# SAN DIEGO COUNTY WATER AUTHORITY

# TWENTY-SIXTH ANNUAL REPORT

1972

San Diego County Water Authority
Organized June 9, 1944

# TWENTY-SIXTH ANNUAL REPORT

## OF AUTHORITY OPERATIONS

## FOR FISCAL YEAR ENDING JUNE 30, 1972

Linden R. Burzell
*General Manager and Chief Engineer*

San Diego, California
1972

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## SAN DIEGO COUNTY WATER AUTHORITY

*Member Agencies, Date of Entry, and Representative on Board of Directors on June 30, 1972*

### 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*

| | | |
|---|---|---|
| Baylor Brooks | R. E. Graham | Mrs. Edith Kamm |
| David S. Casey | Fred A. Heilbron | George Kerrigan |
| John M. Cranston | Gaylord Henry | H. Fred Landgraf |

### IRRIGATION DISTRICTS

Helix ..... *June 9, 1944*
John R. 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
*(Includes City of Chula Vista, an independent member agency, from June 9, 1944, to Nov. 3, 1952)*

### 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*
Walter R. Beck

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
*(Includes Lakeside I. D., an independent member agency from June 9, 1944 to June 7, 1956)*

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
FRED A. HEILBRON
*San Diego*
7-44 to 6-72

Vice Chairman
R. E. BADGER
*Santa Fe Irrigation District*
9-57 to 6-72

Secretary
HANS H. DOE
*Bueno Colorado Municipal Water District*
6-54 to 6-72

Treasurer
HARRY GRIFFEN
*Helix Irrigation District*
7-56 to 6-72

Controller
HOWARD G. GOLEM
*Olivenhain Municipal Water District*
1-62 to 6-72

## 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*

JOSEPH E. LESTER
*Superintendent*

ANNETTE L. WINNER
*Executive Secretary*

WALTER R. BECK
*Rainbow Municipal Water District*
9-62 to 5-72

BAYLOR BROOKS
*San Diego*
5-54 to 10-60
4-62 to 6-72

RALPH A. BROWN
*Fallbrook Public Utility District*
7-67 to 6-72

DAVID S. CASEY
*San Diego*
5-66 to 6-72

FRANK J. CERMAK
*San Dieguito Irrigation District*
7-66 to 6-72

RALPH W. CHAPMAN
*Otay Municipal Water District*
1-64 to 9-71

JOHN M. CRANSTON
*San Diego*
10-64 to 6-72

CHARLES A. CRYTSER
*Rincon del Diablo Municipal Water District*
6-54 to 6-72

ROBERT M. DODD
*Escondido*
1-70 to 6-72

F. D. FITZSIMMONS
*Yuima Municipal Water District*
8-71 to 6-72

JOHN B. GIBSON
*Helix Irrigation District*
10-71 to 6-72

R. E. GRAHAM
*San Diego*
7-63 to 6-72

GAYLORD L. HENRY
*San Diego*
11-64 to 6-72

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

MRS. EDITH KAMM
*San Diego*
8-65 to 6-72

ALLAN O. KELLY
*Carlsbad Municipal Water District*
11-63 to 6-72

GEORGE KERRIGAN
*San Diego*
9-53 to 6-72

H. FRED LANDGRAF
*San Diego*
10-55 to 6-72

JOHN E. LANGAN
*Ramona Municipal Water District*
4-61 to 6-72

LLOYD L. LEE
*South Bay Irrigation District*
4-61 to 6-72

CLEO OSBURN
*National City*
3-70 to 6-72

LELAND D. PRATT
*Helix Irrigation District*
11-69 to 6-72

CHARLES C. PRICE
*Rio San Diego Municipal Water District*
7-58 to 6-72

GLENN M. REITER
*Otay Municipal Water District*
9-71 to 6-72

M. J. SHELTON
*Helix Irrigation District*
2-48 to 6-56
10-65 to 6-72

JACK D. SHELVER
*Del Mar*
12-69 to 6-72

DAVID R. SHEPARDSON
*Poway Municipal Water District*
4-54 to 6-72

FRED W. SIMPSON
*San Diego*
7-44 to 11-71

CARTWRIGHT SMITH
*Valley Center Municipal Water District*
3-65 to 1-72

ROBERT A. WEESE
*Oceanside*
3-53 to 6-72

JOHN N. WILLIAMS
*South Bay*
11-70 to 6-72

GEORGE YACKEY
*De Luz Heights Municipal Water District*
6-68 to 6-72

## COMMITTEES OF THE BOARD

*June 30, 1972*

### Water Problems & Policy Committee

Hans H. Doe, *Chairman*
R. E. Badger, *Vice Chairman*
Baylor Brooks
Ralph A. Brown
David S. Casey
John M. Cranston
Charles A. Crytser
R. E. Graham
Harry Griffen
Fred A. Heilbron
Hadley Johnson
Lloyd L. Lee
John N. Williams

