1N/15W-02Q02S	NH-32	.18	102.57	0	0	0	265.40	0	0	0	219.24	203.17	0	790.56
1N/15W-02R01S	NH-4	.11	61.20	0	0	66.23	63.73	0	0	0	132.23	121.35	0	444.85
1N/15W-02R07S	NH-33	.16	92.84	0	10.10	25.94	224.98	0	0	0	206.84	192.08	0	752.94
2N/14W-12C01S	TGPLT	198.67	71.90	0	0	0	0	0	0	0	98.51	105.74	68.99	543.81
2N/14W-13E04S	FTHL2	0	0	.09	0	0	0	0	0	0	0	0	0	.09
2N/15W-25L01S	WICKS	.41	.20	.07	.03	.11	.04	.14	.23	.17	0	0	0	1.40
1S/13W-04K01S	P-7	134.18	66.12	0	0	13.89	10.33	.80	53.95	100.78	127.64	108.13	88.04	703.86
1S/13W-04L02S	P-4	216.02	103.88	0	0	0	0	.23	83.33	238.98	232.09	214.65	216.37	1305.55
1S/13W-04L03S	P-6	211.89	107.09	0	0	22.84	16.69	81.31	83.93	151.86	195.13	185.26	170.68	1226.68
1S/13W-04L04S	P-5	214.65	111.34	0	0	0	0	91.94	241.51	217.06	215.91	206.73	203.63	1502.77
TOTALS		4547.87	2549.63	1966.32	2336.43	3447.59	10723.65	4356.00	2864.20	5734.50	9710.99	9094.34	5935.46	63266.98
MENA, JOHN AND BARBARA														
2N/14W-11N01S	4973J	.08*	.08*	.08*	.08*	.08*	.08*	.08*	.08*	.08*	.08*	.08*	.08*	.96
RIVERWOOD RANCH MUTUAL WATER COMPANY														
2N/14W-11A01S	3981	2.34	2.15	1.87	1.92	1.83	1.34	1.93	2.57	2.23	4.19	3.52	3.53	29.42
SEARS ROEBUCK AND COMPANY														
1N/13W-20R01S	3945-	39.71	16.94	4.08	.25	0	1.08*	7.34*	9.23*	15.72*	41.46*	36.38*	19.23*	191.66
SOUTHERN SERVICE COMPANY														
1N/13W-20F01S	METR1	1.71	1.74	1.56	1.78	1.52	1.40	1.21	.88	0	0	0	1.32	13.12
1N/13W-20F01S	METR2	2.01	1.65	1.58	1.78	1.53	1.45	1.56	1.51	1.44	1.49	1.51	1.26	18.77
1N/13W-20F01S	METR3	1.63	1.58	1.48	1.74	1.40	1.56	1.66	1.60	1.56	1.45	1.62	1.77	19.05
TOTALS		5.35	4.97	4.62	5.30	4.45	4.41	4.43	3.99	3.00	2.94	3.13	4.35	50.94
SPORTSMENS LODGE, INCORPORATED														
1N/15W-25P01S	1	.63*	.63*	0*	0	.13	0	.06	.25	.04	0	.28*	.27*	2.11
TOLUCA LAKE PROPERTY OWNERS ASSN.														
1N/14W-28R01S	3845F	2.22	.91	0	.20	[illegible]	.27	1.01	2.34	1.58	1.13	5.94	7.11	[illegible]
VALHALLA MEMORIAL PARK														
1N/14W-04Q03S	4	11.83	2.69	0	0	0	.38	24.32	28.19	34.18	27.15	38.72	33.10	200.66
1N/14W-04Q06S	2	0	1.45	0	0	0	0	0	0	0	0	.76	.34	2.56
TOTALS		11.83	4.14	0	0	0	.39	24.32	29.19	34.18	27.15	39.48	33.44	203.22

TABLE B-1. GROUND WATER EXTRACTIONS (Continued)
(in acre-feet)

STATE WELL NUMBER	OWNERS DESIG-NATION	PRODUCTION 1973 OCT	NOV	DEC	1974 JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	TOTAL
VAN DE KAMPS HOLLAND DUTCH BAKERS, INC														
1S/13W-04G01S	1	.02	.29	1.62	.25	.19	0	.86	1.49	.95	.06	.08	.04	5.59
WALT DISNEY PRODUCTIONS														
1N/14W-23E01S	EAST	8.73	114.64	5.25	32.53	57.66	22.78	78.43	35.31	70.84	85.22	7.05	104.35	578.81
1N/14W-23E02S	WEST	131.04	18.60	85.51	76.23	21.84	58.31	.90	64.12	73.48	33.05	157.75	11.75	734.58
TOTALS		139.77	133.24	90.76	108.76	79.50	81.09	79.33	99.43	144.32	118.27	164.80	116.10	1313.39
WESTERN OIL AND GAS ASSOCIATION (NONPARTY)														
	COX	11.17*	9.92*	10.54*	7.71*	8.23*	6.13*	6.10*	5.47*	8.03*	11.77*	9.45*	5.48*	100.00
	NUMAN	16.92	25.30	27.57	17.24	15.02	21.80	22.22	11.15	12.89	14.52	24.77	14.15	223.55
	SAN F	3.35*	3.82*	4.77*	5.25*	6.08*	5.38*	4.35*	6.36*	6.65*	4.31*	5.61*	5.35*	61.24
1S/1E	F-1	11.89*	15.21*	12.26*	14.65*	18.54*	18.53	11.23*	6.96*	1.98*	2.89*	5.89*	18.50*	136.56
TOTALS		43.33	54.25	55.12	44.85	47.87	51.84	43.90	27.94	29.55	33.48	45.72	43.48	521.33
SUBTOTALS SAN FERNANDO BASIN		7856.44 / 4901.94		3486.36	3940.52	4918.78 / 12389.89		6584.68	5420.41	8681.52 / 13045.90		12857.20	9465.95	93569.54

