

SAN DIEGO
COUNTY WATER AUTHORITY



TWENTY-SEVENTH ANNUAL REPORT

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TWENTY - SEVENTH ANNUAL REPORT

OF AUTHORITY OPERATIONS

FOR FISCAL YEAR ENDING JUNE 30, 1973

Linden R. Burzell

General Manager and Chief Engineer

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SAN DIEGO, CALIFORNIA

1973

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SAN DIEGO COUNTY WATER AUTHORITY

*Member Agencies, Date of Entry, and
Representative on Board of Directors on June 30, 1973*

CITIES

Del Mar	Nov. 23, 1962
Jack D. Shelver	
Escondido	Oct. 9, 1950
Robert M. Dodd	
National City	June 9, 1944
Cleo Osburn	
Oceanside	June 9, 1944
Robert A. Weese	
San Diego	June 9, 1944
Charles F. Cooper, John M. Cranston, R. E. Graham, Gaylord Henry, Lawrence Hirsch, Henry R. Hoyt, Edith Kamm, George Kerrigan, H. Fred Landgraf, Roy W. Lessard, Judith McConnell	

IRRIGATION DISTRICTS

Helix	June 9, 1944
John B. Gibson, Harry Griffen, Leland D. Pratt, M. J. Shelton	
San Dieguito	Dec. 13, 1948
Frank J. Cermak	
Santa Fe	Dec. 13, 1948
R. E. Badger	
South Bay	Nov. 3, 1952
Lloyd L. Lee, John N. Williams	
<i>(Includes City of Chula Vista, an independent member agency, from June 9, 1944, to Nov. 3, 1952)</i>	

MUNICIPAL WATER DISTRICTS

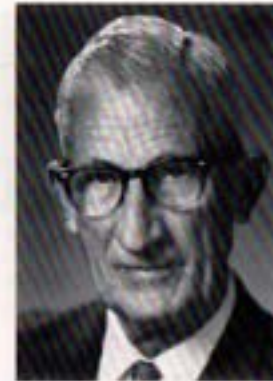
Bueno Colorado	June 11, 1954
Hans H. Doe	
Carlsbad	June 16, 1954
Allan O. Kelly	
De Luz Heights	June 28, 1967
George Yackey	
Olivenhain	July 25, 1960
Howard G. Golem	
Otay	Oct. 26, 1956
Glenn M. Reiter	
Poway	April 21, 1954
David R. Shephardson	
Rainbow	April 10, 1954
Robert Ingold	
Ramona	August 27, 1957
John E. Langan	
Rincon del Diablo	June 14, 1954
Charles A. Crytser	
Rio San Diego	June 7, 1956
Charles C. Price	
<i>(Includes Lakeside I. D., an independent member agency, from June 9, 1944 to June 7, 1956)</i>	

Valley Center	May 9, 1955
Hadley Johnson	
Yuima	Dec. 16, 1963
F. D. Fitzsimmons	

PUBLIC UTILITY DISTRICT

Fallbrook	June 9, 1944
Ralph A. Brown	

OFFICERS OF BOARD OF DIRECTORS



Chairman
R. E. BADGER
Santa Fe
Irrigation District
9-57 to 6-73



Vice Chairman
HANS H. DOE
Bueno Colorado
Municipal Water District
6-54 to 6-73



Secretary
LLOYD L. LEE
South Bay
Irrigation District
4-61 to 6-73



Treasurer
HARRY GRIFFEN
Helix
Water District
7-56 to 6-73



Controller
HOWARD G. GOLEM
Olivenhain Municipal
Water District
1-62 to 6-73

EXECUTIVE OFFICERS



LINDEN R. BURZELL
General Manager and
Chief Engineer



PAUL D. ENGSTRAND
General Counsel



W. H. JENNINGS
General Counsel
Emeritus

ADMINISTRATIVE STAFF



ALLEN H. JONES
Assistant Chief
Engineer



HENRY LOZANO
Director of
Finance



I. E. NICHOLS
Superintendent



ANNETTE L. WINNER
Executive Secretary

**BOARD OF DIRECTORS
1972-73**

For Officers, See Page 5



RALPH A. BROWN
*Fallbrook Public
Utility District
7-67 to 6-73*



FRANK J. CERMAK
*San Diego
Irrigation District
7-66 to 6-73*



CHARLES F. COOPER
*San Diego
4-73 to 6-73*



JOHN M. CRANSTON
*San Diego
10-64 to 6-73*



CHARLES A. CRYTSE
*Rincon del Diablo
Municipal Water District
6-54 to 6-73*



ROBERT M. DODD
*Escondido
1-70 to 6-73*



F. D. FITZSIMMONS
*Yuima Municipal
Water District
8-71 to 6-73*



JOHN B. GIBSON
*Helix
Water District
10-71 to 6-73*



R. E. GRAHAM
*San Diego
7-63 to 6-73*



GAYLORD L. HENRY
*San Diego
11-64 to 6-73*



LAWRENCE HIRSCH
*San Diego
5-73 to 6-73*



HENRY R. HOYT
*San Diego
4-73 to 6-73*



ROBERT INGOLD
*Rainbow Municipal
Water District
10-72 to 6-73*



HADLEY JOHNSON
*Valley Center
Municipal Water District
1-72 to 6-73*



EDITH KAMM
*San Diego
8-65 to 6-73*



ALLAN D. KELLY
*Carlsbad Municipal
Water District
11-63 to 6-73*

**BOARD OF DIRECTORS
1972-73**

(Continued)



GEORGE KERRIGAN
*San Diego
9-53 to 6-73*



H. FRED LANDGRAF
*San Diego
10-55 to 6-73*



JOHN E. LANGAN
*Ramona Municipal
Water District
4-61 to 6-73*



ROY W. LESSARD
*San Diego
5-73 to 6-73*



JUDITH McCONNELL
*San Diego
4-73 to 6-73*



CLEO OSBURN
*National City
3-70 to 6-73*



LELAND D. PRATT
*Helix
Water District
11-69 to 6-73*



CHARLES C. PRICE
*Rio San Diego
Municipal Water District
7-58 to 6-73*



GLENN M. REITER
*Otay Municipal
Water District
9-71 to 6-73*



M. J. SHELTON
*Helix Water District
2-48 to 6-56
10-65 to 6-73*



JACK D. SHELVER
*Del Mar
12-69 to 6-73*



DAVID R. SHEPARDSON
*Poway Municipal
Water District
4-54 to 6-73*



ROBERT A. WEESE
*Oceanside
3-53 to 6-73*



JOHN N. WILLIAMS
*South Bay
11-70 to 6-73*



GEORGE YACKEY
*De Luz Heights
Municipal Water District
6-68 to 6-73*

COMMITTEES OF THE BOARD

June 30, 1973

Finance & Insurance Committee

John M. Cranston, *Chairman*
 Howard G. Golem, *Vice Chairman*
 F. D. Fitzsimmons
 Harry Griffen
 Gaylord L. Henry
 Henry R. Hoyt, Jr.
 Robert Ingold
 George Kerrigan
 H. Fred Landgraf
 John E. Langan
 Roy W. Lessard
 Leland D. Pratt
 Charles C. Price
 M. J. Shelton
 Jack D. Shelver

Water Problems & Policy Committee

Hans H. Doe, *Chairman*
 Ralph A. Brown
 John M. Cranston
 Charles A. Crytser
 R. E. Graham
 Harry Griffen
 Hadley Johnson
 Lloyd L. Lee
 Judith McConnell
 John N. Williams

Public Education & Information Committee

Harry Griffen, *Chairman*
 Hans H. Doe
 R. E. Graham
 Lloyd L. Lee
 Leland D. Pratt
 Charles C. Price
 Glenn M. Reiter
 George F. Yackey

Organization & Personnel Committee

David R. Shepardson, *Chairman*
 Howard G. Golem, *Vice Chairman*
 Frank J. Cermak
 John B. Gibson
 Hadley Johnson
 John E. Langan
 Cleo Osburn
 Charles C. Price
 Glenn M. Reiter
 Jack D. Shelver
 Robert A. Weese
 George F. Yackey

Engineering & Operations Committee

M. J. Shelton, *Chairman*
 Robert A. Weese, *Vice Chairman*
 Ralph A. Brown
 Frank J. Cermak
 Charles F. Cooper
 Charles A. Crytser
 Robert M. Dodd
 Hans H. Doe
 F. D. Fitzsimmons
 Howard G. Golem
 R. E. Graham
 Lawrence Hirsch
 Allan O. Kelly
 Lloyd L. Lee
 Leland D. Pratt
 Glenn M. Reiter
 George F. Yackey

Administrative Code Committee

Charles C. Price, *Chairman*
 Hans H. Doe
 F. D. Fitzsimmons
 John B. Gibson
 R. E. Graham
 Harry Griffen
 Hadley Johnson
 Edith Kamm
 Lloyd L. Lee
 George F. Yackey

Legal & Claims Committee

John M. Cranston, *Chairman*
 David R. Shepardson, *Vice Chairman*
 John B. Gibson
 Gaylord L. Henry
 Robert Ingold
 Edith Kamm
 Allan O. Kelly
 George Kerrigan
 H. Fred Landgraf
 Cleo Osburn
 John N. Williams

Lands & Rights of Way Committee

Lloyd L. Lee, *Chairman*
 Ralph A. Brown
 Robert M. Dodd
 Harry Griffen
 Gaylord L. Henry
 H. Fred Landgraf
 David R. Shepardson

STATISTICAL SUMMARY

	1972-73	1971-72	Percent Change
GROWTH OF AREA			
Number of Agencies	22	22	0
Total Area—Acres	760,762	759,537	+ 0.2
Population	1,459,900	1,391,000	+ 4.9
Assessed Valuation	\$3,634,092,751	\$3,275,533,487	+10.9
OPERATIONS			
Water Imported by Authority—ac. ft.	342,251	349,730	- 2.1
Water Production of Agencies—ac. ft.	342,319	367,945	- 7.0
Local Water Used—ac. ft.	38,088	36,663	+ 3.9
Authority Water Used—ac. ft.	304,231	331,282	- 8.2
Miles of Pipe Line	199	187	+ 6.4
Miles of Patrol Roads Maintained	100	100	0
Number of Service Connections	56	55	+ 1.8
FINANCIAL			
Revenues:			
Water Revenue	\$ 16,186,921	\$ 15,298,275	+ 5.8
Other Revenue	816,554	1,515,363	-46.1
Taxes	3,976,188	3,234,196	+22.9
Expenditures:			
Operation and Maintenance	\$ 534,149	\$ 505,140	+ 5.7
Purchase of Water	15,527,992	15,065,522	+ 3.1
Payments on Outstanding Debt	2,069,030	1,969,030	+ 5.1
Total Investment in Plant:			
Total Fixed Assets	\$ 177,487,566	\$ 163,807,286	+ 8.4
Long-Term Debt	82,123,536	84,524,460	- 2.8

In Memorium



FRED A. HEILBRON
1877 - 1973
Chairman of the Board
1944 - 1973



SAN DIEGO COUNTY WATER AUTHORITY

2750 FOURTH AVENUE
SAN DIEGO, CALIFORNIA 92103

Telephone 297-5218 — Area Code 714

BOARD OF DIRECTORS
R. E. BADGER, CHAIRMAN
WALTER H. DODD, VICE CHAIRMAN
LLOYD L. LEE, SECRETARY

November 15, 1973

LINDEN R. BURZELL
GENERAL MANAGER
AND CHIEF ENGINEER
PAUL O. ENOSTRAND
GENERAL COUNSEL

Board of Directors
San Diego County Water Authority

Gentlemen:

The Twenty-seventh Annual Report of the Authority covering activities during the fiscal year ending June 30, 1973, has been prepared and is transmitted herewith.

The average aqueduct flow for the year exceeded the capacity of Pipelines 1, 2 and 3, again demonstrating the need for Pipeline 4 which has been in partial service since June 1971. Pipeline 4 was completed to its terminus at Miramar Reservoir in April 1973, thereby placing the entire facility authorized by the 1966 bond election in service.

During the year a contract was awarded for the Pomerado Pipeline, a joint project in partnership with the City of San Diego, which will extend Pipeline 4 approximately 5.5 miles to Shepherd Canyon. The contractor completed the project shortly after the end of the fiscal year, at which time the City of San Diego commenced operation of the facility.

Planning and studies of ways to provide filtered water service to the member agencies is continuing. The schedule being followed calls for filtered water service to become available in 1975 in sufficient time to be available before the introduction of Northern California water into the system in 1975.

The Water Authority financial position remains strong; net revenues exceeded expenses by \$401,152 in the General Fund and the total of all contract costs for Pomerado Pipeline are within the estimates and sufficient bond funds remain to complete the work.

Very truly yours,

L. R. Burzell
General Manager and Chief Engineer

LRB:jmr

MEMBER AGENCIES				
CITIES	IRRIGATION DISTRICTS	PUBLIC UTILITY DISTRICTS	MUNICIPAL WATER DISTRICTS	
DEL MAR ESCONDIDO LA JOLLA LEANNE SAN DIEGO	HELI SAN DIEGO SANTA FE SOUTH BAY	FALLBROOK	BUENA VISTA CARLEBO DE LOS ANGELES OLIVERDALE OTAY POMERADO	RAINBOW SAN MAR MISSION VALLEY VALLEY CENTER YUMA

FISCAL YEAR—1972-73

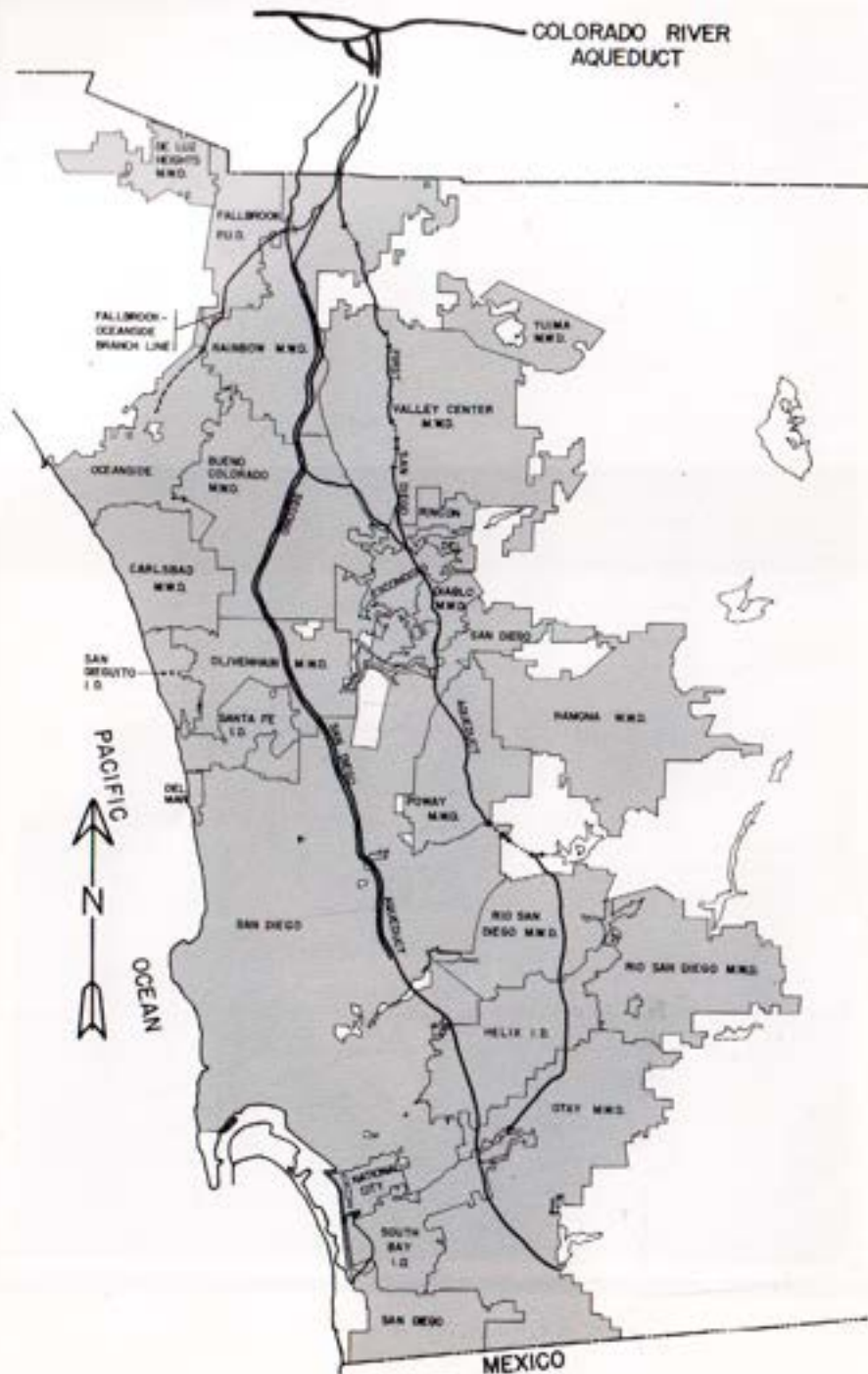


Figure A. Authority Area Within San Diego County.

The San Diego County Water Authority was formed in 1944 under the County Water Authority Act passed by the State Legislature in 1943. Its purpose is to provide water for municipal, domestic and other beneficial uses throughout San Diego County. At present, nearly all water used in the County is supplied by the Authority. The only source from which water is available to the Authority is the Metropolitan Water District of Southern California, which owns and operates the Colorado River Aqueduct. MWD is also the distributor to its member agencies of water from the State Water Project. The County Water Authority, in turn, "wholesales" water to its member agencies. The Authority is a public corporation with the right to sue or be sued and to acquire, hold or dispose of real and personal property. Its powers, privileges and duties are exercised through a Board of Directors. As with a municipal corporation, it can exercise power of eminent domain and is empowered to construct and maintain works and facilities across or along public lands. It may borrow money and incur indebtedness up to a maximum of 15 percent of taxable property in its area. It may levy and collect taxes, enter into contracts, employ personnel and establish offices, and may join other public corporations for the purpose of carrying out its powers.

BOARD OF DIRECTORS

General

The San Diego County Water Authority Board of Directors establishes the policies of this agency. At the start of the fiscal year, there were 34 members. Appointments to vacant positions brought the number to 36 as of June 30, 1973. Each member's appointment was approved by the governing body of one of the Authority's 22 member agencies. Each member agency is entitled to one representative. It is also entitled to an additional representative for each additional five percent of total Authority assessed valuation contained within the member agency's boundary. At the end of the report year, three agencies were represented by more than one Director: City of San Diego by eleven, Helix Water District by four, and South Bay Irrigation District by two.

Officers of the Board of Directors are elected biennially in July of even-numbered years. In July 1972, Fred A. Heilbron was reelected Chairman, Raymond E. Badger was reelected Vice Chairman, and Hans H. Doe was reelected Secretary. Harry Griffen continued to serve as Treasurer and Howard G. Golem as Controller. The latter two offices are filled by appointment.

Fred Heilbron, who had served as Chairman of the Water Authority since its formation, passed away on February 14, 1973. At the March Board of Directors meeting, Vice Chairman Badger was elected to serve Mr. Heilbron's unexpired term. Secretary Doe was elected Vice Chairman, and Lloyd L. Lee was elected Secretary.

Because of the size of the Board, most matters are considered first by one or more of eight standing committees. Results of committee deliberations and

recommendations for action are reported to the full Board, which may then act as it sees fit. The standing committees are Finance and Insurance, Engineering and Operations, Organization and Personnel, Water Problems and Policy, Lands and Rights of Way, Legal and Claims, Public Education and Information, and Administrative Code. Appointments to committees are made by the Chairman of the Board. Standing committee memberships as of June 30, 1973, are listed on page 8 of this report.

Director Howard G. Golem was reappointed to the Board in August 1972 by Olivenhain Municipal Water District.

In September 1972, Director Robert Ingold was appointed to the Board by Rainbow Municipal Water District to succeed the late Director Walter R. Beck.

During December 1972, two Directors were reappointed: Director R. E. Badger by Santa Fe Irrigation District; and Director Frank J. Cermak by San Dieguito Irrigation District.

During April 1973, Directors Charles F. Cooper, Henry R. Hoyt, Jr., and Judith McConnell were appointed to the Board by the City of San Diego to succeed Directors David S. Casey, Fred W. Simpson and Arthur C. Wells, respectively. Director John M. Cranston was reappointed by the City of San Diego and Director Allan O. Kelly was reappointed by Carlsbad Municipal Water District.

Director Lawrence Hirsch was appointed to fill the unexpired term of the late Director Fred A. Heilbron, and Director Roy W. Lessard was appointed to succeed Director Baylor Brooks by the City of San Diego during May 1973.

During the July and August 1972 Board meetings, Chairman Heilbron awarded service emblems to Directors as follows: R. E. Badger and M. J. Shelton, 15 years; Howard G. Golem, 10 years; Frank J. Cermak, six years. During the January Board meeting, Vice Chairman Badger presented a three-year service award to Director Jack D. Shelver.

Policies

During the 1972-73 fiscal year, the Board of Directors took action in support of, or in opposition to, actions of other agencies:

During its meeting of November 9, 1972, the Board indicated its support of SB 4 and its opposition to SB 107, both of which bills were directed toward the creation of "wild rivers" status for several north coastal streams.

SB 538, which would have prohibited any person from serving as a member of the Water Authority Board (or on the Board of any public water agency) beyond his 70th birthday, was opposed in a motion approved by the Board during its May 10, 1973, meeting.

A presentation to be made on behalf of the Water Authority to the Council on Intergovernmental Relations, Local Government Reform Subcommittee was approved by the Board during its meeting of June 14.

Other special actions of the Board of Directors included the following:

During its meeting of March 8, 1973, the Board adopted resolution number 73-7 titled "Resolution in Memorium of Fred A. Heilbron by the Board of Directors of San Diego County Water Authority."

A resolution honoring Mr. James J. Doody, who had served many years as the Southern District Engineer for the Department of Water Resources, was passed by the Board during its meeting February 8, 1973, following announcement of Mr. Doody's promotion to Assistant Director of Central District Operation and Maintenance for the State Water Project.

