

SAN GABRIEL RIVER WATERMASTER

FOR

CITY OF LONG BEACH, et al., vs. SAN GABRIEL VALLEY WATER CO., et al.

CASE No. 722647 — LOS ANGELES COUNTY

FOURTH ANNUAL REPORT OF

**SAN GABRIEL RIVER
WATERMASTER SERVICE**

1966-67

February 29, 1968

SAN GABRIEL RIVER WATERMASTER

FOR
CITY OF LONG BEACH ET AL VS SAN GABRIEL VALLEY WATER CO.
CASE NO. 722647—LOS ANGELES COUNTY

WATERMASTERS
MAX BOOKMAN
M. E. SALSBUURY
THOMAS M. STETSON

February 29, 1968

MAILING ADDRESS
SECURITY BLDG., ROOM 604
102 N. BRAND BLVD.
GLENDALE, CALIF. 91203
TELEPHONE: 245-1883

To: Clerk of Superior Court of Los Angeles County
and All Parties

Re: Watermaster Report for 1966-67 Water Year

Gentlemen:

There is transmitted herewith the report of the San Gabriel River Watermaster for the water year 1966-67 which has been prepared in accordance with the Judgment in this case entered September 24, 1965.

This report covers the fourth year of operation under the Judgment, the first having been for the water year 1963-64. It is interesting to note the progress during those four years.

The commencement of the operating period in 1963-64 followed a series of relatively dry years. The rainfall for 1963-64 in the San Gabriel Valley was only 9.45 inches, wherein the average is 18.52 inches. While the Lower Area Annual Entitlement for 1963-64 was 67,200 acre-feet, Usable Water received was only 40,975 acre-feet, leaving an Upper Area deficiency for that year of 26,225 acre-feet. In 1964-65 the Accrued Debit of Upper Area grew to 46,227 acre-feet.

The past two years (1965-66 and 1966-67) have been average in rainfall in the valley (19.61 inches and 25.03 inches respectively). While these larger amounts of precipitation have had the effect of somewhat increasing the Lower Area Annual Entitlement they have also had the much greater effect of increasing the Usable Water available to the Lower Area thereby decreasing the Upper Area requirement for Makeup Water. The above average rainfall considerably increased the amounts of Usable Water and this, augmented by the three-year total of 49,009 acre-feet of Makeup Water delivered by the Upper Area, has reduced the current Accrued Debit to only 7,425 acre-feet.

Clerk of Superior Court of
Los Angeles County and
All Parties

-2-

February 29, 1968

The principal Watermaster findings for the water year 1966-67 are as follow:

	<u>Acre-feet</u>
Lower Area Annual Entitlement	78,700
Usable Water received by Lower Area	80,778
Accrued Debit of Upper Area as of September 30, 1967	7,425
Minimum amount of Makeup Water required to be delivered prior to October 1, 1968	2,475

A complete summary of findings is contained in Chapter V of this report.

We again gratefully acknowledge the cooperation and data furnished by the Los Angeles County Flood Control District and others.

Very truly yours,

SAN GABRIEL RIVER WATERMASTER

By:

Max Bookman
Max Bookman

M. E. Salsbury
M. E. Salsbury

Thomas M. Stetson
Thomas M. Stetson

Encl.

TABLE OF CONTENTS

	<u>Page</u>
CHAPTER I. ACTIVITIES OF WATERMASTER	
History of Litigation	2
Watermaster Operations	4
Administration	5
Data Collection	7
Field Inspection	7
Preparation of Annual Report	8
Delivery of Makeup Water	9
Stream Gaging Stations	9
Miscellaneous Activities	10
Transfer of Water Rights	11
CHAPTER II. LOWER AREA ANNUAL ENTITLEMENT	
CHAPTER III. USABLE WATER	
Surface Flow	14
Rio Hondo above Mission Bridge, Station F64-R	14
Mission Creek at San Gabriel Boulevard, Station F83-R	14
Rio Hondo Bypass Channel, Station F313-R	14
Whittier Narrows Flood Channel, Station E337-R.	15
Sycamore Canyon	15
San Gabriel River at Point of Maximum Rising Water	16
Reclaimed Water Delivered to Rio Hondo	17

TABLE OF CONTENTS (Cont'd)

	<u>Page</u>
Other Inflow	18
Summary of Surface Flow	19
Subsurface Flow	20
Export to Lower Area	21
Lower Area Replenishment Water	22
Reclaimed Water	23
Makeup Water	23
Recirculation of Measured Water	23
Unusable Surface Flow	24
Determination of Usable Water	25
CHAPTER IV. ACCRUED DEBIT, MAKEUP WATER AND LONG-TERM ACCOUNTING	
Prior Year Determinations	27
Revised Data	27
Delivery of Makeup Water	30
Accrued Debit and Requirement for Makeup Water for 1966-67	31
Long-term Accounting	33
CHAPTER V. SUMMARY OF FINDINGS FOR WATER YEAR 1966-67	

TABLE OF CONTENTS (Cont'd)

TABLES

<u>Table No.</u>		<u>Page</u>
1	Watermaster Budget for the Water Year 1967-68	6
2	Rainfall in San Gabriel Valley 1957-58 through 1966-67	13
3	Summary of Surface Flow through Whittier Narrows for Water Year 1966-67	20
4	Usable Water for Water Year 1966-67	26
5	Summary of Revised Findings for Water Year 1965-66	29
6	Summary of Operation Under Judgment	32

PLATES (Following Text)

<u>Plate No.</u>	
1	Stream Gaging Stations, Rio Hondo-San Gabriel River System
2	Map of Whittier Narrows

APPENDIX

	<u>Page</u>
Letter dated October 2, 1967, Upper San Gabriel Valley Municipal Water District to Central Basin Municipal Water District requesting information on the quantities of Reclaimed Water purchased in water year 1966-67	A-1
Letter dated October 6, 1967, from Central Municipal to Upper District in reply to above item	A-2
Letter dated January 22, 1968, from R. J. Galletly, CPA, concerning audit of Watermaster funds	A-3

TABLE OF CONTENTS (Cont'd)

	<u>Page</u>
San Gabriel River Watermaster Statement of Income and Expenditures for the Water Year 1966-67	A-4
Letter dated June 23, 1967, from the San Gabriel River Watermaster to All Parties reporting the transfer of Water Rights of California Water and Telephone Company to California-American Water Company	A-5
Selected Water Quality Analysis of Reclaimed Water from the Whittier Narrows Water Reclamation Plant	A-7

CHAPTER I. ACTIVITIES OF WATERMASTER

The San Gabriel River runoff after discharging from the San Gabriel Mountains flows across the large ground water basin underlying the main San Gabriel Valley, then joined by runoff from rainfall on the valley floor, passes through the Whittier Narrows and crosses the ground water basin underlying the Coastal Plain of Los Angeles County. Recharge of the important ground water supplies is thus provided by the San Gabriel River to both the San Gabriel Valley and the Coastal Plain. As a result of the Judgment in the case of City of Long Beach, et al., vs. San Gabriel Valley Water Co., et al., the water supply available to these two ground water basins was adjudicated by establishing the entitlement to Usable Water that the Lower Area should receive through Whittier Narrows. As a result both the upper and lower ground water basins can and have initiated independent plans for management and protection of the ground water supplies within their respective basins. This accomplishment is unique in the State of California.

The Judgment in the case of City of Long Beach, et al., vs. San Gabriel Valley Water Co., et al., provides for the establishment of a Watermaster and requires that he submit an annual report. Again presented in this fourth annual report is a brief history of the litigation and a summary of the activities of the San Gabriel River Watermaster. Also included is a determination of the Lower Area Annual Entitlement, Usable

Water, Accrued Debit and the Makeup Water required to be delivered by the Upper Area.

