# EXHIBIT 13



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The Resources Agency

partment of Water Resources

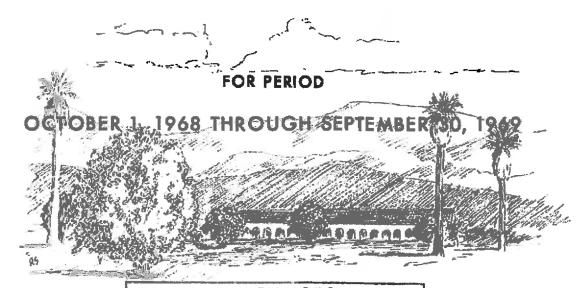
BULLETIN No. 181-69

# WATERMASTER SERVICE

IN THE

UPPER LOS ANGELES RIVER AREA

LOS ANGELES COUNTY



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DEPARTMENT OF WATER RESOURCES

SOUTHERN DISTRICT

NORMAN B. LIVERMORE, JR.

Secretary for Resources
The Resources Agency

RONALD REAGAN

Governor State of California WILLIAM R. GIANELLI

Director

Department of Water Resources



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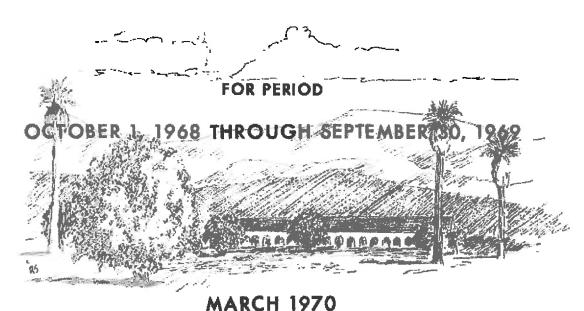
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BULLETIN No. 181-69

# WATERMASTER SERVICE

IN THE

LOS ANGELES COUNTY

**FOR PERIOD** 

OCTOBER 1, 1968 THROUGH SEPTEMBER 30, 1969

**MARCH 1970** 

NORMAN B. LIVERMORE, JR.
Secretory for Resources
The Resources Agency

RONALD REAGAN
Governor
State of California

WILLIAM R. GIANELLI

Director

Department of Water Resources

#### FOREWORD

The Upper Los Angeles River Area is the latest ground water basin to come under the Department of Water Resources supervision as a watermaster service area. We welcome this opportunity to assist the Court and those parties affected by this ground water basin adjudication. The Department, as Watermaster, will strive to administer the Judgment in the most prudent, equitable, and economical manner.

The Watermaster has prepared this annual report for the parties to the Upper Los Angeles River Area Judgment and the Superior Court of Los Angeles County to present a comprehensive review of the water conditions in the Upper Los Angeles River Area during the 1968-69 water year. Authorization for this report is contained in Paragraph 2, Section X of the Judgment rendered by the Superior Court of Los Angeles County in the action: "City of Los Angeles, Plaintiff vs. City of San Fernando, et al., Defendants, No. 650079".

This report contains information on water supply, water use and disposal, water levels, transfers of water rights, compliance with or violation of the Judgment, and administrative costs. This report also contains the tentative budget of the Watermaster for the 1970-71 water year.

James J. Doody District Engineer Southern District and Watermaster R.E. CE 6500

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## State of California The Resources Agency DEPARTMENT OF WATER RESOURCES

Ronald Reagan, Governor Norman B. Livermore, Jr., Secretary for Resources William R. Gianelli, Director, Department of Water Resources John R. Teerink, Deputy Director

#### SOUTHERN DISTRICT

James J. Doody . . . . . . . . . . . . . . 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								
Clyde B. Arnold Chief, Contracts Administration Section								
ъу								
Carlos Madrid								
assisted by								
Stanley F. Hamilton* Assistant Civil Engineer								
Cesar M. Garma Junior Civil Engineer								
Nabil Faraj Junior Civil Engineer								
Morton B. Graham Water Resources Technician II								
Joseph F. Scott Water Resources Technician II								
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. . . . . . . . Water Resources Technician I

<sup>\*</sup>Stanley F. Hamilton was Deputy Watermaster through July 7, 1969.

#### ABSTRACT

The Upper Los Angeles River Area is the fourth ground water basin which has come under the Department of Water Resources' supervision as a watermaster service area. The Upper Los Angeles River Area contains a total of 329,000 acres, comprising 123,000 acres of valley fill area (ground water basin) and 206,000 acres of hill and mountain area located primarily in the northwest section of Los Angeles County, with a small portion being in the County of Ventura. Watermaster service, provided by the Department, helps to protect and guarantee continued use of ground water by the parties of the area consistent with the provisions of the Judgment under which the Watermaster was appointed. The Watermaster has prepared this report for the Superior Court of Los Angeles County and the parties to the Judgment. This report contains information on water supply, water use and disposal, water levels, transfers of water rights, compliance or violation of the Judgment, and administrative costs.

#### CHAPTER I. THE UPPER LOS ANGELES RIVER AREA

On March 14, 1968, the Honorable Edmund M. Moor, Judge of the Superior Court, signed the Upper Los Angeles River Area Judgment (City of Los Angeles vs. City of San Fernando, et al., No. 650,079). The Judgment, in essence, restricts all diversions or extractions of surface or subsurface waters from the Upper Los Angeles River Area, which is depicted on Plate 1. The restrictions were imposed upon approximately 214 parties of which 23 were active during 1968-69. The principal parties in the court action are the Cities of Los Angeles, Glendale, Burbank, San Fernando, and the Crescenta Valley County Water District.

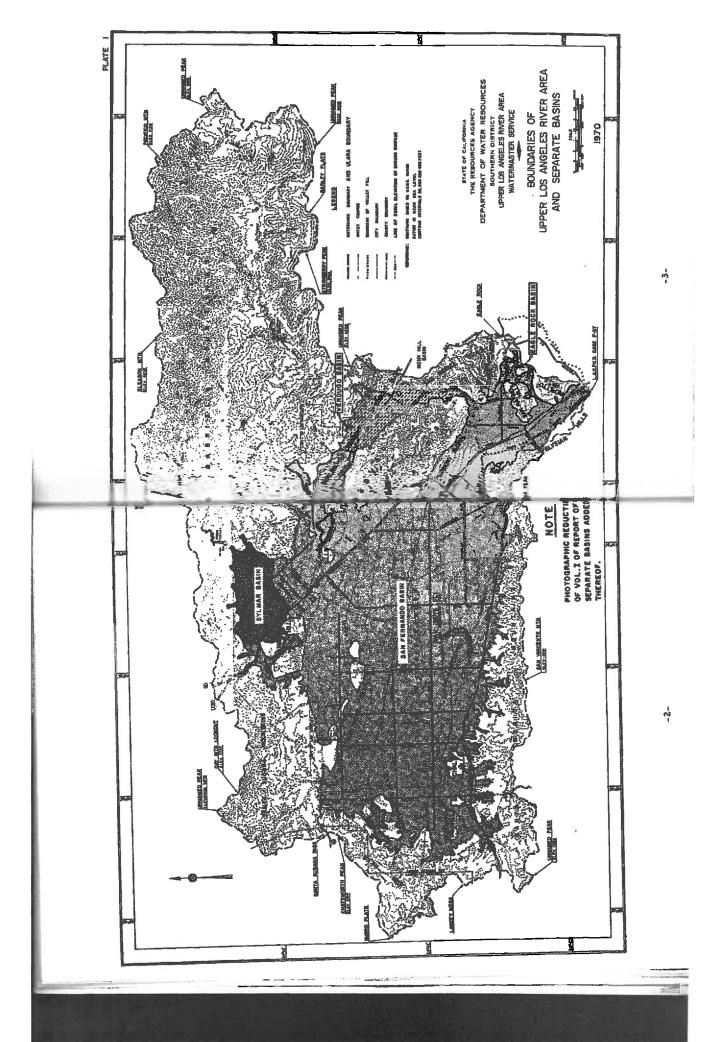
On March 19, 1958, an Interim Order of Reference was entered by the Court in Los Angeles Superior Court Case No. 650,079, above mentioned, directing the State Water Rights Board (now known as the Water Resources Control Board) to study the availability of all public and private records, documents, reports, and data relating to a proposed order of reference in the case. The Court subsequently entered an order on June 11, 1958, entitled "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 Referee 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, the Board investigated the surface location of the beds and banks and of the 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 basins; all sources of water, whether it be diverted, extracted, or imported, etc.

In essence, the report developed a basis whereby a Judgment could be rendered. The Report of Referee has been used extensively in the preparation of this first annual report of the Watermaster. The base maps and data in the Report of Reference will be utilized by the Watermaster in the presentation of this report.

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Numerous pretrials were held, subsequent to the filing of the action by the City of Los Angeles in 1955. The trial, which commenced on March 1, 1966, was presided over by the Honorable Edmund M. Moor, Judge of the Superior Court, without jury. Evidence both oral and documentary was presented, after which the Court delivered and filed a Memorandum of Decision on October 30, 1967. Having submitted the Memorandum of Decision, additional arguments and evidence were presented, resulting in the Court's filing of a "Findings of Fact and Conclusions of Law" dated March 14, 1968. A Judgment (hereinafter referred to as ULARA Judgment) was entered on March 14, 1968.

The City of Los Angeles has since filed an appeal with the Court of Appeals. The City of Los Angeles' brief is on file and The Metropolitan Water District of Southern California has filed a brief amicus curiae on behalf of appellant. The defendant's briefs are due March 24, 1970, and the appellant's closing brief will be due July 13, 1970, as of this writing.



Under the ULARA Judgment, the Court appointed the Department of Water Resources as Watermaster and the Department, in turn, created the "Watermaster Service Area" pursuant to Division 2, Part 4, Chapter 2 of the California Water Code. As stated in the Judgment (Section X, paragraph 1), the Watermaster was appointed to assist the Court in the administration and enforcement of the provisions of the Judgment, and to keep the Court fully advised in the premises. It is hoped that this appointment, as Watermaster, may be beneficial to the parties to the suit, serve the best interests of the State, and aid in accomplishing the results contemplated by Section 4025 of the Water Code.

The Upper Los Angeles River Area (hereinafter referred to as ULARA) encompasses all of the watershed of the Los Angeles River and its tributaries above the junction of the surface channels of the Los Angeles River and the Arroyo Seco at a point designated as Los Angeles County Flood Control District Gaging Station F-57C. The entire area consists of approximately 329,000 acres, comprising 123,000 acres of valley fill area, referred to as the ground water basins, and 206,000 acres of hill and mountain areas. ULARA is bounded on the north by the Santa Susana Mountains and on the west by the Simi Hills. To the south, the Santa Monica Mountains separate it from the Los Angeles Basin and to the east the San Gabriel Mountains separate it from the San Gabriel Basin.

ULARA, as defined in the Judgment, has four distinct hydrologic ground water basins which the Watermaster is required to administer independently of each other. 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 Basin, the Sylmar Basin, the Verdugo Basin, and the Eagle Rock Basin. These ground water basins are described below and depicted in Plate 1.

#### San Fernando Basin

The San Fernando Basin is the latest of the four basins in ULARA. It consists of approximately 112,047 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 northwest and west by the Santa Susana Mountains and Simi Hills, and on the south by the Santa Monica Mountains.

#### Sylmar Basin

The Sylmar Basin is located on the northerly part of ULARA. It consists of approximately 5,565 acres and comprises 4.5 percent of the total valley fill. It is bounded on the north and east by the San Gabriel Mountains; the topographic divide in the valley fill, lying between the Mission Hills and San Gabriel Mountains, divide it on the west; and to the south it is divided by the eroded limb of the Little Tujunga syncline.

#### Verdugo Basin

The Verdugo Basin is located to the north and east of the Verdugo Mountains in ULARA. It consists of approximately 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 south and southwest by Verdugo Mountains, on the southeast by the San Rafael Mountains, and on the east by the ground water divide between the Monk Hill Subarea of the Raymond Basin and the Verdugo Basin.

# Eagle Rock Basin

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Eagle Rock Basin is the smallest of the four basins in ULARA and comprises approximately 807 acres and consists of 0.6 percent of the total valley fill. It is located in the extreme southeast corner of ULARA. No determination was made regarding overdraft or surplus in the Eagle Rock Basin. Therefore, no restrictions on ground water extractions were imposed on the Eagle Rock Basin.

Except for Sparkletts Drinking Water Corporation and Deep Rock Artesian 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.

#### Watermaster Service

Watermaster Service is administered by the California Department of Water Resources in accordance with Division 2, Part 4, of the California Water Code. Under Section 4025 of the Water Code, the Department is authorized to divide the State into watermaster service areas. Pursuant to Section 4026, such service 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. Currently there are 19 such areas controlling surface water diversions in Northern California and four in Southern California controlling ground water use.

#### Scope of Report

This is the Watermaster's first annual report to the Superior Court of Los Angeles County -- and to you as a water user interested in observing water conditions in ULARA. The purpose of this report is to describe water supply conditions in ULARA during the 1968-69 water year (October 1, 1968 through September 30, 1969).

Detailed comments have been prepared on the following topics: nature of water resources development; natural and artificial ground water recharge; use of imported and exported water; ground water extraction; and fluctuations of ground water table. In addition, a separate chapter has been devoted to the Watermaster's administration of the Judgment and the cost of watermaster service in the 1968-69 water year.

# Activities of the Watermaster

The first order of business for the Watermaster began with the opening of the First Advisory Board Meeting held on August 28, 1968. During that meeting, the Watermaster met with the newly appointed members of the Advisory Board. Board members, six in all, were appointed in accordance with the ULARA Judgment. The purpose of the Board is to advise the Watermaster in the administration of its duties. The appointed members of the Board are:

City of Los Angeles

Gerard A. Wyss Melvin L. Blevins

City of Burbank

Ralph Foy

City of Glendale

Lauren W. Grayson Chairman of Board

Crescenta Valley County Water District

Henry Ordunio

City of San Fernando

Robert James

The first meeting of the Board, in addition to electing a Chairman, approved the 1968-69 budget. During a subsequent meeting held on February 3, 1969, the Board discussed and reviewed a proposed operational procedures and policies for watermaster service in ULARA. The Watermaster presented its work accomplishments up to that period and submitted its proposed budget for 1969-70. A third meeting was held on March 10, 1969, at which time the following items were discussed: gasoline pollution problems at Forest Lawn wells; water spreading by the City of Los Angeles, and proposed plans to reclaim ground water and recirculate for lake replenishment. Chapters III and IV will outline these various problems.

The establishment of a watermaster service area in ULARA required considerable study of the area by watermaster personnel. A number of reliable sources of information were investigated; they included the various water agencies within ULARA, the Water Resources Control Board, and the Los Angeles County Flood Control District. The Watermaster wishes to acknowledge its appreciation for the fine cooperation and assistance provided by the various water agencies, the Water Resources Control Board, and the Los Angeles County Flood Control District, which supplied much information and data. The assistance of the various agencies has lightened the task of the Watermaster and, in many cases, has reduced the costs of watermaster service.

A major task of the Watermaster is that of monitoring ground water extractions. In accordance with the operational policies and procedures adopted by the Advisory Board, every ground water pumper reports on a monthly basis his ground water extractions on preprinted forms prepared and supplied by the Watermaster. This makes possible the updating of his water right account (Watermaster Water Production Summary) by electronic machines which compute the amount pumped during the previous month, the total amount pumped thus far during the current

water year, and the amount that can legally be pumped during the remainder of the water year. A copy of the updated account is then mailed to the pumper so that he may more effectively manage his ground water right and use.

The Watermaster field staff will conduct an informal meter testing program; that is, they will verify ground water production at their own discretion of at the request of any party. Defective or inaccurate water measuring devices must be repaired within 30 days after receiving written notice of the results from the Watermaster.

# Summary of Operating Conditions

The first year of Watermaster Service began with an exeptionally wet water year. Rainfall in the valley increased by 14 inches over the prior year. As a result, recharge operations were increased by 245 percent. The curtailment of ground water pumping reduced extractions within ULARA by 35 percent. The curtailment of ground water extractions increased Colorado River imports by 64 percent. Table 1 compares statistics for the last two water years on a ULARA-wide basis.

TABLE 1
WATER YEAR SUMMARIES

Item :	: Water Year					
reem	1967-68	: 1968-69				
Parties	_	214				
Active pumpers	<del>: •</del> .	23				
Active nonparties	-	ì				
Restricted Pumping, in acre-feet	-	104,040				
Watermaster expenses	-	\$11,446.54				
Watermaster expenses		, ,				
per acre-foot pumped	-	\$ 0.11				
Valley rainfall, in inches	15	29				
Spreading Operations, in acre-feet						
LACFCD	13,932	48,080				
Los Angeles, City of	11,860	23,426				
Extractions, in acre-feet	160,364	104,070				
Imports, in acre-feet						
Colorado River Water	20,593	33,878				
Owens River Water	323,252	342,665				
Delivered to Hill and mountain						
areas, in acre-feet	38,493	38,909				
Exports, in acre-feet						
Owens River Water	122,477	144,434				
Sewage	106,490	108,846				

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#### CHAPTER II. WATER SUPPLY CONDITIONS

The Upper Los Angeles River Area depends upon many sources of water to meet demands brought on by a fast growth in industry and a continuing population explosion. At present, water supply to ULARA is comprised of precipitation on the watershed which includes portions of the San Gabriel, Santa Monica, Verdugo, and Santa Susanna Mountains; ground water that is in storage within the four basins; imports from the Mono Basin-Owens River system; and in the case of the San Fernando, Verdugo, and Eagle Rock Basins, import from the Colorado River. Soon water from Northern California will be made available through the facilities of the State Water Project. This chapter explores the sources and uses of current supplies and their effect on water conditions in ULARA.