SYLMAR BASIN

BROWN, CHARLES T														
3N/15W-34K03S	1	.46*	.27*	.09*	0	0	0	0	.04*	.07*	.19*	.14*	.12*	1.38
FIDELITY FEDERAL SAVINGS + LOAN ASSN.														
3N/15W-25G01S	1	.04*	.05*	.03*	.04*	.03*	.04*	.05*	.08*	.05*	.12*	.07*	.18	.79
LOS ANGELES, CITY OF														
2N/15W-04 S MISSN		36.46	0	0	0	208.22	404.89	378.03	381.15	366.69	190.27	380.03	295.75	2839.49
METROPOLITAN WATER DISTRICT OF SO CAL (NONPARTY)														
3N/15W-36F S TUNNL		29.74*	28.64*	33.02*	39.73*	40.46*	47.13*	46.40*	48.91*	44.73*	44.93*	32.33*	36.59*	472.61
SAN FERNANDO, CITY OF														
3N/15W-27Q01S	7A	52.67	81.94	83.95	21.04	.01	.01	5.15	35.82	83.11	91.15	58.97	68.33	582.15
3N/15W-34A01S	4	37.55	44.54	56.60	20.51	34.17	10.36	59.36	53.36	47.71	48.99	14.81	.70	427.46
3N/15W-34C01S	3	128.85	96.49	52.76	15.61	.85	.91	9.89	4.84	19.07	55.98	91.68	93.77	568.54
3N/15W-35B02S	2A	0	0	0	125.72	167.98	181.01	169.80	173.88	173.71	183.23	172.95	175.93	1524.71
TOTALS		219.07	222.91	193.31	182.88	203.01	191.39	244.20	267.98	323.60	379.25	337.81	338.33	1102.88
SUBTOTALS SYLMAR BASIN		285.77 / 251.87		226.45	222.65	451.72 / 643.65		466.68	698.08	715.14 / 814.76		749.58	670.95	6417.10

TABLE B-1. GROUND WATER EXTRACTIONS (Continued)
(in acre-feet)

STATE well number	OWNERS DESIGNATION	PRODUCTION 1975 OCT	NOV	DEC	1976 JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	TOTAL
VERDUGO BASIN														
CRESCENTA VALLEY COUNTY WATER DIST														
2N/13W-10F	PUMP	14.87	14.36	14.68	14.49	13.19	14.62	14.10	14.61	13.97	14.53	14.40	14.05	171.47
2N/13W-10K	DRUG	1.47*	1.28*	1.17*	1.64*	2.37*	1.12*	1.53*	2.26*	1.98*	1.47*	1.44*	1.44*	19.11
2N/13W-03D05S	8	35.31	8.33	20.16	.66	.07	0	16.66	32.56	20.19	24.45	34.08	36.58	227.05
2N/13W-28N01S	9	0	0	0	.01	0	0	0	.02	21.29	37.24	36.44	31.21	126.21
2N/13W-29K02S	2	0	0	0	0	.01	0	10.69	16.89	13.33	12.88	14.56	7.47	75.81
2N/13W-29N01S	4	17.41*	16.38	5.14	0	1.57	0	9.01	2.88	0	0	0	0	51.39
2N/13W-33C01S	7	35.08	31.02	32.94	34.59	37.78	29.62	39.22	39.25	19.04	0	0	0	298.54
2N/13W-33C03S	1	36.45	37.91	33.38	34.93	38.42	30.74	38.94	39.72	46.57	46.92	45.86	39.11	468.55
2N/13W-33C06S	5	63.04	50.69	43.79	47.58	51.24	39.72	49.76	48.66	58.19	66.87	66.71	62.13	648.38
2N/13W-33G01S	11	29.62	23.60	22.08	16.45	25.72	24.20	29.19	32.47	38.22	11.14	0	28.97	281.66
2N/13W-33H01S	14	14.94	7.50	15.56	19.96	31.57	30.83	34.32	27.37	45.19	40.41	38.78	34.25	336.58
2N/13W-33H03S	6	7.10	11.98	0	0	0	0	1.61	3.14	18.39	20.56	20.04	15.58	98.32
2N/13W-33H05S	10	59.24	45.98	27.60	6.83	.60	31.60	58.39	10.28	14.89	31.71	12.10	31.38	330.60
2N/13W-33H06S	12	22.47	0	21.54	29.61	55.76	19.75	13.40	62.80	71.49	70.11	75.73	35.20	477.86
TOTALS		337.20	248.56	237.78	206.75	258.30	222.20	313.82	328.91	382.74	378.29	360.06	337.37	3611.95
GLENDALE, CITY OF														
1N/13W-10F, G, H-6		141.23	132.81	134.56	134.64	120.68	122.20	131.45	138.94	132.20	134.44	131.79	129.91	1584.87
1N/13W-15G, H**	WELLS	104.96	97.85	96.29	111.43	94.58	105.86	100.89	101.54	97.97	87.61	102.62	98.39	1199.99
TOTALS		246.19	230.66	230.85	246.07	215.26	228.06	232.34	240.48	230.17	222.05	234.41	228.30	2784.86
SUBTOTALS VERDUGO BASIN		583.39	479.23	468.63	452.82	473.56	450.26	546.16	569.39	612.91	600.34	594.45	565.67	6396.81
GRAND TOTALS ULARA		8725.46	5633.04	6181.44	4615.99	5844.04	13483.66	7797.52	6687.88	10029.57	14481.00	14201.23	10702.57	106384.50***