On April 12, 1973, the Board adopted resolution 73-21, which established in final form local guidelines for the implementation of the California Environmental Quality Act.

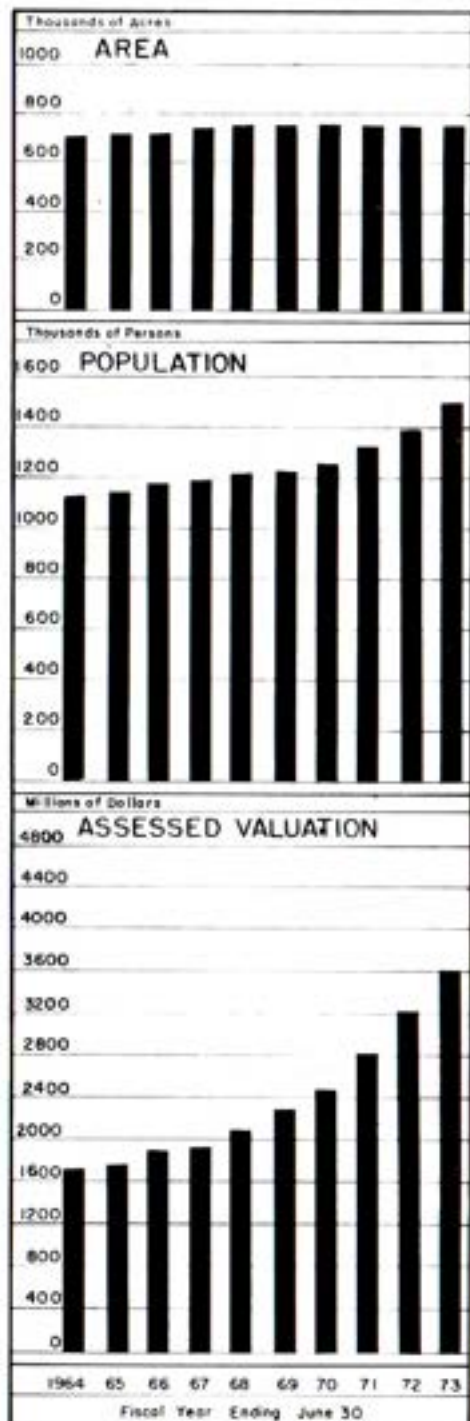
Administration

At the close of the fiscal year, the Water Authority had a staff of 42, including one temporary employee. This was seven less than the total number of employees at the end of fiscal 1971-72. Of those employed at the end of the report year, 10 are engaged in administration, engineering, and financial operations; and 19 in maintenance, stenographic and clerical positions. Another 13 serve in new project engineering design, surveying and inspection capacities or in temporary positions.

WATER AUTHORITY COMPOSITION

Area

The area of the Authority increased during the fiscal year from 759,537 acres (1,187 square miles) to 760,762 acres (1,189 square miles), a net gain of 1,225 acres. Annexations which changed the Authority boundaries were the Tomlinson-Via Rancho Parkway Annexation to the City of Escondido in August 1972, consisting of 517 acres, which added 472 acres to the Authority area; Rincon del Diablo Municipal Water District's Concurrent Annexation No. 4 in November 1972, consisting of 85.5 acres; the City of Escondido's Dixon-Wohlford Annexation in November 1972, consisting of 263.3 acres, which added 35.8 acres to the Authority; San Dieguito Irrigation District's Concurrent Annexation No. 2 in December 1972, consisting of 525 acres; the City of Oceanside's San Luis Rey No. 9 Annexation in April 1973, consisting of 84.3 acres; and Santa Fe Irrigation District's Concurrent Annexation No. 2 in April 1973, consisting of 22 acres.



Ninety-six percent of San Diego County's population lives within the Water Authority, which encompasses 28 percent of the total County area.

Boundaries of Water Authority member agencies overlap in some areas, but efforts are being made to encourage agencies to eliminate such overlaps by appropriate action. Most overlapping has occurred when incorporated cities have annexed neighboring areas already within another member agency.

Area, changes and percentage of each agency are shown in Table 1, page 42. Largest area is within the City of San Diego, which encompasses 26.65 percent of the Authority's total area; smallest is City of Del Mar with 1,082 acres.

The 1972 Statement of Changes of Boundaries, which is required by State law to be filed by the Executive Secretary of the Board of Directors prior to January 1 each year, was filed with the Metropolitan Water District, the San Diego County Assessor, and the State Board of Equalization. This 1972 statement showed 28 changes of boundaries by member agencies, of which seven changed the Authority boundaries. This statement is used by the County Assessor to determine the total assessed valuation within the Authority and is the basis on which the Board levies taxes each August.

Population

Population continued to grow within the Authority service area during the year. It is estimated total population at close of the fiscal year was 1,459,500. Census figures for each decade since 1910, and estimated population figures for the years 1955, 1965, and 1973, are shown in Table 2, page 43. Data pertaining to population within member agencies are shown in Table 3, page 44.

The City of San Diego is the most populous member agency, with 763,100 persons, or 52 percent of the Authority total. De Luz Heights Municipal Water District has the smallest population with 150 persons, and the lowest density with eight persons to the square mile. Highest average population density exists in the City of La Mesa, served by Helix Water District, with 8.67 persons per acre.

The average population per acre for the entire Water Authority area is now 1.92, or 1,228 persons per square mile.

Assessed Valuation

The San Diego County Assessor determines the assessed valuation of all taxable property within the Authority. This assessed valuation and the Authority's budgetary requirements provide the basis for the Board's determination of the tax rate.

The assessed valuation within each member agency determines the number of directors and the total number of votes to which it is entitled. The County Auditor certified to the Authority the assessed valuation of taxable property for the 1972-73 tax levy was \$3,634,092,751, an increase of \$358,559,264, or 10.9 percent over 1971-72. Assessed valuation for 1973-74 was received from the County Auditor before completion of this report. It shows taxable property within the Authority has been assessed at \$4,114,380,482, an increase of \$480,287,731, or 13.2 percent. The average assessed valuation of property within the Authority has increased from \$4,785 per acre in 1972-73 to \$5,408 per acre in 1973-74. The assessed valuation within each member agency, the total for the Authority and the total for San Diego County are shown in Table 4, page 45.

WATER SUPPLY AND CONSUMPTION

Source and System

At present, the entire water supply of San Diego County Water Authority comes from the Colorado River through facilities of the Metropolitan Water District of Southern California (MWD). As the result of taxes and annexation charges paid to MWD, the Authority has a preferential right to 8.9 percent of Metropolitan's total supply. (Water purchases earn no preferential right.)

MWD delivered municipal water throughout the year on the basis of orders from member agencies. In fact, preferential right has never been invoked by MWD as the basis for deliveries.

MWD diverts water from the Colorado River Aqueduct into the San Diego Aqueducts near San Jacinto. The Authority accepts delivery at a point approximately six miles south of the San Diego-Riverside county line. Approximately 900 acre feet (af) of storage is provided by San Jacinto Reservoir near the northern end of the first two pipelines, but MWD plans to abandon this storage soon. First water was delivered into Lake Skinner, near Rancho California, in April 1973. As this report is prepared, the reservoir is being filled to provide an eventual 40,000 af of storage to serve the Third and Fourth pipelines. The San Diego Canal, with 1,000 cubic feet per second (cfs) capacity, will deliver water to Lake Skinner from both the Colorado River Aqueduct and from Perris Lake, terminal reservoir of the California Aqueduct.

Authority Facilities

The Authority takes delivery of water from MWD in the four pipelines of the two San Diego Aqueducts at a point approximately six miles south of the Riverside-San Diego county line, near Rainbow. The First Aqueduct terminates in San Vicente Reservoir, owned and operated by the City of San Diego. The Fallbrook-Oceanside Branch, a portion of which is owned by the Authority, connects to the First Aqueduct at Rainbow; and the La Mesa-Sweetwater Branch extends from the First Aqueduct at Slaughterhouse Canyon through Lakeside and La Mesa to its terminus at Sweetwater Reservoir. The two pipelines of the First San Diego Aqueduct share common tunnels and inverted siphons, and are operated as a unit. The two pipelines of the Second Aqueduct, Pipelines 3 and 4, although in a common right-of-way for most of their length, do not share any facilities in San Diego County, and are operated separately. Pipeline 3 terminates in Lower Otay Reservoir. Pipeline 4 ends at Miramar Reservoir. An extension of Pipeline 4, the Pomerado Pipeline, extends the Authority system to the Tierrasanta section of the City of San Diego. A crossover carries water from the Second Aqueduct at Twin Oaks Valley to the First Aqueduct just north of Escondido.

The Water Authority operates a chlorination station at Rainbow Pass just north of the Riverside-San Diego county line. Flows in the First Aqueduct and in Pipeline 3 are treated at this point. A temporary chlorination station is located at Auld Valley, near Lake Skinner, to provide chlorination to the water in Pipeline 4.

The First San Diego Aqueduct (Pipelines 1 and 2) has a capacity of 196 cfs. Pipeline 3 has a nominal capacity of 250 cfs. Pipeline 4 has a capacity of 380 cfs. In use as far south as the Crossover since June 1971, Pipeline 4 was placed in operation to its terminus at Miramar Reservoir in January 1973.

The Authority does not own or operate any storage facilities. It does, however, have a contractual right to store up to 40,000 af in San Vicente Reservoir.

This privilege results from an agreement with the City of San Diego which expires October 31, 1973. Under this agreement, the City is paid \$2.20 per acre foot for the maximum amount of water in storage each year, plus \$.50 per acre foot to cover pumping costs for any water transferred from storage to the City. The agreement further provides that the first of any water which might be lost over the spillway would be that stored by the Authority. During the fiscal year, a total of 13,500.0 acre feet was placed in San Vicente Reservoir by the Authority for the account of its member agencies. A total of 13,897.2 af was withdrawn, and 811.8 af was lost by evaporation. The net result of this year's activities was a decrease of 1,209.0 af to 20,404.1 af in storage on June 30, 1973. San Vicente storage statistics are shown in Table 11. Rainbow MWD had the largest amount credited to its account at year's end, totaling 4418 af, or nearly 22 percent of all Authority water stored in San Vicente.

Another Authority-City of San Diego agreement permits the storage of up to 2,500 af in the City's Lower Otay Reservoir, terminus of Pipeline 3. Storage here is for operational purposes only. Water is transferred to the City when it requests water at this location. No storage for member agencies is provided. The City is paid \$1.00 per acre foot for the maximum amount of storage in any 12 month period or fraction thereof. A minimum annual fee of \$1,000 is paid to the City. The Authority also pays pumping charges, which vary from \$1.50 to \$2.25 depending on the elevation of water in the reservoir. The City prefers to have water delivered directly to its Lower Otay treatment plant at the rate required rather than into the reservoir. Close control is exercised by Authority personnel to prevent spillage.

Telemetry and supervisory control of the San Diego Aqueduct system is maintained at the Fred A. Heilbron Operations Center, Escondido. Rate of incoming flows from MWD and service to member agencies are monitored from this facility. Communications with Metropolitan's San Jacinto operations center is maintained by two-way radio.

Deliveries and Rates

The four pipelines of the San Diego Aqueducts delivered a total of 342,250 af during the fiscal year, as compared to 349,730 af delivered during the previous year. Despite the fact less water was delivered this year than last, the quantity delivered exceeded the combined capacities of Pipelines 1, 2 and 3 by 22,250 af. This fact amply demonstrates the need for Pipeline 4.

The lowest rate of flow occurred in December 1972 during MWD's annual shutdown for maintenance and cleaning of the Colorado River Aqueduct. Because of relatively high rainfall early in the season, the shutdown was for a full ten-day period. Low flow in the San Diego Aqueducts during this period was 35 cfs, and the average flow for the month was 215 cfs. Member agencies did not report any hardship resulting from the reduced water deliveries during this period. Total deliveries from the aqueducts during December 1972 were 13,190 af.

August brought the highest peak rates of flow and the highest monthly total for water delivered from the aqueducts, establishing a new record for the Authority. The August 1972 peak was 621.5 cfs, 39 cfs greater than the previous high in June 1972. The August total was 38,214 af compared to the previous June's 34,676 af.

Water deliveries to member agencies are shown in Table 5, page 46. The agencies purchased 340,564 af during the year, approximately 13,000 af less than during the 1971-72 fiscal year. An additional 13,500 af was placed in storage by the Authority, down 5,700 af from the previous year. Although MWD has the right to store up to 60,000 af in City of San Diego reservoirs, no water was added by that agency to its storage in San Diego County during the year and it had no water in storage here at the end of the year. Member agencies withdrew a total of 16,780 af from Authority storage.

Total quantities of water delivered to individual member agencies for the eight-year period 1965 to 1973 are shown in Table 6, page 48, as are the total quantities of water purchased by each agency since the Authority first began delivery of water in 1947. Sales during the fiscal year covered by this report show a 3.7 percent decrease from 1971-72.

Operation and maintenance of Authority facilities is financed from water revenues derived from a surcharge of \$1.25 per acre foot, which is added to the cost of water from Metropolitan Water District, together with other miscellaneous revenues. This surcharge was \$2.00 per acre foot until August 1964 at which time the Board of Directors adopted a resolution to reduce this rate to its present level effective in September 1964. Capital outlay requirements are financed from bond funds.

The Metropolitan Water District announces its water rates approximately two years in advance. During recent years, Metropolitan has increased its water rates each year, and further annual increases are scheduled. During the 1972-73 fiscal year, the MWD rate for unfiltered municipal and industrial water was \$52.00 per acre foot. Addition of the Water Authority surcharge brought the total rate to Authority member agencies to \$53.25. A summary of past and future Authority rates for unfiltered Colorado River water follows:

SUMMARY OF WATER RATES (Dollars Per Acre Foot)

From	To	MWD	Authority	Total	Agricultural Rebate	Resulting Agricultural Rate
7/1/58	1/1/61	15.00	2.00	17.00	3.00	14.00
1/1/61	1/1/62	17.00	2.00	19.00	4.25	14.75
1/1/62	1/1/63	19.00	2.00	21.00	5.50	15.50
1/1/63	1/1/64	21.00	2.00	23.00	6.75	16.25
1/1/64	7/1/64	24.00	2.00	26.00	9.00	17.00
7/1/64	9/1/64	25.00	2.00	27.00	9.75	17.25
9/1/64	7/1/65	25.00	1.25	26.25	9.75	16.50
7/1/65	7/1/66	28.00	1.25	29.25	12.00	17.25
7/1/66	7/1/67	31.00	1.25	32.25	14.00	18.25
7/1/67	7/1/68	34.00	1.25	35.25	16.00	19.25
7/1/68	7/1/69	37.00	1.25	38.25	18.00	20.25
7/1/69	7/1/70	40.00	1.25	41.25	20.00	21.25
7/1/70	7/1/71	44.00	1.25	45.25	23.00	22.25
7/1/71	7/1/72	48.00	1.25	49.25	26.00	23.25
7/1/72	8/13/73	52.00	1.25	53.25	28.50	24.75
8/13/73	7/1/75	56.00	1.25 ^a	57.25 ^a	31.00	26.25 ^a
7/1/75	7/1/76	57.00	1.25 ^a	58.25 ^a	32.00	26.25 ^a

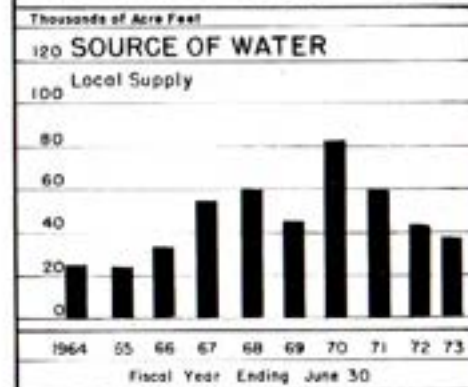
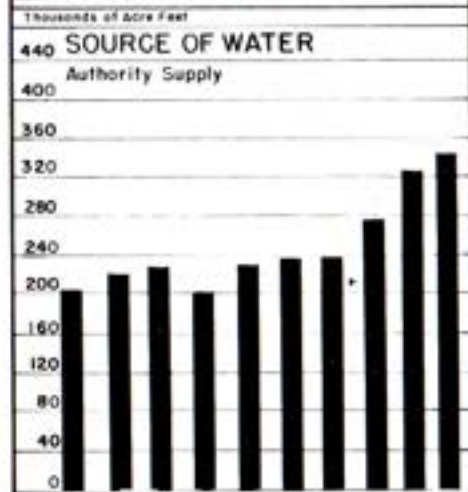
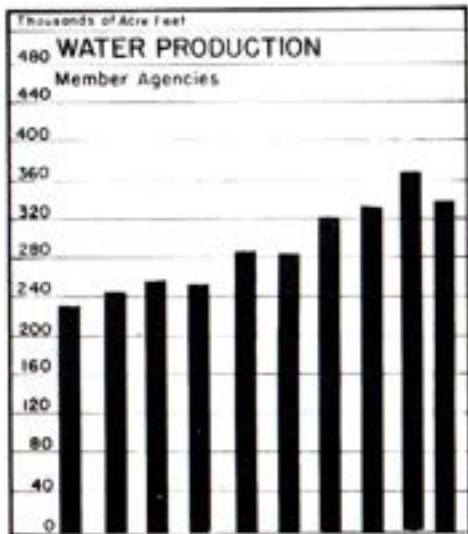
^aSubject to change

Although all the works necessary to make delivery of water from the State Water Project to Lake Skinner have been completed, it will not be possible to deliver northern water to San Diego County agencies until construction of the R. A. Skinner Filtration Plant and probably one other plant. It is anticipated that when the first delivery of this water is made to the Water Authority, scheduled for 1975, Metropolitan will include a surcharge for the more expensive water from the north. This surcharge, designated an "equalization charge," is presently set at \$10.00/af until 7/1/75 at which time it will increase to \$12.00/af. By order of the California Department of Public Health, all water distributed for municipal and industrial use which contains any State Project water must be filtered. Water filtered at the Skinner plant will carry, in addition to the equalization charge, a treatment charge of \$9.00/af during 1975-76, according to present MWD plans.

As shown in the water rate summary, agricultural water users benefit by a rebate from MWD. To obtain the rebate, the Authority certifies to MWD the quantities of water so used. Rebates granted the Authority are paid in full to the agencies, which in turn credit the rebates to the agricultural water users.

Water Production of Member Agencies

"Water Production" describes the quantity of water which an agency must produce from all its sources to meet the demands of its consumers, plus the



losses which occur between the source of supply and the consumers, including leakage, losses from breaks, evaporation from distribution reservoirs, and waste resulting from normal operations. Sources of supply may include impounding reservoirs, wells, and the Authority system.

Total water production of the 22 member agencies is shown in Table 7, page 49. Total water production decreased from 367,945 af in 1971-72 to 342,319 in 1972-73, a seven percent drop. Highest monthly production occurred in August 1972, when 46,906 af was used. This was a 6.6 percent increase over the August 1971 production, which was that year's peak month. Smallest monthly production was in February 1973, with 14,232 af. This was nearly 20 percent less than production in December 1971, the low month for that fiscal year.

Rain and runoff were above normal this fiscal year, being 110 percent of normal at Lindbergh Field, 135 percent at Lake Cuyamaca, and 123 percent at Lake Henshaw. Local sources yielded 38,088 af, or 11 percent of total use.

The wells in Pauma Valley produced 1,446 af for the several agencies within Yuima Municipal Water District. The San Luis Rey River system and the Warner Ranch wells owned by the Vista Irrigation District, a sub-agency of Buena Colorado MWD, produced 10,237 af for distribution within Buena Colorado MWD, Rincon del Diablo MWD and the City of Escondido. California-American Water Company produced approximately 7,241 af of

SAN DIEGO COUNTY WATER AUTHORITY WATER PRODUCTION

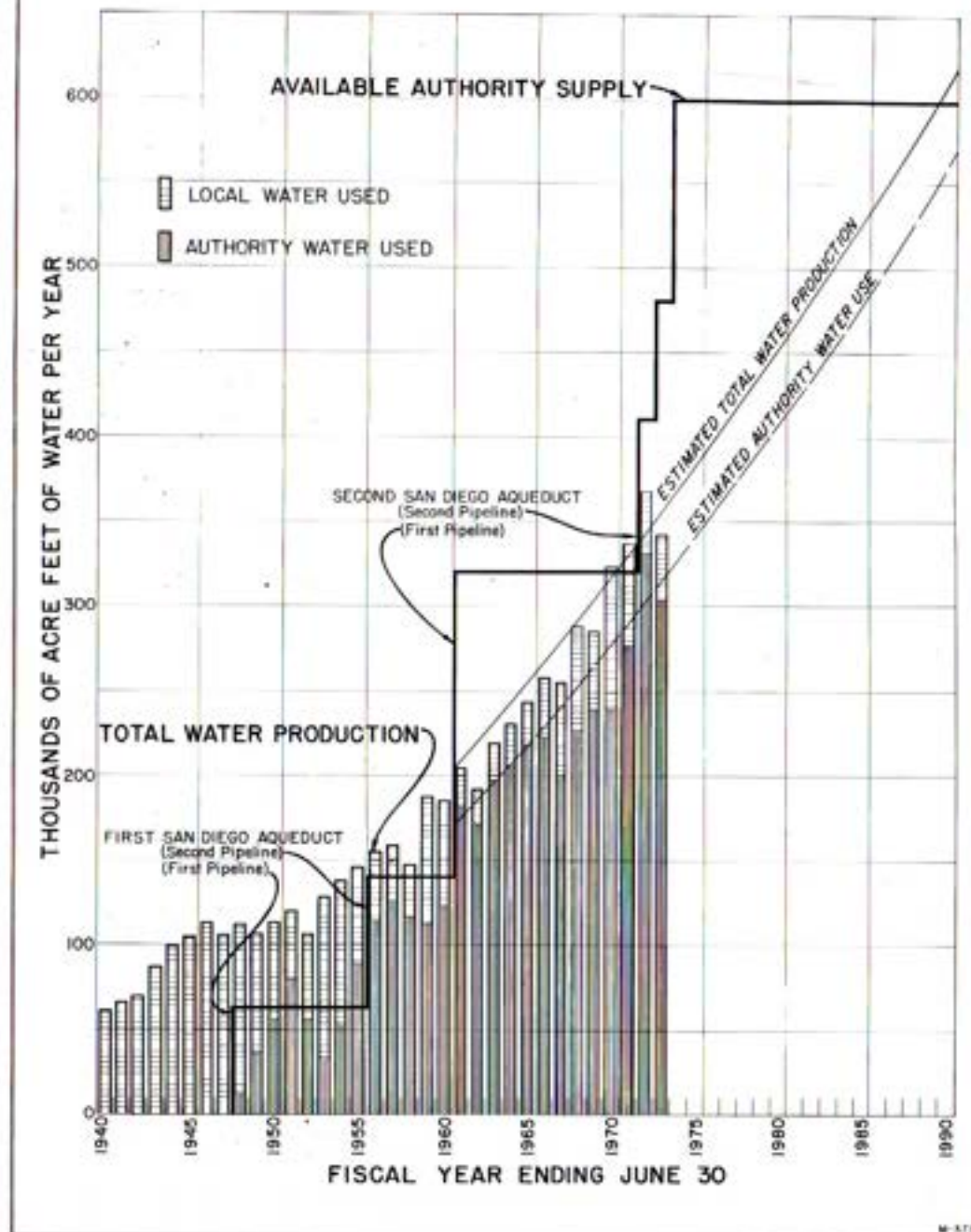


Figure B. Water Production of Authority Member Agencies

local water within its service area, which includes National City and South Bay ID. Helix Water District collected 10,860 af of runoff water in its reservoir system, key feature of which is Lake Cuyamaca. Helix Water District also produced 397 af from wells. The most extensive reservoir system within the Water Authority is that of the City of San Diego. This system produced 14,383 af of local water during the fiscal year, including 6,216 af delivered for use in areas outside the Authority. Detailed statistics on water production are contained in Table 8, page 50.