History of Litigation

On May 12, 1959, a complaint was filed in the Superior Court in and for the County of Los Angeles, Case No. 722,647, by the City of Long Beach, the Central Basin Municipal Water District, and the City of Compton. The defendants were 24 of the major producers of water in the Main San Gabriel Basin and the Upper San Gabriel Valley Municipal Water District. The purpose of the suit was to determine the rights of the parties to waters of the San Gabriel River system and to provide for protection against interference with the rights of the Lower Area Parties.

In an effort to reach a physical solution, two negotiating committees of five members each were appointed, one to represent the plaintiffs and one to represent the major group of defendants. Attorneys, engineers and geologists were utilized as advisors to the negotiating committees and on September 26, 1961, a statement of "Principles for Settlement" was executed. There followed a period of study and negotiations in order to arrive at a fair and equitable physical solution to the problem.

On August 24, 1964, the Upper San Gabriel Valley Municipal Water District intervened in the action. The purpose of intervening in the action

was to enable the District to assume the responsibilities of the Upper Area under the terms of the Judgment. In order to reimburse the District for its expenses in so doing, a Reimbursement Contract was entered into by the District and all of the defendants and certain other producers of water from the Upper Area.

A proposed Stipulation for Judgment and Judgment were approved by the joint negotiating committees on December 7, 1964, and thereafter were approved by all parties. On September 24, 1965, Judgment was entered by Judge Edmund Moor.

A Judgment provided that the Lower Area Average Annual Entitlement would be a usable supply of 98,415 acre-feet. However, due to fluctuations in rainfall, the Lower Area Annual Entitlement in any particular year is allowed to vary from the average in accordance with rainfall received in San Gabriel Valley during the ten preceding years. The components of usable supply are Surface Flow, Subsurface Flow and Export to Lower Area. Deficiencies in the Lower Area Annual Entitlement are to be satisfied by the Upper District as Makeup Water. The effective date of the Judgment was October 1, 1963.

The Judgment provided for the appointment of a three-man Watermaster, one to represent the Upper Area, one to represent the Lower Area, and the third to represent both areas. On November 12, 1965, the three-man Watermaster was appointed and certified by the Court. The Upper Area is represented by Thomas M. Stetson, the Lower Area by Max Bookman, and both areas by M. E. Salisbury.

Plate 1, entitled "Stream Gaging Stations, Rio Hondo-San Gabriel River System," shows the general vicinity of the Whittier Narrows area. Plate 2, entitled "Map of Whittier Narrows," shows in detail the channels and facilities in the Whittier Narrows area.

Watermaster Operations

The activities of the Watermaster include administration of operations under the Judgment; the performance of field inspections, collection of data and maintenance of records; analysis of data and preparation of the annual report; and the maintenance of records on the transfer of water rights. All operations and reports are based on the "water year," which is from October 1 to September 30.

The Judgment requires that the Watermaster make the following determinations each year:

1. The number of inches of depth of average rainfall on San Gabriel Valley.
2. The average annual rainfall on San Gabriel Valley for the ten consecutive water years ending with the year of calculation.
3. The Lower Area Annual Entitlement and the entitlement for the Long-term Accounting Period.
4. The amount of Surface Flow through Whittier Narrows.

5. The amount of Subsurface Flow.
6. The amount of Export to Lower Area.
7. The Amount of Lower Area Replenishment Water.
8. The amount and quality of Reclaimed Water reclaimed by
or on behalf of Lower Area.
9. The total amount of Makeup Water delivered to Lower Area.
10. The surface outflow from Montebello Forebay in the channel
of each of the Rio Hondo and San Gabriel River.
11. The amount of Usable Water received by the Lower Area.
12. The Accrued Debit of Upper Area, if any, or Accrued Credit
of Upper Area, if any, as it exists at the end of each water
year.
13. The amount, if any, of Makeup Water which Upper District
is obligated to deliver during the following water year.

Administration

The official office and depository of records of the Watermaster is at 102 North Brand Boulevard, Glendale, California, and such records are available for inspection at the request of any party.

A tentative budget for the water year 1967-68 was transmitted to the parties on June 23, 1967. After fifteen days, there being no objections thereto, the tentative budget became the final budget and is set forth in Table 1.

TABLE 1
WATERMASTER BUDGET
FOR THE
WATER YEAR 1967-68

1. Administrative fees of Watermaster and general operating expenses	\$ 3,000.00
2. Field inspections	1,400.00
3. Collection of data and maintenance of records	5,000.00
4. Calculations and preparation of Watermaster Report for Water Year 1966-67	3,500.00
5. Printing and reproduction costs	600.00
6. Contingencies	<u>1,000.00</u>
TOTAL	\$ 14,500.00
Less estimated carryover from 1966-67	<u>500.00</u>
Balance to be financed for 1967-68	\$ 14,000.00

Proration for Payment Purposes

Upper San Gabriel Valley Municipal Water District	50%	\$ 7,000.00
Central Basin Municipal Water District	41.2%	5,768.00
City of Long Beach	7.125%	997.50
City of Compton	1.675%	<u>234.50</u>
TOTAL		\$ 14,000.00

An audit of expenditures of the Watermaster for the preceding water year was obtained. This audit was performed by R. J. Galletly, CPA, and a letter from the auditor dated January 22, 1968 presenting the auditor's findings and showing the income and expense is included in the appendix.

Data Collection

The Watermaster collects data on stream flow, rainfall, water quality, ground water levels, export of water, reclaimed water, replenishment water, and other information as required. The principal source of data is the Los Angeles County Flood Control District. Copies of records were obtained from the District, and many conferences were held between Flood Control District personnel and Watermaster personnel in order that the Watermaster would be fully informed on the facts necessary to the determinations required by the Judgment. Other data were obtained from the Metropolitan Water District, the County Sanitation Districts, the Central and West Basin Water Replenishment District, the Upper San Gabriel Valley Municipal Water District and the U.S. Geological Survey.

Field Inspection

A number of field inspections were made of stream gaging facilities in the Whittier Narrows area. On May 2, 1967, the Watermaster, accompanied by representatives of the Los Angeles County Flood Control District and the U. S. Geological Survey, conducted a detailed inspection of all stream gaging stations in the Whittier Narrows area.

During the 1966-67 water year two separate construction activities influenced the flow of water in the Whittier Narrows and Montebello Forebay. Periodic inspection trips were made to determine the effect of the construction on the flow of water. One of these activities included the construction of a plastic lining in Legg Lake by the County of Los Angeles. Due to high ground water conditions a large volume of water was pumped from the construction area. The discharge of this water is discussed in Chapter III. The other major construction activity was reconstruction of the San Gabriel River between Whittier Narrows Dam and a point south of Florence Avenue by the Corps of Engineers. The effect of this construction on the determination of usable water will also be discussed in Chapter III.

Since a primary item in evaluating the water conditions is the rainfall, an inspection was made by Watermaster personnel of the four San Gabriel Valley rainfall stations used in determining the average annual rainfall. Photographs were taken, sketches made and operation was discussed with the observers. It is planned that these stations be inspected periodically.

Preparation of Annual Report

One of the required functions of the Watermaster is the preparation of the annual report. The Judgment provides that a report be prepared and submitted within five months after the end of each water year. This report covers the fourth year of operation under the Judgment - the water year 1966-67.

Delivery of Makeup Water

The Upper District was required during the 1966-67 water year to deliver to Lower Area a minimum of 7,983 acre-feet of Makeup Water out of an accrued debit of 23,948 acre-feet. The Upper District elected to reimburse Central Municipal by payment in the amount of \$224,708.75, for 14,735 acre-feet of reclaimed water at a price of \$15.25 per acre-foot. This payment was made on September 27, 1967.