- ESTIMATED
- ** EXTRACTIONS NOT CHARGEABLE AGAINST CITY OF LOS ANGELES WATER RIGHT ENTITLEMENT
- *** INCLUDES EXTRACTIONS BY NONPARTIES AND CITY OF LOS ANGELES FROM RESEDA WELLS.

APPENDIX C

MEAN DAILY DISCHARGE
AT
KEY SURFACE RUNOFF
GAGING STATIONS

MEAN DAILY DISCHARGE OF LOS ANGELES RIVER ABOVE ARROYO SECO
(in second-feet)

Station 57C-R

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	9.8	11.6	988.0	90.0	12.4	111.0	24.0	14.9	11.6	6.7	12.2	5.8
2	12.8	14.9	40.0	32.0	12.4	1,470.0	266.0	14.9	11.0	7.7	14.9	9.8
3	12.8	14.2	19.3	30.5	9.8	778.0	27.0	14.9	12.2	8.2	19.4	12.8
4	15.6	12.2	11.8	4680.0	11.8	50.0	22.0	13.5	13.5	10.4	17.5	9.2
5	10.4	11.0	9.8	985.0	18.4	23.0	14.9	13.5	13.5	8.7	16.5	10.0
6	11.6	16.5	10.5	4,870.0	13.5	12.2	13.5	58.0	12.8	12.8	14.9	10.0
7	12.2	14.2	9.8	12,480.0	12.8	875.0	13.5	15.6	12.8	9.8	15.6	10.0
8	22.0	20.3	9.8	2,270.0	15.6	4,130.0	13.5	15.6	12.2	11.0	12.2	10.0
9	31.0	17.5	9.2	200.0	21.0	93.0	12.2	14.9	9.2	10.4	11.6	10.0
10	19.4	15.6	10.5	74.0	14.2	50.0	9.8	15.6	10.4	12.2	10.4	10.0
11	16.5	12.2	10.8	58.0	14.2	42.0	12.8	16.5	12.2	12.2	8.2	11.0
12	14.9	11.0	10.5	45.0	13.5	46.0	14.2	15.6	12.8	12.8	9.2	11.0
13	14.2	13.5	11.8	31.0	12.2	38.0	27.0	18.4	11.6	9.8	12.2	11.8
14	14.2	14.2	11.8	15.6	14.9	32.0	22.0	14.9	14.2	7.7	24.0	11.0
15	23.0	14.2	10.5	11.8	14.2	32.0	13.5	15.6	12.2	9.8	24.0	11.0
16	27.0	12.8	13.0	34.0	14.2	33.0	13.5	14.9	9.2	15.6	13.5	12.0
17	22.0	662.0	13.7	362.0	11.6	28.0	13.5	15.6	8.7	14.2	10.4	12.0
18	29.0	1,150.0	13.0	60.0	9.2	25.0	14.2	12.2	11.0	13.5	8.7	12.0
19	22.0	33.0	12.4	23.0	12.8	38.0	13.5	12.8	11.0	8.2	11.0	12.0
20	19.4	18.4	9.2	247.0	13.5	34.0	13.5	14.9	12.2	7.7	12.8	12.8
21	15.6	11.6	9.8	65.0	12.2	31.0	14.2	19.4	11.6	6.2	11.6	12.8
22	15.6	1,070.0	450.0	25.0	12.2	32.0	15.6	16.5	13.5	8.7	11.6	11.6
23	73.0	435.0	21.2	16.5	11.6	28.0	18.4	14.9	19.4	14.9	9.2	12.2
24	47.0	18.4	12.2	16.5	10.4	26.0	39.0	16.5	17.5	24.0	6.7	11.6
25	17.5	12.8	10.4	13.0	12.2	30.0	45.0	13.5	14.9	23.0	5.8	9.8
26	14.2	9.2	10.4	11.8	12.8	35.0	21.0	12.0	15.6	12.2	6.2	20.3
27	12.2	9.2	11.6	9.2	13.5	573.0	16.5	15.6	18.4	9.8	8.2	11.6
28	11.6	11.0	13.5	10.5	60.0	34.0	13.5	15.6	17.5	7.2	8.2	7.7
29	14.2	9.2	11.0	11.1	--	26.0	15.6	15.6	15.6	9.8	7.7	6.2
30	17.5	10.4	11.0	11.8	--	33.0	13.5	13.5	8.8	14.2	7.7	9.2
31	11.0	--	9.8	11.1	--	76.0	--	11.0	--	13.5	7.2	--
Total	623.2	3,686.1	1,770.5	26,736.4	417.1	8,886.2	786.4	481.9	364.1	352.9	366.3	322.4
Mean Daily Discharge	20.1	123.0	57.1	862.0	14.9	285.0	26.2	15.5	12.8	11.4	11.8	10.7
Max. Mean Daily Discharge	73.0	1,150.0	988.0	12,480.0	60.0	4,130.0	266.0	34.0	19.4	24.0	24.0	20.3
Min. Mean Daily Discharge	9.8	9.2	9.2	9.2	9.2	18.2	9.8	11.0	5.8	6.2	5.8	5.8
Runoff in Acre-feet	1,240.0	7,310.0	3,510.0	53,030.0	827.0	17,620.0	1,560.0	956.0	722.0	700.0	727.0	639.0