Water production by member agencies is shown in Table 9, page 51. This table lists water use per acre and per capita. The water systems of member agencies are serving an estimated 359,200 acres, about 47 percent of the 760,762 acres within the Authority.

The volume of water used per year per acre varies a great deal with the state of development, type of soil, type of crop, and other land use factors. Rainbow MWD and Valley Center MWD are intensively irrigated areas with annual water requirements of 1.69 and 1.18 af per acre, respectively. The relatively undeveloped Otay MWD and Ramona MWD report .34 and .37 af per acre, respectively. The Authority average for 1972-73 was .94 af per acre served.

Per capita water use within the Authority was .23 af per year. Rainbow MWD reports 3.99 acre feet per capita based on an estimated population of 4,650, which reflects high agricultural demand.

Figure B, on the facing page, shows the combined water production of Authority member agencies. Columns representing annual production are shaded to indicate the proportion of water obtained from local sources and that supplied by the Water Authority. The chart shows the generally expanding use of Authority water and the year to year changes in the quantity of local water used.

Projections of future water production are based on the assumption that additional water will be available when needed. The staff of the Authority has predicted that facilities now in operation will be adequate to meet all foreseeable demands on the Authority for raw water service until after 1990.

Agricultural Water Use

Agricultural water use amounted to 21.8 percent of the total of 342,319 af produced by Authority agencies. Since MWD allows a rebate of \$28.50/af on water used for agriculture, extensive record keeping and reporting by member agencies and the Authority is justified. To obtain the rebate, each agency must certify to the Authority, with supporting data, the total quantity of water used for agriculture. Table 10 shows these quantities. Rainbow MWD had the highest percentage of agricultural water use at 90.9 percent.

Water Quality

Chemical constituents of dissolved solids in the aqueduct water are shown in Tables 12 and 13. The breakdown is based on analysis of water delivered to the aqueducts at San Jacinto as made by the laboratory of the Metropolitan Water District at the F.E. Weymouth Filtration Plant in La Verne. Variation in total hardness ranged from a high of 344 ppm to a low of 332 ppm. Hard-

ness is reported as parts per million equivalent of calcium carbonate. Water temperatures varied from a low of 50° C. recorded in January and February to a high of 82° reported in August 1972.

Water Treatment

Throughout the year, Authority water continued to meet or exceed the minimum bacteriological quality standards established in the United States Public Health Service Drinking Water Standards of 1962. Most agencies within the Authority complete their treatment of water by simple chlorination.

For many years, the Metropolitan Water District and the Authority controlled bacterial growth on aqueduct pipe walls by "slugging" with chlorine. However, a program of continuous chlorination has been followed since 1965. This program has proven successful and has resulted in fewer service problems. The rate of chlorine application by the Authority during the year ranged from 1.25 to 2.0 ppm depending on chlorine demand, temperature of the water and other variables. Leak detector and automatic shutoff valve systems provide protection against chlorine leakage. As stated above, a permanent chlorination station in Rainbow Pass serves Pipelines 1, 2 and 3. A temporary station in Auld Valley serves Pipeline 4.

Because several Authority member agencies serve areas devoted primarily to agriculture, and because Colorado River water has met State and Federal health standards with simple chlorination, some agencies have distributed water without additional treatment. The practice has been to require dual chlorination, with a time interval of at least one-half hour between applications.

Other member agencies serve urban areas, and, in most cases, have provided for filtration of the water. Six filtration plants are now in operation within the Authority providing filtered water to seven member agencies: City of San Diego; City of National City; City of Del Mar; San Dieguito, Santa Fe and South Bay Irrigation Districts; and Helix Water District.

However, State Public Health officials have announced they will require full filtration, including coagulation and sedimentation, of water from the State Project. Early in 1969, "The Filtration Study Group" was formed by representatives of several member agencies to determine how full water treatment could best be provided. The report issued by this group concluded the most desirable approach to the problem would be to ask Metropolitan Water District to provide filtered water in Pipeline 3. Subsequently, other agencies have indicated they also wish to receive such service. In response, the Authority Board of Directors requested MWD to construct a filtration plant with an initial capacity of 150 million gallons a day (mgd) at Lake Skinner. MWD authorized the plant, and construction is under way. Completion is expected in late 1975.

In April 1972, the Authority Board authorized its staff and James M. Montgomery, Consulting Engineers, Inc., to study ways in which the aqueduct system could be operated to permit distribution of filtered water to all agencies which requested it. Although the study report was not due until August 1973, progress reports indicated a deficiency of at least 50 mgd between the capacity of all plants which would be available to Authority member agencies by 1975 and the peak-day demands which would have to be met that year. Demands will, of course, increase in years beyond 1975. To meet the 1975 and future demands, the progress reports suggested the Water Authority should undertake construc-

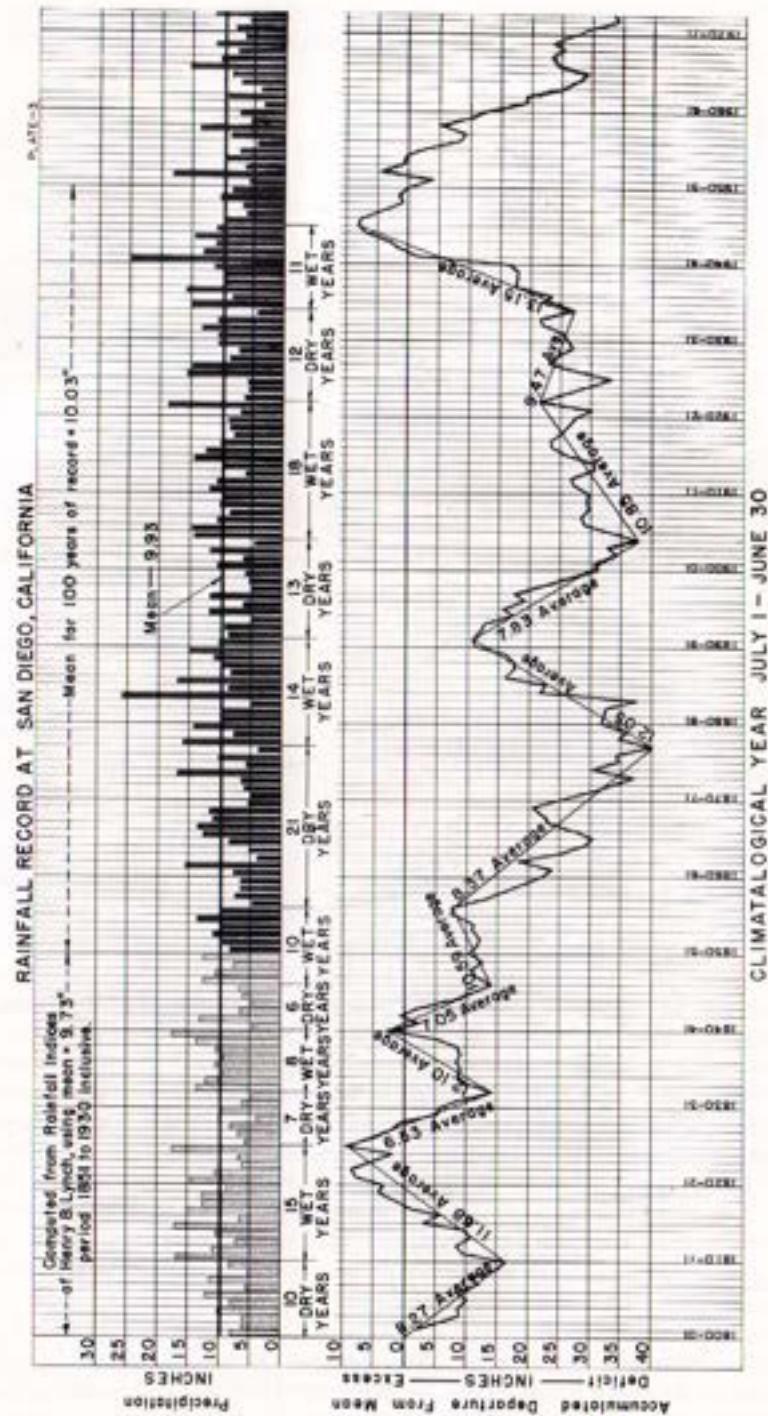
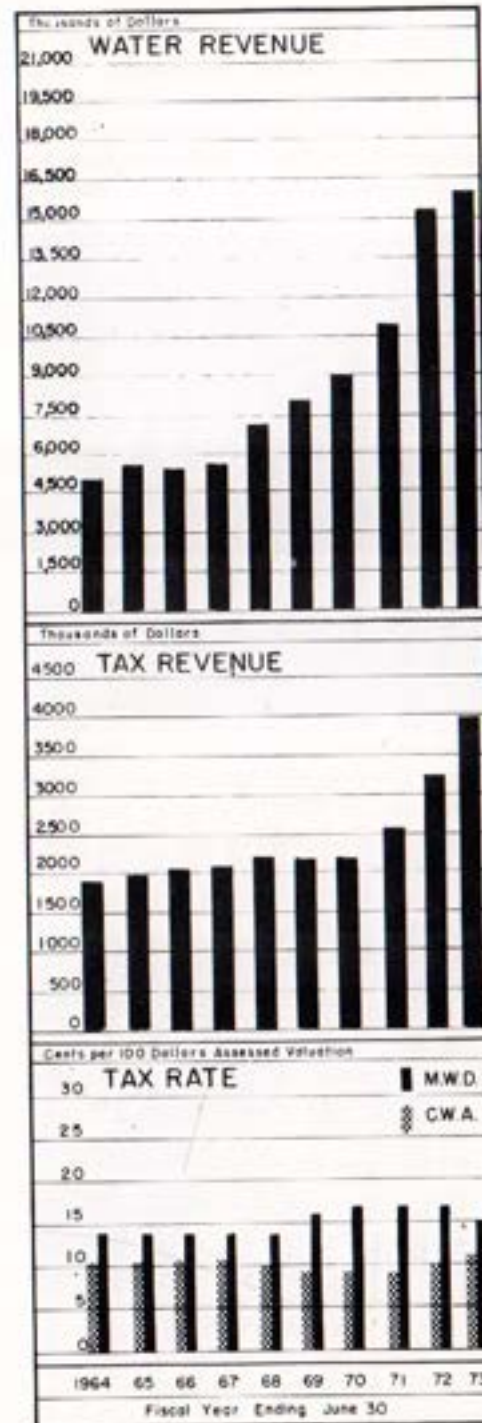


Figure C. Rainfall Record at San Diego, California.



tion over a 20-year period of several plants which it would operate. As of the end of the fiscal year, the full study report had not been received by the Board of Directors.

Allocation of Water Among Member Agencies

The Authority Act (Sec. 5.11) provides the method by which the water supply must be divided among its member agencies should the total demand exceed the Authority's delivery capabilities. Each agency has a preferential right based on its proportion of all payments to the Authority to meet capital costs (primarily taxes and annexation fees). Allocation by preferential right would be invoked only if agreement were not otherwise possible. Before construction of Pipeline 3, demand exceeded system capacity on several occasions. Voluntary agreement between member agencies and the Authority permitted operation without resort to the provisions of Section 5.11. When water and capacity are available, agencies may purchase water without restriction. Table 14 shows the preferential right of each member agency as of June 30, 1973.

Future Supplies

The Water Authority obtains all its water from the Metropolitan Water District of Southern California. At the present time, all of the water comes from the Colorado River through the Colorado River Aqueduct. The MWD Board has adopted a statement of policy, frequently repeated, that when additional water or distribution facilities are needed to

meet demands of its member agencies, additional water and/or facilities will be provided.

In view of the growth in Southern California during the decade of the 1950s it was recognized that additional water supply sources would be required by the early 1970s. The first major step to meet this need was undertaken on November 4, 1960, when MWD entered into a contract with the State of California for 1,500,000 af annually from the State Water Project, commonly called the Feather River Project. As a result of the United States Supreme Court decision in the Case of Arizona v. California, Metropolitan was subject to the loss of nearly half its 1,212,000 af entitlement from the Colorado River. Subsequently, the MWD-State contract was amended to increase Metropolitan's entitlement to State water to 2,011,500 af per year.

The California Aqueduct, key feature of the State Project for water supply, was officially dedicated on May 18, 1973, in ceremonies held at Lake Perris. This facility, the terminal storage reservoir of the 444-mile aqueduct, was the last feature remaining to be completed before the system was fully operational. State Project water, at the end of the fiscal year, was being delivered to MWD through the West Branch of the California Aqueduct at Castaic Reservoir. MWD was supplying its member agencies in Ventura and western Los Angeles counties with this water from northern California.

Water from the north will be available to the Authority early in 1975, according to present plans, following completion of the Skinner Filtration Plant. Already completed are the Lakeview Pipeline, which will carry water from Lake Perris to the existing canal turnout of the Second San Diego Aqueduct, and Skinner Dam. Filling of the reservoir behind the dam was started in April 1973, but only Colorado River supplies are being used for this purpose.

Responsible forecasts indicate water from the Colorado River and from the State Project will meet the growing requirements of MWD's member agencies, including the San Diego County Water Authority, beyond the year 1990. Recent revisions in this forecast suggest the supplies may be adequate until 2010 or 2020. During this period, the population of the District is expected to increase from the present 10 million to about 20 million.

For the period beyond, when additional supplies may be required, many plans have been proposed which call for development of projects on the underdeveloped rivers in northern California, the Columbia River, and perhaps rivers in Canada and Alaska. These many proposals, together with waste water reclamation, weather modification, geothermal water development, and sea water desalting, are being investigated by the Water Authority, MWD, the State of California, and the Federal government.

Figure B shows the increase in water requirements within the Authority since 1940.

DESIGN AND CONSTRUCTION

On June 7, 1966, during the same election in which Metropolitan Water District voters approved Proposition W for \$850,000,000 in bond funds to expand its distribution system to deliver State Project water, the Water Authority voters approved Proposition V for \$30,000,000 to assure distribution of the water throughout the Authority service area.

Second Pipeline, Second San Diego Aqueduct (Pipeline No. 4)

The Second Pipeline of the Second San Diego Aqueduct (Pipeline No. 4) from the end of the San Diego Canal in Auld Valley to the delivery point near Rainbow was the first Proposition W construction by MWD which was of specific interest to the San Diego County Water Authority. This pipeline, completed in early 1971, is approximately 100,000 feet in length and was designed to provide the Authority with an additional 380 cfs of capacity. The

Water Authority's first section of pipeline known as Phase I, extending from the MWD-CWA delivery point to the Crossover Aqueduct diversion structure near San Marcos, was completed and operational in mid-1971. Phase II, consisting of 96-inch mortar lined and coated welded steel pipe covering a distance of 11 miles from the Crossover to Escondido Creek, was completed in May 1972.

Notice of Completion for Phase III (Specification 223) was filed April 6, 1973. This 12 miles of 96 and 72 inch and 1800 feet of 69 inch prestressed concrete pipe completed Pipeline No. 4 from Escondido Creek to Miramar Reservoir.



*Valves at Interconnection near Miramar Dam.
Specification 223*



*Pipe laying in Santo Road.
Specification 224*



*Trench excavation by motorized scrapers.
Specification 224*

At the end of the fiscal year, the contractor had completed all work on the Highways 94 and 125 interchange relocation (Specification 294), except the

two end connections which could not be completed until early winter when flow in the aqueduct can be interrupted.

The Pomerado Pipeline (Specification 224), a joint project with the City of San Diego to extend Pipeline No. 4 south of Miramar Reservoir, was approximately 80 percent complete at the end of the fiscal year. The contract calls for 6.59 miles of 84, 72 and 54 inch prestressed concrete cylinder pipe from Miramar Reservoir to the intersection of Clairemont Mesa Boulevard and Santo Road.

OPERATION AND MAINTENANCE

The Authority operates its aqueducts from the Fred A. Heilbron Operations Center at 610 W. Fifth Ave. in Escondido. From that location, the Superintendent directs all operational activities and all maintenance functions with a crew of 18 employees. Operation of the aqueducts which serve all member agencies, some with very small reservoir capacity, requires that system operators be on call 24 hours every day. Telephone, two-way radio, and telemetering equipment provide the necessary continuous communications throughout the service area.

The Authority aqueducts and related facilities require continuous routine patrol to cope with vandalism, watch for leaks, and inspect structures, gates, culverts, and access roads. In addition to patrol vehicles, the field forces are provided with a variety of equipment, including road graders, bulldozers, compressors, welders, and a well-equipped shop. Skilled Authority personnel perform many tasks, including carpentry, painting, electrical, road building, construction, and mechanical repair work. Operating personnel and maintenance crews are dispatched by two-way radio. Base stations are maintained in San Diego, Escondido, and Hemet, with a repeater station located at Palomar Mountain. The Authority maintains 15 mobile units in operation, maintenance, and construction.

General

A heat wave in late July and in August 1972, combined with a previous very dry spring, caused record demands on the aqueducts. In August, 44,624 acre feet were delivered to member agencies, the largest quantity in any month of record. However, an unusually wet winter and a mild summer in 1973 combined to reduce the annual demand for delivery of water from the aqueducts in 1972-73 by 13,000 af from the previous year.

During July 1972, two venturi tubes were delivered to Otay Municipal Water District for use in metering water delivery to Tijuana, B.C., Mexico. Crews also regraded patrol roads, completed rights-of-way monumenting following completion of construction on Specification 222, and completed the new Second Aqueduct patrol road from the diversion structure on the Crossover Aqueduct to Encinitas Road. A new speaker system was installed in the Board of Directors Room in the San Diego Headquarters Building.

The Otay Municipal Water District and the City of Tijuana completed the necessary works to transfer deliveries of Colorado River water to Tijuana in August. On August 14, routine delivery started at an average rate of flow of 6 cfs. The Water Authority installed and maintains the metering devices. Otay Municipal Water District operates the pumps and delivers the water from the end of the Aqueduct to the Mexican border. Patrol road improvement south

of Lake San Marcos was started. A used 30 KVA electric generator was acquired from the Federal government on a loan basis under an excess property program.

The semi-annual foot patrol of the aqueduct was completed early in November. No unusual maintenance problems were noted and there were no leaks. The installation of a cathodic protection unit on the Fallbrook-Oceanside Pipeline was completed and work was started on the conversion of the telemeter on the Crossover Aqueduct to push-button controls. On November 17, Pipeline No. 4 was shut down to allow MWD to tie in a pressure reducing station at Lake Skinner and the line was out of service for 90 days. During this shutdown, a line valve was installed for the service connection at Red Mountain Reservoir for Fallbrook Public Utility District.

Aqueduct operations and delivery of water during December were adjusted to conditions resulting from the planned annual shutdown of the Colorado River Aqueduct. From December 4 through 14, only 35 cfs was available to the Authority from storage in San Jacinto Reservoir. Pipeline 3 was not available for service until after December 19 due to work on valves and fittings at the Auld Valley pressure control structure. Early rains and the aqueduct shutdown permitted Authority crews to undertake several long-planned maintenance projects and other installations. A valve and tee were installed on Pipeline No. 3 for the Oceanside 3 service connection, an ell was installed on Pipeline No. 3 at the Baltimore Drive overcrossing, and Tijuana No. 2 meter was installed at the border.

Pipeline No. 3 was out of service during much of January to allow the contractor to lower the line through a portion of Los Penasquitos Ranch. A four-day shutdown of Pipelines No. 3 and No. 4 during the week of January 22 permitted the installation of line valves in Pipeline No. 3 at Miramar Reservoir.

Between February 23 and 28, MWD shut down the San Diego Canal to remove the bulkhead blocking the canal inlet to Lake Skinner. The Auld Valley Chlorination plant piping was dismantled and steam cleaned, and chlorine pressure control diaphragms and valves were replaced.

During March, a new chlorine leak detection device was installed at the Rainbow Chlorination station. The Oceanside 3 service connection was completed during the month. At month's end, the Black Mountain siphon was drained on Pipeline 3 to permit removal of the temporary bulkhead installed north of the portion being lowered in Los Penasquitos. Shop work included rebuilding the trailer for an 8 inch portable pump and fabrication of a trailer for a portable welding unit.