### Finance & Insurance Committee

M. J. Shelton, *Chairman*
Harry Griffen, *Vice Chairman*
Walter R. Beck
David S. Casey
Charles A. Crytser
F. D. Fitzsimmons
Gaylord L. Henry
George Kerrigan
H. Fred Landgraf
John E. Langan
Leland D. Pratt
Charles C. Price
Jack D. Shelver

### Legal & Claims Committee

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

### Public Education & Information Committee

Harry Griffen, *Chairman*
Hans H. Doe
R. E. Graham
Fred A. Heilbron
Lloyd L. Lee
Leland D. Pratt

### Engineering & Operations Committee

Robert A. Weese, *Chairman*
Baylor Brooks, *Vice Chairman*
R. E. Badger
Ralph A. Brown
Frank J. Cermak
Robert M. Dodd
Hans H. Doe
F. D. Fitzsimmons
Howard G. Golem
R. E. Graham
Allan O. Kelly
Lloyd L. Lee
Leland D. Pratt
Glenn M. Reiter
M. J. Shelton
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

### 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

### Administrative Code Committee

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



## STATISTICAL SUMMARY

| | 1971–72 | 1970–71 | Percent Change |
|---|---|---|---|
| GROWTH OF AREA | | | |
| Number of Agencies | 22 | 22 | 0 |
| Total Area — Acres | 759,537 | 755,631 | + 0.5 |
| Population | 1,391,000 | 1,334,700 | + 4.2 |
| Assessed Valuation | $3,275,533,487 | $2,841,462,960 | + 15.3 |
| OPERATIONS | | | |
| Water Imported by Authority — ac. ft. | 349,730 | 282,638 | + 23.7 |
| Water Production of Agencies — ac. ft. | 367,945 | 336,043 | + 9.5 |
| Local Water Used — ac. ft. | 36,663 | 59,578 | - 38.5 |
| Authority Water Used — ac. ft. | 331,282 | 276,465 | + 19.8 |
| Miles of Pipe Line | 187 | 176 | + 6.3 |
| Miles of Patrol Roads Maintained | 100 | 96 | + 4.2 |
| Number of Service Connections | 55 | 52 | + 5.8 |
| FINANCIAL | | | |
| Revenues: | | | |
| Water Revenue | $ 15,298,275 | $ 11,011,931 | + 38.9 |
| Other Revenue | 1,515,363 | 2,295,464 | - 34.0 |
| Taxes | 3,234,196 | 2,627,165 | + 23.1 |
| Expenditures: | | | |
| Operation and Maintenance | $ 505,140 | $ 404,725 | + 24.8 |
| Purchase of Water | 15,065,522 | 10,909,255 | + 38.1 |
| Payments on Outstanding Debt | 1,969,030 | 1,924,030 | + 2.3 |
| Total Investment in Plant: | | | |
| Total Fixed Assets | $ 163,807,286 | $ 147,473,377 | + 11.1 |
| Long-term Debt | 84,524,460 | 86,170,338 | - 1.9 |

*Backing pipe truck with 96 inch prestressed concrete pipe down south slope to Lusardi Creek.*

December 26, 1972

Board of Directors
San Diego County Water Authority

Gentlemen:

The Twenty-sixth Annual report of the Authority covering activities during the fiscal year ending June 30, 1972 has been prepared and is transmitted herewith.

During the year, the San Diego aqueducts were operated at the highest peak rates of flow and for a longer period of time than in any previous year. This record high for delivery of aqueduct water in San Diego County in any 12 month period was 349,730 acre feet. The average flow for the year exceeded the capacity of Pipelines 1, 2 and 3 thereby demonstrating the present need for Pipeline 4 which was first placed in service as far south as Escondido vent in June 1971.

At year's end, planning and engineering details were being developed for a joint project in partnership with the City of San Diego for extension of Pipeline 4 south of Miramar Reservoir. This project, to be known as the Pomerado Pipeline, will provide additional conveyance capacity to rapidly expanding service areas in the City of San Diego and to large areas of the Water Authority lying south of the San Diego River.

The Water Authority financial position remains strong; net revenues exceeded expenses by $299,292 in the General Fund and the total of all contract costs for Pipeline 4 are within the estimates and sufficient bond funds remain to complete the work.

The Water Authority's aqueduct operation and maintenance program continues to provide long-term reliability at a very low cost to the member agencies.