Maximum Stage 8.35 feet at 2,148 on 1-7-74 Discharge 24,340 second-feet Total Acre-feet 1973-74 (88,811)

MEAN DAILY DISCHARGE OF BIG TUJUNGA CREEK BELOW BIG TUJUNGA DAM
(in second-feet)

Station 168-B

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	10.2	2.5	0.2	0.2	10.8	3.3	15.6	5.2	6.6	6.0	3.0	2.3
2	7.0	2.5	0.2	0.2	10.8	3.6	15.6	8.4	6.6	6.0	3.0	2.3
3	4.5	2.5	0.2	0.2	10.2	3.6	15.6	8.4	6.6	6.0	3.0	2.3
4	4.5	2.5	0.2	0.3	10.2	3.0	15.6	8.4	6.6	6.0	3.0	2.3
5	4.5	2.5	0.2	0.3	9.6	3.0	15.6	8.4	6.6	6.0	3.0	2.3
6	4.5	2.5	0.2	0.4	9.6	5.2	15.6	8.4	6.0	6.0	3.0	2.3
7	4.5	2.5	0.2	2.9	9.6	11.5	15.0	8.4	6.0	6.0	3.6	2.3
8	4.5	4.3	0.2	0.3	9.6	12.3	15.0	8.4	6.0	6.0	3.6	2.3
9	7.4	5.3	0.2	18.6	10.2	10.2	15.0	8.4	5.7	5.2	3.6	2.3
10	9.6	5.3	0.2	31.0	10.2	10.8	15.0	8.4	5.7	3.9	3.6	2.3
11	9.6	5.3	0.2	31.0	10.2	10.8	15.0	8.4	5.7	3.9	3.3	2.3
12	9.6	5.3	0.2	31.0	10.2	10.8	15.0	8.4	5.4	3.9	3.3	2.0
13	9.6	5.3	0.2	31.0	10.2	10.8	15.0	8.4	5.4	3.9	3.3	2.0
14	9.6	2.2	0.2	31.0	10.2	12.5	15.0	7.8	5.4	3.9	3.3	2.0
15	9.6	0.2	0.2	31.0	10.2	15.6	15.0	7.8	5.4	3.9	3.0	2.0
16	9.6	0.2	0.2	31.0	10.2	15.6	12.2	6.6	5.4	3.9	3.0	2.0
17	9.6	0.2	0.2	31.0	9.6	15.6	9.0	6.6	5.4	4.2	3.0	2.0
18	9.0	1.0	0.2	31.0	9.6	15.6	5.9	6.6	5.7	4.2	3.0	1.8
19	9.0	0.2	0.2	31.0	9.0	15.6	3.3	6.6	5.7	4.2	3.0	1.8
20	9.0	0.2	0.2	31.0	8.4	15.6	3.3	6.6	5.7	4.2	3.0	1.8
21	9.0	0.2	0.2	31.0	8.4	15.6	3.3	6.6	5.7	3.9	27.0	1.8
22	9.0	0.2	0.2	36.0	9.6	15.6	3.6	6.6	5.7	3.9	1.7	1.8
23	9.0	0.2	0.2	49.0	9.6	15.6	3.6	7.8	5.7	3.9	1.7	1.8
24	9.0	0.2	0.2	49.0	9.6	15.6	3.9	6.6	5.7	3.9	1.7	2.4
25	9.0	0.2	0.2	49.0	9.6	15.6	3.9	6.6	5.7	3.9	1.7	29.7
26	9.0	0.2	0.2	48.0	9.6	15.6	3.9	6.6	6.0	3.9	2.3	31.2
27	9.0	0.2	0.2	47.0	9.6	15.6	3.9	6.6	6.0	3.9	2.3	30.0
28	9.0	5.8	0.2	46.0	6.3	15.6	3.9	6.6	6.0	3.3	2.3	30.0
29	9.0	0.2	0.2	44.0	--	15.6	3.9	6.6	6.0	3.3	2.3	33.6
30	5.5	0.2	0.2	43.0	--	15.6	3.9	6.6	6.0	3.3	2.3	33.6
31	2.3	--	0.2	21.0	--	15.6	--	6.6	--	3.0	2.3	--
Total	244.4	60.1	6.2	827.4	270.9	376.5	300.1	228.4	176.1	137.5	86.9	238.6
Mean Daily Discharge	7.9	2.0	0.2	26.7	9.7	12.1	10.0	7.4	5.9	4.4	2.8	8.0
Max. Mean Daily Discharge	10.2	5.3	0.2	49.0	10.8	15.6	15.6	8.4	6.6	6.0	3.6	33.6
Min. Mean Daily Discharge	2.3	0.2	0.2	0.2	6.3	3.0	3.3	5.2	5.4	3.0	1.7	1.8
Runoff in Acre-feet	485.0	119.0	12.0	1,641.0	537.0	747.0	595.0	453.0	349.0	273.0	172.0	473.0