#### Precipitation

The Upper Los Angeles River Area 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 Mediterranian type climate. Precipitation varies considerably throughout the ULARA, depending on the topography and the elevation. Mean seasonal precipitation varies from about 14 inches at the western end of the San Fernando Valley to 35 inches in the San Gabriel Mountains. On the average, approximately 80 percent of the annual rainfall occurs in the 4 winter months of December through March. See Plate 2 for location of precipitation stations.

The 1968-69 water year experienced a record rainfall. In the San Gabriel Mountains, some stations received as much as 200 percent of normal. On the average, about 29 inches of rain fell on the valley floor, whereas the mountain area received approximately 43 inches of rainfall. The 29-year (1929-1957) average precipitation for the valley floor and mountain areas are 16.82 and 21.50 inches, respectively. Table 2 presents a record of rainfall at 22 key valley floor precipitation stations which were used and described in the Report of Referee.

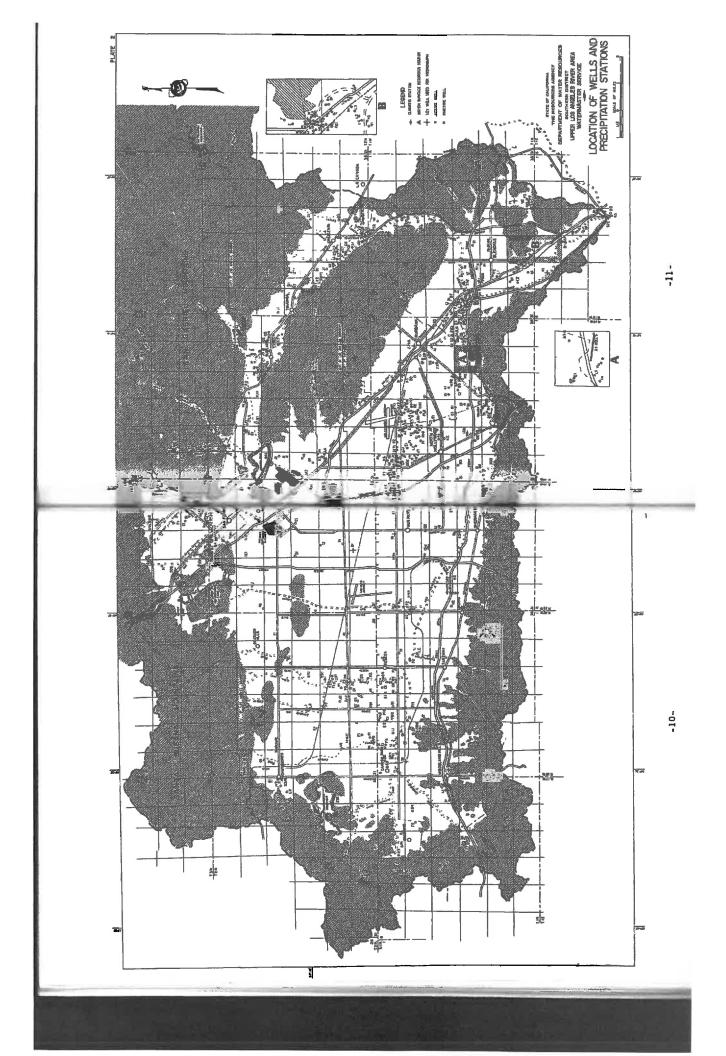


TABLE 2
PRECIPITATION
In inches

	Station	:	: :	196	3-69
L.A.C.F.C.		: 85-year	: 1967-68 :	:	Percent of
District	: Name	: mean	: precipi- :	Precipi - :	85 <b>-year</b>
Raber		:	: tetion :	tation :	mean
10	Sanahilia Garage	19 77	16.71	36.548/	305
<u>12</u>	Franklin Canyon	18.71		30.74	195 182
13	North Hollywood	16.90	16.67	30.68	
14	Roscoe-Mazrillb/	14.61	14.06	24.81	170
15	Ven MuyaD	15,20	13.46	28.16	185
17	Sepulveda Canyon	19.22	15.13_/	33.23,	173
21	Brant Ranch	14.38	11.99	29.93 <sup>c</sup> /	208
23	Chataworth Reservoip <sup>b</sup>	14.12	14.91	25.05	177
25	Northridge-Andrewsb/	14.59	15.23	24.16	166
29	Graneda Pump Plant	17.10	16.17	28.67	168
30	Sylmarb/	16.70	14.40	32.71	196
33	Pacoima Dam	18.94	15.91	31.77	196 168
47	Clear Creek City School	32.41	22.32	77.21	238
	Colby's Ranch	30.13	21.70	66.56	221
53 54	Locais Ranch-Alder Creek	20.90	15.45	38.80	186
210	Reand Park	19.15	15.21	32.38 ,	169
251	La Crescents	23.64	17.70	47.00ª	199
259	Chatsworth Patrol	17.77	16.81	27.36	154
295	Glendele <sup>5</sup> /	17.93	14.86	32.75	183
364	Haines Canyon-Lower	24.30	19.51	49.64	204
1074	Little Gleason	24.48	19.55	53.10	217
470	Tujunga-Mill Creek	17.63	17.89	30.89	175
705	Paradise Ranch-Alder Creek	20.70	17.50	41.39	200

a/ Partially estimated.

b/ Valley Station.

d/ Replace Santa Clara Ridge Station No. 419.

# RUNOFF AND OUTFLOW FROM ULARA

A number of stream gaging stations are maintained throughout ULARA either by the LACFCD or the USGS. Because of the extremely wet season that was experienced in 1968-69, records could not be compiled in time for this report. However, records were obtained for Station No. F-57C which records all surface water outflows from ULARA. See Table 3 for 1968-69 mean daily discharges.

c/ Records obtained from Canoga Park Station No. 1051B.

TABLE 3

MMAN DAXLY DISCRANGE OF LOS ANGELES RIVER ABOVE ARROYO SECO
To second-fuet.

MM189 7-570	Lancing to the second				TH	econa-rea	T.					
Bay :	Detaber :	Enter :	Datember	1 January 2	Pabruary :	March 1	April	i in	Sime	: July	2 August	I MAN OF
1	11.1	7.4	6.9 7.8 7.4	6.9	60.0	2kg0.0	63.0	31.0	22.0	47.0	22.0	32.4
	9.8	9.2	7.8	8.7	60.0	1850.0	65.0	25.0	27.0	50.0	23.D	15.6
3	13.7	6.0	7.4	9.2	180.0	1430.0	371.0	22.0	31.0	49.0		80.0
4	7.4	10.5	8.3 9.8	9.2	110.0	470.0	67.0	46.0	47.0	60.0	29.0	18.4
7	6.0	8.7	9.8	8.7	1360,0	515.0	672.0	. 39.0	53.0	56.0	<b>86.</b> 0	19.3
6	5.5	7.4	6.0	9.8	5650.0	867.0	200.0	30.0	54.0	50.0 46.0	27.0	17.5
7	8.7	7.4	4.6	11.6	1580,0	916.0	108.0	27.0	52.0	46.0	28.0	13.0
8	6.0	7.8	4.0	10.5	1150.0	560.0	115.0	27.0	50.0	<b>48,</b> 0	28.O	13.0 14.3
9 10	<b>5.</b> 5	6.3	9.2	10.5	<b>883.</b> 0	505.0	130.0	27.0	53.0 54.0	52.0	24.0	17.4
10	6.9	7.8	9.8	13.7	256.0	810,0	144.0	30,0	54.0	60.0	22.0	15.6
76 73 75	8.3	16.5	115.0	13.0	362.0	550.0	123.0	21.0	56.0	68.0	21.0	17.4
78	9.2	6.7	22.0	11.1	527.0	326.0	101.0	28.0	60.0	68.0	23.0	18.4
13	6,9	7.8	6.0	337.0	500.C	120,0	119.0	26.0	58.0	67.0	83.0	16,5
36	112.0	7.6	8.3	1410.0	293.0	248.0	115.0	25.0	53.0	67.0	22.0	
15	59.0	221,0	34.0	32.0	351.0	286,0	96.0	27.0	53.0	67.0	22,0	13.0
26	10,5	90.0	178.0	17.4	293.0	281.0	228.0	26.0	74.0	67.0	10.3	20.0
17	8,7	9.2	33.0	8.7	169.0	281.0	274.0	27.0	75:0	67.0	19.3 14.3	20.0
17 18	9.2	5.1	33.0 18.4	438.0	HL2.0	120.0	86.0	23.0	62,0	67.0	21.0	19.3
19	11,1	7.4	12,4	3500.0	150.0	82.0	95.0	22.0	53.0 56.0	66.0	22,0	18.4
20	9.8	6.9	9.2	4310.0	127.0	160.0	108,0	25.0	56.0	65.0	16.5	16.5
21	12.4	9,8	9.2	7370,0	161.0	250,0	100.0	30,0	56,0	63.0	23.0	15.0
21 22	11.8	9.8	6.4	1320,0	1290.0	326.0	104.0	50,0	59.0	60.0	15.6	18.k
23	9.2	9.8 9.8 9.8	8.3 9.8	162.0	6480,0	286,0	100.0	40.0	54.0	58.0	15.6	20.0
23	9.2	9.8	9.8	4280.0	5380.D	257.0	64,0	64,0	58.0	54.0	13.7	20.0
25	11,1	8.3	524.0	<b>23400,</b> 0	18200,0	236.0	65.0	<b>59.</b> 0	58,0	48.0	13.7	20,0
26	15.0	11,6	233.0	11300.0	7680.0	181.0	50.0	67.0	54.0	46.0	17.4	18.4
27 26	19.7	7.8	27.0	4340,0	4000.0	74.0	54,0	64.0	54.0	38,0	15.6	17.k
26	15.0	7.4	13.7	2720.0	3620.0	65.0	53.0	58.0	49.0	33.0	16.5	14.3
89 30	8.7	6.9	7.4	1140.0		61.0	39.0	90.0	46.0	33.0 28.0	15.6	15.6
30	134.0	6.9	7.4	80.0		52.0	34,0	27.0	47.0	24.0	15.0	17.4
31	19.3		10.5	75.0		55.0		27.0		22.0	15.0	
Total	584.7	<b>199.</b> 2	1366.8	663 <b>k</b> 3.2	61334.0	14710.0	3956.0	1080.0	1578.0	1661.0	629.8	517.2
Am-off, in core-feet	1160.0	990.0	2710,0	131600.0	121700.0	29200,0	7850.0	21,40.0	3130.0	3290,0	1250.0	1030.0

Marinem Stage 12.80 feet et 0712 on January 25, 1969, discharge 41,820 second feet.

Total Acra-Feet 1968-69(306050.0)

In subsequent reports, the Watermaster will attempt to present flows at various gaging stations to keep the parties apprised as to the magnitude of runoff from the various areas. Stations that may possibly be utilized for this presentation are as follows:

Station No. 300-R - registers all flow west of Lankershim Blvd. plus outflow from Hansen Dam that is not spread.

Station No. 285-R - registers flow from the westerly slopes of Verdugo Mountains and some flow east of Lankershim Blvd.

Station No. 252-R - registers flow from Verdugo Canyon plus flows from Haines, Dunsmuir, and Pickens Canyons.

Station No. 57-C - registers all surface outflow from ULARA.

Big Tujunga Dam - registers all flow from Big Tujunga Canyon northeasterly of the dam. Runoff below this point flows to Hansen Dam.

Pacoima Dam

- registers all flow from Pacoima Canyon. Runoff below this point flows to Lopez and Pacoima Spreading Grounds.

## Ground Water Recharge

Local precipitation can have a marked influence on the ground water supply or 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.

ULARA, like other areas in Southern California, is experiencing an accelerated urban development which continuously increases the land area paved with asphalt and concrete. Hence, much of the rainfall is being collected and routed into paved channels which discharge into the Los Angeles River and is then carried out of the basin. Plate 2 depicts those channels which are now lined within ULARA. Table 4 summarizes the spreading operations for the water year 1968-69.

TABLE 4
SPREADING OPERATIONS
In acre-feet

				Angeles			by City of Los		
Month	: County Flood Control District : Spreading Basins			Tujunga Spres	cing Grounds	: Headwork	Headworks Spread		
	Branford	Hansen	Lopez		Native water	: Owens River : water	: Chatsworth	: Reseda : Wells	:Ground water :effluent in :L. A. River
Oct. 1968	10	0	55	0	0	805	0	169	397
Nov. Dec.	13 77	0	0	0	0	0	0	168 162	481 422
Jan. 1969	153 88	197	0	2,074	0	0	0	123	234
Feb.	47	7,431 7,097	317 361 160	4,387 4,353	1,478	2,156 715	86	0	338
Apr. May	, 49 1	4,504 3,401	0	1,876 1,501	7,575 2,896	0	0	0	910 799
yrra. June	15	3,161	0	בד 0	1,103	0	<u>°</u> b/	0	264b/
Aug. Sept.	1	2,296 1,656	° °	0	0	0	69 0	_ 0	970 1,029
Totals	461	32,464	893	14,262	13,052	3,676	155	622	5,921

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

b/ During July, a total of 1,396 acre-feet of water was released from Chatsworth Reservoir. However, spreading was discontinued between June 4 and July 25 due to muddy water conditions. The 264 acre-feet spread includes Chatsworth Reservoir releases.

As was mentioned in the previous paragraph, much of the valley floor is covered by impervious materials and is causing the water to run off into lined charmels rather than to percolate into the ground water basin. Fortunately, Paccima Dam and Hansen Dam, which were originally built by the U.S. Corps of Engineers for flood protection, are currently being utilized to regulate storm flows for the purpose of recapturing the flow in spreading basins operated by the Los Angeles County Flood Control District (LACFCD) as well as the City of Los Angeles. Currently, the LACFCD is operating 4 spreading basins; they are: Bradford, Hansen, Lopez, and Pacoima Spreading Grounds. The City of Los Angeles, in turn, operates the Tujunga and Headworks Spreading Grounds. Please refer to Plate 2 for location of these spreading basins. The spreading grounds operated by the LACFCD are utilized for spreading native water, whereas the spreading grounds operated by the City of Los Angeles are utilized to spread Owens River water, spillage from the Chatsworth Reservoir, ground water effluent, and the discharge from the Reseda wells.

# Water Quality

The largest single problem encountered in ULARA during 1968-69 was the gasoline pollution in the vicinity of Forest Lawn Cemetery. Gasoline pollution of the underground water in the vicinity of Forest Lawn was first discovered in September 1968. On September 17, 1968, free gasoline was pumped from Well No. 4 (1N/13W-33N3) which is one of five irrigation wells Forest Lawn operates. On September 18, 1968, twenty-five gallons of gasoline were bailed from the well. The pump was renovated and a separator was installed to remove the free gasoline; water was discharged to a storm drain that traverses the part and empties into the Los Angeles River about 1,500 feet east of the Glendale Freeway. See Figure 1 for details.

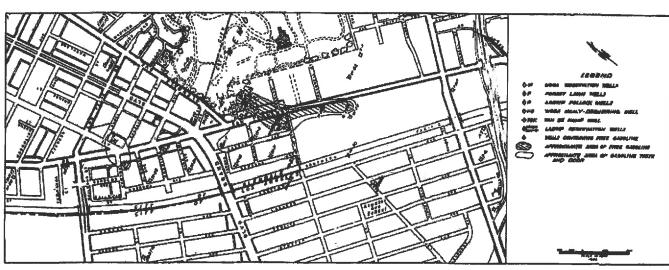


Figure 1-GASOLINE POLLUTION-FOREST LAWN; GLENDALE; LOS ANGELES

nd water

,921 ----

feet

In mid-September, Forest Lawn Memorial Park Association (FLMP) pressure tested all of its underground gasoline storage facilities and found no leaks. On September 19, 1968, Mobil Oil Company pressure tested their 8-inch transmission line in San Fernando Road and found no apparent leaks. Between September 21 and November 4, 1968, FLMP drilled 16 bucket auger holes to determine the area of gasoline pollution. They concluded that the gasoline extended from their Well No. 4 toward Tyburn Street covering an area some 800 feet long and 350 feet wide. Average depth of free gasoline floating on the water surface was 15 inches. They estimated free gasoline in ground water to be in the order of 250,000 gallons. The well locations and approximate areal extent of gasoline pollution as of November 17, 1969, is presented in Figure 1.