Stream Gaging Stations

The Watermaster maintained contact with the Los Angeles County Flood Control District and the U. S. Geological Survey regarding operation of stream gaging stations in the vicinity of Whittier Narrows. There is concern about the accuracy of the gaging station on Whittier Narrows Flood Channel, Station E337-R. In the report of the Watermaster for 1965-66 it was stated on page 15 that: "A review of the U. S. Geological Survey record of flow for Station E337-R indicates that the calculated flow may be inconsistent with other gaged quantities. The Watermaster intends to conduct an extensive review of all data pertinent to Station E337-R, but the record as presently available is being used for the determinations of this report. When this review is completed, the Watermaster may amend his findings presented herein in the next annual report." The review of pertinent data has been undertaken and is continuing but as yet no conclusions have been reached. The problem involves physical conditions within Whittier Narrows Reservoir as well

as uncertainties regarding future routing of conservation flows through the Reservoir and the extent of any increased storm operation pool on the Rio Hondo side. The Watermaster is aiding in the solution of the problem and intends to resolve it, at least so far as the making of satisfactory surface flow measurements is concerned, during the next year.

Gaging stations on the San Gabriel River below Whittier Narrows Reservoir are being changed as part of the channel improvement by the Corps of Engineers. The Watermaster has kept informed on the progress of this work and has also kept informed regarding water measurement during the construction period.

The Watermaster, by letter dated January 24, 1967, to the Los Angeles County Flood Control District, requested that the existing gage at Beverly Boulevard be operated for a period of time subsequent to the installation of the new gage at Parkway Bridge. By letter of January 30, 1967, the Flood Control District advised the Watermaster that this request will be granted.

Miscellaneous Activities

The Watermaster in 1966 made a study of the availability of wells having water level data which can be utilized in calculating the Subsurface Flow at Whittier Narrows. In making this inventory it was concluded that a survey of reference point elevation should be made. Since the elevation of the water surface at each well is critical in determining the slope of the underground water table, the Watermaster in July 1967 had

a level circuit run to 22 wells in the near proximity of the narrowest section of Whittier Narrows.

Transfer of Water Rights

In event of a change in ownership of any of the Defendants in the case, the Judgment requires that such transfer shall be made in writing to the Watermaster. The Watermaster is then required to notify all parties of certain details regarding the transfer. Ownership of the water system of California Water and Telephone Company was transferred to California-American Water Company. The Watermaster was notified by letter of February 13, 1967 that such transfer had occurred in March 1966. Subsequent letters provided the Watermaster with the information required by the Judgment. By a letter dated June 23, 1967 the Watermaster notified all parties of the transfer. Included in the appendix to this report is a copy of the Watermaster letter of June 23, 1967.

CHAPTER II. LOWER AREA ANNUAL ENTITLEMENT

The Lower Area Annual Entitlement for the water year 1966-67 is based on the average annual rainfall which occurred in the 10-year period ending with water year 1966-67 and the corresponding entitlement shown in Table A of the Judgment. Four precipitation stations in the San Gabriel Valley are utilized to determine the average annual precipitation for San Gabriel Valley. The four stations are located at San Dimas, Walnut, El Monte and Pasadena. These stations were inspected by the staff of the Watermaster during the past water year as discussed in Chapter I.

Precipitation during the 1966-67 water year at the four locations was as follows:

<u>Station number</u>	<u>Location</u>	<u>Depth of precipitation, in inches</u>
95	114 East First Street, San Dimas	25.96
102C	19711 East Valley Blvd., Walnut	22.91
108D	119 South Hoyt Avenue, El Monte	25.19
610B	City Hall, Pasadena	<u>26.05</u>
	Average Rainfall	25.03

Shown following is the calculation of the 10-year average rainfall in the San Gabriel Valley for the water years 1957-58 through 1966-67.

TABLE 2
RAINFALL IN SAN GABRIEL VALLEY
1957-58 Through 1966-67

<u>Water year</u>	<u>Rainfall, in inches</u>
1957-58	30.2
1958-59	8.5
1959-60	10.6
1960-61	5.9
1961-62	22.4
1962-63	12.3
1963-64	9.4
1964-65	15.2
1965-66	19.6
1966-67	<u>25.0</u>
Total	159.1
10-year average	15.9

Based on the 10-year average rainfall of 15.9 inches, the Lower Area Annual Entitlement for the water year 1966-67 is 78,700 acre-feet, determined from Table A of the Judgment.

CHAPTER III. USABLE WATER

Presented in this chapter is the determination of the quantity of Usable Water received by the Lower Area during the water year 1966-67.

Surface Flow

The items to be included in Surface Flow through Whittier Narrows are described in Part III.A. of Exhibit B of the Judgment. The Surface Flow is, for the most part, based upon stream flow measurements made by the Los Angeles County Flood Control District. With the exception of the staff gage located on the San Gabriel River at the point of maximum rising water, all stream gaging stations were equipped with continuous recorders. Insofar as can be determined these recorders were all operating normally during 1966-67 with the exception of Station E337-R and the gage on the San Gabriel River which was affected by construction work.

Rio Hondo above Mission Bridge, Station F64-R

The measured flow at Station F64-R for the water year 1966-67 was 85,810 acre-feet.

Mission Creek at San Gabriel Boulevard, Station F83-R

The measured flow at Station F83-R for the water year 1966-67 was 2,340 acre-feet.

Rio Hondo Bypass Channel, Station F313-R

No water flowed through the channel at this gage during the water year 1966-67.

Whittier Narrows Flood Channel, Station E337-R

The U. S. Geological Survey, which operates Station E337-R, reported a flow of 5,855 acre-feet for the water year 1966-67. This flow was calculated by Flood Control District personnel and by U. S. Geological Survey personnel. The recorder at the station was determined to be operating incorrectly for a portion of the water year. Flow past the gage occurred on four separate days. The volume of water was calculated by use of measurements at adjacent stations, and use of observed stages at Station E-337-R. These calculations were reviewed by the Watermaster and found to be reasonable.

During the 1966-67 water year there was construction work on the San Gabriel River and at Legg Lake. These activities resulted in additional components of flow in the vicinity of the Whittier Narrows Flood Channel. These items are discussed later under the heading Other Inflows.

Sycamore Canyon

The runoff from Sycamore Canyon which flows through Whittier Narrows is based on precipitation at Potrero Heights (Station 170D). Sycamore Canyon is located in the Merced Hills westerly of the Whittier Narrows and enters the Rio Hondo below Station F64-R, Rio Hondo above Mission Bridge. During the water year 1966-67 the precipitation at that station was 23.80 inches. Referring to Table 6 of Exhibit B, the runoff from Sycamore Canyon was determined to be 400 acre-feet.

San Gabriel River at Point of Maximum Rising Water

Prior to the installation of a new gage near Parkway Bridge, the Watermaster is required to use the record of flow from the station at Beverly Boulevard (F263B-R), which is located about two-thirds of a mile downstream from Parkway Bridge. The Watermaster then determined the amount of water which percolates between that station and the point of maximum rising water and added that amount to the recorded flow at Beverly Boulevard. The percolation is based on periodic measurements at the point of maximum rising water (F86-S)

As discussed earlier there was construction work underway in the San Gabriel River during 1966-67. This work started about June 1, 1967 and is still in progress. Prior to June 1 the gaging station at Beverly Boulevard (F263B-R) was in continuous operation. For the eight months of October 1966 through May 1967 the measured quantity of water at Beverly Boulevard was 61,010 acre-feet. Percolation between the point of maximum rising water and Beverly Boulevard for the eight months was determined to be 3,740 acre-feet making the total flow for eight months of 64,750 acre-feet.