Maximum Stage 3.88 feet at 1,348 on 9-25-74 Discharge 200 second-feet Total Acre-feet 1973-74 (1,845)

MEAN DAILY DISCHARGE OF VERDUGO WASH AT ESTELLE AVENUE
(in second-feet)

Station 252-R

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	8.0	2.3	86.0	20.0	2.3	2.3	6.5	2.0	2.5	2.5	2.6	2.0
2	2.0	2.8	2.3	2.0	2.3	66.0	43.0	2.0	2.5	2.5	2.5	2.0
3	2.0	2.8	2.5	2.3	2.3	73.0	5.0	2.3	2.5	2.5	2.4	2.0
4	2.0	2.5	2.8	265.0	2.5	3.9	5.0	2.3	2.8	2.5	2.3	2.0
5	2.0	2.8	2.8	80.0	2.5	2.3	5.0	2.8	2.5	2.5	2.2	2.3
6	2.0	2.8	2.5	386.0	2.3	2.3	5.0	2.5	2.5	2.5	2.2	2.3
7	2.0	3.9	2.3	671.0	2.5	152.0	3.9	2.3	2.3	2.5	2.1	2.0
8	1.8	3.9	2.3	97.0	2.3	294.0	3.9	2.3	2.3	2.5	2.0	2.3
9	2.0	3.9	2.3	21.0	2.5	10.6	5.0	2.3	2.3	2.5	2.0	2.0
10	2.0	3.9	2.3	10.6	2.8	5.0	3.9	2.3	2.3	2.5	2.0	2.0
11	2.0	2.8	2.3	6.2	2.8	5.0	3.9	2.3	2.3	2.3	1.8	2.0
12	2.0	2.8	2.5	3.9	3.9	3.9	2.8	2.3	2.3	2.3	1.8	2.0
13	1.8	3.9	2.5	2.8	5.0	2.3	2.5	2.5	2.3	2.3	1.8	2.3
14	1.8	3.9	2.5	2.5	5.0	2.0	2.5	2.5	2.3	2.3	1.8	2.3
15	1.8	2.8	2.3	2.3	6.2	2.3	2.5	2.3	2.5	2.5	1.8	2.3
16	1.8	3.9	2.3	16.7	5.0	2.3	2.5	2.3	2.5	2.8	1.8	2.3
17	1.8	102.0	2.8	45.0	5.0	2.3	2.8	2.3	2.5	2.8	1.8	2.3
18	1.8	124.0	2.8	9.5	5.0	2.5	2.8	2.3	2.5	2.8	1.8	2.3
19	2.0	2.5	2.8	9.5	5.0	2.5	2.8	2.3	2.5	2.8	1.8	2.3
20	2.0	2.4	2.5	59.0	5.0	2.5	2.8	2.5	2.5	3.9	1.8	2.3
21	2.0	2.3	2.8	11.8	5.0	2.3	2.8	2.3	2.5	3.9	1.8	2.3
22	2.0	80.0	17.6	8.4	5.0	2.5	2.8	2.5	2.8	5.0	1.8	2.3
23	6.2	11.8	2.3	6.2	2.8	2.5	2.8	2.5	2.5	6.2	1.8	2.3
24	2.5	2.0	2.3	6.2	2.3	2.5	3.9	2.5	2.5	6.2	1.8	2.3
25	2.3	2.0	2.3	3.9	2.3	2.5	2.5	2.5	2.5	6.2	1.8	2.3
26	2.0	2.3	2.3	3.9	2.3	2.8	2.5	2.3	2.5	6.2	1.8	2.5
27	2.3	2.8	2.3	2.5	2.3	69.0	2.5	2.3	2.8	3.9	1.8	2.5
28	2.0	2.8	2.3	2.5	15.4	2.5	2.5	2.3	2.8	2.8	1.8	2.3
29	2.0	2.0	2.8	2.5	--	2.5	2.3	2.5	2.8	2.8	1.8	2.3
30	2.3	2.0	2.8	2.5	--	5.0	2.3	2.8	2.8	2.7	2.0	2.3
31	2.3	--	2.3	2.5	--	2.5	--	2.5	--	2.6	2.0	--
Total	66.5	352.6	179.5	1,725.2	109.8	735.6	141.0	73.9	75.2	100.3	60.5	66.7
Mean Daily Discharge	2.1	13.1	5.7	55.1	3.9	23.7	4.7	2.4	2.5	3.2	2.0	2.2
Max. Mean Daily Discharge	6.2	124.0	86.0	671.0	15.4	294.0	43.0	2.8	2.8	6.2	2.6	2.3
Min. Mean Daily Discharge	1.8	2.0	2.3	2.0	2.3	2.0	2.3	2.0	2.3	2.3	1.8	2.0
Runoff in Acre-feet	132.0	779.0	347.0	3,420.0	218.0	1,460.0	280.0	147.0	149.0	199.0	120.0	132.0

Maximum Stage 2.00 Feet at 2124 on 1-7-74 Discharge 2,390 second-feet Total Acre-feet 1973-74 (7,383)

MEAN DAILY DISCHARGE OF LOS ANGELES RIVER AT TUJUNGA AVENUE
(in second-feet)