In October 1968, Mobil Oil Company again pressure tested its pipeline and reported no leaks. On October 8, 1968, FIMP contacted Western Oil and Gas Association (WOGA) which indicated its desire to help. On October 19, 1968, WOGA tested all underground gasoline storage tanks in the general area and reported no leaks.

Pollock water wells of the City of Ios Angeles are within a half mile and the City of Glendale's wells are a little over 3 miles away. Fortunately, the danger of their contamination by the escaped gasoline is not considered imminent. The Cities of Ios Angeles and Glendale have taken very active interest in the problem because of the proximity of their well fields to the pollution area. The City of Ios Angeles instituted routine monitoring of WOGA observation wells and Forest Lawn wells to determine the extent of the problem.

The WOGA worked a corrective program that includes drilling observation wells for the purpose of defining the extent of the problem, gasoline extraction, and water treatment. Since WOGA's involvement in the abatement process, they have: (1) drilled about 40 observation wells, 10 of which contain free gasoline; (2) extracted about 32,000 gallons of gasoline as of December 1, 1969; and (3) installed three treatment systems for the treatment of the gasolinewater mixture and the separation of gasoline from water for disposal. Recently, WOGA proposed other measures to be implemented in the near future; these are the following:

- 1. Drilling three gravel packed 16-inch wells for the purpose of creating a definite ground water depression, thus containing the gasoline within its present areal extent.
- 2. Drilling additional wells for skimming off the gasoline to expedite its removal.
- 3. Monitoring the areal and vertical extent of the gasoline.

The California Regional Water Quality Control Board L. A. Region has directed its attention to the problem from the beginning and has taken a leading and coordinating role to see that abatement processes are carried forward to clean up and protect the quality of water in the affected area. The Department of Water Resources, upon the request of the Regional Board, has provided valuable advice to the Board on this matter.

The Watermaster is currently monitoring the extraction of water at the various sites and is requesting WOGA to meter and report monthly all ground water extractions. Further details with respect to the Watermaster's recommendations regarding this problem are contained in Chapter IV.

# Ground Water Table Elevations

During the 1968-69 water year, the Watermaster collected and processed data to determine prevailing ground water conditions in ULARA. The Watermaster collected ground water contour maps from the Los Angeles County Flood Control District and the City of Los Angeles in order to present the ground water table elevations for the fall of 1968, and the spring and fall in 1969. See Plates 3, 4, and 5.

In addition, Figures 2 and 3 depict the water levels at key wells located within ULARA. Please refer to Plate 2 for location of key wells.

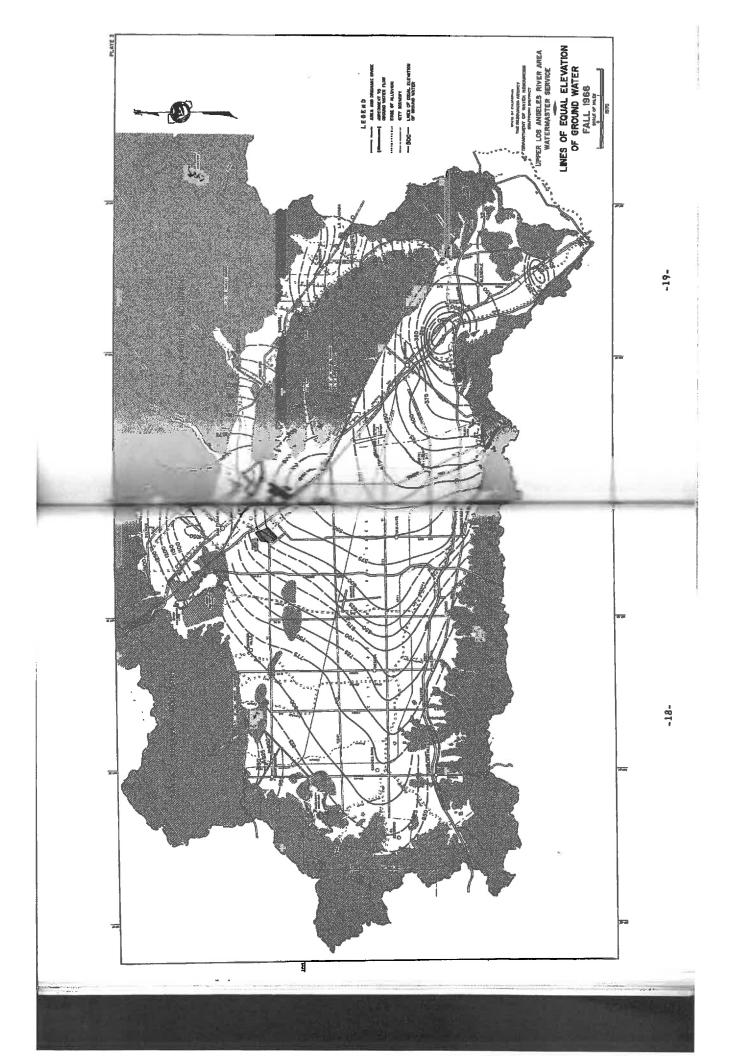
-17-

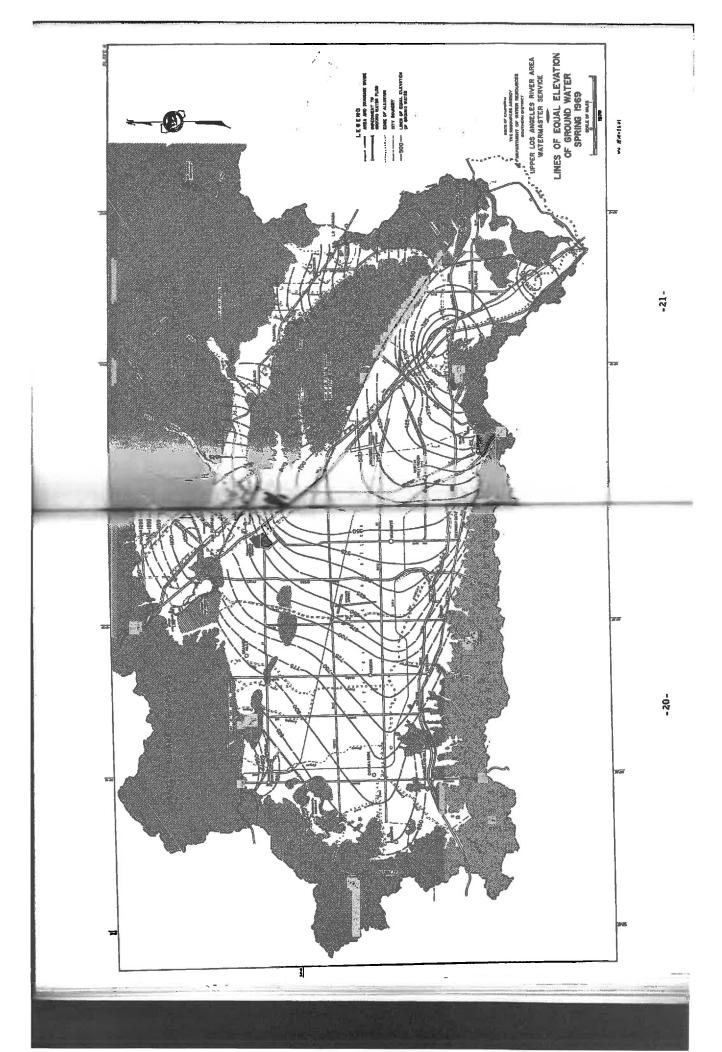
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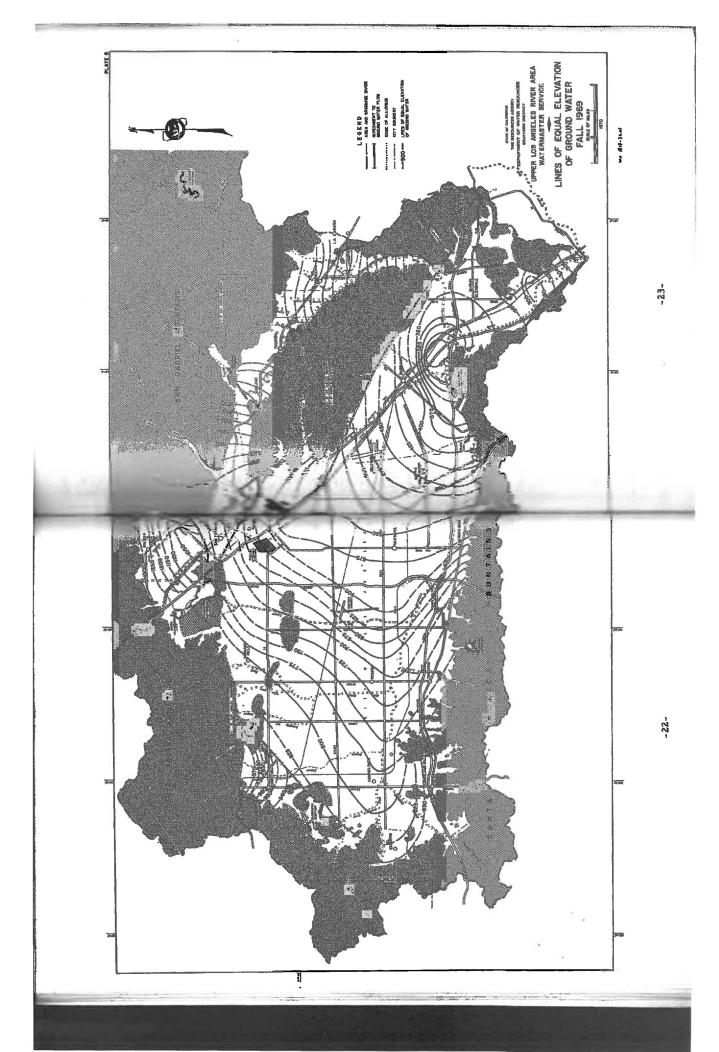
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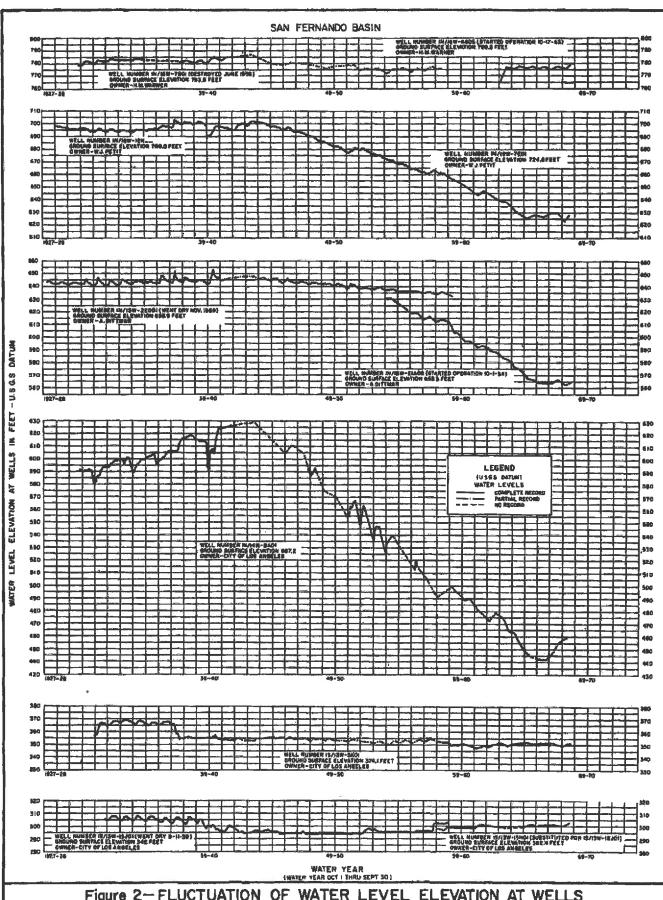


Figure 2—FLUCTUATION OF WATER LEVEL ELEVATION AT WELLS
IN THE SAN FERNANDO BASIN

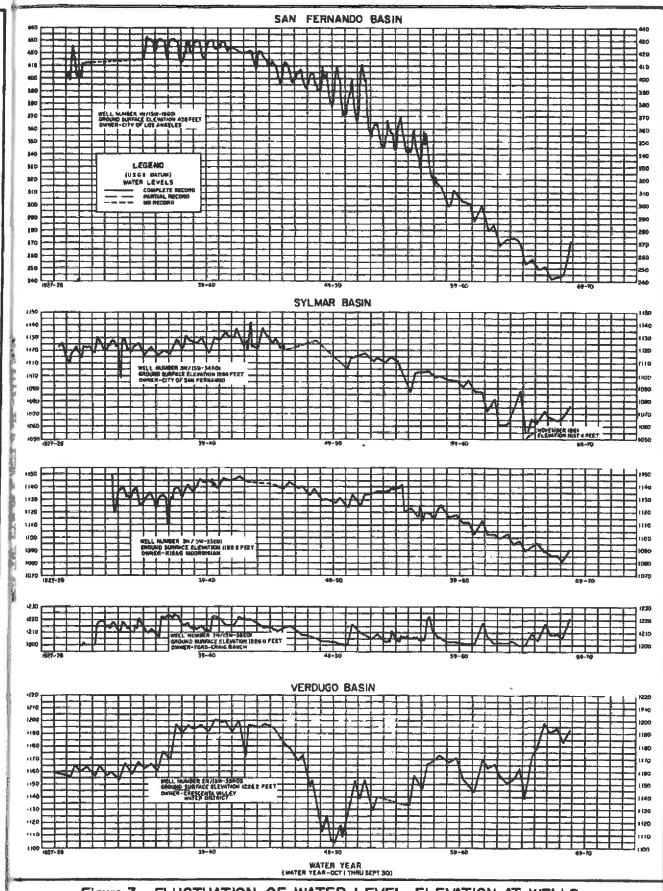


Figure 3 - FLUCTUATION OF WATER LEVEL ELEVATION AT WELLS IN THE SAN FERNANDO, SYLMAR AND VERDUGO BASINS

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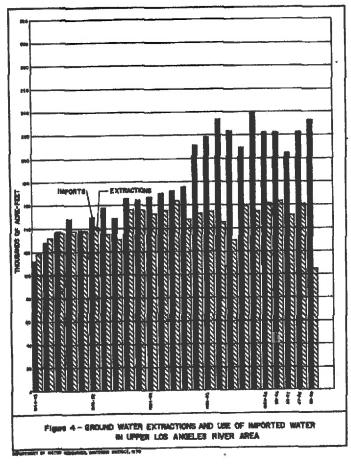
#### CHAPTER III. WATER USE AND DISPOSAL

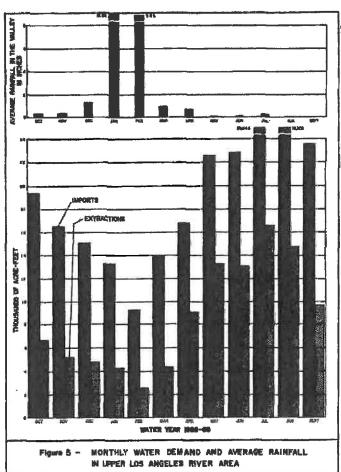
Water to be delivered for use in ULARA may be imported water, local ground water, local surface diversions, or a mixture, depending on the area and water system operations. During the 1968-69 water year, water purveyors in ULARA consumed or served more than 336,000 acre-feet of water to their customers. Of this total, approximately 104,000 acre-feet were extracted and approximately 232,000 acre-feet were imported to ULARA.

The adjudication of ground water rights in ULARA restricted all ground water extractions effective October 1, 1968. On that date, ground water extractions were restricted to approximately 104,000 acre-feet. Thus, the basin experienced a cutback of approximately 56,000 acre-feet of ground water extractions between the water years 1967-68 and 1968-69. Restrictions on ground water extractions inevitably requires parties to increase their importation of water to ULARA to make up the difference.

Figure 4 graphically illustrates the annual ground water extractions and total water imported to ULARA beginning with 1944-45 water year. Note the change during 1968-69.

Figure 5 provides another graphical analysis of the monthly relationship between rainfall, ground water extractions, and imported supply. This graph is representative of the entire ULARA and not any specific ground water basin within ULARA. The precipitation values were obtained from those stations that are located on the valley floor. (See Table 2.)





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#### Ground Water Extractions

By letter dated April 26, 1968, the Watermaster informed all parties that were known to be active, that ground water extractions within ULARA would be reduced and controlled by the Watermaster in accordance with the Judgment. The ULARA Judgment 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 5 presents a balance sheet which summarizes each party's water account by listing its "Restricted Pumping" (see Appendix A for any changes); any additional allowable pumping as the result of a water right assignment; amount of ground water extracted during the 1968-69 water year; and the amount that can be carried forward to the succeeding water year.

In order to provide flexibility in the control of ground water extractions, the Judgment contains various provisions which allow the 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. First of all, 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 that party's "Restricted Pumping". The flexibility clause also allows parties to overextract up to an amount equal to 10 percent of its "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.