On June 1, 1967 the gates at Whittier Narrows Dam on San Gabriel River were closed to provide protection to the contractor working downstream. The construction work involved a large amount of excavation and the station at Beverly Boulevard became inoperative. Measurements were made on a weekly basis at the point of maximum rising

water (Station F86-S). Since flows were uniform, with one exception which will be discussed later, and on the order of ten cubic feet per second daily, values were obtained by interpolating between weekly measurements. The flow for the four months of June through September was determined to be 2,270 acre-feet at the point of maximum rising water.

On September 1, 1967 a storm occurred. The storm was of sufficient magnitude that water was impounded behind the gates of the Whittier Narrows Dam. These gates are not equipped with seals. The Flood Control District has developed a rating curve of reservoir elevation and amount of leakage through the gates. Using the record of elevation of water above the gates the amount of leakage was estimated for each day until September 6, at which time all of the water had drained through the gates. This quantity of water was determined to be 80 acre-feet and is additive to the other flow.

The total flow determined to occur at the point of maximum rising water for the 1966-67 water year was 67,100 acre-feet.

Reclaimed Water Delivered to Rio Hondo

Water from the Whittier Narrows Water Reclamation Plant is delivered to either the San Gabriel River or Rio Hondo. Of the total production of 16,320 acre-feet of Reclaimed Water during the 1966-67 water year, 14,204 acre-feet was delivered to the Rio Hondo, and of the latter amount 3 acre-feet was included with the storm flow measured

at Station E337-R. Thus, 14,201 acre-feet was delivered to the river below the F64-R gage and must therefore be added as Surface Flow. Reclaimed Water in the amount of 2,116 acre-feet was delivered to the San Gabriel River above the gaging station and is included in the measurement at Beverly Boulevard. Reclaimed Water lost to the ocean during storm operations is not paid for by the Central and West Basin Water Replenishment District. The losses during the year were 96-acre feet, resulting in a purchase of Reclaimed Water of 16,224 acre-feet.

Other Inflow

During the 1966-67 water year, ungaged surface water entered the Coastal Plain in the vicinity of Rosemead Boulevard and the Whittier Narrows Flood Channel due principally to construction work in the vicinity of the Whittier Narrows.

Legg Lake was drained during the water year in order that an impermeable bottom could be installed. It was necessary for the contractor to pump for a number of months to lower the ground water table during construction. A large amount of this water was pumped into Mission Creek and was measured at Station F83-R. Other water was pumped into adjacent fields and allowed to infiltrate. During August and September 1967, the contractor pumped water into the Rio Hondo By-Pass Channel in which reclaimed water was flowing. The Reclaimed Water is measured before it is put in the By-Pass Channel. The amount of water from Legg Lake which was diverted by the contractor

to the channel was determined by the hydrographer of the Flood Control District to be 762 acre-feet. This water entered the Lower Area.

The contractor on the San Gabriel River, in an effort to create dry working conditions, installed pumps upstream of Whittier Narrows Dam and diverted some of the San Gabriel River water to the Rio Hondo via the Flood Channel. Frequent measurements of these operations were made by the hydrographer of the Flood Control District. These measurements show that during the 1966-67 water year the pumping by the contractor caused 329 acre-feet of water to flow ungaged into the Lower Area.

The total amount of ungaged surface flow for the 1966-67 water year was determined to be 1,091 acre-feet.

Summary of Surface Flow

Shown in Table 3 are the amounts of Surface Flow passing through Whittier Narrows during the water year 1966-67, which total 176,797 acre-feet.

TABLE 3

SUMMARY OF SURFACE FLOW THROUGH WHITTIER NARROWS
FOR WATER YEAR 1966-67

<u>Point of measurement</u>	<u>Amount in acre-feet</u>
Rio Hondo above Mission Bridge, Station F64-R	85,810
Mission Creek at San Gabriel River, Station F83-R	2,340
Rio Hondo By-pass Channel, Station F313-R	0
Whittier Narrows Flood Channel, Station E337-R	5,855
Sycamore Canyon	400
San Gabriel River at point of maximum rising water	67,100
Reclaimed water delivered to Rio Hondo Channel below Station F64-R	14,201
Other inflow	<u>1,091</u>
Total Surface Flow	176,797

Subsurface Flow

The method utilized to determine Subsurface Flow through Whittier Narrows is set forth in Exhibit B of the Judgment. The data used for computing Subsurface Flow are the spring and fall ground water levels in Whittier Narrows.

As discussed in Chapter I, the Watermaster had levels run to the reference points of selected critical wells in the Whittier Narrows area so that water surface elevations could more accurately be determined. A corrected reading in elevation for a well led to a revision of

the data for the spring and fall of 1966. The Subsurface Flow for any year is the average of the six spring and fall computations of Subsurface Flow for the three years ending with the year of calculation. Shown in the following tabulation is the result of those calculations and the computations of Subsurface Flow for the water year 1966-67, which is 17,500 acre-feet.

<u>Time</u>	<u>Subsurface flow in acre-feet</u>
Spring 1965	16,400
Fall 1965	13,300
Spring 1966	15,800
Fall 1966	13,400
Spring 1967	20,900
Fall 1967	<u>25,200</u>
Subsurface Flow 1966-67	17,500

Export to Lower Area

The Watermaster is required to determine the amount of water which is pumped from ground water or diverted from surface streams in the Upper Area and transported in conduits through Whittier Narrows.

During water year 1966-67 there are three entities which transported water via pipeline through Whittier Narrows. They are the California Domestic Water Company, Suburban Water Systems and the City of Whittier. The Judgment provides that commencing in the water year 1966-67 the maximum export which may be used for the determination of usable water shall not exceed 23,395 acre-feet. Since

reports are made by these exporters to the Upper San Gabriel Valley Municipal Water District, and the Watermaster receives copies of these reports, it was determined that there was no need to require filing separate reports to the Watermaster. The total export for each of the exporters in water year 1966-67 is shown below:

<u>Exporter</u>	<u>Export to Lower Area in acre-feet</u>
California Domestic Water Company	12,204
Suburban Water Systems	11,574
City of Whittier	<u>8,195</u>
Total	31,973

Lower Area Replenishment Water

The Lower Area purchases replenishment water from The Metropolitan Water District of Southern California. Deliveries were made during water year 1966-67 from Metropolitan's Middle Feeder at two connections: (1) San Gabriel River north of the San Bernardino Freeway (M335-R) and (2) Alhambra Wash (M340-R). The Live Oak Wash turnout was not used during the year. All connections are metered and delivered amounts are recorded by the Metropolitan Water District. During water year 1966-67 the amount of imported water purchased for replenishment by or on behalf of the Lower Area Parties was 46,382 acre-feet at Alhambra Wash and 37,859 acre-feet at the San Gabriel River, a total of 84,241 acre-feet.

Provision is made in the Judgment for the deduction of evaporation losses from the metered releases of replenishment water. The calculated amounts of evaporation are 20 acre-feet on the Alhambra Wash releases and 65 acre-feet on San Gabriel River releases, or a total of 85 acre-feet.

The net replenishment water, after deducting evaporation, is 46,362 acre-feet on the Rio Hondo and 37,794 acre-feet on the San Gabriel River, or a total net amount of 84,156 acre feet.

Reclaimed Water

The total amount of Reclaimed Water produced was 16,320 acre-feet. During storm periods 96 acre-feet of the Reclaimed Water delivered to the Rio Hondo or San Gabriel River flowed past the Montebello Forebay. The total amount of Reclaimed Water purchased in the water year 1966-67 was therefore 16,224 acre-feet. A typical chemical analysis of the Reclaimed Water is included in the Appendix.

Makeup Water

During the water year 1966-67 the Upper Area purchased no Metropolitan Water District water for delivery to the Lower Area as Makeup Water. All makeup requirements were fulfilled by payment for Reclaimed Water previously purchased by Lower Area Parties.

Recirculation of Measured Water

During the water year 1966-67 there was no recirculation of measured water as defined in Paragraph 3 (1) (6) of the Judgment.