Station 300-R

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	12.5	10.9	791.0	59.0	14.9	34.0	11.3	13.7	12.2	12.2	10.0	10.9
2	11.8	10.9	38.0	10.1	13.2	954.0	113.0	13.2	13.0	13.0	11.8	10.0
3	11.8	11.6	22.0	11.7	12.5	340.0	11.6	13.0	13.2	12.2	10.4	11.6
4	11.6	10.2	10.0	2,870.0	11.8	23.0	11.1	12.7	13.6	11.8	10.2	11.6
5	11.1	10.6	9.0	550.0	13.2	11.3	12.0	14.2	14.0	11.1	10.6	12.5
6	10.9	10.6	9.0	2,290.0	10.9	11.6	11.8	14.2	14.4	11.3	11.3	12.0
7	11.1	11.3	9.0	7,650.0	11.8	786.0	12.0	13.9	13.9	15.9	10.9	12.2
8	27.6	10.9	9.0	822.0	16.7	2,210.0	12.7	14.2	12.7	11.6	10.2	11.1
9	17.8	10.9	9.0	55.0	11.8	60.0	11.3	13.7	12.5	11.8	10.2	11.1
10	9.3	11.1	9.0	48.0	12.5	35.0	10.4	12.5	12.2	11.1	11.1	11.6
11	8.0	12.2	10.0	35.0	14.2	24.0	10.6	12.2	11.8	10.9	9.3	11.1
12	9.1	12.0	10.0	32.0	13.7	22.0	11.8	13.7	11.3	11.6	10.2	10.2
13	9.1	12.2	10.0	23.0	12.7	17.7	12.5	12.0	11.8	10.9	9.7	8.7
14	10.2	12.0	10.0	18.5	12.2	16.4	12.7	12.5	13.0	11.8	10.0	9.1
15	10.4	11.3	10.0	17.5	12.0	16.2	12.5	12.2	12.2	11.6	9.7	9.3
16	10.2	38.0	9.0	72.0	12.7	15.9	13.2	14.7	12.5	11.1	10.6	10.4
17	9.1	357.0	8.0	262.0	11.3	15.4	12.0	12.5	11.6	11.6	10.4	11.6
18	9.5	434.0	7.0	48.0	10.6	15.9	11.6	11.3	12.2	12.0	10.9	12.0
19	9.5	12.2	5.5	26.0	12.7	16.4	10.6	11.8	12.0	11.6	10.4	10.6
20	9.1	7.6	5.9	122.0	10.6	15.7	12.2	11.6	13.4	11.8	10.4	10.0
21	8.9	11.4	6.3	29.0	10.4	15.4	12.2	12.5	12.7	12.0	10.6	9.3
22	8.7	786.0	882.0	18.3	12.2	14.9	12.0	13.4	13.7	11.8	10.2	10.2
23	19.0	122.0	8.7	16.9	11.6	14.2	11.8	13.7	13.7	15.2	10.2	10.4
24	9.4	13.0	8.0	15.7	11.1	14.7	36.0	14.2	13.9	11.6	10.6	10.6
25	8.0	9.3	7.2	13.9	12.2	15.2	11.6	13.7	13.4	11.3	10.4	11.6
26	10.9	5.0	8.2	14.2	13.2	16.4	10.9	13.9	13.7	11.6	9.5	10.2
27	10.2	5.0	9.3	13.4	13.9	252.0	12.0	13.0	15.7	11.1	10.0	8.9
28	10.2	6.5	13.0	13.0	61.0	13.9	11.6	13.7	14.4	10.6	10.4	9.1
29	11.1	5.0	8.2	14.4	--	13.0	11.3	12.7	13.4	11.3	10.6	10.6
30	9.7	6.0	8.0	14.2	--	64.0	12.0	13.7	12.7	11.8	10.4	9.7
31	9.5	--	7.2	14.2	--	15.5	--	12.7	--	10.2	10.6	--
Total	359.7	1,986.7	1,366.5	15,199.0	397.6	5,039.7	478.3	407.0	390.8	365.4	321.8	318.2
Mean Daily Discharge	11.6	66.2	44.1	490.0	14.2	163.0	15.9	13.1	13.0	11.8	10.4	10.6
Max. Mean Daily Discharge	39.0	786.0	791.0	7,650.0	61.0	2,210.0	113.0	14.7	15.7	15.9	11.8	12.5
Min. Mean Daily Discharge	8.0	5.0	5.5	8.6	10.4	11.3	10.4	11.3	11.3	10.2	9.3	8.7
Runoff in Acre-feet	713.0	3,940.0	2,710.0	30,150.0	789.0	10,000.0	949.0	807.0	775.0	725.0	638.0	631.0

Maximum Stage 9.05 feet at 2124 on 1-7-74 Discharge 16,100 second-feet Total Acre-feet 1973-74 (52,807)

MEAN DAILY DISCHARGE OF PACOIMA CREEK FLUME BELOW PACOIMA DAM
(in second-feet)