At the end of April, all four pipelines were in service in all reaches. Metropolitan started filling Lake Skinner on April 16 with a 100 cfs flow. High flows in the canal and problems with the screens at the end of the canal contributed to high turbidity problems for many member agencies.

On June 19, Metropolitan increased the flow in the San Diego Canal to 900 cfs to provide approximately 400 cfs flow into storage at Lake Skinner. This record high flow in the canal scoured canal walls and flushed inverted siphons causing turbidities of up to 25 units compared to previous highs in the range of 1 to 5 units. Water delivery to Tijuana during June was 880 acre feet, the largest quantity delivered in any one month. The Water Authority

was advised by Sr. Juan Ojeda Robles, General Manager of the Comision Estatal de Servicios Publicos de Tijuana, that Tijuana had requested construction of Phase II as described in Minute 240 of the International Boundary and Water Commission be started early in 1974 and to be operative by July 1, 1974. The necessary construction work will be performed by Otay Municipal Water District. Construction of the Rainbow 7 service connection was started, including the excavation and pouring of the concrete floor slab. By year's end, considerable work had been accomplished on a new patrol road in the Golf Hill area of Spring Valley on easements donated by local property owners in exchange for joint use of the road.

Routine aqueduct operations, patrol and maintenance activities continued throughout the year, particularly road grading, clearing of brush, valve greasing, flushing venturi rings, calibrating venturi meters, repairing vandalized facilities, vehicle maintenance, and culvert cleaning.

Special Activities

A large group of Water Authority Board members, staff and guests, including several leading citizens of Tijuana, attended the dedication of the State Water Project in Riverside and at Lake Perris on May 17 and 18, 1973. Governor Ronald Reagan gave the signal which started water flowing into the terminal reservoir of the 444-mile-long California Aqueduct.

A general meeting of the Operating Heads of the member agencies was held on September 20, 1972, to hear a preliminary progress report on filtered water distribution in the San Diego Aqueducts from James M. Montgomery, Inc.

A meeting of the Metropolitan Water District operating heads was held at Rancho California on September 29, 1972, with the Water Authority as co-host.

Seven employees participated in portions of the Southern California Safety and Health Congress held in San Diego as part of the Water Authority effort to comply with new regulations imposed by the Occupational Safety and Health Act.

On April 20, 1973, the Engineering and Operations Committee and other members of the Board of Directors conducted the annual inspection of the aqueducts. A brief, informal dedication ceremony was conducted at the valve structure on Pipeline No. 4 at Miramar Reservoir marking completion of construction of the \$30 million Second Pipeline of the Second San Diego Aqueduct.

The operating heads of the Water Authority member agencies met at the San Diego headquarters on May 23. Topics included anticipated summer requirements, the filling of Lake Skinner and the problem with the screens at the end of the canal, a progress report on the filtered water distribution study, and a progress report on the water quality monitoring program.

A seminar on water resources management and the environment, co-sponsored by the Water Authority, the City of San Diego, and the Institute of Public and Urban Affairs of San Diego State University, was held June 1, 1973, in San Diego.

Under direction of the Public Information and Education Committee, news media were kept advised of Authority activities and policies, a new folder

describing briefly the history and function of the Authority was prepared and distributed, and new graphics were prepared and utilized as an exhibit at the Southern California Exposition at Del Mar during late June and early July. San Diego Water News, which had been published as a quarterly journal, was increased to a bi-monthly, its format changed to that of a newsletter, and its circulation increased from 450 to approximately 2700.

Water Authority representatives continued to appear as speakers before community organizations, civic groups, schools and public bodies. The themes stressed by the speakers were Authority operations, history and purpose of the Authority, the Colorado River supply and the anticipated State Water Project supply. Two MWD motion pictures, "Billion Gallons a Day" and "People and Water," were made available to or shown to groups throughout the year. A slide presentation on the State Water Project was prepared, and shown several times.

During March, the Authority co-hosted a tour by a group of financial analysts, which included representatives of banks, insurance companies, bond houses, and the two standard financial reference publications, Standard and Poor's and Moody's. Other hosts were the City and County of San Diego and the Port District.

Directors and staff toured Tijuana water distribution facilities and the Rosarito desalination facility as the guests of the Comision Estatal de Servicios Publicos de Tijuana on March 22, 1973.

Authority Directors were offered the opportunity to nominate area school teachers to participate in a Colorado River Aqueduct tour sponsored by the Metropolitan Water District with Director Harry Griffen as host. The three-day tour started May 26, 1973.

LEGAL DEPARTMENT

Acquisition of rights of way for Pipeline No. 4 continued under authority of the Board as recommended by the Lands and Rights of Way Committee during Fiscal Year 1972. The total amount authorized for land acquisitions for Pipeline No. 4 remained at \$974,500. Three lawsuits were prepared during the year for trial in the immediate future. These are the only pending condemnation cases involving right of way acquisitions.

As the County areas become more and more congested, Authority rights of way problems become increasingly troublesome. The Authority now has rights of way for four major pipelines extending most of the distance from the northerly to the southerly County boundaries. In addition, there are the rights of way for the Crossover Aqueduct and the Oceanside and Sweetwater branch lines. The result is considerable acreage of rights of way surface which adjacent owners and others desire to use. The Authority permits planting and other surface use not inconsistent with the Authority's use of the property but frequently such use results in conflicts. The Authority processes numerous applications for encroachment permits of various kinds and is frequently met with unauthorized encroachments that endanger the facilities installed in the

easements. Constant patrolling and other protective measures are necessary to minimize damage to costly Authority installations.

The sum of \$86,828.72 was received during the year as payments on settlement of the pipe antitrust suits which make the total amount received from that settlement by the Authority \$1,695,547.33 including interest.

An important contractual arrangement was entered into between the United States, The Metropolitan Water District of Southern California, the San Diego County Water Authority, the Otay Municipal Water District and the City of San Diego as of the 13th day of June, 1972. It provides for the temporary delivery of a portion of Mexico's entitlement from the Colorado River through the facilities of the California agencies to the City of Tijuana, Mexico. The Authority is the coordinating agency under the contract. Delivery of water to Tijuana commenced August 14, 1972. It is expected that deliveries will reach 20,600 acre feet per year. The contract terminates in five years and Mexico is studying methods to provide a permanent supply to meet their rapidly growing needs.

Litigation brought against the Authority and the City of San Diego to delay construction of the Pomerado pipeline was successfully defended. Plaintiffs representing certain environmental groups filed Action Nos. 338633 and 338634 in the Superior Court contending that compliance with the Environmental Quality Act of 1970 was legally inadequate. After extensive briefing, the matter was heard by Superior Court Judge Ross G. Tharp who denied their claims. An appeal was filed but it has not been prosecuted. The contract was about 80% complete on June 30, 1973.

SB 1056 was introduced by Senator John Stull at the request of the Authority and was passed by the Legislature. It amends the County Water Authority Act to make clear that there is no legal incompatibility of offices by persons serving on the Authority Board and the boards of water district member agencies. It also makes the provisions of the Revenue Bond Law of 1940 applicable to the Authority.

A report was prepared for the Council on Intergovernmental Relations which was presented by the General Manager and Chief Engineer on June 28, 1973 at a hearing in San Diego. It outlined the background of the Authority—its functions, purposes and goals.

Annexations were processed which added territory to the City of Escondido, City of Oceanside, Ramona MWD, Rincon del Diablo MWD, San Dieguito Irrigation District, and concurrently to the Authority.

TREASURER'S REPORT

The Treasurer is appointed by the Board of Directors, serves at their pleasure without remuneration, and is responsible for the funds of the Authority.

Acting under policies adopted by the Board of Directors, the Treasurer invests funds, deemed to be idle by the Director of Finance, in interest bearing bank time deposits, in direct obligations of the Federal Government and in obligations of Federal agencies. The investments in Federal Agency securities

are made only when there is no evidence of need for the funds prior to the maturity of the agency obligations.

In accordance with the Administrative Code, the Treasurer is to report to the Board of Directors in summary form the financial transactions under his control at the end of each fiscal year.

For the fiscal year ending June 30, 1973, income was received in the total amount of \$21,462,825. Disbursements during this same period totaled \$27,968,009. As of June 30, 1973, the Treasurer had under his control funds and investments totaling \$6,854,437.

Income received was in the following categories:

Sales of water	\$16,098,004	
Taxes including annexation charges	3,996,966	
Interest earned on investments	596,110	
Contract payments from Metropolitan Water District including interest of \$120,261	577,063	
Miscellaneous	194,682	
Total Income		<u>\$21,462,825</u>

Disbursements were as follows:

Purchase of water	\$15,527,991	
Outlay for property, plant and equipment	7,064,904	
Operation and maintenance	534,149	
Debt service, principal and interest	4,840,965	
Total Disbursements		<u>\$27,968,009</u>

As of June 30, 1973, the Treasurer's accountability for \$6,854,437 was invested as follows:

Demand deposit	\$ 29,437	
Time deposits	6,575,000	
Repurchase agreements	250,000	
Total		<u>\$ 6,854,437</u>

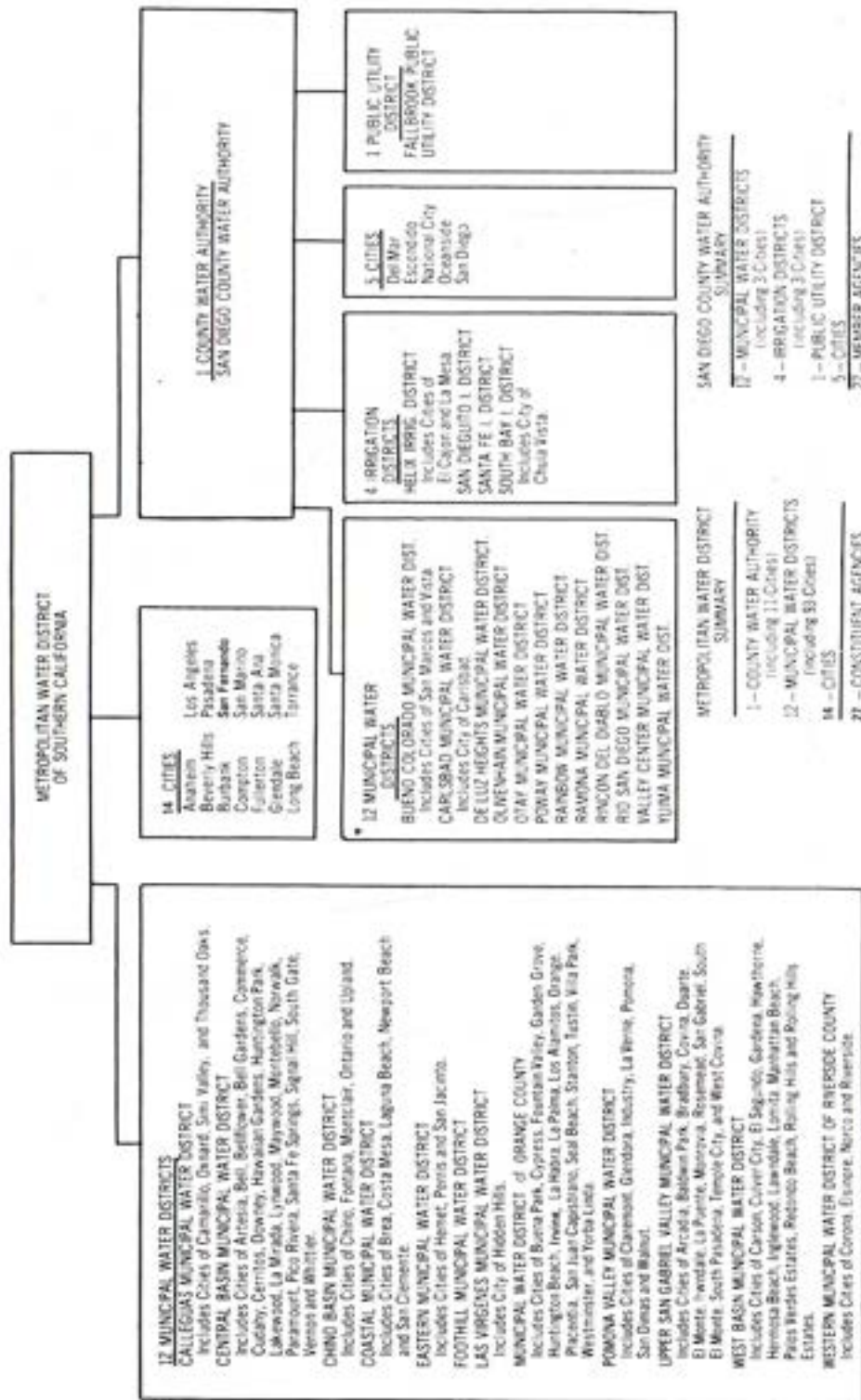
METROPOLITAN WATER DISTRICT MEMBERSHIP

The San Diego County Water Authority receives its entire supply of water from The Metropolitan Water District of Southern California, is a member agency of that District, and works very closely with it. A brief outline of MWD's organization and operations may, therefore, be of interest to readers of this report.

The Metropolitan Water District was organized in 1928 under the then newly-enacted Metropolitan Water Districts Act. Originally, the act provided only cities could be member agencies. A later amendment permitted the annexation of large water districts. The District now includes the original 13 cities, plus one city added in 1971, 12 municipal water districts, and the San Diego County Water Authority.

The Metropolitan and Authority acts are very similar. Just as with the Authority, MWD is governed by a board of directors the members of which

SAN DIEGO COUNTY WATER AUTHORITY



METROPOLITAN WATER DISTRICT MEMBERSHIP

represent the member agencies. Each director is appointed by the chief executive officer of the agency he represents, with approval from its legislative body. Under an amendment to the Metropolitan Water Districts Act passed during the 1971-72 legislative session, each member agency is entitled to one director on the MWD board, plus an additional director for each three percent of the total District assessed valuation which lies within its boundaries. Figure D, page 36, lists the 27 MWD member agencies.

The Water Authority began the fiscal year with four representatives on the Metropolitan Water District Board of Directors:

Fred A. Heilbron, who had been chairman of the Water Authority board since its organization, served on the Metropolitan board 26 years, from the annexation of the Authority until his death. He was MWD Board Secretary for many years; and a member of the Engineering and Operations and the Water Problems committees. As of the end of the fiscal year, the vacancy created by Mr. Heilbron's death had not been filled.

Director Hans H. Doe is a member of the Executive, the Engineering and Operations, Organization and Personnel, and the Special Advisory Nuclear Power and Resalting Plant committees. He has served on the Metropolitan board for 13 years.

Director Harry Griffen is a member of the Finance and Insurance Committee and chairman of its Audit Subcommittee, the Water Problems Committee and the Special Committee on Charges and Payments Under the State Contract. He has served on the Metropolitan Board for ten years.

Director Ralph E. Graham is a member of the Engineering and Operations and the Land committees. He has served on the MWD board for nearly two years.

As of June 30, 1973, the Authority had a total of 345 votes out of 2,940 or 11.74 percent of the total. Each member agency of the District is entitled to vote on all questions coming before the board and to cast one vote for each ten million dollars, or major fraction thereof, of assessed valuation of taxable property within the member agency's boundaries. When a member agency is represented by more than one director, each director in attendance is entitled to vote a proportionate fraction of the total number of votes of his agency.

Figure E, page 38, shows the Metropolitan Water District system and the areas which it serves. Portions of Ventura, Los Angeles, Orange, Riverside, San Bernardino and San Diego counties are within the District. Within this area are 124 incorporated cities. During the year, 33,737 acres were annexed to MWD, of which 1,225 acres were also annexed to the Authority. As of June 30, 1973, District area equaled 4,886 square miles (3,127,040 acres), of which 1,189 square miles (760,762 acres) or 24.3 percent lie within the boundaries of the Authority.

Assessed Valuation

Total assessed valuation of taxable property lying within the boundaries of the Metropolitan Water District as determined by the assessors of the several counties for use in levying taxes for fiscal year 1972-73 was \$31,011,520,641, an increase of \$1,988,107,179 or 6.4 percent over the assessed valuation of \$29,023,413,462 for the 1971-72 fiscal year. An amount of \$358,559,264 or 18.0 percent of this increase occurred within the boundaries of the Authority.

COMPOSITION OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
JUNE 30, 1973

Figure D.

was levied against taxable property within the boundaries of the Authority. Special taxes are levied when an area annexing to the District decides to amortize its annexation fees over a 30-year period. The annexation fee represents taxes which would have been paid had the annexing area been a part of MWD at the time of its organization. As of the fiscal year's end, Water Authority member agencies had assumed back-tax liability totaling \$27,635,539, of which \$14,758,002 had been paid by the start of the 1973-74 fiscal year.

COLORADO RIVER BOARD MEMBERSHIP

The Colorado River Board of California is an agency of the State devoted to protecting the rights of California agencies as users of Colorado River water. Six agencies—San Diego County Water Authority, The Metropolitan Water District, the City of Los Angeles Department of Water and Power, Imperial Irrigation District, Coachella Valley County Water District, and Palo Verde Valley Irrigation District—are represented on the Board. Chairman Raymond E. Badger is the Authority's representative. Once fully financed from the State budget, the Board now receives one-third of its support from that source. The remaining amount will be contributed by the six agencies as follows: Metropolitan, 44½ percent; Los Angeles Department of Water and Power, 28½ percent; Imperial Irrigation District, 19 percent; Coachella Valley Water District, five percent; San Diego County Water Authority, two percent; and Palo Verde Valley Irrigation District, one percent.

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SAN DIEGO COUNTY WATER AUTHORITY

Table 1
AREA—AUTHORITY MEMBER AGENCIES

Member Agencies	Area Within Authority			Percent of Total Authority Area 6/30/73
	As of 6/30/72 (Acres)	Changes During Year (Acres)	As of 6/30/73 (Acres)	
Bueno Colorado M.W.D.	48,930	0 (2)	48,930	6.43
In City of San Marcos	(7,700)	(0)	(7,700)	(1.01)
In City of Vista	(7,040)	(+560)	(7,600)	(1.00)
Carlsbad M.W.D.	20,212	+2 (3)	20,214	2.66
In City of Carlsbad	(8,600)	(+4,200)	(12,800)	(1.68)
Del Mar, City of	1,082	0	1,082	0.14
De Luz Heights M.W.D.	11,830	0	11,830	1.56
Escondido, City of	11,686	+897	12,583	1.65
Fallbrook Public Utility District	15,759	0	15,759	2.07
Helix Irrigation District	31,454	+10 (4)	31,464	4.14
In City of El Cajon	(7,754)	(+18)	(7,772)	(1.02)
In City of La Mesa	(5,013)	(+1)	(5,014)	(0.66)
National City, City of	5,380	+20	5,400	0.71
Oceanside, City of	23,777	+82	23,859	3.14
Olivenhain M.W.D.	27,558	0 (5)	27,558	3.62
Otay M.W.D.	63,893	+2 (6)	63,895	8.40
Poway M.W.D.	22,980	-91	22,889	3.01
Rainbow M.W.D.	47,043	0 (10)	47,043	6.18
Ramona M.W.D.	47,487	+91	47,578	6.25
Rincon del Diablo M.W.D.	17,875	(1) -303 (7)	17,572	2.31
Rio San Diego M.W.D.	54,256	-12 (8)	54,244	7.13
San Diego, City of	202,704	0	202,704	26.65
San Dieguito Irrigation District	4,914	+525	5,439	0.72
Santa Fe Irrigation District	10,184	+22	10,206	1.34
South Bay Irrigation District	15,610	(1) -20 (9)	15,590	2.05
In City of Chula Vista	(12,060)	(0)	(12,060)	(1.59)
Valley Center M.W.D.	62,110	0	62,110	8.16
Yuima M.W.D.	12,813	0	12,813	1.68
Total Authority Area	759,537	+1,225	760,762	100.00
San Diego County			2,725,100	

- (1) Includes area annexed by an adjacent city member agency but still in district, being an overlapping area and considered here as being part of the city.
- (2) Does not include 2652 acres overlapping in City of Oceanside and 284 acres overlapping in City of Escondido.
- (3) Does not include 201 acres overlapping in City of Oceanside.
- (4) Does not include 21 acres overlapping in City of San Diego.
- (5) Does not include 5 acres overlapping in City of San Diego.
- (6) Does not include 726 acres overlapping in City of San Diego.
- (7) Does not include 8665 acres overlapping in City of Escondido and 39 acres overlapping in City of San Diego.
- (8) Does not include 12 acres overlapping in City of San Diego.
- (9) Does not include 297 acres overlapping in City of San Diego and 626 acres overlapping in City of National City.
- (10) Does not include 701 acres overlapping in City of Oceanside.

TABLES

Table 2
POPULATION GROWTH—COUNTY AND AUTHORITY AREA
1910 to 1973
(Includes Resident Military Personnel)

Year (as of April 1)	COUNTY		AUTHORITY		Percent of County Population in Authority
	Total Population (1)	Average Annual Growth	Total Population	Average Annual Growth	
1910	61,665				
		5,958			
1920	112,248				
		9,741			
1930	209,659				
		7,969			
1940	289,348	26,746	(3)	440,659	88
1946 (3)	502,804				
				2,807	
1950	556,808	42,478	(2)	451,886	81
1955 (4)	769,200	52,762	(2)	702,300	91
1960	1,033,010	32,198	(2)	956,400	93
1965 (4)	1,194,000	23,360	(5)	1,150,000	96
1970	1,310,800	86,900	(5)	1,255,000	96
1971 (4)	1,397,700	77,300	(5)	1,334,700	95
1972 (4)	1,475,000	46,500	(5)	1,391,000	94
1973 (4)	1,521,500		(5)	1,459,500	96

- (1) County population from U.S. Census Bureau Reports.
- (2) Authority population based on U.S. Census Bureau Reports.
- (3) Based on Special Census, U.S. Census Bureau, exclusive of emergency military personnel due to World War II.
- (4) Estimated by the San Diego Chamber of Commerce.
- (5) Estimated by Authority member agencies.