Unusable Surface Flow

The water from San Gabriel Valley which flows past the Montebello Forebay is called Unusable Surface Flow and is determined in accordance with Exhibit B of the Judgment. Surface outflow from the Montebello Forebay is measured on the Rio Hondo at Stewart and Gray Road, Station F45B-R, and on the San Gabriel River at Florence Avenue, Station F262-R. This surface outflow may be comprised of water from the San Gabriel Valley and of local storm water which enters the channels southwesterly of Whittier Narrows.

During water year 1966-67 the measured outflow from the Montebello Forebay on the Rio Hondo at Station F45B-R was 21,530 acre-feet. This included water from San Gabriel Valley and local inflow originating below Whittier Narrows. The daily inflow from tributary channels below Whittier Narrows was estimated by correlating the drainage areas of the unmeasured storm drains with the Montebello Storm Drain, which is equipped with a stream flow recorder. The total amount of Local Storm Inflow was calculated to be 7,110 acre-feet. By an analysis of daily flows it was possible to segregate the flow at Stewart and Gray Road into Local Storm Outflow and Unusable Surface Flow. It was determined that the Local Storm Outflow was 6,106 acre-feet and the Unusable Surface Flow in the Rio Hondo was 15,424 acre-feet.

The surface outflow from the Montebello Forebay on the San

Gabriel River, Station F262-R, was 23,300 acre-feet during water year 1966-67. The Local Storm Inflow to the San Gabriel River was calculated to be 3,100 acre-feet on the basis of correlation of drainage areas with that of the Montebello Storm Drain. The Judgment specifies the method to be used in segregating the outflow between Local Storm Outflow and Unusable Surface Flow. It was determined that 21,110 acre-feet was Unusable Surface Flow in the San Gabriel River.

The total amount of Unusable Surface Flow for the water year 1966-67 was 36,534 acre-feet, consisting of 15,424 acre-feet from the Rio Hondo and 21,110 acre-feet from the San Gabriel River.

Determination of Usable Water

Usable Water under terms of the Judgment is defined as the sum of Surface Flow, Subsurface Flow and Export to Lower Area less Lower Area Replenishment Water, Reclaimed Water, Makeup Water, recirculation of measured water and Unusable Surface Flow. Shown in Table 4 is the determination of Usable Water for water year 1966-67.

TABLE 4

USABLE WATER FOR
WATER YEAR 1966-67

<u>Item</u>	<u>Amount, in acre-feet</u>
Surface Flow	176,797
Subsurface Flow	17,500
Export to Lower Area	<u>23,395 *</u>
Subtotal	217,692
Less:	
Lower Area Replenishment Water	84,156
Reclaimed Water	16,224
Makeup Water	0
Recirculation of measured water	0
Unusable Surface Flow	<u>36,534</u>
Subtotal	136,914
Usable Water	80,778

* Maximum for which credit can be received according to Judgment.

CHAPTER IV. ACCRUED DEBIT, MAKEUP WATER AND LONG-TERM ACCOUNTING

Under terms of the Judgment, the Watermaster is required to annually determine the Accrued Debit or Credit of the Upper Area and to make a Long-term accounting each 15 to 25 years. There is presented herein a summary of Usable Water received, Annual Entitlement, Accrued Debit or Credit and Makeup Water requirement. Also included in this section is a review of determinations for prior years.

Prior Year Determinations

Revised Data

Subsequent to the publishing of the third annual Watermaster report on February 28, 1967, the Los Angeles County Flood Control District and the U.S. Geological Survey made minor changes in data which were published or were to be published. The change in stream flow was found to be 10 acre-feet at one station, 20 acre-feet at another station. These adjustments resulted from changes made by Flood Control during rechecking of computations subsequent to the time the Watermaster obtained the data. Further investigation of subsurface flow and the revision of water contour maps from revised reference point data indicated a change in subsurface inflow.

Final checking of the data for Station F64-R, Rio Hondo above Mission Bridge, indicated a total annual flow of 92,380 acre-feet for water year 1965-66. This quantity is 10 acre-feet less than was utilized in the prior Watermaster Report. Also, checking of data for Station F263B-R, San Gabriel River at Beverly Boulevard, indicated that the total flow should be 55,320 acre-feet instead of 55,300 acre-feet for the water year 1965-66. This changes the flow at the San Gabriel River at the point of maximum rising water to 60,140 acre-feet. The Watermaster investigated the changes and found them to be in order.

The Subsurface Flow for the spring of 1966 was recalculated to be 15,800 acre-feet and for the fall of 1966 was recalculated to be 13,400 acre-feet, which results in a Subsurface Flow for 1965-66 of 17,000 acre-feet. The net effect of the three changes is to decrease the amount of Usable Water received by the Lower Area during water year 1965-66 by 290 acre-feet. Shown in Table 5 is a summary of revised findings for the water year 1965-66.

TABLE 5

SUMMARY OF REVISED FINDINGS FOR WATER YEAR 1965-66

<u>Item</u>		<u>Quantities in acre-feet*</u>	
1.	Rainfall 1965-66 19.61 inches		
2.	10-year average rainfall 14.8 inches		
3.	Lower Area Annual Entitlement		70,300
4.	Surface Flow through Whittier Narrows	(232,577)	232,587
5.	Subsurface Flow through Whittier Narrows	(17,300)	17,000
6.	Water exported through Whittier Narrows		32,506
7.	Total flow through Whittier Narrows	(282,383)	282,093
8.	Lower Area Replenishment Water		121,534
9.	Reclaimed Water		15,056
10.	Makeup Water		6,489
11.	Recirculation of Measured Water		0
12.	Unusable Surface Flow		67,742
13.	Usable Water received by Lower Area	(71,562)	71,272
14.	Credit for water year 1965-66	(1,262)	972
15.	Accrued Debit of Upper Area as of September 30, 1965 (corrected)		59,484
16.	Amount of Makeup Water delivered prior to October 1, 1966		
	Reclaimed Water 27,785		
	Colorado River Water <u>6,489</u>		
	Total		34,274
17.	Accrued Debit as of September 30, 1966, unadjusted for credit during 1965-66 water year		25,210
18.	Accrued Debit of Upper Area as of September 30, 1966	(23,948)	24,238
19.	Minimum amount of Makeup Water required to be delivered to Lower Area prior to October 1, 1967	(7,983)	8,079

*Values shown in parentheses are the previously published figures which have been corrected.

Delivery of Makeup Water

By letter dated October 3, 1966, the Upper District requested of Central Municipal the total number of acre-feet of Reclaimed Water purchased and the cost per acre-foot thereof for the 1965-66 water year.

By letter dated October 7, 1966, Central Municipal advised Upper District that it had purchased 15,056.2 acre-feet at a cost of \$15.25 per acre-foot.

The Upper District elected to purchase the maximum amount of Reclaimed Water permissible under the Judgment. Accordingly, the Upper District made a payment on September 27, 1967 to Central Municipal of \$224,708.75 for 14,735 acre-feet.

Shown in the following tabulation is the determination of the "Adjusted Accrued Debit" as of September 30, 1966. The Adjusted Accrued Debit as of September 30, 1966 is defined herein as the "Accrued Debit as of September 30, 1966, adjusted for the Makeup Water delivered in 1966-67 water year."

	<u>Quantity, in acre-feet</u>
Accrued Debit of Upper Area as of September 30, 1966 (Table 5, Item 18 corrected)	24,238
Makeup Water deliveries	
Reclaimed Waste Water	14,735
Surface Flow delivery	<u>0</u>
Subtotal	14,735
Adjusted Accrued Debit of Upper Area as of September 30, 1966	9,503

Accrued Debit and Requirement for Makeup Water for 1966-67

The Lower Area Annual Entitlement, as heretofore determined for 1966-67, is 78,700 acre-feet. The Usable Water received was 80,778 acre-feet, which leaves a credit for the water year 1966-67 of 2,078 acre-feet. The Accrued Debit as of September 30, 1967, is the adjusted Accrued Debit as of September 30, 1966 (9,503 acre-feet) less the credit of 2,078 acre-feet for 1966-67, or 7,425 acre-feet.