Station 118-B

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	0.1	0.6	1.1	0.1	6.7	3.8	8.9	3.7	2.4	0.1	0.1	0.1
2	0.1	0.6	1.3	0.1	6.7	26.0	8.2	3.6	2.4	0.1	0.1	0.1
3	0.1	0.6	1.3	0.1	5.4	9.0	8.2	3.4	2.4	0.1	0.1	0.1
4	0.2	0.6	1.3	0.0	4.8	11.9	8.2	3.4	2.4	0.1	0.1	0.1
5	0.6	0.6	1.3	1.8	4.8	11.9	8.2	3.1	2.4	0.1	0.1	0.1
6	0.6	0.6	1.3	13.3	4.8	11.9	7.7	3.1	2.4	0.1	3.3	0.1
7	0.6	0.6	1.3	123.1	4.8	11.9	6.6	3.1	2.4	0.1	0.1	0.1
8	0.6	3.4	1.3	205.1	4.8	51.0	6.6	3.1	2.4	0.1	0.1	0.1
9	2.2	0.6	1.3	64.0	4.6	30.0	6.6	3.1	2.4	0.1	0.1	0.1
10	1.4	0.6	1.3	51.0	4.6	29.0	7.1	3.1	2.4	0.1	0.1	0.5
11	1.0	0.6	1.3	37.0	4.6	42.0	7.1	2.9	2.4	0.1	0.1	0.5
12	1.4	0.6	1.3	13.0	4.6	32.0	7.1	2.9	2.4	0.1	0.1	5.9
13	1.0	0.6	1.3	12.3	4.6	22.0	7.7	3.1	2.4	0.1	0.1	11.2
14	1.0	0.6	1.3	16.5	4.6	22.0	7.7	2.9	2.4	0.1	0.1	5.9
15	2.2	0.6	1.3	17.2	4.6	22.0	7.1	2.9	2.4	0.1	0.1	0.1
16	1.6	0.6	1.3	17.2	4.6	22.0	7.1	2.9	2.4	0.1	0.1	0.1
17	1.0	0.6	1.3	21.0	4.6	22.0	7.4	2.9	2.4	0.1	0.1	0.1
18	1.0	7.6	1.3	43.0	4.6	22.0	7.1	2.8	2.4	0.1	0.1	0.1
19	1.0	0.6	1.3	30.0	4.6	22.0	5.1	2.6	2.0	0.1	0.1	0.1
20	1.0	0.7	0.9	30.0	4.6	13.8	3.3	2.4	2.0	0.1	0.1	8.8
21	1.6	0.6	0.9	30.0	4.6	10.1	3.3	2.4	1.0	0.1	0.1	0.1
22	1.0	0.6	0.9	24.0	4.2	13.9	3.7	2.3	0.3	0.1	0.1	0.1
23	1.8	0.6	0.9	20.0	4.2	17.3	3.7	2.3	0.2	0.1	0.1	0.1
24	1.8	0.6	0.9	19.3	4.2	17.3	3.7	2.4	0.2	0.1	0.1	0.1
25	1.8	0.6	0.9	15.8	4.2	17.3	3.7	2.4	0.2	0.1	0.1	0.1
26	1.8	0.6	0.9	14.4	4.5	17.3	3.8	2.4	0.3	0.1	0.1	0.1
27	0.6	0.6	0.9	14.4	4.5	17.3	3.8	2.4	0.2	0.1	0.1	0.1
28	0.6	0.6	0.9	14.4	4.5	17.3	3.8	2.4	0.2	0.1	0.1	0.1
29	0.6	0.6	0.9	9.1	--	14.1	3.8	2.4	0.1	0.1	0.1	0.1
30	0.6	0.6	0.9	6.7	--	11.1	3.8	2.4	0.1	0.1	0.1	0.1
31	0.6	--	0.5	6.7	--	11.1	--	2.4	--	0.1	0.1	--
Total	31.5	27.9	34.9	870.5	132.9	642.3	180.1	87.2	70.0	3.1	6.3	26.5
Mean Daily Discharge	1.0	0.9	1.1	28.1	4.8	20.6	6.0	2.8	1.7	0.1	0.2	0.9
Max. Mean Daily Discharge	2.2	7.6	1.3	205.0	6.7	52.0	8.9	3.7	2.4	0.1	3.3	11.2
Min. Mean Daily Discharge	0.1	0.6	0.5	0.1	4.2	3.8	3.3	2.3	0.1	0.1	0.1	0.1
Runoff in Acre-feet	63.0	55.0	69.0	1,730.0	264.0	1,270.0	357.0	173.0	139.0	6.0	12.0	53.0

Maximum Stage 3.7½ Feet at 0,5½ on 1-8-74 Discharge 478 second-feet Total acre-feet 1973-74 (6,190)

MEAN DAILY DISCHARGE OF BURBANK WESTERN STORM DRAIN AT RIVERSIDE DRIVE
(in second-feet)