SAN DIEGO COUNTY WATER AUTHORITY

Table 3
POPULATION—AUTHORITY MEMBER AGENCIES AND COUNTY
(Includes Resident Military Personnel)

Member Agencies	Area 6/30/73 Acres	POPULATION—U.S. CENSUS				Average Annual Increase 1970-73 Percent	Density of Population 1973 Per Acres
		1960	1970	1973 Estimate	1973 Estimate (2)		
		(1)	(1)	(1)			
Bueno Colorado M.W.D.	48,930	31,500	39,000	49,000	9	1.00	641
In City of San Marcos	(7,100)	(3,900)	(7,600)	(7,600)	31	0.97	623
In City of Vista	(7,600)	(24,600)	(27,400)	(27,400)	4	3.61	2,307
Carlsbad M.W.D.	20,214	10,000	15,500	17,300	4	0.86	548
In City of Carlsbad	(12,800)	(9,400)	(14,850)	(17,200)	5	1.34	860
Del Mar, City of	1,082	3,900	4,900	4,900	8	4.53	2,898
De Luz Heights M.W.D.	11,830	150	150	150	0	0.01	8
Escondido, City of	12,583	18,500	36,000	45,800	9	3.64	2,329
Fallbrook Public Utility District	15,759	10,000	12,000	13,450	4	0.85	546
Helix Irrigation District	31,464	122,100	163,000	179,800	3	5.71	3,657
In City of El Cajon	(7,772)	(37,300)	(50,900)	(58,000)	5	7.46	4,776
In City of La Mesa	(5,014)	(29,900)	(38,800)	(43,450)	4	8.67	5,546
National City, City of	5,400	32,300	39,000	43,750	4	8.10	5,185
Oceanside, City of	23,859	24,700	40,700	49,000	7	2.05	1,314
Olivenhain M.W.D.	27,558	200	2,000	8,000	100	0.29	186
Otay M.W.D.	63,895	5,400	19,400	32,000	22	0.50	321
Poway M.W.D.	22,889	4,800	14,000	22,000	19	0.96	615
Rainbow M.W.D.	47,043	3,800	4,200	4,650	4	0.10	63
Ramona M.W.D.	47,578	5,600	6,800	7,600	4	0.16	102
Rincon del Diablo M.W.D.	17,572	14,000	18,900	20,900	4	1.19	761
Rio San Diego M.W.D.	54,244	25,500	46,000	68,600	16	1.26	809
San Diego, City of	202,704	557,200	676,800	763,100	4	3.76	2,409
San Deganito Irrigation District	5,439	15,000	21,800	23,100	2	4.25	2,718
Santa Fe Irrigation District	10,206	7,700	8,600	11,200	10	1.10	702
South Bay Irrigation District	15,590	64,300	80,000	84,450	2	5.42	3,467
In City of Chula Vista	(12,060)	(42,400)	(64,500)	(75,900)	6	6.29	4,028
Valley Center M.W.D.	62,110	3,600	7,000	9,500	12	0.15	98
Yuima M.W.D.	12,813	1,250	1,250	1,250	0	0.10	62
Total Authority	760,762	955,200	1,255,000	1,459,500	5	1.92	1,228
San Diego County	2,725,100	1,033,010	1,310,800	1,521,500	27	0.56	357

(1) Population in agencies other than cities was furnished by agencies.

(2) Estimated by agencies.

TABLES

Table 4
ASSESSED VALUATIONS—AUTHORITY MEMBER AGENCIES AND COUNTY

Member Agencies	Area 6/30/73 Acres	Assessed Valuation—Secured and Unsecured					
		1971-72		1972-73		1973-74	
		Total	Percent Increase	Total	Percent Increase	Total	Percent Increase
Bueno Colorado M.W.D.	48,930	\$ 113,261,336	19.5	\$ 135,309,178	19.5	\$ 162,562,435	3,322
Carlsbad M.W.D.	20,214	75,116,953	18.0	88,665,121	18.0	104,079,216	5,179
Del Mar, City of	1,082	17,325,957	5.2	18,232,666	5.2	24,038,026	22,216
De Luz Heights M.W.D.	11,830	1,686,636	32.5	2,234,993	32.5	2,370,122	200
Escondido, City of	12,583	90,326,658	7.4	97,001,431	7.4	106,477,819	8,462
Fallbrook Public Utility District	15,759	30,178,005	4.2	31,446,925	4.2	39,104,143	2,481
Helix Irrigation District	31,464	358,928,110	7.9	387,395,781	7.9	427,281,665	13,580
National City, City of	5,400	62,396,896	9.7	68,421,364	9.7	75,050,212	13,898
Oceanside, City of	23,859	86,786,102	27.4	110,527,231	27.4	122,142,122	5,119
Olivenhain M.W.D.	27,558	25,149,980	11.3	27,997,953	11.3	36,421,721	1,322
Otay M.W.D.	63,895	64,080,236	9.0	69,874,390	9.0	78,825,196	1,234
Poway M.W.D.	22,889	33,546,175	43.8	48,250,490	43.8	65,338,921	2,426
Rainbow M.W.D.	47,043	39,466,170	2.2	40,346,433	2.2	44,920,809	905
Ramona M.W.D.	47,578	18,894,568	13.8	21,510,574	13.8	28,556,987	600
Rincon del Diablo M.W.D.	17,572	44,317,614	6.8	47,337,149	6.8	52,449,186	2,985
Rio San Diego M.W.D.	54,244	91,326,425	16.9	106,802,068	16.9	122,763,223	2,263
San Diego, City of	202,704	1,707,640,498	10.3	1,950,022,383	10.3	2,213,996,401	10,922
San Deganito Irrigation District	5,439	43,574,019	6.9	46,589,566	6.9	60,897,922	11,197
Santa Fe Irrigation District	10,206	46,174,207	17.3	54,171,601	17.3	63,205,906	6,193
South Bay Irrigation District	15,590	222,678,405	6.6	237,310,585	6.6	245,705,256	15,760
Valley Center M.W.D.	62,110	33,924,345	4.2	35,361,536	4.2	37,923,386	611
Yuima M.W.D.	12,813	8,756,192	6.0	9,283,333	6.0	9,469,808	739
Total Authority	760,762	\$3,275,533,487	10.9	\$3,634,092,751	10.9	\$4,114,380,482	\$ 5,408
San Diego County	(1) 1,250,000	\$3,482,821,910	10.6	\$3,853,612,531	10.6	\$4,362,535,878	\$ 3,490

(1) Excluding 1,475,100 acres of tax-exempt lands in San Diego County.

SAN DIEGO COUNTY WATER AUTHORITY

Table 5
SALES OF COLORADO RIVER WATER—FISCAL YEAR 1972-73
(All Figures in Acre Feet)

Member Agencies	July	August	Sept.	Oct.	Nov.	Dec.	Total 6 Months
Buena Colorado M.W.D.	1,871.2	2,000.2	1,171.9	929.1	737.6	416.9	7,126.9
Carlsbad M.W.D.	1,118.9	1,325.1	1,182.7	901.8	369.4	428.9	5,326.8
Del Mar, City of	141.2	178.5	106.7	59.9	53.2	48.7	588.2
De Lux Heights M.W.D.	0	0	0	0	0	0	0
Escondido, City of	2,009.5	2,489.7	1,921.1	1,600.5	946.2	329.9	7,826.9
Fallbrook P.U.D.	1,666.3	1,796.6	1,265.5	1,033.5	553.6	492.7	6,828.2
Helix I.D.	3,658.6	3,674.7	3,377.7	2,411.8	1,772.4	1,189.9	16,076.1
National City & South Bay I.D.	1,761.0	1,073.1	1,212.9	877.8	516.7	84.9	5,526.4
Oceanside, City of	1,491.2	1,596.6	1,266.8	1,280.0	723.2	681.5	7,039.3
Olivenhain M.W.D.	307.1	351.0	242.7	179.4	125.9	89.3	1,295.4
Otay M.W.D.	1,513.9	1,753.3	1,335.5	812.3	479.2	368.2	6,282.4
Poway M.W.D.	814.6	1,064.3	740.9	531.0	252.5	367.6	3,770.9
Rainbow M.W.D.	2,601.2	3,274.8	2,507.3	1,902.9	919.8	645.7	11,842.7
Ramona M.W.D.	409.1	421.6	306.6	228.8	135.2	119.7	1,621.0
Rincon del Diablo M.W.D.	417.6	398.2	279.5	200.2	115.6	117.6	1,528.7
Rio San Diego M.W.D.	1,199.4	1,164.5	783.1	620.3	466.5	421.6	4,655.4
San Diego, City of	17,717.4	16,731.4	18,219.7	17,390.4	15,209.4	6,484.1	91,653.4
San Dieguito I.D.	654.9	667.0	473.6	429.2	363.3	145.7	2,733.7
Santa Fe I.D.	937.4	1,009.2	695.5	553.5	358.9	120.1	3,674.6
Valley Center M.W.D.	2,774.7	3,136.7	1,716.6	1,408.9	627.7	483.8	10,148.4
Yuima M.W.D.	449.6	517.7	220.1	146.8	96.5	3.8	1,434.5
Total Sales to Agencies	43,514.8	44,624.2	38,126.4	32,878.1	24,804.8	13,031.6	196,979.9
Total Sales to Others	*45.3	*275.1	*586.9	*657.8	*610.7	*389.0	*2,564.8
Total Sales to Agencies and Others	43,560.1	44,899.3	38,713.3	33,535.9	25,415.5	13,420.6	199,544.7
Total to Authority Storage	0	0	0	0	0	0	0
Total from Authority Storage	-5,984.4	-6,035.1	-3,811.3	-710.0	-647.4	-229.5	-16,517.7
Total to Metropolitan Storage	0	0	0	0	0	0	0
Total from Metropolitan Storage	-650.0	-650.0	-508.0	0	0	0	-1,808.0
Total Flow in Authority System	37,825.7	38,214.2	34,394.0	32,825.9	24,768.1	13,191.1	181,219.0
Rate of Flow (c.f.s.)							
To Agencies and Others	798.4	739.2	650.6	545.4	427.1	218.2	3,468.8
To Authority Storage	0	0	0	0	0	0	0
From Authority Storage	-82.7	-98.2	-64.1	-11.5	-10.9	3.7	-45.3
To Metropolitan Storage	0	0	0	0	0	0	0
From Metropolitan Storage	-10.5	-10.5	-8.5	0	0	0	-5.0
Flow in Authority System	615.2	621.5	578.0	533.9	416.2	214.5	496.5

*To Authority's Contractor for Construction and to Otay for delivery to Tijuana, Mexico.

TABLES

Table 5
(Continued)

Jan.	Feb.	March	April	May	June	Total 6 Months	Yearly Total	Yearly Average c.f.s.
519.3	365.6	464.1	426.7	348.4	603.3	2,727.4	9,854.3	13.61
465.8	293.1	369.7	830.5	858.1	840.3	3,597.5	8,924.3	12.33
57.2	17.5	33.3	45.0	49.3	60.0	262.3	850.5	1.17
0	0	0	0	1.8	6.9	8.7	8.7	0.01
611.4	599.5	748.9	1,000.2	1,128.5	1,021.2	5,109.7	12,936.6	17.87
350.5	171.4	176.3	786.2	1,126.7	1,412.7	4,023.8	10,852.0	14.99
2,248.0	1,630.6	1,783.7	2,193.9	3,325.0	3,523.6	14,074.8	30,150.9	41.65
844.0	806.1	746.9	1,244.9	1,225.4	979.0	5,846.3	11,372.7	15.71
642.7	567.9	538.1	1,069.7	1,268.7	1,415.4	5,502.5	12,541.8	17.32
98.9	65.8	52.3	175.3	230.0	339.7	962.0	2,257.4	3.12
293.5	265.6	217.7	610.8	766.9	1,205.8	3,360.3	9,642.7	13.32
151.4	236.3	125.8	452.6	691.7	918.1	2,485.9	6,256.8	8.64
418.8	179.7	129.4	1,301.7	1,882.8	2,439.8	6,343.2	18,185.9	25.12
72.5	65.4	74.0	147.3	270.0	388.9	1,018.1	2,639.1	3.65
37.7	33.6	23.6	164.4	259.3	349.0	867.6	2,396.3	3.31
440.7	384.9	434.8	633.1	896.6	1,106.7	3,896.6	8,552.2	11.81
11,636.7	10,875.8	11,461.0	11,246.6	13,849.1	14,489.1	73,558.3	165,211.7	228.20
255.1	263.7	278.5	17.8	256.1	410.0	1,481.2	4,214.9	5.82
188.3	183.2	134.4	18.4	312.2	628.0	1,464.5	5,139.1	7.10
237.0	190.5	112.1	710.4	2,603.9	2,638.7	6,402.6	16,551.0	22.86
1.7	13.0	7.0	50.9	169.9	348.2	590.7	2,025.2	2.80
19,511.2	16,519.2	17,872.6	23,126.4	31,430.4	35,124.4	143,584.2	340,564.1	470.41
*557.8	*576.4	*628.8	*728.0	*785.7	*934.8	*4,211.5	*6,776.3	9.36
20,069.0	17,095.6	18,501.4	23,854.4	32,216.1	36,059.2	147,795.7	347,340.4	479.77
+1,500.0	+2,000.0	+3,000.0	+3,000.0	+3,000.0	+1,000.0	+13,500.0	+13,500.0	+18.65
-25.0	-25.0	-25.0	-41.0	-58.0	-90.0	-264.0	-16,781.7	-23.18
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	-1,808.0	-2.50
21,544.0	19,070.6	21,476.4	26,813.4	35,158.1	36,969.2	161,031.7	342,250.7	472.74
326.4	397.8	300.9	400.9	523.9	696.0	411.7	479.77	
+24.4	+36.0	+48.8	+50.4	+48.8	+16.8	+137.6	+18.65	
-0.4	-0.4	-0.4	-0.7	-0.9	-1.5	-0.7	-23.18	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	-2.50	
350.4	343.4	349.3	450.6	571.8	621.3	448.6	472.74	

Table 6
WATER SALES—1947 to 1973
(All figures in acre feet)

Member Agencies	(1) 1947-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	Total
Bueno Colorado M.W.D.	74,121	11,377	9,633	8,325	8,147	3,235	6,248	13,000	9,854	143,940
Carlsbad M.W.D.	43,662	6,103	6,222	6,996	6,990	7,885	8,745	9,350	8,924	104,897
Del Mar, City of	0	178	632	767	722	868	835	944	850	5,836
De Luz Heights M.W.D.	—	—	—	0	0	0	0	0	0	0
Escondido, City of	25,412	3,157	3,270	4,134	4,455	4,989	6,761	15,085	12,207	80,200
Fallbrook Public Utility District	115,238	10,764	9,848	11,031	10,010	11,143	11,168	13,065	10,832	200,139
Helix Irrigation District	249,823	25,965	18,844	25,290	22,586	25,039	20,388	31,782	30,151	459,796
National City & South Bay I.D.	167,342	9,907	8,548	12,013	10,996	15,524	17,186	20,399	11,373	273,288
Oceanside, City of	47,471	7,266	7,543	8,096	8,751	10,086	11,484	12,972	12,542	126,811
Olivenhain M.W.D.	2,317	910*	803	1,111	1,189	1,923	1,666	2,248	2,267	14,364
Otay M.W.D.	20,094	6,579	8,268	9,316	8,471	9,037	9,769	10,666	9,643	91,943
Poway M.W.D.	18,779	3,317	3,423	3,907	3,882	4,375	4,648	6,493	6,257	55,131
Rainbow M.W.D.	70,386	13,591	12,724	14,333	13,836	17,659	18,019	21,687	18,186	201,023
Ranoma M.W.D.	3,639	896	860	1,172	1,280	1,677	1,785	2,420	2,639	16,367
Rincon del Diablo M.W.D.	61,546	7,856	4,849	4,810	7,917	6,445	7,874	4,426	2,396	106,419
Rio San Diego M.W.D.	23,049	4,593	4,692	5,755	5,912	6,737	7,585	8,782	8,552	75,657
San Diego, City of	1,296,162	86,575	87,550	99,817	112,138	104,333	110,497	145,343	165,212	2,147,857
San Diego Irrigation District	21,090	2,310	2,481	1,689	2,878	14	2,243	4,911	4,215	45,731
Santa Fe Irrigation District	21,649	2,310	2,481	1,689	2,878	14	3,008	6,740	5,139	45,908
Valley Center M.W.D.	19,674	7,233	7,676	10,372	11,423	14,372	15,143	20,624	16,551	123,970
Yuima M.W.D.	220	1,703	2,165	1,985	2,149	2,018	2,342	2,370	3,025	16,968
Total Sales to Agencies	2,225,694	212,889	202,532	233,270	246,701	343,613	377,244	553,607	340,564	4,338,024
Total Sales to Others	1,212	73	32	18	5	65	208	233	6,776	8,622
Total to Authority Storage	-117,382	+7,814	-4,572	-2,462	+20,962	+509	+14,348	+19,218	-13,500	+200,567
Total from Authority Storage	-83,304	-9,728	-9,742	-8,919	-12,371	-2,454	-8,127	-15,732	-16,781	-161,158
Total to Metropolitan Storage	—	+25,326	+17,178	+20,375	+10,635	+24,320	-19,965	+3,909	0	+120,929
Total from Metropolitan Storage	—	-17,561	-14,099	-18,879	-13,340	-18,693	-21,680	-11,496	-1,808	-116,909
Total Flow in Authority System	2,260,894	218,813	206,573	228,227	251,952	249,258	282,638	349,730	342,251	4,290,075
Rate of Flow (c.f.a.)	174.7	294.1	279.8	321.4	340.8	330.4	383.2	487.4	479.8	234.4
To Agencies and Others	-9.2	+10.8	-6.0	-3.4	+28.9	-0.7	+19.8	+26.5	-18.6	-10.8
To Authority Storage	-6.5	-13.4	-5.2	-12.3	-17.1	-3.4	-11.2	-21.7	-23.2	-8.7
From Authority Storage	—	—	—	—	—	—	—	—	—	—
To Metropolitan Storage	—	—	-35.0	-23.7	-37.9	-13.9	+27.6	+5.4	0	+6.5
From Metropolitan Storage	—	—	-24.3	-19.4	-26.0	-18.4	-29.0	-15.8	-2.5	-6.3
Flow in Authority System	177.4	302.2	284.9	314.4	348.1	344.3	390.4	481.8	472.7	236.7

(1) The operation of the First Aqueduct was formally initiated on November 24, 1947. For sales in intervening years, see previous reports.

Table 7
WATER PRODUCTION WITHIN AUTHORITY AGENCIES—FISCAL YEARS 1963-64 to 1972-73
(All Figures in Acre Feet)

Member Agencies	From Local and Authority Supplies									
	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73
Bueno Colorado M.W.D.	12,743	13,022	13,616	12,551	14,400	13,341	15,513	15,511	17,376	15,839
Carlsbad M.W.D.	6,412	6,295	6,247	6,350	6,944	7,002	7,960	8,700	9,373	8,907
Del Mar, City of	691	629	650	652	767	722	868	855	944	850
De Luz Heights M.W.D.	0	0	0	0	0	0	0	0	0	0
Escondido, City of	3,953	4,275	4,556	4,582	5,580	5,831	6,459	8,911	20,299	16,911
Fallbrook Public Utility District	10,712	10,716	11,016	9,872	11,020	10,072	11,598	11,221	13,087	10,790
Helix Irrigation District	22,943	25,969	26,036	25,672	28,778	28,504	31,802	31,684	33,383	32,141
National City and South Bay I.D.	14,021	14,143	14,614	14,591	15,785	15,904	17,718	18,512	21,326	18,614
Oceanside, City of	6,664	7,424	7,447	7,697	8,688	8,808	10,134	11,510	13,000	12,575
Olivenhain M.W.D.	620	717	910	803	1,111	1,189	1,923	1,650	2,278	2,265
Otay M.W.D.	5,008	6,045	6,679	8,268	9,316	8,471	9,037	9,760	10,666	9,643
Poway M.W.D.	2,754	3,196	3,317	3,423	3,957	3,882	4,375	4,048	5,066	4,428
Rainbow M.W.D.	11,431	12,629	14,149	13,123	15,319	14,358	18,247	18,010	21,287	18,542
Ranoma M.W.D.	825	859	1,019	1,039	1,277	1,390	1,789	1,932	2,519	2,765
Rincon del Diablo M.W.D.	12,108	11,945	12,613	11,707	12,813	12,763	14,642	13,899	3,076	2,396
Rio San Diego M.W.D.	3,936	4,580	4,988	4,888	5,810	6,018	6,956	7,765	9,015	8,681
San Diego, City of:										
Inside City	92,451	95,032	102,174	103,894	112,841	113,421	122,630	130,290	141,815	138,472
Outside City (not in Authority)	4,498	4,922	5,426	5,432	5,780	5,396	6,147	6,056	6,548	6,216
San Diego Irrigation District	3,743	4,057	3,920	4,022	4,329	3,641	4,397	4,696	5,238	5,088
Santa Fe Irrigation District	3,958	3,725	3,968	3,822	5,344	5,034	5,938	6,351	7,175	6,294
Valley Center M.W.D.	3,452	5,331	7,233	7,676	10,372	11,423	14,409	15,146	18,931	16,512
Yuima M.W.D.	8,625	9,282*	8,142	6,070	7,939	7,072	9,927	8,636	4,613	3,471
Total	231,548	243,893	258,720	256,044	288,170	284,182	322,589	336,043	367,945	342,319

*Use of Colorado River water began this year. All other agencies' use began prior to 1963-64. See previous reports.