In accordance with the provisions of the Judgment, Makeup Water amounting to at least one-third of the Accrued Debit must be delivered during water year 1967-68. This means that Upper District must deliver 2,475 acre-feet of Makeup Water to the Lower Area prior to October 1, 1968.

By letter dated October 2, 1967, the Upper District requested of Central Municipal a statement as to the total number of acre-feet of Reclaimed Water purchased during water year 1966-67 and the cost per acre-foot therefor. By letter dated October 6, 1967, Central Municipal advised Upper District that the Lower Area had purchased 11,495.4 acre-feet of Reclaimed Water during the water year 1966-67 at a cost of \$15.25 per acre-foot, and 4,728.2 acre-feet at a cost of \$18.00 per acre-foot. Copies of these letters are included in the appendix to this report. The total payment by the Lower Area was \$260,412.45 for 16,223.6 acre-feet, an average cost of \$16.05 per acre-foot. Under terms of the Judgment the Upper Area has the option of paying for an amount not to exceed 14,735 acre-feet

of Reclaimed Water. However, it is not permissible to pay for Reclaimed Water in a quantity greater than the Accrued Debit. Further, the maximum payment which the Upper District could make for water year 1966-67 would be for 7,425 acre-feet. The minimum delivery under the terms of the Judgment would be 2,475 acre-feet. The Upper District could therefore satisfy the required delivery of Makeup Water by the payment on or before September 30, 1968 to Central Municipal for 2,475 acre-feet of Reclaimed Water. It will not be necessary to schedule Makeup Water deliveries by surface delivery during the current water year, assuming the above payment is made.

Table 6 is a summary of operation under the Judgment showing Lower Area Annual Entitlement, Usable Water received by Lower Area and the Accrued Debit of Upper Area for the entire period of operation.

TABLE 6
SUMMARY OF OPERATION UNDER JUDGMENT

(Values in acre-feet)					
<u>Water year</u>	<u>Lower Area Annual Entitle- ment</u>	<u>Water received by Lower Area</u>			<u>Accrued Debit or Credit</u>
		<u>Usable</u>	<u>Makeup</u>	<u>Total</u>	
1963-64	67,200	40,975	0	40,975	-26,225
1964-65	68,000	34,741	13,257	47,998	-46,227
1965-66	70,300	71,272	21,017	92,289	-24,238
1966-67	78,700	80,778	14,735	95,513	- 7,425

Long-term Accounting

The Watermaster is required from time to time but not sooner than at the end of 15 years, nor later than 25 years after September 30, 1963, to make a long-term accounting of the aggregate amount of Usable Water and Makeup Water received by the Lower Area, compared to a theoretical amount comprised of the base period annual entitlement times the number of years involved adjusted by the ratio of the average annual rainfall to the base period rainfall. A running summary of items which will in the future be needed for Long-term Accounting follows.

Water year	<u>Rainfall, in inches</u>		Water received by			Accumu- lated Total
	Annual amount	Accumu- lated average annual amount	Lower Area			
			in acre-feet			
			<u>Usable</u>	<u>Makeup</u>	<u>Total</u>	
1963-64	9.45	9.45	40,975	0	40,975	40,975
1964-65	15.24	12.34	34,741	13,257	47,998	88,973
1965-66	19.61	14.77	71,272	21,017	92,289	181,262
1966-67	25.03	17.33	80,778	14,735	95,513	276,775

CHAPTER V. SUMMARY OF FINDINGS FOR WATER YEAR 1966-67

The findings of the Watermaster for water year 1966-67 are as follow:

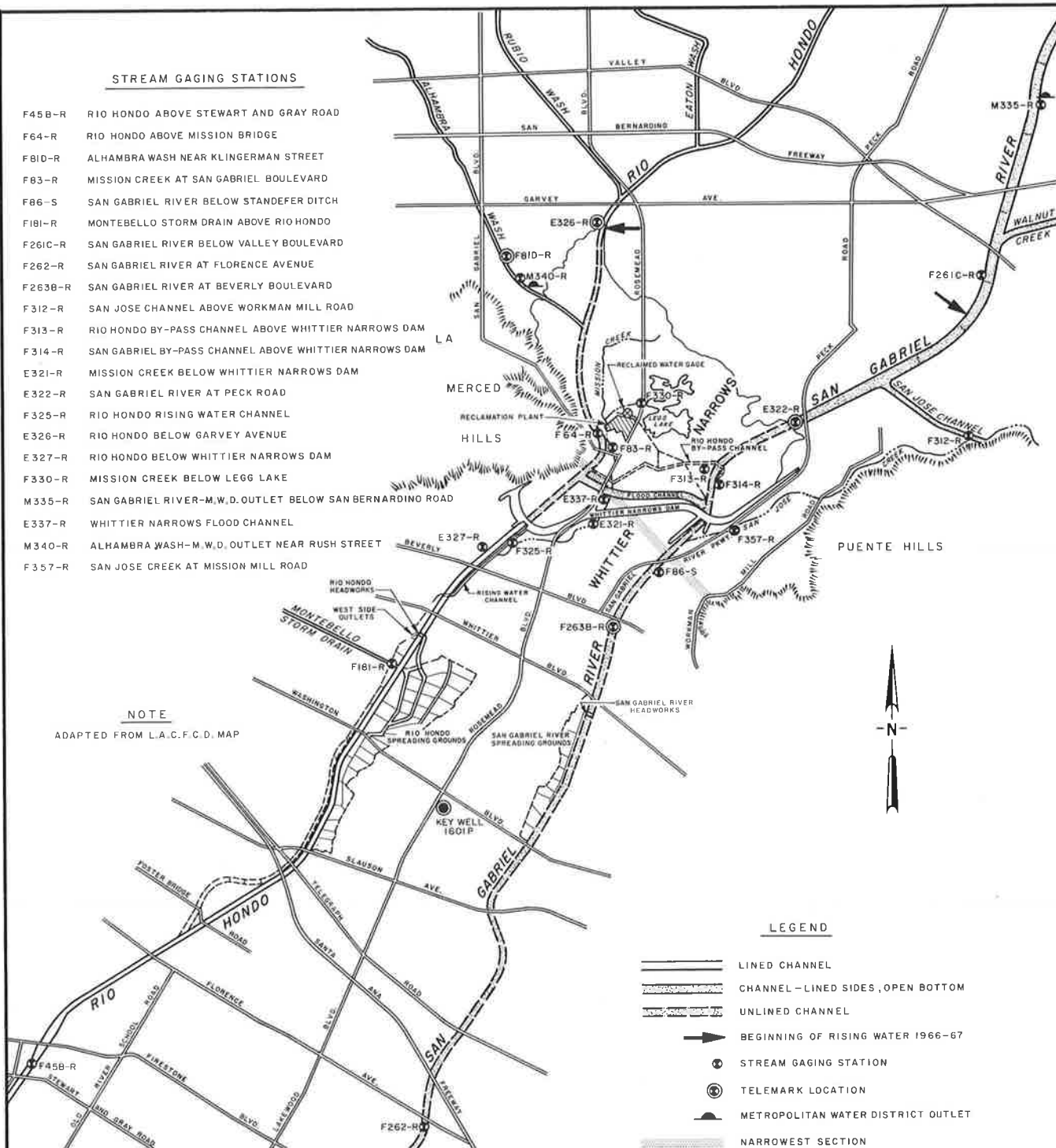
	Quantities <u>in acre-feet</u>
1. Rainfall 1966-67, 25.03 inches	
2. 10-year average rainfall, 15.9 inches	
3. Lower Area Annual Entitlement	78,700
4. Surface Flow through Whittier Narrows	176,797
5. Subsurface Flow through Whittier Narrows	17,500
6. Water exported through Whittier Narrows	23,395
7. Total flow through Whittier Narrows	217,692
8. Lower Area Replenishment Water	84,156
9. Reclaimed Water	16,224
10. Makeup Water (direct delivery)	0
11. Recirculation of Measured Water	0
12. Unusable Surface Flow	36,534
13. Usable Water received by Lower Area	80,778
14. Credit for water year 1966-67	2,078
15. Accrued Debit of Upper Area as of September 30, 1966 (corrected)	24,238
16. Amount of Makeup Water delivered during Water year 1966-67:	
Reclaimed Water	14,735
Colorado River Water	<u>0</u>
Total	14,735
17. Adjusted Accrued Debit of Upper Area as of September 30, 1966	9,503
18. Accrued Debit of Upper Area as of September 30, 1967	7,425
19. Minimum amount of Makeup Water required to be delivered to Lower Area prior to October 1, 1968	2,475