Station F 285-B

Day	October	November	December	January	February	March	April	May	June	July	August	September
1	5.0	7.9	12.0	20.0	5.0	6.7	7.9	9.1	7.9	5.6	7.9	7.9
2	5.6	7.9	5.6	5.6	5.0	51.0	24.0	9.1	7.9	6.7	6.7	7.9
3	6.7	7.9	9.1	6.7	5.0	69.0	6.7	10.6	9.1	6.7	5.6	7.9
4	5.6	7.9	5.6	321.0	5.6	7.9	6.7	9.1	7.9	5.6	5.6	7.9
5	4.5	7.9	9.1	45.0	5.6	6.7	6.7	13.1	7.9	7.9	5.6	9.1
6	4.5	7.9	7.9	350.0	5.6	6.7	6.7	10.6	9.1	6.7	5.6	9.1
7	5.0	7.9	9.1	800.0	5.6	192.0	6.7	10.6	9.1	6.7	5.6	9.1
8	5.0	7.9	6.7	100.0	5.6	390.0	6.7	10.6	7.9	7.9	5.6	7.9
9	5.0	9.1	5.6	10.6	5.6	15.0	6.7	9.1	7.9	7.9	6.7	9.1
10	5.6	7.9	5.6	7.9	5.6	10.0	6.7	9.1	7.9	6.7	6.7	9.1
11	5.6	7.9	5.6	7.9	5.0	9.1	6.7	9.1	9.1	5.6	7.9	9.1
12	5.6	6.7	5.6	6.7	5.6	9.1	6.7	9.1	9.1	5.0	9.1	7.9
13	5.6	6.7	5.6	6.7	5.6	7.9	5.6	10.6	10.6	5.6	9.1	7.9
14	5.6	7.9	5.6	6.7	5.6	7.9	5.6	10.6	9.1	7.9	7.9	7.9
15	5.6	6.7	5.6	5.6	5.6	6.7	6.7	9.1	9.1	9.1	6.7	7.9
16	6.7	7.9	5.6	14.7	5.6	6.7	7.9	9.1	9.1	9.1	6.7	7.9
17	6.7	60.0	5.6	32.0	5.6	6.7	7.9	9.1	10.6	9.1	6.7	7.9
18	6.7	27.0	6.7	5.6	7.9	7.9	7.9	9.1	10.6	7.9	5.6	6.7
19	10.6	8.0	5.6	5.6	7.9	6.7	7.9	9.1	9.1	5.6	6.7	7.9
20	13.1	8.0	5.6	30.0	7.9	7.9	7.9	9.1	9.1	5.6	6.7	7.9
21	7.9	8.0	5.6	9.1	7.9	7.9	7.9	9.1	7.9	7.9	7.9	7.9
22	7.9	121.0	34.0	9.1	6.7	7.9	7.9	9.1	6.7	9.1	6.7	6.7
23	9.1	61.0	5.0	7.9	7.9	7.9	9.1	7.9	6.7	7.9	7.9	6.7
24	7.9	8.0	5.0	9.1	5.6	7.9	10.6	7.9	6.7	7.9	7.9	7.0
25	6.7	8.0	5.0	9.1	5.6	9.1	9.1	6.7	7.9	7.9	7.9	7.2
26	6.7	7.8	9.6	9.1	6.7	9.1	10.6	5.6	9.1	9.1	7.9	7.4
27	6.7	7.5	6.7	9.1	6.7	98.0	9.1	6.7	7.9	7.9	9.1	7.6
28	6.7	7.0	5.6	9.1	18.0	5.6	9.1	7.9	5.6	7.9	7.9	7.8
29	7.9	7.0	5.6	5.6	--	5.6	9.1	7.9	5.0	9.1	7.9	8.0
30	7.9	6.7	5.6	5.6	--	5.6	9.1	7.9	5.0	9.1	7.9	8.4
31	7.9	--	5.6	6.7	--	5.0	--	9.1	--	9.1	6.7	--
Total	207.6	448.7	242.7	1,877.3	181.6	961.2	247.9	280.8	246.6	231.8	220.4	238.7
Mean Daily Discharge	6.7	15.6	7.8	60.6	6.5	31.0	8.3	9.2	8.2	7.5	7.1	8.0
Max. Mean Daily Discharge	13.1	121.0	34.0	800.0	18.0	390.0	24.0	13.1	10.6	9.1	9.1	9.1
Min. Mean Daily Discharge	4.5	6.7	5.0	5.6	5.0	5.0	5.6	5.6	5.0	5.0	5.6	6.7
Runoff in Acre-feet	412.0	930.0	481.0	3,720.0	360.0	1,910.0	492.0	557.0	489.0	460.0	437.0	473.0

Maximum Stage 2.0½ Feet at 2100 on 1-7-74 Discharge 1,860 second-feet Total acre-feet 1973-74 (10,721)

APPENDIX D

WELLS DRILLED
AND
DESTROYED

WELLS DRILLED 1973-74

Party	State Well No.	Owner No.
Los Angeles County Flood Control District	2N/14W-29H01	4936B
" " " " " "	2N/14W-29H02	4936C
" " " " " "	2N/15W-31N01	4809
" " " " " "	2N/15W-31N02	4809A
" " " " " "	2N/16W-15G01	4754

WELLS DESTROYED 1973-74

Party	State Well No.	Owner No.
Livingston-Graham, Inc.	2N/14W-10N01	Sunland
Los Angeles, City of	1N/13W-19Q01	CS48
" " " "	1N/13W-19Q03	CS31A
" " " "	1N/16W-20R01	-
Pertusati, J. H.	2N/16W-20R01	-
Walsh, Signe	1N/17W-13L01	-
Warner Bros. Pictures	1N/14W-22P02	-
Western Oil and Gas Association	1N/13W-33N05	W-14
" " " " "	1N/13W-33N06	W-17
" " " " "	1N/13W-33N12	W-24
" " " " "	1N/13W-33N15	W-34
" " " " "	1N/13W-33P12	W-39
" " " " "	1N/13W-33P20	W-54
" " " " "	1N/13W-33P22	HD
" " " " "	1S/13W-04D03	W-31