Table 8
WATER PRODUCTION OF AUTHORITY AGENCIES—FISCAL YEAR 1972-73

Member Agencies	TOTAL WATER PRODUCTION				SOURCE OF WATER			
	m.g.d.	as c.f.s.	as ac.ft./yr.	Local Supply		Authority Supply		
				Amount ac.ft.	percent	Amount ac.ft.	percent	
Bueno Colorado M.W.D.	14.14	21.88	15,839.0	5,935.4	37.5	9,903.6	62.5	
Carlsbad M.W.D.	7.95	12.30	8,907.0	0	0	8,907.0	100.0	
Del Mar, City of	0.76	1.17	850.5	0	0	850.5	100.0	
De Luz Heights M.W.D.	0.01	0.01	8.7	0	0	8.7	100.0	
Escondido, City of	15.10	23.36	16,911.1	4,301.1	25.4	12,610.0	74.6	
Fallbrook Public Utility District	9.63	14.90	10,790.0	0	0	10,790.0	100.0	
Helix Irrigation District	28.69	44.40	32,140.6	2,484.0	7.7	29,656.6	92.3	
National City and South Bay I.D.	16.62	25.71	18,614.0	7,241.0	38.9	11,373.0	61.1	
Oceanside, City of	11.22	17.37	12,575.5	17.9	0.1	12,557.6	99.9	
Olivenhain M.W.D.	2.02	3.13	2,264.7	0	0	2,264.7	100.0	
Otay M.W.D.	8.61	13.32	9,642.7	0	0	9,642.7	100.0	
Poway M.W.D.	4.85	7.50	5,428.4	0	0	5,428.4	100.0	
Rainbow M.W.D.	16.55	25.61	18,541.6	0	0	18,541.6	100.0	
Ramona M.W.D.	2.47	3.82	2,764.8	120.0	4.3	2,644.8	95.7	
Rincon del Diablo M.W.D.	2.14	3.31	2,396.3	0	0	2,396.3	100.0	
Rio San Diego M.W.D.	7.75	11.99	8,681.1	128.9	1.5	8,552.2	98.5	
San Diego, City of:								
Inside City	123.62	191.27	138,471.8	8,167.5	5.9	130,304.3	94.1	
Outside City (Not in Authority)	5.55	8.59	6,215.7	6,215.7	100.0	0	0	
San Diego Irrigation District	4.54	7.03	5,088.1	930.9	18.3	4,157.2	81.7	
Santa Fe Irrigation District	5.54	8.57	6,204.1	1,041.7	16.8	5,162.4	83.2	
Valley Center M.W.D.	14.74	22.81	16,512.4	58.4	0.4	16,454.0	99.6	
Yulma M.W.D.	3.10	4.79	3,470.9	1,445.7	41.7	2,025.2	58.3	
Total	305.60	472.84	342,319.0	38,088.2	11.1	304,230.8	88.9	

Note: This table is a compilation of data furnished by member agencies.
Figures include losses in transmission and distribution systems but not in conservation reservoirs.

Table 9
UNIT WATER PRODUCTION—PER ACRE AND PER CAPITA 1972-73

Member Agencies	Gross Area (2)	acres	Total Production of Water	ac.ft.	Estimated Water		Water Production Per Capita
					Area Served by Water System	Production Served	
Bueno Colorado M.W.D.	48,930	15,839.0	34,950	0.45	49,000	0.32	
Carlsbad M.W.D.	20,214	8,907.0	16,950	0.53	17,300	0.51	
Del Mar, City of	1,082	850.5	1,080	0.79	4,900	0.17	
De Luz Heights M.W.D.	11,830	8.7	100	0.09	150	0.06	
Escondido, City of	12,583	16,911.1	9,620	1.76	45,800	0.37	
Fallbrook Public Utility District	15,759	10,790.0	8,250	1.31	13,450	0.80	
Helix Irrigation District	31,464	32,140.6	29,100	1.10	179,800	0.18	
National City, City of	5,400	4,756.0	3,900	1.22	43,750	0.11	
Oceanside, City of	23,859	12,575.5	13,300	0.95	49,000	0.25	
Olivenhain M.W.D.	27,558	2,264.7	2,300	0.98	8,000	0.28	
Otay M.W.D.	63,895	9,642.7	28,200	0.34	32,000	0.30	
Poway M.W.D.	22,889	5,428.4	8,800	0.62	22,000	0.25	
Rainbow M.W.D.	47,043	18,541.6	11,000	1.60	4,650	3.99	
Ramona M.W.D.	47,578	2,764.8	7,500	0.37	7,600	0.36	
Rincon del Diablo M.W.D.	17,572	2,396.3	13,400	0.18	20,900	0.11	
Rio San Diego M.W.D.	54,244	8,681.1	24,000	0.36	68,600	0.13	
San Diego, City of	202,704	(1) 138,471.8	105,000	1.32	763,100	0.18	
San Diego Irrigation District	5,439	5,088.1	4,710	1.08	23,100	0.22	
Santa Fe Irrigation District	10,206	6,204.1	9,190	0.68	11,200	0.55	
South Bay Irrigation District	15,590	13,858.0	9,850	1.41	84,450	0.16	
Valley Center M.W.D.	62,110	16,512.4	14,000	1.18	9,500	1.74	
Yulma M.W.D.	12,813	3,470.9	4,000	0.87	1,250	2.78	
Total and Average	760,762	336,103.3	359,200	0.94	1,469,500	0.23	

(1) Does not include production by City of San Diego for areas outside City (not in Authority).
(2) Does not include overlapping area as shown in Table 1.

Table 10
AGRICULTURAL USE OF WATER—FISCAL YEAR 1972-73

Member Agencies	Total Water Production ac.ft.	Water Used for Agricultural Purposes				Percent of Agricultural Water to Total Production	
		From Local Supply		From Authority			Total ac.ft.
		ac.ft.	Percent	ac.ft.	Percent		
Bueno Colorado M.W.D.	15,839.0	2,332.2	41.6	3,276.4	58.4	5,608.6	35.4
Carlsbad M.W.D.	8,907.0	0	0	3,652.3	100.0	3,652.3	41.0
Del Mar, City of	850.5	(a)		(a)		(a)	(a)
De Luz Heights M.W.D.	8.7	0	0	6.1	100.0	6.1	70.1
Escondido, City of	16,911.1	1,674.3	27.4	4,436.5	72.6	6,110.8	36.1
Fallbrook Public Utility District	10,790.0	0	0	8,060.1	100.0	8,060.1	74.7
Helix Irrigation District	32,140.6	108.2	9.6	1,023.8	90.4	1,132.0	3.5
National City & South Bay I.D.	18,614.0	99.3	25.5	290.5	74.5	389.8	2.1
Oceanside, City of	12,575.5	0.5	0	1,661.2	100.0	1,661.7	13.2
Olivenhain M.W.D.	2,264.7	0	0	1,255.8	100.0	1,255.8	55.5
Otay M.W.D.	9,642.7	0	0	4,640.7	100.0	4,640.7	48.1
Poway M.W.D.	5,428.4	0	0	1,267.8	100.0	1,267.8	23.4
Rainbow M.W.D.	18,541.6	0	0	16,847.9	100.0	16,847.9	90.9
Ramona M.W.D.	2,764.8	0	0	1,267.8	100.0	1,267.8	45.9
Rincon del Diablo M.W.D.	2,396.3	0	0	1,168.8	100.0	1,168.8	48.8
Rio San Diego M.W.D.	8,681.1	0	0	119.2	100.0	119.2	1.4
San Diego, City of	144,687.5	89.0	10.1	792.2	89.9	881.2	0.6
San Dieguito Irrigation District	5,088.1	245.7	14.1	1,499.5	85.9	1,745.2	34.3
Santa Fe Irrigation District	6,204.1	191.8	11.0	1,550.5	89.0	1,742.3	28.1
Valley Center M.W.D.	16,512.4	0	0	14,672.6	100.0	14,672.6	88.9
Yuima M.W.D.	3,470.9	504.1	20.2	1,988.1	79.8	2,492.2	71.8
Total	342,319.0	5,245.1		69,477.8		74,722.9	21.8

(a) Included in City of San Diego.

Table 11
AUTHORITY STORAGE IN SAN VICENTE RESERVOIR
(Fiscal Year 1972-73)

Member Agencies	Total Quantity in Storage 7/1/72 ac.ft.	Placed Into Storage During Fiscal Year ac.ft.	Withdrawn During Fiscal Year		Total Quantity in Storage 6/30/73 ac.ft.
			By Delivery ac.ft.	By Evaporation ac.ft.	
Bueno Colorado M.W.D.	1,681.0	595.0	555.7	77.1	1,643.2
Carlsbad M.W.D.	1,347.4	1,035.0	991.9	49.4	1,341.1
Del Mar, City of	0	0	0	0	0
De Luz Heights M.W.D.	0	0	0	0	0
Escondido, City of	0	0	0	0	0
Fallbrook Public Utility District	1,670.2	2,340.0	1,303.0	70.8	2,636.4
Helix Irrigation District	3,744.2	0	2,000.0	122.2	1,622.0
National City & South Bay I.D.	0	0	0	0	0
Oceanside, City of	407.7	440.0	200.7	20.1	626.9
Olivenhain M.W.D.	417.6	510.0	244.9	19.7	663.0
Otay M.W.D.	2,062.2	1,190.0	1,375.4	75.1	1,801.7
Poway M.W.D.	250.8	0	222.2	5.1	23.5
Rainbow M.W.D.	3,259.2	3,735.0	2,444.6	132.1	4,417.5
Ramona M.W.D.	297.9	300.0	234.9	11.0	352.0
Rincon del Diablo M.W.D.	794.6	875.0	780.3	25.2	864.1
Rio San Diego M.W.D.	1,175.6	400.0	594.5	46.2	934.9
San Diego, City of	0	0	0	0	0
San Dieguito Irrigation District	0	0	0	0	0
Santa Fe Irrigation District	652.8	0	413.6	18.6	200.6
Valley Center M.W.D.	3,006.4	1,900.0	2,094.6	106.8	2,705.0
Yuima M.W.D.	865.5	180.0	440.9	32.4	572.2
Total	21,613.1	13,500.0	13,897.2	811.8	20,404.1

Table 12
CHEMICAL CHARACTER OF NATURAL COLORADO RIVER WATER
AT WEST PORTAL OF SAN JACINTO TUNNEL

Year Ending June 30, 1973

Samples Taken at Entrance to San Diego Aqueduct by M.W.D.
and Analyzed by District Laboratory

Month	Total Hardness as P.P.M. CaCO ₃	Noncarbonate Hardness as P.P.M. CaCO ₃	Alkalinity as P.P.M. CaCO ₃		Magnesium as P.P.M. of Mg.	Hydrogen Ion Concentration	Temperature When Sampled °F
			Total	Phenolphthalein			
July	339	218	121	0	31.5	8.2	80
August	342	215	127	1	31.0	8.5	82
September	332	213	119	3	31.0	8.5	80
October	335	216	119	0	28.0	8.2	76
November	338	218	120	0	31.5	8.4	70
December	344	219	125	0	31.5	8.3	54
January	344	219	125	1	32.0	8.3	50
February	344	223	121	0	32.5	7.8	50
March	339	215	124	0	31.5	8.2	55
April	338	213	125	0	30.5	8.3	60
May	340	213	127	1	30.5	8.3	68
June	340	210	130	1	31.0	8.4	76
Average	340	216	124	1	31.0	8.3	67
Maximum	344	223	130	3	32.5	8.5	82
Minimum	332	210	119	0	28.0	7.8	50

Table 13
ANALYSIS OF COLORADO RIVER AQUEDUCT WATER
TAKEN AT WEST PORTAL OF SAN JACINTO TUNNEL
For Year Ending June 30, 1973

Constituent	Symbol	ANALYSIS		
		Average	Maximum Minimum	
Silica	SiO ₂	7.5 ppm	8.9 ppm	5.0 ppm
Iron	Fe	-	-	-
Calcium	Ca	85 ppm	88 ppm	82 ppm
Magnesium	Mg	31 ppm	32.5 ppm	28 ppm
Sodium	Na	109 ppm	113 ppm	106 ppm
Potassium	K	5 ppm	5 ppm	4 ppm
Carbonate	CO ₃	1 ppm	4 ppm	0 ppm
Bicarbonate	HCO ₃	149 ppm	156 ppm	138 ppm
Sulfate	SO ₄	310 ppm	317 ppm	300 ppm
Chloride	Cl	94 ppm	98 ppm	90 ppm
Nitrate	NO ₃	0.7 ppm	1.3 ppm	0.2 ppm
Fluoride	F	0.4 ppm	0.5 ppm	0.4 ppm
Total Dissolved Solids		718 ppm	730 ppm	706 ppm
Hardness as CaCO ₃				
Total		340 ppm	344 ppm	332 ppm
Carbonate		124 ppm	130 ppm	119 ppm
Noncarbonate		216 ppm	223 ppm	210 ppm
Alkalinity—Phenolphthalein		1 ppm	3 ppm	0 ppm
Alkalinity—Total		124 ppm	130 ppm	119 ppm
Free Carbon Dioxide	CO ₂	1 ppm	4 ppm	0 ppm
Hydrogen Ion Concentration	pH	8.3 ppm	8.5 ppm	7.8 ppm
Electrical Conductivity	ECx10 ⁶ at 25°C	1,130 ppm	1,160 ppm	1,110 ppm
Temperature	°F	67 ppm	82 ppm	50 ppm

Table 14
ALLOCATION OF RIGHT TO PURCHASE AUTHORITY WATER
As of June 30, 1973

Member Agency	Amount Paid by Taxes to 6/30/73	Amount Paid for Service Connections to 6/30/73	Total Amount Paid by Each Member Agency to 6/30/73	Amount Remaining to be Paid Under Terms of Annexation	Total Contributions Paid and Contracted for	Allocation Percentage of Auth. Supply	Equivalent Flow c.f.s.
Bueno Colorado M.W.D.	\$ 1,226,709	56,654	1,283,363	0	1,283,363	3.22	26.62
Carlsbad M.W.D.	847,017	7,931	854,948	0	854,948	2.15	17.74
Del Mar, City of	260,067	—	260,067	—	260,067	0.65	5.40
De Luz Heights M.W.D.	12,897	—	12,897	6,137	19,034	0.05	0.39
Escobedo, City of	807,684	9,253	816,937	0	816,937	2.05	16.95
Fallbrook P.U.D.	338,347	67,773	406,120	0	406,120	1.02	8.43
Helix Irrigation District	4,277,198	28,905	4,306,103	0	4,306,103	10.81	89.34
National City, City of	866,903	—	866,903	0	866,903	2.18	17.98
Oceanside, City of	1,045,486	59,109	1,104,595	0	1,104,595	2.77	22.92
Olivenhain M.W.D.	154,140	22,660	186,800	4,896	191,696	0.48	3.98
Otay M.W.D.	533,496	96,019	629,517	0	629,517	1.58	13.06
Poway M.W.D.	305,586	27,307	332,893	0	332,893	0.84	6.91
Rainbow M.W.D.	313,075	104,769	417,844	4,075	421,919	1.06	8.75
Ramona M.W.D.	214,471	3,378	217,849	20,476	238,325	0.60	4.94
Rincon del Diablo M.W.D.	551,844	14,527	566,371	0	566,371	1.42	11.75
Rio San Diego M.W.D.	869,734	45,244	914,978	2,060	917,038	2.30	19.03
San Diego, City of	22,543,908	84,908	22,628,816	0	22,628,816	56.84	469.46
San Diegoito I.D.	514,755	5,758	520,513	0	520,513	1.31	10.80
Santa Fe I.D.	486,553	8,129	494,682	1,800	496,482	1.25	10.30
South Bay I.D.	2,435,749	594	2,436,343	0	2,436,343	6.12	50.54
Valley Center M.W.D.	275,005	128,973	403,978	2,870	406,848	1.02	8.44
Yreina M.W.D.	90,154	11,500	102,054	7,582	109,636	0.28	2.27
Total Authority	\$38,980,790	783,799	\$39,764,589	49,898	\$39,814,487	100.00	**\$26.00

*Figures do not total due to omission of cents.

**Maximum capacity as of June 30, 1973.

Table 15
SAN DIEGO COUNTY WATER AUTHORITY
Statement of Tax Assessments and Collections
Fiscal Years 1945-46 to 1972-73

Member Agencies	Tax Assessments to Date	Adj. to Tax Assessments	Tax Collections	Interest & Penalties	Tax on Options	Receipts in Lieu of Taxes	Misc. Tax Sales	Less Refunds	Net Total Collections	Uncollected 6/30/73
Fallbrook P.U.D.	\$ 336,359	190	333,729	1,218	—	3,420	42	62	338,347	2,861
Helix I.D.	4,274,459	1,039	4,261,116	11,101	89	4,930	693	733	4,277,198	14,422
City of National City	800,618	857	859,639	1,956	8	6,828	85	615	866,903	2,835
City of Oceanside	1,043,435	1,070	1,040,965	2,411	5	2,601	95	582	1,045,486	3,531
City of San Diego	22,598,255	17,627	15,281,908	28,904	42	7,975,428	2,424	44,799	22,643,908	10,879
Ramona M.W.D.	210,277	584	208,039	987	—	5,400	58	14	214,471	2,822
Santa Fe I.D.	482,101	1,281	480,673	1,822	821	2,892	1,093	748	486,553	2,708
San Diegoito I.D.	509,525	3	508,154	1,265	3	5,426	187	321	514,755	1,374
City of Escondido	807,126	1,832	805,592	2,171	—	28	28	136	807,684	3,267
South Bay I.D.	2,436,133	755	2,429,524	3,812	—	15,296	142	13,026	2,435,749	7,264
Rainbow M.W.D.	297,188	177	290,788	1,236	—	21,079	—	31	313,075	5,577
Poway M.W.D.	308,668	22	302,924	2,672	—	15	8	34	305,586	5,767
Bueno Colorado M.W.D.	1,216,156	1,763	1,212,066	4,001	1	10,802	121	285	1,226,709	5,854
Rincon del Diablo M.W.D.	694,183	1,033	691,610	1,474	1	58,800	1	43	551,844	3,605
Carlsbad M.W.D.	818,181	(1,138)	812,237	1,865	—	33,275	10	371	847,017	4,506
Valley Center M.W.D.	265,652	8,335	272,309	1,673	—	1,011	26	15	275,005	1,678
Rio San Diego M.W.D.	872,831	1,185	864,915	4,084	—	878	131	274	869,734	8,801
Otay M.W.D.	535,981	172	531,856	1,772	—	1,250	45	176	535,498	4,247
Olivenhain M.W.D.	166,851	(256)	161,873	1,068	—	530	—	50	164,140	4,722
City of Del Mar	258,751	1,794	258,750	830	—	1,500	1	44	260,067	1,705
Yreina M.W.D.	89,438	272	88,537	1,63	—	1,000	—	47	90,154	1,174
De Luz M.W.D.	12,325	1	11,868	28	—	1,000	—	—	12,897	458
Total Member Agencies	\$38,980,790	38,518	\$31,508,071	76,624	972	7,462,397	5,141	62,416	\$38,980,790	101,586
Withdrawn Areas	4,169	29	4,199	11	—	186	2	5	4,294	—
Grand Total*	\$39,098,404	38,548	\$31,512,270	76,635	972	7,462,584	5,143	62,422	\$38,985,184	101,586

*Figures do not total due to omission of cents.

Table 16
ASSESSSED VALUATIONS AND TAX RATES
Fiscal Years 1945-46 to 1972-73

Fiscal Year	Secured Property	Public Utilities	Unsecured Property	Total	Tax Rate per \$100	
					Secured	Unsecured
1945-46	\$ 212,082,975	28,253,700	29,960,130	270,296,805	0.04	0.04
1946-47	208,715,150*	29,433,430	30,665,910	268,814,510	0.04	0.04
1947-48	233,579,990	32,740,680	40,977,850	307,298,520**	0.14	0.14
1948-49	254,227,570	37,482,020	47,177,300	338,886,890	0.14	0.14
1949-50	290,351,875	42,429,140	45,743,200	378,524,215	0.10	0.10
1950-51	306,104,930	43,595,730*	44,717,740	394,418,400	0.10	0.10
1951-52	344,620,030	48,432,940	50,904,035	443,977,005	0.10	0.10
1952-53	382,948,860	53,208,220	63,994,330	500,153,410	0.12	0.10
1953-54	490,709,350	63,092,050	69,147,150	622,948,550	0.10	0.12
1954-55	546,272,880	69,243,550	79,629,790	695,146,220	0.10	0.10
1955-56	627,082,960	87,485,390	79,936,450	794,484,800	0.09	0.10
1956-57	680,824,400	101,224,260	97,950,800	879,999,460	0.09	0.09
1957-58	761,088,330	111,151,890	128,124,720	1,001,025,660	0.09	0.09
1958-59	865,283,080	128,479,290	134,846,730	1,121,887,090	0.10	0.09
1959-60	979,491,050	145,317,290	155,149,890	1,259,655,070	0.11	0.10
1960-61	1,116,723,830	165,666,720	169,954,740	1,442,345,290	0.11	0.11
1961-62	1,220,810,650	191,276,650	184,849,440	1,567,237,190	0.11	0.11
1962-63	1,272,504,330	201,245,370	154,989,440	1,628,741,140	0.11	0.11
1963-64	1,340,197,170	209,793,780	159,714,930	1,709,705,880	0.11	0.11
1964-65	1,423,376,590	213,352,470	151,686,520	1,788,414,580	0.11	0.11
1965-66	1,511,967,750	212,605,040	155,417,220	1,879,990,010	0.11	0.11
1966-67	1,567,290,460	212,223,560	147,740,730	1,927,254,740	0.11	0.11
1967-68	1,735,209,870	209,156,160	178,641,120	2,122,987,150	0.10	0.10
1968-69	1,876,936,060	208,018,700	197,139,600	2,282,094,360	0.09	0.10
1969-70	2,063,618,582	210,839,100	237,951,409	2,512,409,091	0.09	0.09
1970-71	2,348,151,943	216,378,300	276,932,717	2,841,462,960	0.09	0.09
1971-72	2,755,734,987	213,191,301	306,608,099	3,275,533,487	0.10	0.09
1972-73	3,061,010,163	225,224,650	347,857,938	3,634,092,751	0.11	0.10

*City of Coronado secured assessed valuation not included in this or subsequent tax levies by the Authority, having withdrawn from the Authority prior to 1946-47.