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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.

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 Ios 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 1968-69 operation.

The Judgment, in Section IV, also allowed 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 would, in turn, deduct from its "Restricted Pumping" for each year, the aggregate amount of water extracted pursuant to the separate stipulated Judgments.

TABLE 5 RESTRICTED PURPLIES AND QUARTITIES EXTRACTED AND ASSIGNED

In scre-feet									
	: (1)	(2) :	(3)	; (4) ;	467	(6)			
Party	: Restricted:	Assign-	Allowable :	: Amount :	Balance :	Allowble carrover			
recy	: Panoine :			: Dagged :	(3)-(4)-(5) :	into			
	1		(1)±(2)=(3)		127 (-7-127 2	1969-70			
AN FERRANDO BASIN									
Bartholossus, William O.	15.00		+ 15.00	0.00	+ 15.00	+ 1.50			
Markank, City of	13,649.00	+ 360.00b/	+ 13,649.00	- 13,654.42	- 5.42				
Oalifornia Materials Company	0.00		+ 360.00 + 1,180.00	- 399.57	- 39-57	- 39.572/			
Composidated Rock Products Company Forest Lawn Homorial Park	0.00	+ 1,180.001	+ 19100'00	- 1,499.57	- 319.57	- 319.572/			
Association	814.00	0.00	+ 814.00	- 587 <b>.99</b> 4/	+ 228.01	+ 81.40			
Siendale, City of	12,405.00	9.00	+ 12,405.00	- 12,379.00	+ 26.00	+ 26.00			
Marper, Cecilia DeMille	0.00	0.00	0.00	- 28.31	- 28.31	- 28.31,			
Myingston-Graham, Incorporated	0.00	+ 270.00	+ 270.00	- 349.07	- 79.07	- 79.07			
Lookheed Aircraft Corporation	239.00	0.00	+ 239.00	0.00,	+ 239.00	+ 23.90			
les Angeles, City of	63,257.00	- 3,500.00	+ 59,757.00	- 59,701.8 <b>2</b> °	+ 55.18	+ 55.18			
McCabe, Coleste Louise,	1.00		+ 1,00	0.00	+ 1.00	+ 0.10			
ions, John and Burbares	0,00	0.00	0.00	0.96	- 0.96	- 0.96			
Monteria Lake Association	0.00	0,00	0,00	- 7.15	- 7.15	- 7.15			
Myerrood Ranch Metual Water Co.	0.00	+ 100.00	+ 100.00	- 7,24 - 228,96	- 7.24 - 128.96	7.24			
lears, Roebuck and Company	0.00	7 300,00-	T 100,00	- 820, 30	- 120.50	- 128.96 <sup>c/</sup>			
outhern Service Company, Ltd.	0.00	0.00	0.00	- 93.82	- 93.82	- 93.82			
portenen's Lodge, Incorporated	0.00	0.00	0.00	- 110,04	- 110,04	- 110,04			
Joines Lake Property Owners'	<b>65.00</b>			on he	- 1-	- 1-			
Association Wilhalla Mamorial Park	23.00 184.00		+ 23.00 + 184.00	- 30.40 - 166.56	- 7-40 + 17-44	- 7.40 + 17.44			
fan de Kump's Holland Dutch	207400	0.00	1 101.00	- 100,00	T 21-44	A Wilder			
Bekere, Inc.	93,00		+ 93.00	- 22,02	+ 70.98	+ 9.30.			
ialt Dianey Productions	0.00	N/	+ 1,590.00	- 1,643.21	- 53.21	+ 9.30 - 53.21			
fright, J. Marion and Alice M.	0.00	0,00	0.00	- 7.04	- 7.04	- 7.04			
Subtotals	90,680.00	0.00	+ 90,680.00	- 90,915.15	- 235.15	- 672.94			
TIMAR EASTS									
Total Common (5)	609.00	0.00	+ 609,00	- 15.28	+ 593.72	+ 60.90			
Boise Coscade Building Company - Brown, Charles T.	0.00	0.00	0.00	0.00	0,00	0.00			
Church of Jeans Christ of the		7		- •	-	_			
Latter Day Saints	0.00	- 300.00 <sup>f</sup> /	0.00	- 318.84	- 318.84	- 318.8 <sup>k</sup>			
los Angeles, City of	2,818.00	- 300.005/	+ 2,518.00	- 2,210.81	+ 307.19	+ 251.80			
Mordigian, Kisag	46.00	- 40.00	+ 6,00	0,00	+ 6.00	+ 0.60			
San Pernaudo, City of	2,737.00	+ 340.00	+ 3,077.00	- 3,022.69	+ 54.31	+ 54.312/			
Subtotals	6,210.00	0.00	+ 6,210.00	- 5,567.62	+ 642.38	+ 48.77			
VERDUGO BASIN									
Greacenta Valley County Water									
District	3,294.00	0.00	+ 3,294.00	- 3,287.36	+ 6.64	+ 6.6k			
Glendale, City of	3,856.00	0,00	+ 3,8%,00	- 3,430.29	+ 425.71	+ 385.60			
Subtotals	7,150,00	0.00	+ 7,150,00	<u>- 6.717.65</u>	+ 432.35	+ 392,24			
WLARA TOTALS	104,040.00	0.00	+104,040.00	.103,200,42	+ 839.58	- 231.93			
Abutu Taturo									

e/ Refer to Table 8 and Appendix A for information concerning easignments of "Restricted Pumping" or prior ownership.

// Assignment pursuant to separate Stipulated Addgment.

// Reverts to City of Los Angeles.

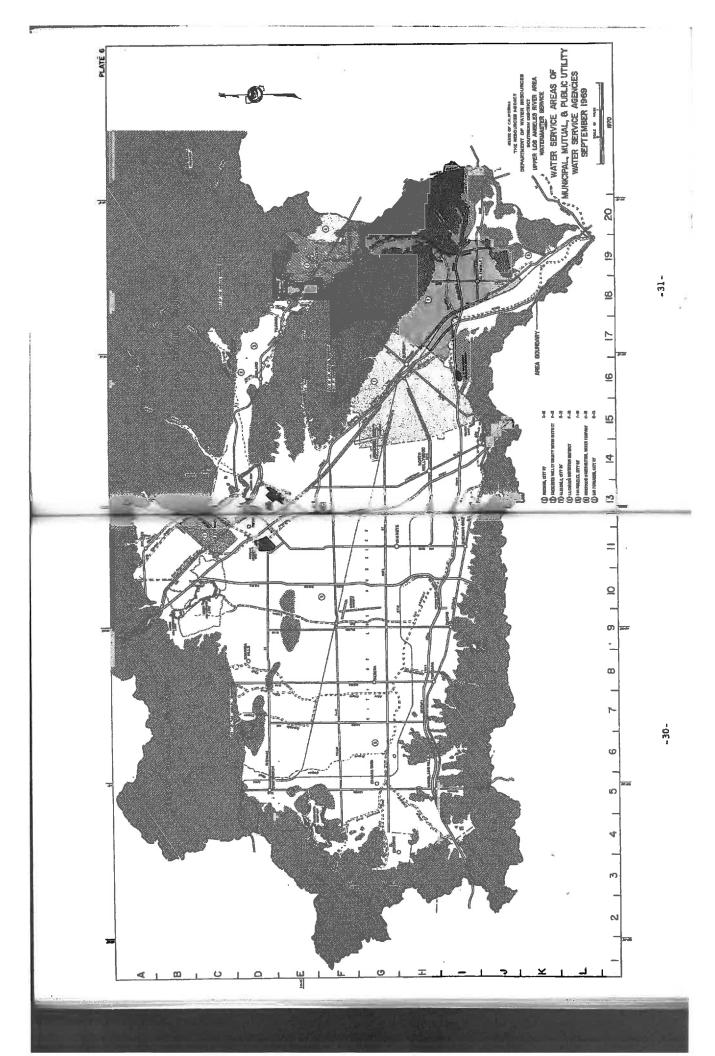
// Excludes 239.98 acre-feet extracted from Forest Lawn Well No. 4.

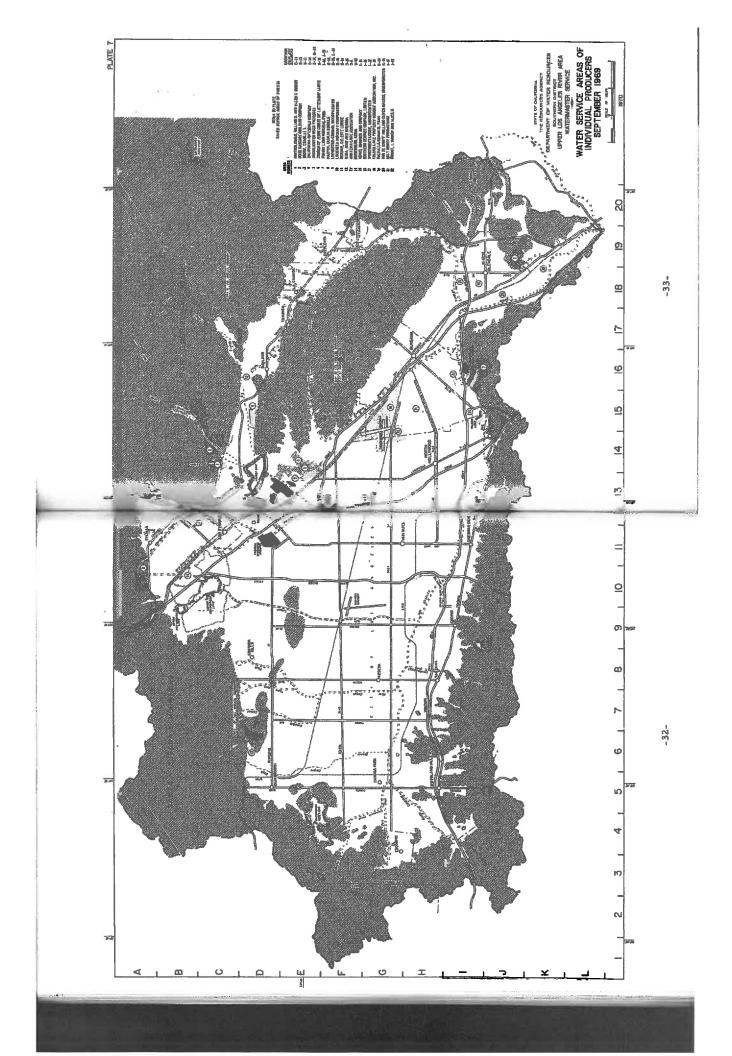
// Excludes extractions from Reseds Wells which totaled 629.94 acre-feet.

// Assignment pursuant to Physical Solution - Sylmar Basin.

// Water use license to City of San Fernando

// Includes assignments pursuant to footnotes (f) and (g).





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 (see 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.

# 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 seek and 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, and information on hand, the Western Oil and Gas Association is the only nonparty extracting ground water within ULARA. The Watermaster has approved this operation which is necessary for the control of gasoline pollution at Forest Lawn. No report on ground water extraction will be made as to the parties dismissed from the action, such as Glenhaven Memorial Park, Incorporated, Los Angeles County Waterworks District No. 21, etc., which are still active pumpers.

Ground water extracted by the Western Oil and Gas Association is shown in the following tabulation.

#### Quantity Extracted, in 1,000 Gallons

Healy-Deburring Plant		Cox Wells	Healy-Deb	nt Cox Wells	
October	0	0	April	0	0
November	1	0	May	2	0
December	2	0	June	0	0
January	0	0	July	432	0
February	0	0	August	432	10
March	0	0	September	432	864
	874				
		Total ac	cre-feet	6.6'	7

#### 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 its recording system. Each water well in ULARA was assigned a state well number in order to simplify the administration of the Judgment and the monitoring of ground water extractions. A cross-index between State well numbers and County numbers should be completed by March 1970. At that time, it will be made available to all interested parties. The 1969-70 annual report will include a cross-index of well numbers.

A state well numbering system was adopted by the State several years ago which utilizes the United States Public Land Survey System. A graphical illustration of the system in ULARA is shown below. Each state well number consists of a township, range, and section number; a letter to indicate the 40-acre plot where the well is located; a number to identify the particular well in the section; and the letter "S" indicating that the well location is referenced to the San Bernardino Base and Meridian.

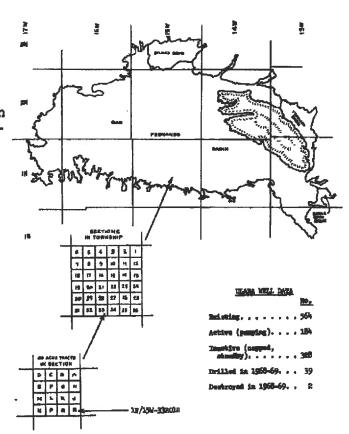
For instance, State Well No. 1N/15W-33ROIS would be the first well assigned a number in Township 1 North,
Range 15 West, Section 33, and in
the 40-acre Tract "R". All wells in
ULARA are referenced to the San

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. If the well is suspected of being abandoned or destroyed, the Watermaster will attempt to tag the well, requesting that the owner inform the Watermaster of his intentions. In this manner, the owner may be informed of the proper methods of destroying the well. Each party is required to notify the Watermaster Whenever a new well is drilled.

Bernardino Meridian so the letter "S"

is normally dropped in this report.

During 1968-69, the City of Los Angeles drilled seven new wells in the Sunland-Tujunga area, Toluca Lake Property Owner's Association redrilled an old existing well, and Western Oil and Gas Association drilled 31 wells near Forest Lawn in Glendale.



# Imports and Exports of Water

Rapidly expanding residential, commercial, and industrial areas within ULARA require the importation of additional water supplies. The City of Los Angeles has kept abreast of this demand by a 338 mile aqueduct for the importation of Owens River and Mono Basin water. The City is currently constructing a second barrel for the aqueduct. As of September 1969, 84 percent of construction was completed and a target date of May 7, 1970, set for operation.

In addition to the City's aqueduct, the Colorado River aqueduct constructed by The Metropolitan Water District of Southern California began delivery of water in 1940. The Metropolitan Water District of Southern California supplies water to the Cities of Burbank, Glendale, and Los Angeles. The Crescenta Valley 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 The Metropolitan Water District of Southern California.

Exports from ULARA, exclusive of sewage, are limited to the City of Ros Angeles, which exports water consisting of imported water and ground water extractions. Listed in Table 6 are the ULARA imports and exports.

# Physical Data by Basins

In order to comply with the Court's directive, the Watermaster has collected and summarized data on Table 7 which shows the water supply and disposal in each of the basins.