STREAM GAGING STATIONS

- F45B-R RIO HONDO ABOVE STEWART AND GRAY ROAD
- F64-R RIO HONDO ABOVE MISSION BRIDGE
- F81D-R ALHAMBRA WASH NEAR KLINGERMANN STREET
- F83-R MISSION CREEK AT SAN GABRIEL BOULEVARD
- F86-S SAN GABRIEL RIVER BELOW STANDEFER DITCH
- F181-R MONTEBELLO STORM DRAIN ABOVE RIO HONDO
- F261C-R SAN GABRIEL RIVER BELOW VALLEY BOULEVARD
- F262-R SAN GABRIEL RIVER AT FLORENCE AVENUE
- F263B-R SAN GABRIEL RIVER AT BEVERLY BOULEVARD
- F312-R SAN JOSE CHANNEL ABOVE WORKMAN MILL ROAD
- F313-R RIO HONDO BY-PASS CHANNEL ABOVE WHITTIER NARROWS DAM
- F314-R SAN GABRIEL BY-PASS CHANNEL ABOVE WHITTIER NARROWS DAM
- E321-R MISSION CREEK BELOW WHITTIER NARROWS DAM
- E322-R SAN GABRIEL RIVER AT PECK ROAD
- F325-R RIO HONDO RISING WATER CHANNEL
- E326-R RIO HONDO BELOW GARVET AVENUE
- E327-R RIO HONDO BELOW WHITTIER NARROWS DAM
- F330-R MISSION CREEK BELOW LEGG LAKE
- M335-R SAN GABRIEL RIVER-M.W.D. OUTLET BELOW SAN BERNARDINO ROAD
- E337-R WHITTIER NARROWS FLOOD CHANNEL
- M340-R ALHAMBRA WASH-M.W.D. OUTLET NEAR RUSH STREET
- F357-R SAN JOSE CREEK AT MISSION MILL ROAD

NOTE

ADAPTED FROM L.A.C.F.C.D. MAP



LEGEND

- LINED CHANNEL
- CHANNEL - LINED SIDES, OPEN BOTTOM
- UNLINED CHANNEL
- ➔ BEGINNING OF RISING WATER 1966-67
- ⊙ STREAM GAGING STATION
- ⊙ TELEMARK LOCATION
- ⊙ METROPOLITAN WATER DISTRICT OUTLET
- NARROWEST SECTION

SAN GABRIEL RIVER WATERMASTER

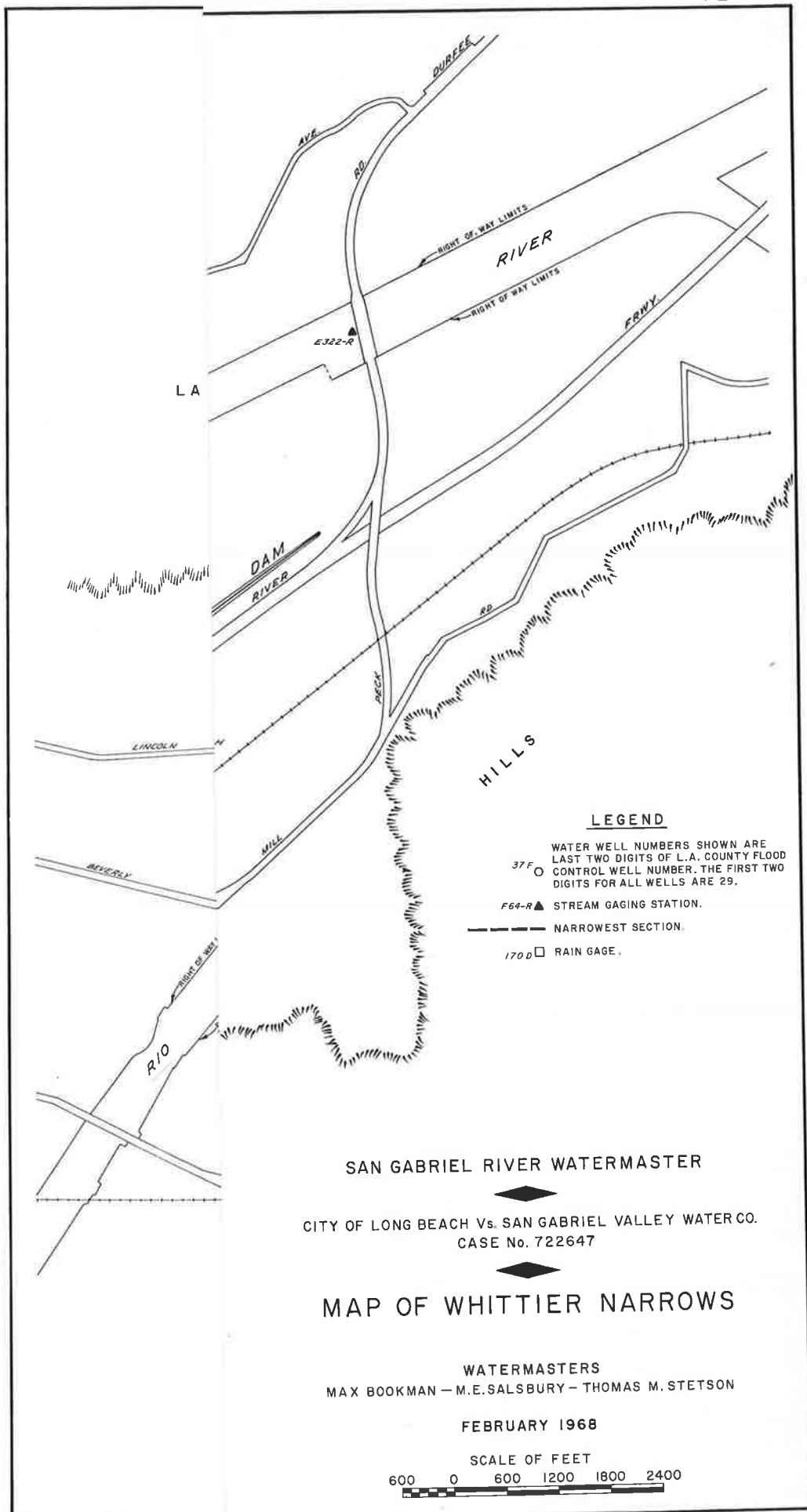
CITY OF LONG BEACH Vs. SAN GABRIEL VALLEY WATER CO.
CASE No. 722647

STREAM GAGING STATIONS
RIO HONDO - SAN GABRIEL RIVER SYSTEM

WATERMASTERS
MAX BOOKMAN - M.E. SALSURY - THOMAS M. STETSON

FEBRUARY 1968

SCALE OF FEET
4000 0 4000 8000



APPENDIX



UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

11229 Valley Boulevard

Suite 202 — Neer Building

El Monte, California

Glbert 3-2297

Directors: Frank E. Vachon, President • Robert T. Radford, Vice-President • Howard H. Hawkins, Sec'y-Treas. • Roy L. Anderson • Travis L. Manning

October 2, 1967

Board of Directors
Central Basin Municipal Water District
7439 E. Florence Avenue
Downey, California

Gentlemen

In accordance with provisions of Paragraph 5 (i) (2) of the judgment in the Long Beach case, will you please furnish a statement as to the total number of acre feet of reclaimed water purchased and the cost per acre foot therefor, for the water year commencing October 1, 1966.