**City of Coronado not included in this or subsequent total valuation.

Table 17
TAX LEVIES AND TAX COLLECTIONS BY FISCAL YEAR
Fiscal Years 1945-46 to 1972-73

Fiscal Year	Tax Levy*	Collection of Current Year's Taxes During Fiscal Year		Percentage of Levy Collected During Fiscal Year	Adjustments to Prior Year's Levies	Collection of Prior Years' Taxes During Fiscal Year	Total Tax Collections	Accumulated Delinquent Taxes	Ratio of Accumulated Delinquent Taxes to Adjusted Tax Levy**
		Fiscal Year	Fiscal Year						
1945-46	\$ 96,131	94,656	98.47%	-	-	-	94,656	1,474	1.53%
1946-47	107,808	105,753	98.09	-	-	1,090	106,844	2,439	2.26
1947-48	389,591	381,563	97.94	-	-	1,882	383,445	8,585	2.20
1948-49	474,520	459,504	96.84	-	-	5,916	465,420	17,685	3.73
1949-50	491,112	392,732	79.91	329	329	13,342	406,074	13,052	3.25
1950-51	397,970	390,274	98.07	373	373	8,217	398,482	12,904	3.24
1951-52	450,405	441,242	97.97	978	978	7,699	448,941	15,346	3.40
1952-53	495,603	585,417	98.46	(1,140)	978	12,567	597,985	10,824	1.82
1953-54	652,335	640,299	98.15	4,213	4,213	9,942	650,181	17,191	2.62
1954-55	709,678	695,200	97.96	1,295	1,295	12,438	707,838	20,326	2.86
1955-56	803,375	788,734	97.41	(2,099)	576	12,140	800,874	20,726	2.59
1956-57	874,774	851,461	98.48	576	576	13,056	874,517	21,560	2.46
1957-58	965,006	946,445	98.08	958	958	12,890	959,335	28,189	2.92
1958-59	1,178,885	1,157,265	98.17	-	-	13,347	1,170,613	36,462	3.09
1959-60	1,436,270	1,408,277	98.05	(5,274)	(5,274)	16,647	1,424,925	42,533	2.97
1960-61	1,624,733	1,586,169	97.63	(8,720)	(8,720)	21,501	1,607,671	50,874	3.15
1961-62	1,763,785	1,718,575	97.44	(2,276)	(2,276)	31,477	1,750,053	62,330	3.54
1962-63	1,816,449	1,775,932	97.77	(3,688)	(3,688)	38,134	1,814,066	61,023	3.37
1963-64	1,910,019	1,862,973	97.54	(298)	(298)	36,825	1,899,799	70,975	3.72
1964-65	2,000,067	1,948,833	97.44	(6,588)	(6,588)	42,596	1,991,450	73,003	3.66
1965-66	2,101,023	2,033,032	96.76	(7,164)	(7,164)	44,784	2,077,816	98,714	4.69
1966-67	2,154,994	2,090,637	97.01	(301)	(301)	54,333	2,144,970	101,573	4.73
1967-68	2,175,276	2,129,966	97.92	-	-	64,478	2,194,470	82,078	3.77
1968-69	2,110,913	2,103,601	99.65	-	-	55,253	2,158,854	34,136	1.62
1969-70	2,298,574	2,204,128	95.89	38,500	38,500	24,018	2,228,146	103,963	4.52
1970-71	2,450,123	2,408,899	98.32	27,045	27,045	10,403	2,512,932	79,655	3.25
1971-72	3,084,869	3,058,713	99.15	494	494	32,926	3,091,639	99,930	3.24
1972-73	3,790,191	3,743,715	98.73	-	-	45,314	3,789,029	101,586	3.73

*Including adjustments of current year's levy.

**Including adjustments to current and prior years' levies.

SAN DIEGO COUNTY WATER AUTHORITY

Table 18
SAN DIEGO COUNTY WATER AUTHORITY
ANNEXATION CHARGES, ASSESSMENTS AND BALANCES

Area	Date of Annexation	Amount of Annexation Charge	Period of Special Assessments		Special Assessments to 6/30/72	Fiscal Year 1972-73		Remaining Balance of Annexation Charges 6/30/73
			First Year	Last Year		Special Assessments	Tax Rate c/4100	
Annexation Charges Completed		\$741,930			\$741,930			
Annexation Charges Outstanding:								
Del Mar, City of	11-23-62	131,200	1963-64	1972-73	120,228	\$10,971	18c	\$ 0
De Lux Heights M.W.D.	6-28-67	7,400	1968-69	1977-78	3,215	616	14c	3,567
No. 1 Annex of 1969	10-20-69	4,200*	1970-71	1979-80	1,250	370	33c	2,569
Olivenhain M.W.D.								
No. 1 Annex of 1965	2-11-65	14,000	1966-67	1975-76	8,917	1,659	15c	3,422
No. 4 Annex of 1967	11-15-67	3,500	1968-69	1977-78	1,715	310	24c	1,474
Rainbow M.W.D.								
No. 3 Annex of 1967	12-11-67	9,100	1968-69	1977-78	4,116	908	18c	4,075
Ranona M.W.D.								
No. 4 Annex of 1967	11-30-67	6,100	1968-69	1977-78	2,855	568	18c	2,676
No. 5 Annex of 1972	5-17-72	18,300	1971-72	1982-83	500	—	—	17,800
Rincon del Diablo M.W.D.								
No. 4 Annex of 1972	11- 2-72	2,600	1972-73	1972-73	—	2,000	—	0
Rio San Diego M.W.D.								
No. 4 Annex of 1970	8- 3-70	3,100	1971-72	1980-81	761	277	18c	2,060
San Dieguito I.D.								
No. 2 Annex of 1972	12- 8-72	4,300	1972-73	1972-73	—	4,300	—	0
Santa Fe I.D.								
No. 2 Annex of 1973	4-11-73	2,300	1972-73	1983-84	—	500	—	1,800
Valley Center M.W.D.								
No. 2 Annex of 1967	12- 4-67	1,650	1968-69	1977-78	831	136	39c	681
No. 3 Annex of 1967	12- 4-67	2,750	1968-69	1977-78	1,402	239	14c	1,088
No. 4 Annex of 1973	Incomplete	1,600	1972-73	1983-84	—	500*	—	1,100
Yulma M.W.D.								
No. 1 Annex of 1967	12-16-63	40,750	1964-65	1973-74	33,583	4,104	16c	3,061
No. 1 Annex of 1967	11-27-67	6,000	1968-69	1977-78	2,628	497	16c	2,876
No. 2 Annex of 1969	11- 3-69	2,800	1970-71	1979-80	916	238	58c	1,644
Total		\$1,002,980			\$924,861	\$28,219		\$49,898

*Processing charge deposit—Annexation proceedings incomplete.

SAN DIEGO COUNTY WATER AUTHORITY

Table 19
ASSESSED VALUATIONS AND TAX RATES OF THE
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Fiscal Year	Area (acres)	Assessed Valuation Total (1)	Tax Rate	
			Per \$100 Secured	Per \$100 Unsecured
1929-30	-	\$ 2,439,836,920	0.04	0.00
1930-31	-	2,431,684,250	.03	.04
1931-32	-	2,382,184,445	.03	.03
1932-33	-	1,936,051,180	.04	.03
1933-34	-	1,654,403,890	.04	.04
1934-35	-	1,587,147,565	.10	.04
1935-36	-	1,783,531,020	.20	.10
1936-37	-	1,789,160,685	.37	.20
1937-38	-	1,827,765,725	.40	.37
1938-39	-	1,896,966,255	.40	.40
1939-40	-	1,910,152,190	.42	.40
1940-41	389,588	1,841,248,450	.49	.42
1941-42	399,875	1,900,599,934	.48	.49
1942-43	400,614	2,001,924,735	.48	.48
1943-44	401,190	2,005,496,430	.48	.48
1944-45	401,536	2,109,192,795	.48	.48
1945-46	402,779	2,159,731,425	.50	.48
1946-47	501,425	2,413,186,570	.48	.50
1947-48	546,573	3,443,212,822	.35	.48
1948-49	578,368	3,883,081,225	.34	.35
1949-50	585,184	4,181,812,855	.34	.34
1950-51	721,850	4,281,519,725	.31	.34
1951-52	995,130	4,674,664,040	.30	.31
1952-53	1,120,448	5,372,498,515	.28	.30
1953-54	1,368,038	6,015,691,980	.25	.28
1954-55	1,793,651	6,548,392,114	.23	.25
1955-56	1,876,256	8,514,868,335	.21	.23
1956-57	1,932,205	9,674,000,560	.19	.21
1957-58	2,046,189	11,235,906,510	.18	.19
1958-59	2,128,333	12,070,838,070	.18	.18
1959-60	2,171,290	12,714,205,470	.17	.18
1960-61	2,544,960	13,737,971,925	.16	.17
1961-62	2,647,014	14,803,202,587	.15	.16
1962-63	2,797,946	15,699,681,030	.14	.15
1963-64	2,825,306	17,261,412,395	.14	.14
1964-65	2,882,144	17,757,246,740	.14	.14
1965-66	2,890,266	19,143,157,788	.14	.14
1966-67	2,901,421	20,979,150,165	.14	.14
1967-68	3,061,885	22,732,157,500	.14	.14
1968-69	3,067,896	24,016,568,274	.16	.14
1969-70	3,072,058	25,572,510,561	.17	.16
1970-71	3,075,616	27,605,064,302	.17	.17
1971-72	3,093,303	29,023,413,462	.17	.17
1972-73	3,127,040	31,011,520,641	.15	.17
1973-74	(3)	32,838,476,378	.14	.15

(1) Includes secured, unsecured, and public utility valuations.

(2) First year in which Authority assessed valuation was included in District's assessed valuation.

(3) Data for 1973-74 were available before completion of report and are included for convenience of reader.

SAN DIEGO COUNTY WATER AUTHORITY

Table 20

METROPOLITAN WATER DISTRICT ANNEXATION CHARGES AND BALANCES ON AUTHORITY AREAS

Member Agencies	Date of Annexation	Amount of Annexation Charge	Remaining Balance 6/30/73
Annexation Charges Completed		\$ 146,659	\$
Annexation Charges Outstanding			
Chula Vista, City of			
Fallbrook Public Utility District			
Lakeside Irrigation District			
Helix Irrigation District	12-17-46	13,045,000	1,735,976
National City, City of			
Oceanside, City of			
San Diego, City of			
Bueno Colorado M.W.D.	6-11-54	1,072,230	426,651
Carlsbad M.W.D.	6-16-54	548,100	213,960
Del Mar, City of	11-23-62	611,250	406,866
De Luz M.W.D.	6-28-67	2,002,000	2,373,840*
No. 1 Annexation of 1969	10-15-69	312,000	347,839*
Escondido, City of	10- 9-50	386,000	99,913
Fallbrook Public Utility District			
No. 1 Annexation of 1950	8- 1-50	34,600	7,193
No. 2 Annexation of 1958	11-24-58	50,400	26,531
Fallbrook Community Air Park	12-22-69	59,800	66,862*
Helix Irrigation District			
Crest P.U.D. Annexation	12-13-48	10,500	1,998
El Cajon Dry Island Annexation	12-20-54	327,450	123,484
Helix-Watson Ranch Annexation	2-20-59	8,730	4,891
Helix-Sunny Slope Hts. Annexation	9-17-59	38,250	21,614
Olivenhain M.W.D.	7-25-60	83,880	48,253
No. 1 Annexation of 1965	2-11-65	512,520	392,595
No. 4 Annexation of 1967	11-13-67	74,000	82,499*
Otay M.W.D.	10-26-56	273,000	123,035
No. 3 Annexation of 1960	10-20-60	95,100	56,998
Poway M.W.D.	4-21-54	91,800	33,170
No. 1 Annexation of 1959	9-21-59	27,150	14,932
Rainbow M.W.D.	4-10-54	167,700	63,961
No. 1 Annexation of 1959	5-12-59	24,300	13,763
No. 3 Annexation of 1967	12- 6-67	1,728,000	2,064,888*
Ramona M.W.D.	8-27-57	339,000	169,445
No. 1 Annexation of 1959	5-29-59	42,330	23,865
No. 2 Annexation of 1961	9-22-61	15,480	9,773
No. 3 Annexation of 1963	9-20-63	10,560	7,363
No. 4 Annexation of 1967	11-27-67	480,000	559,960*
No. 5 Annexation of 1972	5-17-72	732,000	732,000
Rincon del Diablo M.W.D.	6-14-54	757,200	302,402
No. 4 Annexation of 1972	11- 2-72	19,200	19,200
Rio San Diego M.W.D.			
(not including Lakeside I.D.)	6- 7-56	373,980	173,710
No. 2 Annexation of 1959	11- 6-59	109,110	61,285
No. 3 Annexation of 1960	10-17-60	289,890	173,776
No. 4 Annexation of 1970	8- 3-70	164,000	163,793
San Dieguito Irrigation District	12-13-48	187,100	36,936
No. 1 Annexation of 1959	9-15-59	71,820	40,523
No. 2 Annexation of 1972	12- 8-72	107,000	107,000
Santa Fe Irrigation District	12-13-48	167,000	33,007
South Bay Irrigation District			
(not including City of			
Chula Vista)	11- 3-52	449,370	141,923
Valley Center M.W.D.	5- 9-55	205,680	86,327
No. 1 Annexation of 1960	12-12-60	23,700	14,137
No. 2 Annexation of 1967	11-29-67	22,000	25,011*
No. 3 Annexation of 1967	11-30-67	502,000	593,504*
Yuima M.W.D.	12-16-63	749,490	524,525
No. 1 Annexation of 1967	11-21-67	72,200	109,233*
No. 2 Annexation of 1969	11-24-69	14,400	15,107*
Total		\$27,636,539	\$12,877,537 (a)

*Greater than original annexation charge due to special assessment at maximum tax rate of 75¢/\$100, is less than interest on annexation charge.
(a) Figures do not total due to omission of cents.

TABLES

Table 21

WATER SALES BY METROPOLITAN WATER DISTRICT

Fiscal Years 1941-42 to 1972-73

Year	To Member Municipalities							
	Natural Water		Treated Water		Total to Agencies	To Others	Total	
	Acre Feet	Per Cent	Acre Feet	Per Cent	Acre Feet	Acre Feet	Acre Feet	
1941-42	0	0	9,372.6	100	9,372.6	70.7	9,443.3	
1942-43	0	0	14,457.8	100	14,457.8	2,626.4	17,084.2	
1943-44	0	0	15,874.9	100	15,874.9	3,301.8	19,176.7	
1944-45	0	0	30,591.3	100	30,591.3	1,715.7	32,307.0	
1945-46	0	0	46,685.8	100	46,685.8	1,264.2	47,950.0	
1946-47	0	0	59,861.8	100	59,861.8	524.0	60,385.8	
1947-48	41,093.5	36	71,995.4	64	113,088.9	116.8	113,255.7	
1948-49	71,642.6	49	73,237.1	51	144,879.7	128.4	145,008.1	
1949-50	69,308.0	49	72,936.0	51	142,244.0	23,371.6	165,615.6	
1950-51	75,000.9	54	63,493.1	46	138,494.0	26,978.6	165,472.6	
1951-52	66,674.3	44	84,616.1	56	151,290.4	42,464.2	193,754.6	
1952-53	30,845.3	24	99,589.6	76	130,434.9	31,682.4	162,117.3	
1953-54	120,773.0	51	115,550.6	49	236,323.6	7,820.7	244,144.3	
1954-55	192,544.7	59	134,923.3	41	327,468.0	58,184.5	385,652.5	
1955-56	190,337.2	53	169,506.4	47	359,843.6	45,562.9	405,406.5	
1956-57	286,059.1	60	191,110.7	40	477,169.8	66,074.1	543,243.9	
1957-58	266,024.1	57	197,900.0	43	463,924.1	75,612.8	539,536.9	
1958-59	244,354.2	46	282,248.1	54	526,602.3	74,107.1	600,709.4	
1959-60	425,019.0	58	304,874.8	42	729,893.8	3,523.2	733,417.0	
1960-61	594,521.1	64	335,207.2	36	929,728.3	4,099.4	933,827.7	
1961-62	608,811.0	66	312,975.9	34	921,786.9	3,676.9	925,463.8	
1962-63	668,881.8	66	348,092.6	34	1,016,974.4	3,677.0	1,020,651.4	
1963-64	671,853.4	63	388,553.9	37	1,060,407.3	3,776.7	1,064,184.0	
1964-65	645,577.3	58	471,042.0	42	1,116,619.3	5,035.3	1,121,654.6	
1965-66	550,630.8	52	503,424.9	48	1,054,055.7	4,821.8	1,058,877.5	
1966-67	523,141.2	50	531,659.7	50	1,054,800.9	4,513.0	1,059,313.9	
1967-68	514,248.1	48	557,730.9	52	1,071,979.0	4,934.9	1,076,913.9	
1968-69	455,174.3	43	599,237.7	57	1,054,412.0	2,232.4	1,056,644.4	
1969-70	482,256.9	41	682,846.4	59	1,165,103.3	650.0	1,165,753.3	
1970-71	520,983.9	46	612,511.6	54	1,133,495.5	150.3	1,133,645.8	
1971-72	590,356.9	47	656,635.9	53	1,246,992.8	549.6	1,247,542.4	
1972-73	569,290.7	48	606,120.4	52	1,175,411.1	4.3	1,175,415.4	

Table 22
 WATER PRODUCTION - METROPOLITAN WATER DISTRICT CONSTITUENT AREAS
 Figures Furnished by Metropolitan Water District

Constituent Areas	Total Water Production			Source of Water Produced - 1972-73				
	1971-72	1972-73	Percent Increase or Decrease	M. W. D.		Other		
	Amount ac. ft.	Amount ac. ft.		Amount ac. ft.	Percent of Total		Amount ac. ft.	Percent of Total
Anaheim	40,339	38,790	-3.8	(b)	5,209	13	33,581	87
Beverly Hills	14,849	14,696	-1.6		9,815	67	4,791	33
Burbank	26,674	24,601	-7.8		11,513	47	13,088	53
Calleguas M. W. D.	81,322	75,697	-9.7	(c)	44,961	60	29,346	40
Central Basin M. W. D.	232,375	216,945	-6.6		67,715	31	149,230	69
Chino Basin M. W. D.	168,978	173,593	2.7		8,393	5	165,000	95
Coastal M. W. D.	34,565	36,379	5.2		35,541	98	838	2
Compton	10,176	9,437	-7.3		4,294	46	5,143	54
Eastern M. W. D.	127,989	116,979	-8.0		39,963	27	85,896	73
Foothill M. W. D.	17,643	15,147	-14.1		7,645	59	7,502	50
Fullerton	27,393	25,620	-6.5		12,820	59	12,800	50
Glendale	25,943	23,473	-9.4		10,187	43	13,286	57
Las Virgenes M. W. D.	9,054	10,929	20.7		10,929	100	0	0
Long Beach	74,657	72,262	-3.7		43,666	69	28,596	40
Los Angeles	602,596	572,328	-5.0		32,539	6	539,789	94
Los Angeles	293,754	249,438	-15.0	(d)*	106,638	43	143,000	57
Pasadena	36,485	33,355	-8.6		16,530	50	16,825	50
Pomona Valley M. W. D.	84,623	80,964	-4.3		18,540	23	62,424	77
San Diego C. W. A.	367,945	375,123	2.0	(e)	337,055	90	38,068	10
San Fernando	2,465	3,133	27.2		444	14	2,691	86
San Marino	5,397	4,625	-14.3		0	0	4,625	100
Santa Ana	30,450	30,764	1.0		9,291	39	21,473	70
Santa Monica	18,117	17,715	-2.2		10,199	58	7,516	42
Torrance	25,114	24,186	-3.7		20,583	85	3,603	15
Upper San Gabriel Valley M. W. D.	206,182	189,590	-8.0		229	0	189,361	100
West Basin M. W. D.	182,835	174,854	-4.4		127,501	73	47,353	27
Western M. W. D.	213,982	211,552	-1.1		20,652	14	180,900	86
Totals	2,582,874	2,319,897	-4.5		1,013,122	36	1,896,745	64

NOTES: (a) Includes 5,000 acre-feet of seepage into San Jacinto Tunnel.
 (b) Does not include deliveries by M.W.D. of Orange County.
 (c) Includes 696 acre-feet delivered from storage.
 (d) Does not include 10,537 acre-feet delivered by Coastal M.W.D.
 (e) Includes 1,808 acre-feet delivered from storage.
 * Does not include water delivered for replenishment purposes.

San Diego County Water Authority
 ANNUAL FINANCIAL REPORT
 YEAR ENDED JUNE 30, 1973



SAN DIEGO COUNTY WATER AUTHORITY

2750 FOURTH AVENUE
SAN DIEGO, CALIFORNIA 92103
Telephone 297-3218 - Area Code 714

BOARD OF DIRECTORS
R. E. BARNER, CHAIRMAN
MARIO R. DIAZ, VICE CHAIRMAN
LLOYD L. LEE, SECRETARY

October 18, 1973

LINDEN R. BURZELL
GENERAL MANAGER
AND CHIEF ENGINEER
PAUL D. ENSTROM
GENERAL COUNSEL

Mr. L. E. Burzell
General Manager and Chief Engineer
San Diego County Water Authority
2750 Fourth Avenue
San Diego, California 92103

Dear Mr. Burzell:

The June 30, 1973, audited financial statements and supporting schedules are presented in the following pages.

The Contractor has finished Phase III of Pipeline No. 4. Water Authority personnel are finishing the "as built" drawings and necessary access road work.

During this fiscal year, a contract was awarded to Kessler Corporation, Gordon H. Ball, Inc. and L. H. Woods & Sons, Inc., the low bidder, for construction of 6.59 miles of 84, 72 and 54-inch prestressed, concrete cylinder pipe. This is a joint project between the City of San Diego and the Water Authority from Miramar Reservoir to Clairemont Mesa Boulevard and Santo Road. As of June 30, 1973, 80% of the job is complete with 75% of the time elapsed.

The water sales surcharge of \$1.25, which has been in effect since 1964, continues to be adequate to finance General Fund requirements when added to other revenues in that Fund.

Debt service requirements have been financed from the tax levy of 11c per \$100 of assessed valuation and interest earnings from investments.