TABLE 6
ULARA IMPORTS AND EXPORTS

Source and Agency	:	Quantity,	in acre-f	eet
Double Blu Agency	:	1967-68	:	1968-69
IMPORTS				
Colorado River Water				
Burbank, City of	4,685		11,932	
Crescenta Valley Water				
District	880		686	
Glendale, City of	3,872		8,679	
Los Angeles, City of	10,290		11,736	
La Canada Irrigation District	866		Q), c	
DIRCLICE	000		845	
Subtotal		20,593		33,878
Owens River Water				
Los Angeles, City of		323,252a/		342,665 <sup>a</sup> /
Total		343,845		376,543
EXPORTS				
Owens River Water			¥1	
AUDIN HTACK MOACE				
Los Angeles, City of		-122,477		-144,434
Net Import		221,368		232,109

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

TABLE 7

## SUMMARY OF WATER SUPPLY AND DISPOSAL BY BASING In acre-feet

#### san fernando rasin

Water source and use	City of : Burbank :	City of : Glendale :	City of Los Angeles	City of San Fernando	All others	Total
tractions						
Total quantity Used in Valley Fill	13,654 13,140	12,379 8,822	59,702 <sup>16</sup> / 5,699	0	5,419 <sub>b</sub> /	91,154 32,840
ports						
Colorado River Water Owens River Water Ground water from	11,932	8,679	7,889 335,235	٥	0	28,500 335,23
Sylmar Basin			2,211	2,751	0	4,962
morts						
Ground water to Verdugo Basin Out of ULARA	o	2,197 0	0 54,632	o	0	2,197 54,632
Owens River Water Out of ULARA to Eagle Rock Basin Colorado River to			144,434 0			144,431 (
Verdugo Basin	0	4,258	0		0	4,256
ater delivered to hill and mountain areas						
Ground water Owens River Water	514	1,360	29,701			1,871 29,70
Colorado River Water	455	584	2,756			3,79
ster outflow						
Surface Subsurface Severs	14,4174/	18,105	70,990	1,411	0	306,050 142 104,923
		0971	AR BASIN			
		City of				
Water source and	use :	Los Angeles	: City		others To	tal
Extractions						
Total quantity Used in Valley Fi	n	2,211 0	3,02 27		334 5, 334	568 606
Imports						
Owens River Water	•	6,520			6,	520
Exports						
Ground water to S Fernando Basin	lan	2,211	2,75	<b>51</b>	0 4,	962
Water delivered to and mountain area						
Owens River Water	•	337			;	337
Water outflow						
Surface Subsurface to San	<b>.</b>					<sup>e</sup> /
Fernando Basin						S45 850

## SUMMARY OF WATER SUPPLY AND DISPOSAL BY BASINS In acre-feet (continued)

#### VERDUGO BASIN

Water source and use	County Water District	City of Glendale		Total
Stractions				
Total quantity Used in Valley Fill	3,287 3,232	3,430 3,430	0	6,717 6,662
Imports				
Colorado River Water Owens River Water Ground water from San	<del>68</del> 6	4,258	910 0	910 11,944
Fernando Besin	O	2,197	0	2,197
morts	0	0	0	0
end mountain areas				
Colorado River Water	14	447	0	461
Owens River Fater Ground water	55	309	332	332 364
ster outflow				
Surface Subsurface to Mouk Hill Basin to San Fermando Basi	7.			300
Sevage	0	1,013		1,013

#### EAGLE ROCK BASIN

\_\_\_\_

Water source and use		All others	Total
kkrackions			
Total quentity Used in Valley Fill	0	197 0	197 0
<u>zporte</u>			9
Owens River Colorado River Ground water	3,847 0	0 0 0	3,847 0
hmorts			
Ground water	o	197	197
ster delivered to hill and mountain areas			
Colorado River Water	2,045	o	2,045
ater outflow			
Burface Subsurface Semma	2,060	o	2,060 2,060

a/ Excludes production from Reseda wells.
b/ Excludes production from Forest Lawn Well No. 4.
c/ The 29-year mean (1929-57) for 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 s basin after being discharged in L. A. River and while on route to gagi station F-57C.

e/ Surface outflow is not measured. Calculated average surface outflow by Laverty - SF Exhibit 57.

f/ Information not available in time for report.

g/ Based on 29-year average (1929-57).

h/ Assumed to be mil.

j/ Information not available.

f/ There is little or no subsurface flow to fine for the fine for fin

#### CHAPTER IV. ADMINISTRATION OF THE JUDGMENT

When the Court appointed the Department of Water Resources as Watermaster in the Upper Los Angeles River Area, it did so for the specific purpose of administering and enforcing the provisions of the Judgment and to keep the Court fully advised or apprised of any violations. The Watermaster was also directed to keep the Court informed of any changes in ownership of water rights by reason of transfer by parties and to report on the compliance and violation by any party under the terms of the Judgment. This chapter presents these important requirements of the Court.

On April 26, 1968, the Watermaster contacted for the first time, the parties in ULARA who had acquired "Restricted Pumping" rights as well as those parties who were suspected of being active within ULARA. Information relative to the status and addresses of the parties was obtained from the State Water Resources Control Board, the Los Angeles County Flood Control District, the City of Los Angeles, and various other agencies. This initial contact by mail informed the parties that a Judgment had been signed in ULARA which restricted the use of ground water within ULARA. It mentioned the fact that parties having rights to extract ground water from the basins (San Fernando, Sylmar, and Verdugo Basins) were listed in the Judgment together with their respective allowable extractions (Restricted Pumping) per water year. They were further informed that the actual reduction and control of ground water extractions would not become effective until October 1, 1968.

The letter also requested information as to the current status of each party, whether it was active or inactive at the time. The parties that responded as being active were subsequently notified by letter dated May 15, 1969, that Watermaster representatives would like to meet with them to discuss the Judgment. Thus the Watermaster informed all parties, on a personal basis, of their responsibilities of the Watermaster in enforcing the Judgment.

#### Assignments of Restricted Pumping

The Watermaster is required to inform the Court of any transfers or assignments of "Restricted Pumping". During the 1968-69 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 of Los Angeles. The clause, which allows the parties with stipulated Judgments to extract ground water under the City of Los Angeles' "Restricted Pumping" right, is covered by Section V of Paragraph 2 of the Judgment. In addition, the City of San Fernando exercised its right to purchase water from the City of Los Angeles pursuant to the "Physical Solution - Sylmar Basin", which is described in Section VII, Paragraph 2 of the Judgment.

In other assignments, the City of San Fermando leased water rights from Kisag Moordigian in the Sylmar Basin. Table 8 lists all assignments, parties, and amounts involved. Appendix "A" records the documents used to assign "Restricted Pumping" rights between parties and shows the current ownership of "Restricted Pumping" rights by each of the parties as of September 30, 1969.

Please note the suggested sample copies of Water Use License Agreements and Sale of Water Rights which are included in Appendix A.

TABLE 8 ASSIGNMENTS OF RESTRICTED PUMPING

Party	: Assignment in ac	and amou re-feet	nt,	Party
	San Fer	nando Bas	in	
Pursuant to Stipulated Judgments				
California Materials Company	Stipulated	360 <sup>8</sup> /	from	Los Angeles, City of
Consolidated Rock Products Company	Stipulated	1,180 <sup>a</sup> /	from	Los Angeles, City of
Livingston-Graham, Inc.	Stipulated	270ª/	from	Los Angeles, City of
Sears, Roebuck and Company	Stipulated	1008/	from	Los Angeles, City of
Walt Disney Productions	Stipulated	1,590ª/	from	Los Angeles, City of
Pursuant to Sale				
Mena, John and Barbara	Successor to	0	from	Holmgrin, Neva Bartlett
	Sylm	ar Basin		
Pursuant to Physical Solution				
San Fernando, City of	Conveyed	300p/	from	Los Angeles, City of
Pursuant to License				
San Fernando, City of	Licensed	40	from	Moordigian, Kisag
Pursuant to Sale				
Boise Cascade Building Company	Successor to	609	from	The Wellesley Company
Church of Jesus Christ of Latter Day Saints	Successor to	0	from	Stetson, Henry G.

a/ Estimate submitted by City of Los Angeles, see Appendix A. b/ Estimate submitted by City of San Fernando.

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 must have been signed before or during the water year in question. In addition, the license or sale document should be filed early with the Watermaster. Failure to submit a license or sale document by September 30 of the water year in question may be considered as 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 usage occurring from year to year. Therefore, the flexibility clause was included in the Judgment which allowed 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 subsequent water years. The flexibility provisions described in Section VIII of the Judgment, allows the parties a flexibility of 10 percent of its "Restricted Pumping" right. In other words, a party may underpump or overpump by ten percent of its Restricted Pumping and in the succeeding water year increase or decrease (whichever is applicable) its pumping by the same amount.

Those parties that overextracted, but still fell within the 10 percent limitation are listed in Table 9. Table 9 likewise summarizes all overextractions and violations of the Judgment. Of the 15 parties that overextracted within the San Fernando Basin, eight were in violation of the Judgment. In the Sylmar Basin, only one party violated the Judgment and that was by reason of having no "Restricted Pumping" right. The parties in violation are subject to court action.

Table 9 also lists those parties that are subject to the stipulated Judgment with the City of Los Angeles. These parties' extractions, in excess of the estimates submitted by the City of Los Angeles, will be adjusted against the City's "Restricted Pumping" right during the 1969-70 water year. As such, the parties in question are not considered to be in violation of the Judgment.

## Determinations and Recommendations by the Watermaster

In the 1968-69 water year, the Watermaster was faced with two separate requests submitted by parties in ULARA which required a close review and determination for submission of recommendations to the Court. One emergency arose when the City of Los Angeles was faced with high water levels in their lower Van Norman Reservoir, threatening their construction project on the lower Van Norman Reservoir facilities. The City requested permission to lower the water level by releasing water from the reservoir and spreading it in the Tujunga Spreading Grounds. A copy of the letter requesting permission is shown in Appendix A. The other emergency arose when gasoline pollution was detected in Forest Lawn Memorial Park Association's Well No. 4. Forest Lawn requested that it not be held responsible or accountable for extractions from Well No. 4 while it was being utilized to prevent the further spreading of gasoline pollution and as long as it was producing contaminated water.

TABLE 9 OVEREXTRACTIONS In acre-feet

	1	(1)	:	(2)	:		Overextrac	
Party		lowable	•	Amount	:	(3)	: (4) b/:	(5)
		raction 68-69		extracted	1	Amount	(:Allowable :	In percent
	: 19	00-09-			:(1	) <del>-(2)=(3</del>	)!	(3)4(1) 7100=(5)
San Pernando Bagin								
Burbank, City of	+13	,649.00	-;	13,654.42	-	5.42	1,364.90	_O4
California Materials Co.	+	360.00		399-57		39.57		
Consolidated Rock Products						-•		
Company .	+ 1	,180.00		1,499.57	_	319.57	<u>c</u> /	a/
Marper, Cecilia DeMille		0.00		28.31		28,31	.00 <sub>c</sub> /	a/
Livingeton-Grahem, Inc.	+	270.00	-	349.07	-	79.07	<i>9</i>	
Mena, John and Barbara		0.00	_	0.96	_	0.96	<b>.</b> 00	a/
Monteria Lake Association		0.00	_	7.15			,00	3/
Riverwood Rench Mutual				1000	_	10-7	.00	
Water Company		0.00	_	7.24	_	7.24	.00_/	<u>. a/</u>
Sears, Roebuck and Co.	•	100,00	_			128.96		<b>-</b>
Southern Service Co., Ltd.		0.00	-	93.82	-	93.82	.00	<u>4</u> /
Sportsmen's Lodge, Inc.		0.00	-	110.04	-	110.04	.00	<u>4</u> /
Coluca Lake Property								
Owners   Association	+	23.00	94	30.40	_	7.40	2.30	32.174/
ialt Disney Productions	+ 1	.590.00	_	1,643.21	-	53.21	c/	<u></u> -
right, J. Marion and				-			_	
Alice N.		0.00	-	7.04	-	7.04	.00	<b>4</b> /
Sylmar Basin								
Number of Toma Shutch of								
Church of Jesus Christ of		0.00		318.84		318.84	00	₫/
The Latter Day Saints		0.00	_	210.04	-	310.04	•00	
erdugo Basin								
Q								
<del>-</del> ,								

a/ Refer to Column (3), Table 5.
b/ Computed as 10 percent of the "Restricted Pumping" 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 (3).

d/ Party in violation of the Judgment either as a result of having a zero water right or having exceeded its extractions by 10 percent of its "Restricted Pumping".

The submission of the above requests was considered in view of Section X, Paragraph 2(c) of the Judgment which reads in part, "The Watermaster shall make such recommendations as it deems appropriate in connection with the proper utilization of the water supply and the underground storage capacities of the ground water reservoirs in the ULARA". In both cases mentioned above, the Watermaster first reviewed the circumstances and physical conditions existing at that time, and then submitted pertinent information regarding the request to the Advisory Board. After discussing the matter with the Board, a final determination was made by the Watermaster.

With regard to the City of Los Angeles, the Watermaster was first informed by the City, by letter dated August 19, 1968, of the serious problems which it anticipated in its water operations during the late fall and winter of 1968. The City informed the Watermaster that it was reconstructing the lower Van Norman Reservoir and it was essential that the water level in the reservoir be maintained at a prescribed level. The City requested permission to transfer some of the reservoir water to ground water storage by means of its Tujunga spreading grounds.

The parties, as well as the Advisory Board, were notified by the Watermaster of this request. The parties approved the request and it was subsequently approved by the Court on January 20, 1969, when it signed the "Stipulation Re Spreading of Water by Plaintiff and Order". A copy of the document is shown in Appendix A.

The stipulation allowed the City to spread 5,000 acre-feet of water during the critical construction period. The City was allowed to spread and agreed to spread water only if no other means along the reservoir, such as consumer use, was available. During the interim (prior to the Court's signing of the stipulation) weather conditions were such that the City was required to spread water in order to lower threatening high water levels. The Watermaster was informed of the City's intention and agreed to allow the spreading as long as the Watermaster was present. Thus, all spreading operations were monitored at Tujunga spreading grounds located near Sheldon Street and North Hollywood Freeway (see Plate 2). A summary of the spreading operations monitored by the Watermaster is as follows:

## Spreading Operations No. 1

October 5, 1968 through October 17, 1968 Amounts spread	13 days	805 acre-feet
Water level dropped in lower Van Norman Reservoir	8.9 feet	
Spreading Operations No. 2		
February 3, 1969 through February 17, 1969 Amounts spread	15 days	1,652 acre-feet
Water level dropped in lower Van Norman Reservoir	5.0 feet	

## Spreading Operations No. 3

described in Chapter II of this report.

February 25, 1969 through March 7, 1969

Amounts spread

Water level dropped in lower

Van Norman Reservoir

Total Amount spread

3,677 acre-feet

The other determination made by the Watermaster involved the occurrence of gasoline pollution at Forest Lawn Well No. 4. A study was made of the gasoline pollution problem, after which the Watermaster informed the parties and the Advisory Board. Having considered all aspects and comments, the Watermaster arrived at the following recommendation. It is recommended that the Court allow ground water extractions from Well No. 4 for the express purpose of alleviating a serious ground water contamination problem. It is further recommended that extractions from Well No. 4 be considered non-beneficial so long as the water produced continued to be contaminated and that Forest Lawn Memorial Park Association not be held accountable for these ground water extractions. The Watermaster's action and recommendations were approved by the Advisory Board. Further details on the operation are

If and when the water quality from Well No. 4 improves so that it might be used for beneficial purposes, the Watermaster will then commence charging this water use to Forest Lawn Memorial Park Association. It is the Watermaster's intention to monitor the pollution problem and the methods used for containing and alleviating the contamination.

#### CHAPTER V. ADMINISTRATIVE COSTS

The Upper Los Angeles River Area was established as a "Watermaster Service Area" in accordance with Part 4, Division 2, of the Water Code of the State of California. Pursuant to the provisions of Section 4201 thereof, 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 their endeavor to distribute the waters of ULARA in the most economical way.

The Judgment, on the other hand, 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 proposed budget covering the forthcoming July 1 to June 30 fiscal year. Please keep in mind that 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 proposed budget in its annual report, so that both may be reviewed and approved by the Advisory Board on or about February 1 of each year. The proposed 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 proposed 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 proposed budget becomes final. 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.

## Cost of Watermaster Service for 1968-69

The tentative budget for the first year of watermaster service (1968-69)was reviewed and approved by the Advisory Board in a meeting held on August 28, 1968. The tentative budget was subsequently mailed to the parties on August 30, 1968. The tentative budget shown on Table 10 received no objections and it was adopted as the final budget on September 16, 1968.

TABLE 10
APPROVED BUDGET FOR 1968-69

Salaries and wages	\$11,919
Operating expenses	8,133
TOTAL BUDGET	\$20,052
Billing amount necessary for fiscal year July 1, 1968 through June 30, 1969	\$20,052
One-half payable by State	\$10,026
One-half payable by parties to Judgment	\$10,026

The administrative cost of \$10,026 chargeable to the parties was apportioned among the parties as directed by the Judgment. Each party's share of the budget for the water year 1968-69 is set forth in Table 11. All payments were received on time, prior to September 30, 1968.

Income and expenditures for watermaster service during the 1968-69 water year are shown in Table 12. 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 water year. The parties' share of the carryover into the 1969-70 water year totaled \$4,302.79.

During the first year of watermaster service it was anticipated that considerable work would be accomplished; however, due to lack of personnel, much of the work was not completed and was delayed to the 1969-70 fiscal year. In addition, an annual report was not prepared during the first fiscal year of work. However, the second fiscal year of watermaster service should see an increase in the costs due to the increased work load required of the Watermaster.

TABLE 11
APPORTIONMENT OF PARTIES' SHARE
OF 1968-69 BUDGET

Party	: Mutually Prescriptive : Right, in acre-feet	: Apportionment to be paid
an Fernando Basin		
Burbank, City of Forest Lawn Memorial	17,760	\$ 1,396
Park Association	1,060	83
Glendale, City of	16,141	1,269
Lockheed Aircraft Corp.	310	24
Los Angeles, City of	82,310	6,468
Valhalla Memorial Park	240	19
Van de Kamp's Holland	300	
Dutch Bakers, Inc.	120	9
Verdugo Basin		
Crescenta Valley County		_
Water District	1,988	156
Glendale, City of	2 <b>,32</b> 7	183
14		-
ylmar Basin	¥	
Los Angeles, City of	2,440	192
San Fernando, City of	2,370	186
Wellesley Company, The*	527	41
	<b>⊕</b> 7/	
TOTALS	127,593	\$ 10,026
Recapitulation for:		
Glendale, City of	18,468	\$ 1,452
Los Angeles, City of	84,750	\$ 1,452 \$ 6,660

<sup>\*</sup>Now known as Boise Cascade Building Company.

TABLE 12
STATEMENT OF 1968-69 INCOME AND EXPENDITURES

Item :	Parties	: State	: State and Parties
Income	5		
From 1968-69 budget	\$10,026.00	\$10,026.00	\$20,052.00
Expenditures			
Salaries and wages	\$ 4,584.60	\$ 4,584.62	\$ 9,169.22
Operating expenses Miscellaneous indirect costs Travel in State Electronic machine computing	\$ 1,034.56 34.59 69.46	\$ 1,034.61 34.62 69.48	\$ <b>2,069.17</b> 69.21 138.94
TOTAL EXPENDITURES	\$ 5,723.21	\$ 5,723.33	\$11,446.54
BALANCE	\$ 4,302.79	\$ 4,302.67	\$ 8,605.46

a/ Rent, utilities, auto rental, janitorial services, communications rental, retirement, employees' health plan, and workman's compensation insurance.
 b/ Subject to delayed charges and adjustments.