It will be appreciated if this information is furnished at your earliest convenience, as it is needed at an early date, in connection with planning for delivery of required make-up water under terms of the judgment.

Very truly yours

Jane M. Bray
Jane M. Bray
Deputy Secretary

CC: San Gabriel River Watermaster ✓

DIRECTORS

MILO DELLMANN, *President*
MARSHALL R. BOWEN
ROBERT J. FURLONG
CLAIRE S. THOMPSON, JR.
FRANK H. WHELOCK

CENTRAL BASIN
MUNICIPAL WATER DISTRICT

7439 EAST FLORENCE AVENUE
DOWNEY, CALIFORNIA
TOpaz 9-1163

October 6, 1967

Board of Directors
Upper San Gabriel Valley
Municipal Water District
Suite 202, Near Building
11229 Valley Boulevard
El Monte, California 91731

Gentlemen:

In accordance with provisions of Paragraph 5 (i) (2) of the Judgment in the Long Beach case, written notice is hereby given of the total number of acre feet of reclaimed water purchases, and of the cost per acre foot, at the existing Whittier Narrows Water Reclamation Plant for the water year commenced October 1, 1966, as follows:

Water Year Commenced October 1, 1966

October 1, 1966 through June 30, 1967

11,495.4 acre feet @ \$15.25 per acre foot

July 1, 1967 through September 30, 1967

4,728.2 acre feet @ \$18.00 per acre foot

Very truly yours,

Marvel A. Roberts
Deputy Secretary

MAR:m

cc: Max Bookman, Watermaster
M. E. Salsbury, Watermaster
Thomas M. Stetson, Watermaster

R. J. GALLETLY
CERTIFIED PUBLIC ACCOUNTANT
GLENDALE FEDERAL SAVINGS & LOAN BUILDING
401 NORTH BRAND BOULEVARD
GLENDALE 3, CALIFORNIA
CHAPMAN 5-2402

January 22, 1968

San Gabriel River Watermaster
Security Building, Room 604
102 North Brand Blvd.
Glendale, California

In our opinion the accompanying statement of Income and Expenditures for the San Gabriel River Watermaster for the water year 1966 - 1967 presents fairly the results of its operations for the year in conformity with generally accepted accounting principles. Our examination was made in accordance with generally accepted auditing standards, and accordingly included tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Very truly yours,



R. J. Galletly
Certified Public Accountant

San Gabriel River Watermaster
Statement of Income and Expenditures
For the Water Year 1966 - 1967

Carried forward from year 1965 - 1966		\$ 3,435.18
Income		<u>10,000.00</u>
		13,435.18
Expenditures		
Administrative fees and general operating expenses	\$ 1,949.51	
Field inspections	1,289.76	
Collection of data and maintenance of records	4,473.84	
Calculations and preparation of Watermaster Reports for water years 1966 - 67	2,740.73	
Printing and reproduction costs	<u>505.33</u>	
Total expenditures		<u>10,959.17</u>
Balance		\$ <u>2,476.01</u>

SAN GABRIEL RIVER WATERMASTER

FOR
CITY OF LONG BEACH ET AL VS SAN GABRIEL VALLEY WATER CO.
CASE NO. 722647—LOS ANGELES COUNTY

WATERMASTERS
MAX BOOKMAN
M. E. SALSBURY
THOMAS M. STETSON

MAILING ADDRESS
SECURITY BLDG., ROOM 604
102 N. BRAND BLVD.
GLENDALE, CALIF. 91203
TELEPHONE: 245-1883

June 23, 1967

To: All Parties

Subject: Transfer of Water Rights of California Water & Telephone Company to California-American Water Company

Gentlemen:

The Watermaster has been advised by letters dated February 13, 1967 and March 9, 1967 from Mr. Tadini Bacigalupi, Jr., attorney for the California Water & Telephone, that the California Water & Telephone Company has transferred all of its public utility water business, together with all water rights of every kind and nature, to the California-American Water Company. Copies of these letters are on file in the Watermaster's office.

Pursuant to the Judgment in the subject case, notice is hereby given to all parties that:

- (a) The transferor is California Water & Telephone Company.
- (b) The transferee is California-American Water Company.
- (c) The effective date of the transfer was March 31, 1966.
- (d) The transfer was made pursuant to a deed dated March 31, 1966, and recorded on that day in the office of the County Recorder of the County of Los Angeles.
- (e) The transfer was voluntary.
- (f) The transferor does not have or claim any rights which are the subject of paragraph 5(j) of the Judgment in the subject case.

The California-American Water Company will be considered hereafter by the Watermaster as successor in interest of the California Water & Telephone Company, and the latter will be removed from our mailing list.

June 23, 1967

By a letter dated April 7, 1967, to the County Clerk from Bacigalupi, Elkus, Salinger and Rosenberg the California-American Water Company agreed to be bound by the terms of the Judgment in Case No. 722647. California-American further indicated that its designees to whom all notices, requests, objections, reports and other papers permitted or required by the terms of the Judgment should be mailed are:

W. J. Hays, President
California-American Water Company
P. O. Box 45053
Los Angeles, California 90045

David H. Fiscus
Division Manager
San Gabriel Valley Division
California-American Water Company
2116 Huntington Drive
San Marino, California 91108

Bacigalupi, Elkus, Salinger and Rosenberg
Suite 1030
300 Montgomery Street
San Francisco, California 94104

In the administration of the Judgment by the Watermaster, the official address of this party will be:

W. J. Hays, President
California-American Water Company
P. O. Box 45053
Los Angeles, California 90045

Very truly yours,

SAN GABRIEL RIVER WATERMASTER

By:

Max Bookman
Max Bookman

M. E. Salsbury
M. E. Salsbury

Thomas M. Stetson
Thomas M. Stetson

cc - Clerk of Superior Court of
Los Angeles County
Case No. 722647

SELECTED WATER QUALITY ANALYSIS OF RECLAIMED WATER
FROM THE WHITTIER NARROWS WATER RECLAMATION PLANT

Composite: 8:00 a.m. October 10 to 8:00 a.m. October 11, 1967

Constituents	: Final : Effluent	: Maximum : Limits
BOD, 5 days at 20°C, ppm	5	
Suspended Solids, ppm	6	
Total Dissolved Solids, ppm	652	1,000
Sulfate, ppm	103	
Chloride, ppm	126	250
Sulfate + Chloride, ppm	229	500
Boron, ppm	0.74	2.0
Sodium Equivalent Ratio, % Na	60.6	60.0
ABS, ppm	0.4	2.0
Phenol, ppm	0.058	
Lead, ppm	0.011	0.1
Fluoride, ppm	0.70	1.5
Arsenic, ppm	0.000	0.05
Selenium, ppm	0.00	0.05
Chromium, Hexavalent, ppm	0.06	0.05
Copper, ppm	0.07	3.0
Iron, ppm	0.42	
Manganese, ppm	0.00	
Iron + Manganese, ppm	0.42	0.3
Zinc, ppm	0.26	15