Very truly yours,

[Signature]

Mario R. Diaz
Director of Finance

HCL:bcm

MEMBER AGENCIES

Table with 4 columns: CITIES, IRRIGATION DISTRICTS, PUBLIC UTILITY DISTRICTS, MUNICIPAL WATER DISTRICTS. Lists various agencies like Del Mar, Escondido, National City, etc.

PEAT, MARWICK, MITCHELL & Co.

CERTIFIED PUBLIC ACCOUNTANTS

1850 FIFTH AVENUE

SAN DIEGO, CALIFORNIA 92101

The Board of Directors
San Diego County Water Authority:

We have examined the balance sheet of the San Diego County Water Authority as of June 30, 1973, and the related statements of income and expenses, changes in financial position and changes in equity and fund balances for the year then ended. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of the San Diego County Water Authority at June 30, 1973, and the results of its operations and changes in financial position for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year. The current year's supplementary data included in Schedules 1 to 5 have been subjected to the same auditing procedures and, in our opinion, are stated fairly in all material respects when considered in conjunction with the basic financial statements taken as a whole.

Peat, Marwick, Mitchell & Co.

September 7, 1973

SAN DIEGO COUNTY WATER AUTHORITY

Exhibit A

Balance Sheet

June 30, 1973
with comparative figures for 1972

Assets	1973	1972
General fund:		
Current assets:		
Cash (including certificates of deposit)	\$ 4,132,170	4,016,130
Investments (note 1)	212,000	-
Accounts receivable	2,298,110	1,672,536
Current installments of long-term receivables	95,851	112,451
Inventory of water in storage (note 1)	1,129,930	1,236,389
Prepaid expenses	8,259	9,206
Total current assets - general fund	<u>7,876,320</u>	<u>7,046,712</u>
Long-term receivables, excluding current installments:		
Notes, 5% current maturities \$85,000 (\$90,000 for 1972)	74,375	146,341
Annexation charges, current maturities \$10,851 (\$22,451 for 1972)	39,047	45,466
Total long-term receivables	<u>113,422</u>	<u>191,807</u>
Total general fund	<u>7,989,742</u>	<u>7,238,519</u>
Special funds:		
Debt service reserve funds:		
Cash (including certificates of deposit)	894,445	871,367
Investments (note 1)	5,000	-
Interest receivable	555	2,633
Waterworks bonds, debt service funds:		
Cash (including certificates of deposit)	44,042	279,586
Deposit with fiscal agent	37,454	28,474
Investments (note 1)	25,000	-
Interest receivable	56	18,214
U.S. Government contract fund:		
Cash (including certificates of deposit)	18,946	8,325
Interest receivable	19	-
Due from Metropolitan Water District (note 2)	5,609,004	6,065,807
Waterworks bonds, improvement funds:		
Cash (including certificates of deposit)	1,510,950	10,044,662
Investments (note 1)	8,000	-
Accounts receivable	1,091,282	-
Trust and agency fund (note 3):		
Cash	4,184	116,438
Accounts receivable	-	269,144
Total special funds	<u>9,248,927</u>	<u>17,710,650</u>
Property, plant, equipment and participation rights, net (note 4)	<u>176,081,751</u>	<u>163,801,291</u>
	\$ 193,320,430	188,750,260

See accompanying notes to financial statements.

FINANCIAL REPORT

Liabilities, Reserves, Equity and Fund Balances	1973	1972
General fund:		
Current liabilities:		
Accounts payable	\$ 3,596,960	3,207,966
Advances and deposits by agencies	46,054	18,212
Total current liabilities - general fund	<u>3,643,014</u>	<u>3,226,178</u>
Special funds:		
Current liabilities:		
Current installments of long-term debt (note 2)	2,149,029	2,869,029
Matured bond principal and interest payable	37,454	28,475
Accounts payable	1,071,520	1,725,252
Trust and agency fund balance (note 3)	4,184	365,282
Total current liabilities - special funds	<u>3,262,187</u>	<u>4,988,038</u>
Total current liabilities	<u>6,905,201</u>	<u>8,214,216</u>
Long-term debt, excluding current installments (note 2):		
General obligation bonds payable - not due	57,510,000	58,780,000
U.S. Government contracts	9,586,969	10,465,999
Annexation charges - Metropolitan Water District (note 1)	12,877,538	12,409,431
Total long-term debt	<u>79,974,507</u>	<u>81,655,430</u>
Reserve for long-term notes receivable	159,375	236,141
Equity and fund balances:		
Equity in property, plant, equipment and participation rights (note 4)	95,496,927	87,596,239
Restricted balances:		
Waterworks bonds, debt service fund	69,098	297,801
U.S. Government contract fund	5,627,969	6,074,132
Appropriated funds:		
Debt service reserve funds	900,000	900,000
General fund	291,690	166,388
Unappropriated general fund balance	3,825,663	3,609,613
Total equity and fund balances	<u>106,281,347</u>	<u>98,644,173</u>
Commitment (note 5)		
	\$ 193,320,430	188,750,260

SAN DIEGO COUNTY WATER AUTHORITY

Exhibit B

Statement of Income and Expenses

Year ended June 30, 1973
with comparative figures for 1972

	1973	1972
Operating income:		
Water sales	\$ 16,098,004	15,298,275
Cost of sales:		
Water in storage at beginning of year	1,236,389	1,015,061
Water purchased	15,527,992	15,065,522
	16,764,381	16,080,583
Water in storage at end of year	1,129,930	1,236,389
	15,634,451	14,844,194
Gross margin from sale of water	463,553	454,081
Water delivery fees (note 3)	88,917	-
Total operating income	552,470	454,081
Operating expense	534,149	505,140
Net operating income (loss) before depreciation	18,321	(51,059)
Depreciation expense	714,128	714,622
	(695,807)	(765,681)
Nonoperating income:		
Property taxes	3,974,515	3,234,834
Interest	726,384	1,425,089
Other	95,752	90,106
Total nonoperating income	4,796,651	4,750,029
	4,100,844	3,984,348
Nonoperating expense - interest	2,771,936	2,835,012
Net income	1,328,908	1,149,336
Provision for depreciation, an expense which did not require a current cash outlay	714,128	714,622
Net income before depreciation	\$ 2,043,036	1,863,958

See accompanying notes to financial statements.

FINANCIAL REPORT

Exhibit C

Statement of Changes in Financial Position

Year ended June 30, 1973
with comparative figures for 1972

	1973	1972
Funds provided:		
Net income before depreciation	\$ 2,043,036	1,863,958
Taxes and direct payments by member agencies to Metropolitan Water District	6,179,556	6,329,128
Property, plant and equipment additions funded by member agencies	118,510	33,111
Annexation charges	10,200	18,300
Decrease in long-term receivables	78,185	94,657
By special funds:		
Waterworks bonds, debt service funds	219,722	203,452
U.S. Government contract fund	446,163	500,605
Waterworks bond, improvement funds	7,434,430	7,823,746
Increase in debt redemption liabilities	-	103,900
Increase in improvement fund liabilities	-	781,590
Increase in trust and agency fund balance	-	365,582
Decrease in trust and agency fund assets (note 3)	361,398	-
	\$ 16,891,200	18,118,029
Funds used:		
Acquisition of property, plant and equipment and participation rights (net of capitalized interest in 1972)	12,994,588	15,614,170
Decrease in long-term portion of debt	1,680,923	1,740,789
Decrease in reserve for long-term notes	76,766	76,766
Decrease in debt redemption liabilities	711,021	-
Decrease in improvement fund liabilities	653,732	-
Decrease in trust and agency fund balance (note 3)	361,398	-
Increase in trust and agency fund assets	-	365,582
Increase in working capital	412,772	320,722
	\$ 16,891,200	18,118,029
Changes in working capital:		
Increase (decrease) in current assets:		
Cash	116,040	2,331,670
Investments	212,000	(1,947,985)
Accounts receivable	625,574	275,667
Current installments of long-term receivables	(16,600)	13,999
Inventory of water in storage	(106,459)	221,329
Prepaid expenses	(947)	(603)
	829,608	894,077
Decrease (increase) in current liabilities:		
Accounts payable	388,994	(578,507)
Deposits and advances by agencies	27,842	5,152
	416,836	(573,355)
Net increase in working capital	\$ 412,772	320,722

See accompanying notes to financial statements.

Exhibit D

Statement of Changes in Equity and Fund Balances

Year ended June 30, 1973

	Total	General	Debt service	Waterworks debt service	U.S. Government contracts	Equity in plant, equipment and participation rights
Balances, July 1, 1972	\$ 98,644,173	3,776,001	900,000	297,801	6,074,132	87,596,239
Additions (deductions):						
Net income before depreciation	2,043,036	409,417	25,488	961,297	432,867	213,967
Provision for depreciation	(714,128)	-	-	-	-	(714,128)
Taxes and direct payments by member agencies to Metropolitan Water District (note 1)	6,179,556	-	-	-	-	6,179,556
Expenditures for property, plant and equipment:						
From general fund	-	(33,753)	-	-	-	33,753
From advances by member agencies	118,510	-	-	-	-	118,510
Increase in annexation charges	10,200	10,200	-	-	-	-
Waterworks bonds redeemed	-	-	-	(1,190,000)	-	1,190,000
Payments on U.S. Government contracts	-	-	-	-	(879,030)	879,030
Interfund transfers	-	25,488	(25,488)	-	-	-
Balances, June 30, 1973	\$ <u>106,281,347</u>	<u>4,187,353</u>	<u>900,000</u>	<u>69,098</u>	<u>5,627,969</u>	<u>95,496,927</u>

See accompanying notes to financial statements.

SAN DIEGO COUNTY WATER AUTHORITY

Notes to Financial Statements

June 30, 1973

(1) Summary of Accounting Policies

Accounting Method:

The financial statements of the Authority are prepared from accounting records kept on a modified accrual basis. In general, income is recorded when earned and expenses are recorded upon incurrence of liability, except accrued interest on outstanding indebtedness, which is payable from appropriations of the following year. If accrued interest were recorded, the net income for the year would have been increased by approximately \$17,000 and the total of equity and fund balances at June 30, 1973 would have been reduced by approximately \$824,000.

Taxes Receivable:

Uncollected taxes are fully reserved and are not included in the accompanying financial statements.

The fund analysis of taxes receivable is as follows:

	1973	1972
General fund	\$ 2,324	4,122
Waterworks bonds, debt service funds	84,852	75,188
U.S. Government contract fund	14,410	18,620
Total taxes receivable	\$ 101,586	97,930

Investments:

Investments include U.S. Government securities owned by the Authority and which, by contract, will be repurchased by a bank at a guaranteed interest return. Such investments are recorded at cost which approximates market value.

Inventory of Water in Storage:

The inventory of water in storage is recorded at cost (first-in, first-out).

Property, Plant, Equipment and Participation Rights:

Property, plant and equipment and participation rights are recorded at cost. Depreciation is computed on the straight-line method over the estimated lives of the respective items.

Annexation charges due The Metropolitan Water District and interest thereon are paid by special taxes levied on the properties within the annexed areas. The liability at June 30, 1973 (\$12,877,538) and the corresponding cost of participation rights in The Metropolitan Water District are reflected on the Authority's records. The net reduction in annexation charges payable is reflected only as an increase in the Authority's equity in plant, equipment and participation rights along with other taxes and direct payments by member agencies to Metropolitan Water District.

FINANCIAL REPORT

Notes to Financial Statements, Continued

(2) Long-Term Debt

Description	Interest rate	Outstanding balance	
		Current portion	Long-term portion
General obligation bonds - not due:			
Waterworks bonds, 1957, maturing February 1, 1974 - 1994	1% - 6%	\$ 830,000	29,525,000
Waterworks bonds, 1966, maturing October 1, 1973 - 2004	4-1/2% - 5-1/2%	440,000	27,985,000
Total bonds		1,270,000	57,510,000
U.S. Government contract:			
Authority's share:			
First pipeline	-	250,000	861,049
Second pipeline	2.599%	172,227	3,573,718
		422,227	4,434,767
Metropolitan Water District's share:			
First pipeline	-	250,000	861,049
Second pipeline	2.599%	206,802	4,291,153
		456,802	5,152,202
Total U.S. contract		879,029	9,586,969
Annexation charges - Metropolitan Water District		-	12,877,538
Total long-term debt		\$ 2,149,029	79,974,507

The Metropolitan Water District's indebtedness to the Authority represents the balance of the District's share of the cost of the first and second pipelines of the first San Diego aqueduct.

(3) Trust and Agency Fund

The Authority is a party to an agreement with several governmental agencies for the temporary delivery of Mexican treaty waters of the Colorado River to the international boundary. The agreement, in part, provides for the Authority to:

- Receive and disburse advances for the estimated costs during construction.
- Collect and disburse service charges relative to the delivery of water.

An analysis of construction advances follows:

Balance, beginning of year	\$ 365,582
Expended for construction	361,398
Balance, end of year	\$ 4,184

SAN DIEGO COUNTY WATER AUTHORITY

Notes to Financial Statements, Continued

(3) Trust and Agency Fund, Continued

Amounts billed by the Authority for service charges for water delivery are collected and, in part, distributed to the respective agencies providing the agreed services. The Authority's share of these charges are reported on Exhibit B as water delivery fees.

(4) Property, Plant, Equipment and Participation Rights and Equity in Property, Plant, Equipment and Participation Rights

	1973	1972
Property, plant, equipment and participation rights:		
Property, plant and equipment	66,364,619	66,298,608
Less accumulated depreciation	<u>9,172,789</u>	<u>8,489,077</u>
Net property, plant and equipment	57,191,830	57,809,531
Construction work in progress	26,333,559	19,283,060
Participation rights in Metropolitan Water District	<u>92,556,362</u>	<u>86,708,700</u>
Net property, plant, equipment and participation rights	<u>176,081,751</u>	<u>163,801,291</u>
Less:		
Current installments of long-term debt	2,149,029	2,869,029
Long-term debt excluding current installments	<u>79,974,507</u>	<u>81,655,430</u>
	<u>82,123,536</u>	<u>84,524,459</u>
	93,958,215	79,276,832
Add:		
Construction capital projects - waterworks bonds, improvement funds, net of construction accounts payable (subject to encumbrances of \$775,479; \$5,113,024 for 1972)	<u>1,538,712</u>	<u>8,319,407</u>
Equity in property, plant, equipment and participation rights	<u>\$ 95,496,927</u>	<u>87,596,239</u>
The property, plant and equipment was financed by:		
General obligation bonds	43,084,266	43,076,656
U.S. Government contract	14,873,407	14,873,407
Current revenues	7,559,753	7,534,907
Agencies contributions	<u>847,193</u>	<u>813,638</u>
Total property, plant and equipment	<u>\$ 66,364,619</u>	<u>66,298,608</u>

(5) Pension Plan

The Authority is a member of the California Public Employee's Retirement System which provides retirement benefits for all of its permanent employees. The total pension expense for the year ended June 30, 1973 was \$39,717 which included amortization of prior service benefits to June 30, 1980 and supplemental benefits to May 30, 1983. The Authority's policy is to fund accrued pension costs. There are no unfunded vested benefits.

FINANCIAL REPORT

Schedule 1

Operating Expense

Year ended June 30, 1973
with comparative figures for 1972

	1973	1972
Water treatment	\$ 98,708	84,593
Systems operations	73,986	67,602
Maintenance of structures and plant	116,884	99,873
Administrative and general salaries	122,862	113,843
General expense and supplies	177,558	169,475
Automotive operation, maintenance and shop expense	<u>40,117</u>	<u>34,979</u>
Grand total	630,115	570,365
Less portion charged to property, equipment and other	<u>95,966</u>	<u>(65,225)</u>
Total operating expense	<u>\$ 534,149</u>	<u>505,140</u>

Schedule 2

Property, Plant and Equipment
and Accumulated DepreciationYear ended June 30, 1973

	<u>Cost</u>		
	<u>Balance</u> <u>June 30, 1972</u>	<u>Additions,</u> <u>net of</u> <u>retirements</u>	<u>Balance</u> <u>June 30, 1973</u>
First San Diego aqueduct	15,523,398	-	15,523,398
Second San Diego aqueduct	47,672,219	54,486	47,726,705
La Mesa Sweetwater extension	1,491,304	-	1,491,304
Palibrook-Oceanside line	639,565	(15,113)	624,451
San Diego headquarters	180,442	-	180,442
Escondido headquarters	391,297	-	391,297
Furniture and fixtures	24,957	459	25,416
Office equipment	25,949	-	25,949
Engineering equipment	7,976	6,715	14,692
Automotive equipment	169,852	12,868	182,720
Telemetry equipment	89,018	2,725	91,743
Miscellaneous equipment	56,877	2,061	58,938
Wald Valley chlorinator	25,754	1,810	27,564
Totals	\$ 66,298,608	66,011	66,364,619

	<u>Accumulated depreciation</u>			<u>Cost less</u> <u>accumulated depreciation</u>	
	<u>Balance</u> <u>June 30, 1972</u>	<u>Additions,</u> <u>net of</u> <u>retirements</u>	<u>Balance</u> <u>June 30, 1973</u>	<u>1973</u>	<u>1972</u>
	3,153,408	155,045	3,308,453	12,214,945	12,369,990
	4,541,009	476,755	5,017,764	42,708,941	43,131,210
	347,658	14,892	362,550	1,128,754	1,143,646
	152,786	1,100	153,886	470,565	486,779
	39,687	4,321	44,008	136,434	140,755
	60,368	12,626	72,994	318,303	330,929
	22,078	715	22,793	2,623	2,879
	19,360	1,766	21,126	4,823	6,589
	7,358	209	7,567	7,125	618
	97,996	4,761	102,757	79,963	71,856
	2,581	850	3,431	88,312	86,437
	44,788	6,380	51,168	7,770	12,089
	-	4,292	4,292	23,272	25,754
Totals	8,489,077	683,732	9,172,789	27,191,830	27,809,531

Schedule 3

Bonded Debt Maturities

June 30, 1973

Year ended June 30,	Total		
	Principal	Interest	Total
1974	\$ 1,270,000	2,493,670	3,763,670
1975	1,350,000	2,435,840	3,785,840
1976	1,450,000	2,375,190	3,825,190
1977	1,570,000	2,310,215	3,880,215
1978	1,665,000	2,239,952	3,904,952
1979	1,740,000	2,165,437	3,905,437
1980	1,830,000	2,087,250	3,917,250
1981	1,925,000	2,009,917	3,934,917
1982	2,025,000	1,931,967	3,956,967
1983	2,120,000	1,852,260	3,972,260
1984	2,220,000	1,767,890	3,987,890
1985	2,330,000	1,678,707	4,008,707
1986	2,425,000	1,584,486	4,009,486
1987	2,515,000	1,486,521	4,001,521
1988	2,630,000	1,384,475	4,014,475
1989	2,730,000	1,277,868	4,007,868
1990	2,850,000	1,166,815	4,016,815
1991	2,965,000	1,051,020	4,016,020
1992	3,070,000	930,117	4,000,117
1993	3,180,000	804,537	3,984,537
1994	1,320,000	694,630	2,014,630
1995	1,105,000	632,747	1,737,747
1996	1,155,000	577,377	1,732,377
1997	1,210,000	519,435	1,729,435
1998	1,265,000	458,797	1,723,797
1999	1,320,000	395,465	1,715,465
2000	1,380,000	329,315	1,709,315
2001	1,440,000	260,225	1,700,225
2002	1,505,000	188,072	1,693,072
2003	1,575,000	112,612	1,687,612
2004	1,645,000	37,012	1,682,012
	<u>\$ 58,780,000</u>	<u>39,239,821</u>	<u>98,019,821</u>

Schedule 4

Legal Debt Margin

June 30, 1973

Assessed valuation for year ended June 30, 1973	\$ 3,286,234,813
Debt limit (1% of assessed valuation)*	<u>492,935,222</u>
Amount of debt applicable to debt limit:	
General obligation bonds payable:	
Waterworks bonds, 1957	\$ 30,355,000
Waterworks bonds, 1966	<u>28,425,000</u>
Total bonded debt	58,780,000
Contractual obligations:	
To U.S. Government on first San Diego aqueduct:	
On first pipeline	2,222,098
On second pipeline	<u>8,243,900</u>
	10,465,998
To Metropolitan Water District on annexation charges	<u>12,877,538</u>
Total contractual obligations	<u>23,343,536</u>
Total gross indebtedness	83,123,536
Less portion of fund balances available for debt redemption:	
Waterworks bonds, debt service funds	69,098
U.S. Government contract fund	<u>18,965</u>
	<u>88,063</u>
Net indebtedness	<u>82,035,473</u>
Legal debt margin	\$ <u>410,899,749</u>

*Sec. 5(7), County Water Authority Act.

SAN DIEGO COUNTY WATER AUTHORITY

Schedule 5

Insurance Coverage

June 30, 1973

	<u>Amount or limit</u>	<u>Company</u>
Excess liability, property damage and product liability	\$ 5,000,000	Insurance Co. of North America
Select liability, personal injury, property damage, bodily injury, including automobile. Deductible of \$1,000 on property damage liability, except automobiles	5,000,000	Harbor Insurance Co.
Medical payments, each payment	100,000	
Buildings and equipment - Escondido and San Diego	2,000	Great American Insurance Co.
Office block policy - unscheduled - office equipment, includes tele-metering	461,500	Great American Insurance Co.
Chlorination station - optional peril policy	107,000	Great American Insurance Co.
Dwelling - Escondido	127,700	Great American Insurance Co.
Contractor's equipment	17,500	Great American Insurance Co.
Automobile - comprehensive, collision \$100 deductible	83,757	Industrial Indemnity Insurance Company
Official bonds:	Actual cash value	Great American Insurance Co.
L. R. Bursell, General Manager and Chief Engineer	25,000	Great American Insurance Co.
H. C. Griffen, Treasurer	25,000	Great American Insurance Co.
Public employees' blanket bond	50,000	Great American Insurance Co.
Travel accident - employees and directors:		
Death benefits, etc.	50,000	
Medical	5,000	
Aggregate	600,000	Travelers Insurance Company
Workmen's compensation	<u>Statutory</u>	State Compensation Insurance Fund