## Approved Budget for 1969-70

The tentative budget for 1969-70 was reviewed and approved by the Advisory Board at a meeting held on February 3, 1969. This second budget, like the first budget prepared for watermaster service, was submitted to the Advisory Board and to the parties separately as a separate item and not as a part of an annual report. The budget mailed to the parties on March 1, 1969, received no objections and, by reason thereof, became final on April 1, 1969. Table 13 presents the 1969-70 approved budget. The apportionment of the budget is shown on Table 14. All payments were made within the specified time limit.

TABLE 13
APPROVED BUDGET FOR 1969-70

Salaries and wages Operating expenses	\$16,021 9,410		
TOTAL BUDGET	:	\$25,431	
Billing amount necessary for fiscal year July 1, 1969 through June 30, 1970		\$25 <b>,43</b> 1	
One-half payable by State One-half payable by parties	×		\$12,716
to Judgment			\$12,715

TABLE 14
APPORTIONMENT OF PARTIES! SHARE OF 1969-70 BUDGET

Party	: Mutually Prescriptive : Right, in acre-feet	
San Fernando Basin		
Burbank, City of	17,760	\$ 1,770
Forest Lawn Memorial Park Association	1,060	106
Glendale, City of	16,141	1,608
Lockheed Aircraft Corporation	310	31
Los Angeles, City of	82,310	8,202
Valhalla Memorial Park	240	24
Van de Kamp's Holland Dutch Bakers, In	c. 120,	, . 12
Verdugo Basin	4 °	
Crescenta Valley County Water District	1,988	198
Glendale, City of	2,327	232
Sylmar Basin		
Los Angeles, City of	2,440	243
San Fernando, City of	2,370	<b>23</b> 6
Watt, R. A. Company, Inc.*	<u> </u>	<u>53</u>
TOTALS	127,593	. \$ 12,715
Recapitulation for:		*
Glendale, City of	18,468	\$ 1,840
Los Angeles, City of	84,750	\$ 8,445

<sup>\*</sup>Now known as Boise Cascade Building Company

red

led ne m-

∌d

### TENTATIVE BUDGET FOR 1970-71

In accordance with the Judgment, the Watermaster hereby submits a proposed budget for the fiscal year July 1, 1970 through June 30, 1971. The tentative budget submitted herewith was reviewed and approved by the Advisory Board on February 2, 1970. The parties will have 30 days after the mailing of the annual report for submitting their objections to the proposed budget. If no objections are received by March 31, 1970, 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, 1970. Table 15 presents the 1970-71 budget as approved by the Advisory Board. Each party's share of the 1970-71 budget is shown in Table 16.

# State of California The Resources Agency DEPARTMENT OF WATER RESOURCES Southern District

### TABLE 15

## TENTATIVE BUDGET FOR THE FISCAL YEAR JULY 1, 1970 THROUGH JUNE 30, 1971

Salaries and wages Operating expenses	\$16,532 <u>8,644</u>
TOTAL BUDGET	\$25,176
One-half payable by State	\$12,588
One-half payable by parties to Judgment Less estimated funds on hand July 1, 1970 Amount to be billed	\$12,588 - 3,000 \$ 9,588

James J. Doody District Engineer Southern District and Watermaster

Approved: Date: 1/2/1/c

UPPER LOS ANGELES RIVER AREA ADVISORY BOARD

By Chairman

TABLE 16

APPORTIONMENT OF PARTIES' SHARE OF 1970-71 BUDGET

FREEV	: Mutually Prescriptive : Right, in acre-feet	
San Fernando Basin		
Burbank, City of	17,760	\$1,335
Forest Lawn Memorial Park Association	1,060	80
Glendale, City of	16,141	1,213
Lockheed Aircraft Corporation	310	23
Los Angeles, City of	82,310	6,185
Valhalla Memorial Park	240	18
Van de Kamp's Holland Dutch		
Bakers, Inc.	120	9
erdugo Basin		
Crescenta Valley County Water District	1,988	149
Glendale, City of	2,327	175
ylmar Basin		
Los Angeles, City of	5 <b>°</b> fr\0	183
San Fernando, City of	2,370	178
Watt, R. A. Company, Inc.	527	40
TOTALS	127,593	<b>\$9,</b> 588
ecspitulation for:		
lendale, City of	18,468	\$1,388
os Angeles, City of	84,750	\$6,368

<sup>\*</sup>Now known as Boise Cascade Building Company

## APPENDIX A

RESTRICTED PUMPING OF UPPER LOS ANGELES RIVER AREA PARTIES SEPTEMBER 1969

,, AND

COPIES OF LEGAL DOCUMENTS

## APPENDIX A

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Copies of Legal Documents Transfers of Restricted Pumping		
Party	Agreement with	
SAN FERNANDO BASIN		
California Materials Company	Los Angeles, City of	59
Consolidated Rock Products Company	Los Angeles, City of	59
Livingston-Graham, Incorporated	Los Angeles, City of	59
Sears, Roebuck & Company	Los Angeles, City of	59
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# RESTRICTED PUMPING: OF UPPER LOS ANGELES RIVER: AREA: PARTIES SEPTEMBER: 1969

Party 8	Restricted Pumping, in acre-feet per year
, v = 1	in data foot per year
SAN FERNANDO BASIN	
Bartholomaus, William O. and Ellen S. Dubois	15,00 <sup>(1)</sup> (3)
Burbank, City of Burbank	-13;649:00 ; · · · ;
California Materials Company	0.00 <u>b</u> /
Consolidated Rock Products Company	0.0 <b>0</b> _b
Forest Lawn Memorial Park Association Includes: American Security and Fidelity 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 <sub>1</sub>
Livingston—Graham, Incorporated Successor of Livingston Rock and Gravel Company	0-00 <b>p</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	0.004
Southern Service Company, Limited	0.00
Sportsmen's Lodge, Incorporated  Formerly known as Sportsmen's Lodge Banquet Corporation	0.00
Toluca Lake Property Owners' Association	23.00
Valhalla Memorial Park Includes: Valhalle Mausoleum Park Valhalla Properties	184.00
Van de Kamp's Holland Dutch Bakers, Incorporated	93.00
Walt Disney Productions	0.00 <u>b</u> /
Wright, Marion J. and Alice M.	0.00
SUBTOTALS (SAN FERNANDO BASIN)	90,680.00

## RESTRICTED PUMPING OF UPPER LOS ANGELES RIVER AREA PARTIES SEPTEMBER 1969

(Continued)

(*2 d (#	Party 3/	Restricted in acre-fee	Pumping, t per year
SYLMAR BASIN			
Boise Cascade Buil Successor of The We Successor of	* '	00.00	
Brown, Charles T. Successor of Stella	M. Brown	0.00	
Church of Jesus Cl Successor of Henry	hrist of the Latter-Day-Saints G. Stetson	0.00	
Los Angeles, City	of,	2,818.00	
Moordigian, Kisag		46.00	
San Femando, 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)		10 4,040.00

Parties that are not listed on this table have a zero water right or "Restricted Pumping."

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



BAH YORTY

JOHN W. LUMBING, PRESIDENT

MENRY 6. SODKIN NATHAN G. FREEDMAN J. STANLEY MULLIN

## WATER AND POWER

THE CITY OF LOS ANGELES

WATER AND POWER EDGARE
UI RORTH MOPE STREET - P. O. BOR HIL
LOB ANGELER. CALIFORNIA, BOORS

edgár í Kanguse Þenegal Hagaser 140 chief enginese

, John G. Cowan Abdistant Comreal Manager And Chief Company

FLOYD L. 4045 EMIET-4LECTRICAL ENGINEER AND ASSISTANT MAINLAND

ROMENTAY, PHILAIPS CHIEF ENGINEER BY WATER WORKS AND ABILITARY MANAGER

WILLIAM D. BACHAU CHIEF FINENCIAL OFFICER

My 5. 1969

1914 DE

Mr. James J. Doody
District Engineer and Waterndster
State of California
Department of Water Resources
P. O. Box 6598
Los Angeles, California 90055

Dear Mr. Doody:

Stipulated Judgments and Physical Solution Under the Trial Court Judgment - Estimated Values for 1968-69

In accordance with Section IV of the "Policies and Procedures" for the Watermaster Service in the Upper Los Angeles River Area, following is a status report for the San Fernando and Sylmar subsreas.

#### San Fernando Subarea

The "Restricted Pumping Right" of the City of Los Angeles in the San Fernando Subarea, under the Trial Court Judgment, is 63,257 acre-feet per year. The total estimated pumpage by the Stipulating Parties for the year 1968-69 is 3,500 acre-feet. Thus, the amount evailable for pumping by the City of Los Angeles is 59,757 acre-feet (63,257 minus 3,500).

#### Sylmar Subarea

The "Restricted Pumping Right" of the City of Los Angeles in the Sylmar Subares, under the Trial Court Judgment, is 2,818 acre-feet per year. The City of San Fernando has indicated to the Department by letter (R. E. James to M. L. Blevins dated February 26, 1969), that they will require approximately 300 acre-feet of water for the water year 1968-69. Thus, the amount available for pumping by the City of Los Angeles is 2,518 acre-feet (2,816 minus 300).

Very truly yours

Chief Engineer of Water Works and Assistant Manager

## WATER INGÜT LEASE

KISAG MOORDIGIAN, hereinafter referred to as Lessor or Licensor, hereby grants to the CITY OF SAN FERNANDO, a municipal corporation, hereinafter referred to as Lessee or Licensee, the right and license to extract form (40) acre-feet of water of Licensor's Mutually Prescriptive Water Right (40 acre-feet of Licensor's Restricted Pumping Water Right), being are of Lessor's adjudicated water rights, 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 June 1, 1969 and continuing to and including September 30, 1974.

Said right and license are granted subject to the following conditions:

- (1) Licensee shall exercise said right and license to said waters and take, divert, and extract the same for and on behalf of KISAG MOORDIGIAN during the period above specified and put the same to beneficial use, and Licensee shall not by the exercise hereunder of said right and license acquire any right to extract water independent of the rights of Licenser.
- (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.

the right to annually take, divert, and extract each water year water in the quantity of forty (50) acre-feet of Mutually Prescriptive Water Right (46 acre-feet of Restricted Pumping Water Right) and that he has not pumped and will not pump or permit or license any other person to pump

EXHIBIT "A"

	ony part of his total 10 albe-feet Prescriptive Right (46 acre-feet	
	Restricted Pumping) during the period of June 1, 1969 through	
	September 30, 1974, or any extension of said term. Leaves berely resident for the form of the desire the second of the desire the second of th	igat
	CITY OF SAN FERNANDO	
	ATTEST:  B. Municipal Corporation  ATTEST:  B. MAYOR  Licensee  OF SAN FERNANDO	
	70 447 C (Individual)	
	STATE OF CALIFORNIA SS.	
KENE	On June 23, 1969 before me, the undersigned, a Notary Public in and for said State, personally appeared Kisag Moordigian and Dean Peters Moordigian	
TAPIE	to be the person s whose names are subscribed to the within justicinest and acknowledged that they executed the same.  WITNESS my hand and official seal.  Signature William Alcholas  Win . Howard Nicholas  Name (Typed or Printed)	
	STATE OF CALIFORNIA ) SS COUNTY OF LOS ANGELES )	
	On this day of Comment, 1969, before me, Stuart E. Bergman, a Notary Public in and for the County of Los Angeles, State of California, personally appeared Philip F. Jones and Leila Edwards, known to me to be the Mayor and City Clerk, respectively, of the municipal corporation that executed the within instrument and acknowledged to me that they executed the same on behalf of such municipal corporation.	
	. IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.	
	STUART E. BERGMAN NOTARY PUBLIC CALIFORNIA PRINCIPAL OFFICE IN LOS ANGELES COUNTY  Ky commission expires Feb. 8, 1971	*

## 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 h	as acre-feet of Restricted
Pumping and that he has not pumped an	d 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	BILL SMITH
Ву	By
Title	Title

## DEED OF WATER RIGHTS

For a valuable c	nsideration, BHL SMITH hereby sells and
transfers to the JOHN DOE	OMPANY:
The Right to ext	act acre-feet of
grantor's Mutually Prescri	tive Right (acre-feet of
Restricted Pumping) alloca	ed to grantor (or predecessors in interest)
under and pursuant to Judg	ment 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	BILL SMITH
	,
Ву	By
Title	Title



SAM YORTY

COMMISSION

HENRY & BODKIN

JOHN W. LUHRING J STANLEY MULLIN

FRANK R PALMIERI

OPAL L. MURPHY, SEGRETARY

NATHAN O. FREEDMAN, PRESIDENT

## WATER AND POWER

THE CITY OF LOS ANGELES

WATER AND POWER SQUARE

I) I NORTH HOPE STREET - P G BOX 111

LOS ANGELES. CALIFORNIA BOOS4

TELEPHONE (213) 481-4211 CABLE ADDRESS: DEWAPOLA EDGAR L KANQUSE GENERAL MANAGEN AND CHIEF ENGINEER

NAWG COWAN
AREISTANT GENERAL HANA())
AND CHIEF ENGLEER

FLOYD L. GOSS SHIEF ELECTRICAL ENGINEES AND ASSISTANT MANAGER

ROBERT V PHILLIPS CHIEF ENGINEER OF WATER WORKS AND ASSISTANT MANAGER

WILLIAM D SACHAU SHIEF FINANCIAL OFFICER

August 19, 1968

Mr. James J. Doody District Engineer and Watermaster State of California Department of Water Resources P. O. Box 6598 Los Angeles, California 90055

Dear Mr. Doody:

City of Los Angeles Vs. City of San Fernando, et al Superior Court Case 650079

In the judgment in the above-named action, the Department of Water Resources, Southern District, of the State of California, was appointed as Watermaster in the case and this letter is directed to you in that capacity.

The purpose of writing you at this time is to make you familiar with a serious problem which we anticipate in our water operations during the late fall and winter of 1968 and to allow adequate time for your appraisal, notification of parties, and recommendations to the court.

The Water System of the City of Los Angeles, in programming the reconstruction of the Lower San Fernando Dam of the Lower Van Norman Reservoir, plans to do some vital preliminary work beginning on or about November 15 this year. As you are undoubtedly aware, Lower Van Norman Reservoir is the terminal reservoir for the Los Angeles-Owens River Aqueduct systems and nearly all of the aqueduct water received from that source is dispensed from this reservoir. In said planned operation of reconstruction, it is required that the level of the reservoir be lowered to elevation 1085 by November 15, 1968. This is 40 feet below its present high water operating level and more than 30 feet below our normal minimum operating level. Consequently, the operation to keep

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ENGINEENS

the reservoir in service and our customers supplied will require some very careful planning and operating procedures. Fluctuations in demand created by extremes in weather conditions could cause a sudden rise in water level at that low storage point which must be controlled or have our construction work seriously interrupted.

While we are planning to have storage available in our distribution reservoirs and will anticipate transferring water within our capability at the reduced head, it may be necessary to transfer some of the water to ground storage through the Tujunga Spreading Grounds. This may be accomplished by diverting from the City Trunk Line and the Sheldon Street Trunk Line to the Tujunga spreading basins or by discharging water from the Stonehurst line into the concrete channel of the Tujunga Wash and diverting into the spreading grounds at the rubber dam and diversion works just southwesterly of Laurel Canyon Boulevard.

It may be possible under certain conditions of supply and demand to operate through this critical period between Movember 1, and December 31, 1968, without using the groundwater storage available. But in the event it is necessary, and in order to avoid waste of this water, we would propose to utilize this groundwater storage capacity to the extent of approximately 3,200 acre feet. We request your recommendation that such operation would constitute proper utilization of the water supply and the underground storage capacity of the Upper Los Angeles River area. It is our intent, in the event such recommendation by you is made, to recover from said ground storage, through our Vanowen Wells, an equal amount of water within the 1968-69 water year. We also request that the parties be notified and the approval of the Court be obtained for such operation to the extent of adding a maximum of 3,200 acre-feet of water to ground storage through the Tujunga Spreading Grounds and later to recapture the same.

Should you require greater detail we will be happy to provide you with any and all records which you may find pertinent.

ROBERT V. PHILLIPS
Chief Engineer of Water Works

and Assistant Manager

1 2 3 5 6	ROGER ARNIBERGH, City Attorney GILMORE TILLMAN, Chief Assistant City Attorney for Water and Power ROBT. E. MOORE, JR., Assistant City Attor RALPH GUY WESSON, Assistant City Attorney 111 North Hope Street 108 Angeles, California 90054 Telephone: 481-6362 Attorneys for Plaintiff City of Los Angeles NEVILLE R. LEWIS, City Attorney LEWIS, VARNI & GHIRARDELLI Special Counsel	ORIGINAL FILED  JAN 24 1959  WILLIAM G. SHARP COUNTY CLOCK  BY  Deputy
8	501 South Brand Boulevard San Fernando, California	
8	Telephone: 361-1121 Attorneys for Defendant	
10	City of San Fernando	than S. Damanan
11	JOSEPH W. RAINVILLE, City Attorney City of Glendale	FLO COLLEGE COMMENT
12	SAMUEL CORLICK, City Attorney City of Burbank	JAM 27 1570
13	HIGGS, JENNINGS, FLETCHER & MACK	RECEIVEDA
14		RECEIVED
16		
16	Attorneys for Defendants City of Glendale and City of Burbank	
17	MELBY, CRICKARD & AMDERSON	RECEIVED
18	Suite 306 - Fidelity Building 223 East Broadway	LECAL CIVISION DEPT. OF WATER A POWER CITY OF LOS ANGELES
19	Glendale, California 91205 Telephone: 246-5644	
20	Attorneys for Defendant Crescenta Valley County Water District	JAN 29 1969
21		71819110111112111215141516
22	2600 Wilshire Boulevard Los Angeles, California 90057	,
23	Telophone: 388-6131 Attorney for Defendants	
24	Lockheed Aircraft Corporation, Forest Lawn Cemetery Association, et a	1.
25	SUPERIOR COURT OF THE STATE	OF CALIFORNIA
26	FOR THE COUNTY OF LOS	ANCELES
27	.THE CITY OF LOS ANGELES, a	NO. 650079
28	•	ULATION RE SPREADING
29		ATER BY PLAINTIFF
50	,	and Opder
81	CITY OF SAN FERMANDO, a ) Emmicipal Corporation, et al., )	
52	Defendants. )	

IT IS HERESY STIPULATED by and between the parties hereto, through their attorneys of record:

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31.

- 1. That plaintiff has represented that on October 5, 1968, an emergency situation arose by reason of certain construction work by plaintiff and a change in weather conditions which prevented the proper lowering of the water levels of the Lower Van Rorman Reservoir sufficient to permit the commencement of the construction of a cofferdam at said reservoir which required it to commence the spreading of Owens River water in its Tujunga Spreading Grounds in order to prevent its waste by disposing of it in the Los Angeles River Channel and that it is still engaged in construction work which may cause similar conditions to arise in the future.
- 2. That plaintiff notified the Watermaster herein on August 19, 1968 that such an emergency might arise and thereafter informal conferences were held among plaintiff and some of the defendants whereby it was concluded that no adverse affect on water table conditions would be expected to occur if such spreading were to become necessary.
- 3. That Paragraph IX of the judgment entered herein on March 15, 1968 enjoins any party "from engaging in any artificial recharge by the spreading of water on the surface of the ground for the purpose of causing it to percolate into the ground water basins within the U.L.A.R.A., except pursuant to terms and conditions as fixed by the court upon application to the court after notice to all parties and the Watermaster and the conclusion of hearings held in connection therewith."
- 4. That said judgment is presently being appealed by plaintiff herein.
- 5. That the parties desire to cooperate to avoid the wasting of water and to provide for the emergency spreading of Owens River water by plaintiff during the pendency of the appeal so

long as the respective rights, claims and contentions of each party are not projudiced thereby.

NOW, THEREFORE, IT IS HEREBY FURTHER STIPULATED by and between the parties:

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- 6. That during the period it is necessary to maintain the water levels of the Lower Van Norman Reservoir at lower than normal levels for the purpose of construction, the City of Los Angeles may spread Owens River water on the surface of the ground in its Tujunga Spreading Grounds, for the purpose of causing it to percolate into the San Fernando Basin of the U.L.A.R.A.
- 7. That accurate records shall be maintained of the time and amount of such water spread by the City of Los Angeles in its Tujunga Spreading Grounds, and that the information shall be furnished to the Watermaster.
- 8. That the City of Los Angeles shall keep the Watermaste advised of its plans, operations and spreading programs, and shall cooperate with the Watermaster in providing such information and records as the Watermaster may require.
- 9. That nothing contained in this stipulation shall be deemed to affect or prejudice in any way any right, claim or contention that any party may have herein.
- Owens River water spread since October 5, 1968 and prior to the execution of this stipulation, shall be deemed to have no adverse affect on the water table conditions in the San Fernando Basin between the parties hereto, but defendants shall not be responsible to any third parties for any legal damages sustained and that such spreading shall not exceed 5,000 acre feet without plaintiff first receiving court approval thereof pursuant to paragraph IX of said judgment.
- 11. That this stipulation shall be effective upon submission to and approval by the court and shall be subject to

further order of the court herein. 2 ROGER ARNEBERGE, City Attorney GILMORE TILLPAN, Chief Assistant City Attorney for Water and Power ROBT. E. KOORE, JR., Assistant City Attorney
RALPH GUY KESSOM, Assistant City Attorney

By:

RALPH GUY FESSON

Attorneys (for Plaintiff NEVILLE R. LEWIS, City Attorney LEWIS, VARNI & CHIRARDELLI, Special Counsel NEVILLE R. LEWIS Attorneys for Defendant 11 City of San Fernando 12 JOSEPH W. RAINVILLE, City Attorney City of Glendale 13 SAMUEL GORLICK, City Attorney City of Burbank 14 HIGGS, JERNINGS, FLETCHER & MACK Special Counsel 15 PAUL F. ENGSTRAND 16 Attorneys for Defendants 17 City of Glendale and City of Burbank 18 MELBY, CRICKARD & ANDERSON 19 Attorney for Defendant 20 Crescenta Valley County Water District 21 22 WM. HOWARD XICHOLAS 23 Attorneys for Defendants Lockheed Aircraft Corporation, et al. 24 25 ORDER 26 Pursuant to said stipulation and for good cause thus shown, 27 IT IS SO ORDEPED, subject to the retained jurisdiction 28 of the court to modify the same. 20 Dated: 30 31 Judge of the Superior Court 32 Edward M. MOOR

## APPENDIX B

## GROUND WATER EXTRACTION

TABLE H-1
GROUND WATER EXTRACTIONS
IN ACRE-FEE!

STATE	OWNERS		1468				PRO	DUCTION	1969					
I WELL I	DESIG- MATION		1 NOV	1 DEC	1 JAN	; FEB	I MAR	# APH		A ILINE		4.87		TOTAL
· comment	1101			1154	1 384		A PURIS	· APR	T HAY	; JUNE	I JULY	I Ada	1 SEPT	1
					SAN	FERN	ANDO I	BASIN						
BURB	ANK, CIT	Y OF			GAI.	1 1 - 1 11 11	11120	Pot 1011 a						
1N/14W-09A03S	144	257.93	221.03	58.29	40.96	65.36	55,39	142.06	151.68	127.86	263.24	383.65	286.41	2424.05
14/144-094845 14/144-090825	11 12	36.68 184.64	44.47 64.18	40.37 56.14	20.75 141.15	29,91 55,15	33.65	116.75 84.92	21.54 70.84	57.46	95.57	57.27	116.37	744.79
IN/144-498935		91.02	26.61	25. p2	44.00	19:11	89.47	144.83	96.16	77.19	197.21	196,52	116.89 74,51	1475.73 1475.31
1M/14W-09H81S 1M/14W-09H84S	10 11A	110.41	36,52 11.54	94.50 56.03	22.23 48.58	127.14	39.82 31.94	107.36	107.27	147.24	101,74	152.86	89,57 189,61	1139.09
FM/14M-08K052	134	#.00 5≤.11	8.00	0.00 34.57	0 - 40	128-61	167,30	102.54	43.47	141-93	145.33	16.015	240.93	1226.92
141144-04642	18 68	190.75	119.77	67.65	130.60	19.40 226.97	201.26	113.06	146.23	181-18	214.41 137.08	213.40	211.75	1263.4 <u>1</u> 1615.45
1N/14M-114015 1N/14M-148GBS	7 15	94.40 94.40	100.33	110.02	62.[4 41.99	0.00 0.00	4,00	98.97 90.48	114.38	121.72	127.07	132.47	122,53	1949,26
TOTALS		96/-7/	779.45	650.73	816-17	581.77						[814.8]		
1017-20		-01417	(17275		4,011,	001871	711434	. 0 . 3 . 3 . 3	1541140	fen.na1	1022640	[ald-n[	fitais.	13054,42
<u>CAL I</u>	FORNIA M	ATERIALS (												
2N/14W-38A41S	4926-	34.16	34.79	33.95	24.55	21,79	33,01	36,73	38.53	36.77	32.22	32.43	39.24	199,57
CONS	<u>OLIDATEU</u>	HOCK PHU	DUCTS CO	MPANY										
20/14W-30A03S 20/14W-30A03S	2	85,43 8J.36	68.64 57.41	55.19 51.2/	41.40	44.04	62,07 58,50	74.16 68.13	72.85	75,87 70,84	86.37 78.76	50-51	65.73	/77.28
_	•											46.89	61.83	122.29
TOTALS		171.79	117.65	106:48	80.29	85 <b>.</b> 58	120.57	142,29	134.72	145.91	165.13	97.42	126.76	1499.57
FORE	ST LAWN A	MEMORIAL PAI	RK ASSOCI	ATION										
1N/13N-33N015 1N/13N-33N025	2	21-50*	0.00* 17.50*	0.95= 10.40=	4.86*	0.00+	*.05*						0.005	2,80
1M/13K-33P015	6	21.20*	7.90*	7-10*	3.60*	1.50 <b>=</b> 2.10	6.00°			34.58° 14.90	43-36* 17-38	47.43° 17.06	23.550 17.89	263.55 156.01
15/134-048415	7	13.48*	11.70*	7.00=	2+18+	8-40-	3.70*	9-56	40.16	20.81	53-13	51-51	25,76	(63-63
FOTALS		64 . 80	37.1u	50-70	13.50	4 - MO	17.78	47.26	73.47	70.29	43.87	82.74	67.14	585-99
FORE	ST LAWN I	MEMORIAL PAI	RK ASSOCI	ATEOM										
1M/13W-33M035	6	15,20*	22.10*	14.20*	2.01*	21.10*	56,20*	0.00-	29.634	27.581	3.54=	24,29*	26.220	∠39,98
														40.000
GLEN	DALE. CI	TY OF												
210L91-W11	GVENT STPT1	1512:00	568.0U 2,UU	515.00 2.00	574.U0 2.00	521.00 2.00	573,00 2.00	574.00				1666.7L		10900.46
M/13W-19J04S	S1972	121.00	117.08	118.00	118-40	104.00	112.00	118-00	4.00 113.80	21-48 67-00	9.48 132.78	12.05 153.31	5,8 <del>9</del> 128,g3	1414.12
TOTALS		1337.00	707-00	635.00	694.00	627.00	667,00	685.00	867,00	1143.00	1892.14	1632.07	1272.79	12379 .00
											-			
		LIA DE HII	_											
2N/14W-054925 2N/14W-05L015	CEHES	0.00* 0.24*	0.34*	*b#.0 *#t.4	0-79= 0-00*	0.444	0,3+* L.0+*	0-347 1-060					4.564	5.47 18.72
2N/14W-058015	ZENS	2.12*	1.00-	1-00*	0.00*	0.00-	6:40+	0.000						4,12
TOTALS		de36	1.34	1 34	0-49	0-49	1.36	1.40	c+25	1,23	4,43	4,24	5.36	28,31
LIVI	re65 TON~6	HAHAM: INC	C.											
M/14W-10M015	diam'r.	U-00=	0.00*	8.494	0.00*	4.004	0.00*	0.004						26.74
SWLIGH-TAROTS	SNYAL	53.01.	23.01-	21.02*	51.05	22.96*	29.BJ*	32.42	30.86	29.46-	31,390	25.09*	23.32*	122.33
TOTALS	•	23.67	23.67	23-02	21-02	22.06	29,83	32,42	36.86	24.98	31.39	38,46	36,69	349.07
L05	ANGELES	CIT! OF												
M/13V-19 5	CS-CH	424.47	449.49	477.73	492.65	5,28	236.91	713.73	657.81	650.83	556.24	432.47	370.48	5-87.59
1W/13W-19K03S 1W/14W-05W01S	CS-51 MM-16	0.02	0.44 0.44	0-00	9.42	25.0 26.0	0.02	1-86	135.44	0.40	0.00	V-00	0.90	2447
N/ 4H-05P015	MH-18	v-89	0.UU	8.00	B.00	9.00	0.00	0.00	144.51	162.40	102.57	4.02	0.80 269.49	+01+83 42+24
N/ 44-05PAZS  N/ 44-06L0 5	NH-17 NH-24	4.00 4.00	# . 0 U U . B B	5.68 4.00	U.UG	0.00	4.00 11.00	0.00	44.46	164.03	104.25	0.00	8.00	-03.74
N/14W-06N01S	MH-2	4.00	0.00	0-41	9.40	0.00	0.00	0.04	0.00	0.00	10.45	160.97	91.13 9.00	297.54 199.04
M/14V-04P015 M/14V-04P025	MH-5 MH-31	V.60	62.19 0.00	#/.47 #.00	9 • A A 9 • R B	0 · 00	0.00	0-90	42,25	0.00	311.49	130.65	0.00	307.12
M/14W-000015 M/14W-060015	NH-13	0.00	0.00	0.00	0.00	4.60	0.00	0.00	65.65	100-67	181.50	D.00	0.00	452.66 467.62
K/14#-064855	MH-24	1.35	\$4.60	n.00 55.40	0.00 0.00	0 - 0 0 U = 0 0	0.D0 9.D0	0.00 0.00	97,44 19.60	150.09	145.20	0.00	0-00 0-00	459,37
N/14W-95HE15 N/14W-96R955	NH-11 NH-27	0 + 0 0 0 + 0 0	\$.00 \$.00	0.00	0.4 <b>4</b>	0-00	0,00	0.00	49.65	84,55	196.44	0-00	0,00	104-04
N/14W-U6HOTS	NH-28	D = 00	0.00	0.00	0.00	0 • G V	0.00	19.47	140.61	171.97	132,30	0-00 6-00	0-00	416.43 480.35
210ATQ-W#1\M	#-1 €-10	17,47	0.00	U-46 U-00	# • 00 # • 00	0.00	48.30	242,70 240.49	236,71 244.88	266.04 177.55	267.75 249.08	225.51	259.66	1503.91
N/14W-07JD35	E-6 NH-7]	13-17	8.00	8+.46	U.00	0-00 0-00	10.54 31.08	85,42 68,85	237.44	167.24	234.92	234.62	15.36	[4]4*95
				H - 4 - W	-114		24.VD	* 4 1 11		140461	213.31	0.00	8-00	#13 <b>, 1</b> 9

## TABLE M-1 GHOUND WATEN EXTHACTIONS (CONTINUED) IN ACHE-PRET

							PRI	DOUCTION						
I STAPE E	DESIG-		1966						1969					ALIO1
NUMBER 1	MATION	4 BCT	I MOY	1 UEL	1 Jan	FEU	1 MAH	1 APK	1 HAY	I JUNE	I JULY	I AUG	4 SEPT	1
1.115 Aug	ELES, CI)	W 05												
I CONT IN	MFD1			40 -					-4					
N/L4%-UMAQ2S	M1-20 M1-35	0 • 00 0 0 • 0	0.40	89.07	F6"A9 00°0	0-00	15.65 99.65	44.05	261.87	77,265 07,661	255,49	265,77	265,58	1426.21
18/148-486015	RH-10	9.00 55.50	0.60 0.60	0.90 F04.53	0 - 0 L L - 0 C	U-00	34.77	87.95	300.89 67,51	230.78 256.72	266.02	0.00 34,27	0.00	#41,94 102,14
13/14#-58E415 [3/14#-88F415	W-3	54,78 57,19	U . 04	0.00	0.00	0.00	44,67	257.97	267.15	252,80	255.05	258,45 384,16	146.33	1531.20
10/14d-08J815 10/14d-08J815	E=5 E=3	20.39 14.27	0.40	0.00	0.00	0.00	55,53	96.49	320,06	225.42	310.40	302.71	20-25	1364,21
TM/T4A-Agride2	E-L	14.39	8-48	0.00	0.00	0.00 0.00	0,00 30,04	5.01 103.03	205.01	197.89	273.71	176.04 265.24	17.22	55.40¢c 1194.35
14\14A-48[452 14\14A-48[452	E-4	64.29	135.94	0.00	0.00	B.00	48.32	142.23	100.W3 274.94	316.90 194.77	310.48 271.07	344.99 266.87	120,64 17.42	1,77,89
]M/]4W-88H915 1M/]4W-15H815	4-5 4-5	4J.68	0.00	0.80	11.00 4.73	0.00	9.41	139.46 267.33	215.31	217.56	2J1.41 305.20	301.70	61.59 294.93	1107.42
14/14#-15F515 [N/14#-16D515	y-4	24.36	U.00	11 + 50 D . G 6	0 - u t	6.00	15,17	0.50 71.63	25.67	161.50 71,76	16J.09 109.50	87.03	89.26	>52.43
1N/(4W-L7AP)S	41 — PI	20.73	0-00	D=00	B = 40	0.09	18.62	[2].64	155.80	132,58	124.89	120.36	3.35 4.67	******
1N/144-21C015	A-14	14.92	0 * N N 0 = G N	0 - 00	a-hu 6-ne	0.40	15,01	54.56 67.19	73.8A 90.29	65.91 83.20	41.62 65.56	51,43	2.62	J64.26 461.25
JM/14A-5[40]?	4-55	5J.01 14.20	4-0D	#-00 #-00	4.96	U = ##	#.0F 15.38	67.79	88.54 0.00	117,36 82,19	167.86 61.73	88.54 76.54	64.94 2+34	490.91
1M/14W-22M815 1M/14W-22M855	4-[3	226.47 34.52	0.00	0 - 00 0 - 00	4 - 60	0.00	43,64 15.93	250.47	264.07 77.53	251-06	202,42	9.00	148.92	1/12.05
14/14m-22Cols	¥±] U63−4	81.75 86.78	90.0W 33,40	0.00	D.U0	0.00	79.96	215,73	220.69	211.50	214.40	211-07	122,25	1445,13
147 [4 = - 2 4AD 35	6F-13	. E⇒.01	100.90	72.27 21.46	45.74 23.53	9.84 11.84	4.40 32.70	41.95	112.95 66.27	2,64 23,49	90.EL	216.63	137.66 9.80	#29,64 420.65
\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	H-26	510-63	148.45	205.16	197.67	1.08	/1.74 64.85	174.70	164.72	104.45 95.27	159,89	137,28	135,45	1572.28 1620.44
1M/14w-Z4UQ5S 1M/14W-Z4UQ65	H-28 H-29	ស•ប្រ •-ប្ផ	197.55	V.D0	0.44 00.4	75.76	155.60 93.48	456.87	443,98	260.40 272.84	420.22	418,85	404.15	2642.33
1N/14W-24E06S	H-25 C5-52	124.31	120.06	124,47	66.46	D.09	52.34	127-41	133.15	75,53	114.32	101,12	98.71	1137.27
LN/150-0 LK015	NH-15	W.71	U - 60	0.404	0.00	\$+111 \$+45	43,63	0.00	194,33	164-67	0-00 0-00	166,15 22,64	0.00	20.45t ( 24.64
14/12x-01k4+2	MH-36	1.95	0 - 00	0.00 0.00	ត- § កំ ្- ពក្	0-8D	0.00 6.00	11.00	14,96	0.40	9-00	0.40	126.65	145-44 71.90
10/154-01K059 1N/154-01P045	8H-37 8H-25	u.#(I 1.54	111.24	117.10 76.37	0.60	0-00	6_0U 0_00	56.20	71,14	60.79	301,45	343,64	0-00	472.73
14/150-014825 14/154-014035	NH-22 NH-23	1.13	ម្នាធិប្រ មានប្រ	11 - 11 D	0-10	0.09	0,00	0.01 0.01	0.00	94.55	165.56 366.76	200.16	8-0D 6-0B	367.95 617.36
1N/15V-01004S	NH=26	1.63	0.00	0.05	ម - ៤៣	4-40	9.00	0.00	0-00	0.00	44.79	533*31	0.00	277.13
1M/15w-e24u15	NH-32	A*8# 9*60	0 - DU	44°52	0 - 00 0 - 0	0.00	n * a n a * a u	U-01 44 4 4	0.00	11.00	0.00	ñ <b>- #</b> ∂ ≎ • ñ ⊙	6-66	75.13
16/15M-02AQ1S 16/15M-02AQ25	NH-4 NH-33	n-00 0-5¢	0.04 0.04	35,84 45,45	ր-ըս Մանն	0.00	0.00	9.00 0.00	9. <b>0</b> 0	0.40	27.75 35.72	134.09	0.00	197.48 256,28
LS/13H-04K0 S LS/13H-04L02S	P-7	11/07/	4K-44	5,77 10,67	54.44 113.04	25.57	46.37	77.89	130.74	60.15 170.57	55.67 [67.70	49.36	45.43 143.71	572.08 1190.54
19/13W-04L036 19/13W-04L045	P-5	BE . 34	152.44	164,26	166.55	65.63	H6. 7#	184.42	202.30	142-62	175.05	164.47	153.35	1877.78
2H/[44-12C015	TGPLT	44.54	22.75	ك زار و واك	60.67	74.54 43.34	46-50	212.47 69.55	223,83 50.67	147.89	143.76	31.40	18.25	££,\$å[S 2£,d\$d
24/144-130045 24/144-130055	F WRINN NUMBS	ս-գր	0.40	10.65	0.40	0.UJ	p.00	u = 84 0 • 8-8	0-00 0-00	0.00	0.00 0.06	0.00	0.00	10.07
2M/14m-13E025 2M/14m-13E035	OMMHU EJMT 4	0.00	0. PU	0.51 0.24	0.00	0.00	0,00	D.60	0.D0	B. 50	0.00	0.11 0.15	0.00	0.62
2N/14W-13E045 2N/14W-14A015	FIHL? FN#K?	W-00	n * ap	0.80	0.00	U - 60	0,00	D • O O	v.ub	0.00	0.00	0-18	8+14	1,67
TUTALS	· reach ;		2287.39	$\overline{}$	1679.37	0.44	17714 1774	6.00	U.U0	0.00 8712.871	0.00	U.U?	9-14	1.81
10.41			,,,,,	3614		224(6)	1.54.55	2009122	4013643	0175.01	0.00,1.00	z Au i Poli	-a12-21	59 <b>7</b> 01, <b>62</b>
1.05	APPEAR, C	CEY OF (REC	NOA NEWS	)										
19/169-436045	H-10	0.86	¥.44	el a dib	6-57	0.00	0.00	0-40	0.00	0.00	0.00	0.00	4198	31,63
10/160-030835 20/160-27P02S	×-6	84.23 16.80	14,44 14,44	15.30	11.04	0.00	0.00	0.0U	6+50 11*01	0.00	6-08 U-09	0.48	0 - 0 0	307,49 64,64
ZN/]ob-34KB25 ZN/16H-34G02S	H-4	24.77	41,11 41,11	14./6 52.18	34,52	0 = 00 0 - 00	0.00 0.00	0.00	0 - 0 Q	0.00 00.0	0.00	0.00	9.10	77.73
		169,00	167.70	170.41		0,00			0.00		9.00	0.00	<u>\$1,84</u>	(60,35
TOTAL		Legimo	207,70	710147	745 70	0,00	0,00	0.90	0.00	0,00	0,00	0.00	0,00	6 <b>19</b> ,94
MEH	he JIIMW As	БАЙНАШ (J)	a											
2M/[4W-[]MQIS	4973J	u-94*	. G.DH.	0.44	0.1164	0.064	u.04*	U.08*	U + 119#	0+uB+	0.06-	D-48*	D. 08*	0.96
mrsta.		465401	CI/IN Ta							F)	-			_
2N/16W-06JB15	A722-	#330CTR		_	0.694	0.644	0.41*	0.41*	0.65*	0.659	0.62*	0.62-	0.65*	7,15
					4,000	04-7	9271	W-71-	0103	4167	n # 04-	h4 of	8.03-	1119
	HERRI HAN													
24/14=+114015	+485-	1-81-	1.814	1.01.	1.81.	0.00	4.60*	8.00*	Ü • Ģ 1 •	0.00*	9.024	0.00*	0.04-	1.24
SEAL	іъ, морниск	ANU COM	PANT											
14/13#-8040[5	3945-	[3.04*	14:04*	[8.6Hs	14.094	[##BRe	14.08.	14.08*	14.08*	14-06-	14.080	19.000	14.05-	228.96
SUL	MENN SENS	ICE COMP	AleY				4							
1M/13m-20F815		J-36	2.53	2.16	2.62	2.53	2.67	2.61	2.46	2.47	2-42	2.33	2.39	31.37
1M/13w-20F01S		£,44	2.76	2.74	5-25 5-81	2.62	2.75	2.51	2.23 2.35	2.52 2.58	2.41	2.44	2.39 2.57	30.06 31.59
TOTALS		7.31	Ball	H-22	M-1>	7,55	8.29	7.86	7.04	7.57	7.29	7.00	7+35	81.65
			-		-									

TABLE 8-1 WATER EXTRACTION

#### GROUND WATER EXTRACTIONS (CONTINUED) IN ACRE-FEET

PRODUCTION														
STATE :	UE\$16-		1968		1				1969					T TUTAL
: NUMBER :	MATION	: OCT	1 WO≱	I DEC	HAL ;	FEB	RAH 1	1 APR	3 MAY	1 JUNE	1 JULY	. AUG	1 SEPT	1
EDA	DIGMANS I	DUGE, INC	· Augunali	· n										
				_					1 7.					
3N\12m-S20012	1	9.17	4.17.	9.174	9.17*	9.17*	9,17*	9.17 <del>-</del>	4-37*	4,174	9.174	9.17=	9-17-	110,04
TOL	JUA LAKE	PHOPENTY	OWNERS A	LSSN										
1W/14W-20Ho1S		W . 100		_	0-48*	0.00*	0,00*	0.68*	8,48*	7.30*	6.12-	4.93*	3.65*	30.40
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4	****					0100	2000	0110	,,,,,,	41.46-	7873-	3003-	34,140
VALI	HALLA MEM	ORIAL PA	erc											
1M/14W-04ND35	4	7.46		7.67	1.00*	1.40*	1.06*	17.00-	19.80*	13.6B	28.85	25,71	29,69	151.73
1N/14#-09D065	. 5	4 . 25	0.254	0.25	0.08*	0-004	6.90*	0.70*	0.90*	1.40	2.41	5.98	2.69	14-83
TOTALS		r•91	7.92	7.92	1 - 00	3.04	1,06	17.70	11-70	15.00	31.26	31.69	32.38	164.56
****	an mode													
	DE KAMPS	HOLLAND			•									
15/13#-846015	1	4.554	3.694	3.81-	3.62*	3.44*	0.60*	4.10	0.10	0.10	0.65	4.61	0.35	22.02
WALT DISNEY PRODUCTIONS														
,				£3.40										
3N/14W-23E01S 1N/14W-23E02S	east Wesy	56.36 25.601	45.38 62.12	57.49 66.10	51.10 56.75	52.92 68.04	61.93 72.20	46.29 54,56	4 <b>3.78</b> 69.97	41.96 88,58	58.24 149.04	73.11 113.52	39.47 121.13	614.01 1629.20
TOTALS		154.56	107.50	123.59	107.85	121.01	134.11	104.85	114.75	130.46	194.26	186-63	160,60	1043,21
											••••			104-10.
WRIGHT - J HANTON AND ALICE H														
1M/13W-32E02S	3937F	U-854	8-534	0.44	0.184	0.00-	8.29*	0.490	y=65+	0.72*	1.120	1,334	0-444	7.04
	_			-										
Sturctals Say Peru	ando basin	5809.4S		4089.67	. seen on	1987,68		8018,72	****	11649.37	-1-0	13169.20		
			4330,6	ь	3605.85		<b>3621.</b> 17		12182.7	L	14983.87		8328.77	91785.07
						SYLM	AR BAS	SIN						
8015	E CASCAD	E HUTTDIN	IS COMPAN	ΙÝ										
34/124-524012	,	U-46*		_	0.31*	0.31*	0.31*	0.31*	ų.31÷	0.46*	9.444	0.46*	0.46*	4.47
3N/15V-250015	3	U.78*			0,82+	9-62-	0,82*	0.82*	1.06=	1.04	0.644	0.64*	0.750	10.0)
TOTALS		1-24	1-61	1-61	1-13	1.13	1:13	1.13	1.37	1.52	1-10	1-18	1.21	15.28
CHU	CH OF JE	SUS CHRIS	TOFLO	SAINTS										
3N/15W-20R0IS	1	48.36*	16.154	0-004	0+00*	0.00*	8-48-	23.29*	46.57*	44.78*	46,574	46.574	44.584	318,84
Los	ANGELES:	CITY OF												
ZN/15W-04 5	MISSN	4.84	0.08	0-00	0-00	0.00	0.00	216.63	273.83	447,54	438.64	419.51	414.44	2210.81
E pas	gedn imus	CITY OF												
				# b		<b>4.</b>			44				_	
34/154-34A01\$ 34/154-34B01\$	ž	3y.94 22.36	25,91 25,91	31.03 60.16	34.67	31.50 8.54	17,18	34.16 10.15	44,65	41.64 20.14	52,71 55,36	64,49 73,79	59.98 52.57	480.62 317.91
3M/15W-34C015 3M/15W-34H015	3 5	151.02	153,46 0.00	93.5 <del>9</del> 8-00	114,91 0-00	0.00	0.00	150.B8 0.00	161.72	1.62		147.38	150.62	1691.03
3N/15H-34Kd45 3N/15H-34P01S	7	<b>b.87</b> 2c.76	18.90	18.52 16.18	6.75 15.49	11.08	- 1.97	9.69 17.14	15-11 19-91	23,34	39.01	44-08	27.26	215.44
3M/15H-34P078	ê	4.52	4+62	4.58	4.58	3,55	16.30	4.57	5.61	4-03	23.95 7.45	7,72	6,22 6,22	22 <b>8.18</b> 63.65
TOTALS		250.47	214.93	197,49	124.84	149.95	195,58	226.79	291.22	E0.075	346.88	379.82	325+49	3422.69
BUTCHALS -														
STLIGHT THE		300.07	232.66	169,10	185.97	151.0B	196.71	468.0h				847,00	787.74	5567.68

TABLE B-1
GROUND WATEN EXTRACTIONS
1CUNTINUED)
IN ACHE-FFET

	STATE		OWNERS	19	09				PROD	UC1 10H				
8	MELL	1	DESIG- NATION		0V 1	DEC :	JAN	I FEd	s MAPI	I APR	I MAY	1 JUNE 1 JULY	I AUG I SEPT	TOTAL

#### VERDINGO BASIN

GNESCENTA YALLEY COUNTY WATER DIST														
1N/13M-83D056 2N/13M-28M015 2N/13M-29F825 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015 2N/13M-33C015	9 2 4 7 1 1 14 6 10 12 0 0 0 12 0	7.27 30.42 1.55 24.75 40.42 0.54 57.85 34.53 34.53 34.53 6.00 73.15 0.00 4.62	4.37 33.41 2.21 20.37 45.46 8.15 51.43 24.98 8.03 0.88 68.40 4.74 4.50	7-87 20-81 8-32 13-99 14-09 14-09 19-18 0-29 0-46 9-45 4-49	9.76 25.97 6.36 19.36 19.36 0.00 45.24 13.67 0.00 42.76 0.00 43.76	4-29 12-79 1-89 0-89 0-74 43-15 20-18 0-80 46-43 0-80 0-74	11.37 11.53 1.91 3.24 34.99 9.00 47.13 31.08 9.56 63.47 6.00 6.20	29.33 21.76 3.55 13.85 28.85 0.84 41.50 48.97 2.97 5.99 67.94 0.88 7.76	34.17 31.98 5.10 14.03 41.86 62.67 45.48 34.62 53.77 4.52 4.00 8.97	27.00 28.44 0.96 13.63 26.95 0.44 47.48 43.98 18.93 74.31 0.74 18.35 13.06	41-W7 36-96 16-15 48-18 0-80 44-49 48-44 46-49 48-49 9-83 14-56	41.09 39.47 3.80 15.24 52.96 6.00 68.80 47.11 48.44 58.11 3.42 17.41	8.97 22.51 6.97* 4.14 31.48 5.97 46.64 20.46 19.20 9.05 01.07 9.09 7.43 16.50	220-42 320-19 51-76 150-42 449-15 024-39 380-380 105-27 14-75 4-39 49-10 112-92
TOTALS		280.60	291-12	220.02	14.582	163.28	216.62	262.42	337.30	292.84	354.04	397.05	272.76	3287.34
SLENDALE, CITY 0+														
1M/134-10F S 1M/134-15P S	GL3-4 VPCKP	174.00	111-88	173-88	138.00	114-00	135,00	128-00	176-00	154,00	173-69 134.72	175.56	169.61 129.72	1989.88
TOTALS		580.08	514-00	292.00	270.00	217-00	291.00	277.00	312.88	207.00	300.41	307.55	209.33	3430,29
ag objecty Ag objecty	ŝ <b>T</b> II	576.60	530.12	512.02	<u>\$72.61</u>	380.eB	507.B2	539.92	649.30	579,84	692,45	704.60	24.03	6727,65
SRAND TOTALS	6680.09	<u> </u>	<u> 1790 - 79</u>	4264.43	<u>2519,04</u>	4325.70	9017-12 1	<u>3454.56</u> 1	2993,88	<u>6388+7)</u>	4720,40	9 <b>646.5</b> 8	104070-34	