Very truly yours,

Linden R. Burzell

Linden R. Burzell
General Manager and Chief Engineer

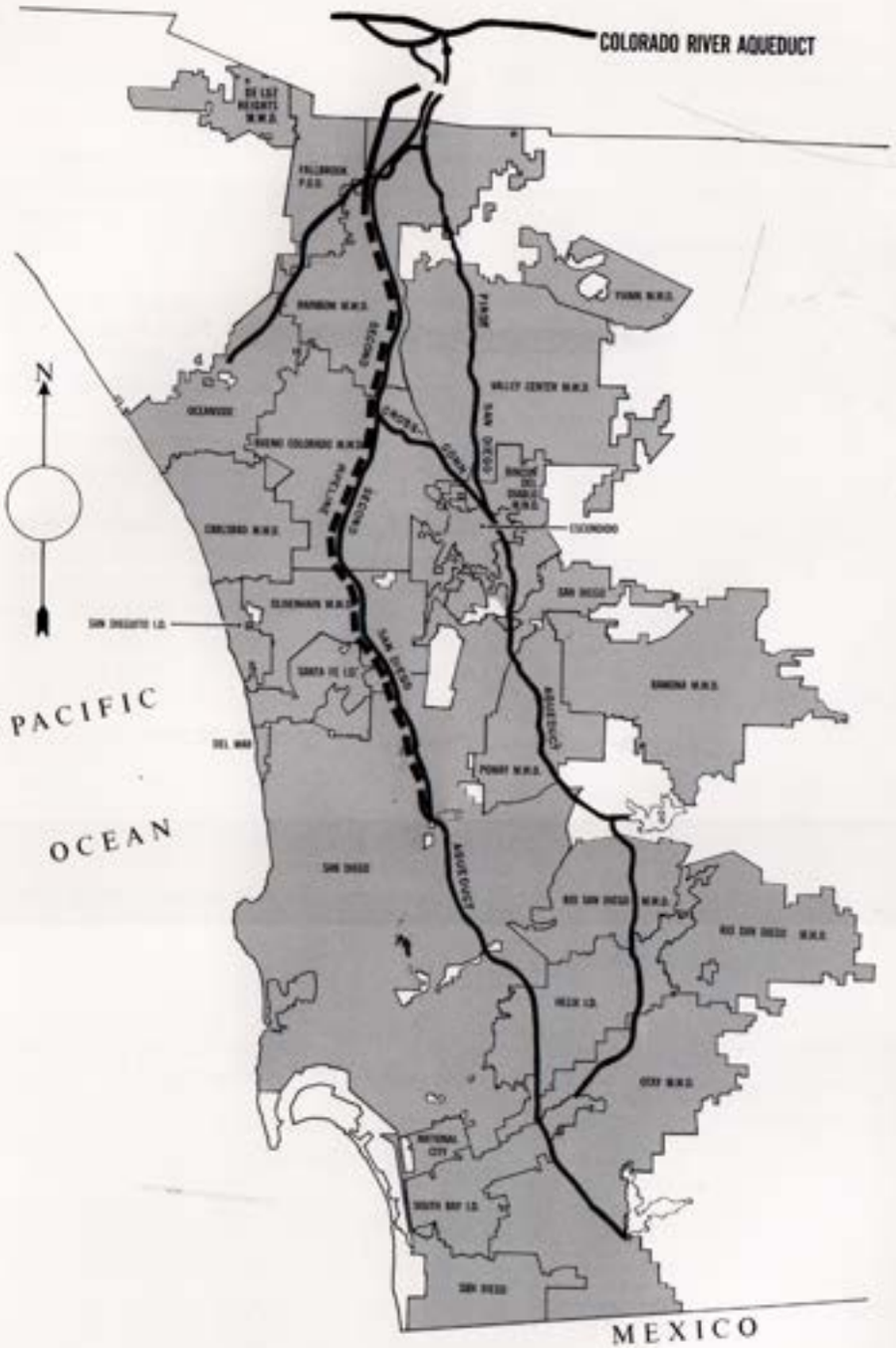



*Figure A. Authority Area Within San Diego County.*



# SAN DIEGO COUNTY WATER AUTHORITY

## REPORT OF ACTIVITIES

## FISCAL YEAR - 1971-72

*The San Diego County Water Authority was formed in 1944 under the County Water Authority Act passed by the State Legislature in 1943 to provide water for municipal, domestic and other beneficial uses throughout San Diego County. It now imports nearly all the water used in San Diego County from the Colorado River, 300 miles away, "wholesaling" the water to member agencies. It is a public corporation with the right to sue or to be sued and to acquire, hold or dispose of real and personal property. Its powers, privileges and duties as provided in the County Water Authority Act of 1943 are exercised through a Board of Directors. Like a municipal corporation, it can exercise power of eminent domain and condemn private property for public use. Moreover, the Authority is empowered to construct and maintain works and facilities across or alongside public lands, and may borrow money and incur indebtedness up to a maximum of 15 per cent 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

The Water Authority was governed by a 34 member Board of Directors during fiscal 1971-72. Each member was appointed by the governing body of one of the Authority's 22 member agencies. Each member agency was entitled to one representative on the Board, plus an additional Director for each $115 million of assessed valuation within its boundaries as determined by the San Diego County Assessor. At the end of the report year, three agencies were represented by more than one Director: City of San Diego by nine, Helix Irrigation District by four, and South Bay Irrigation District by two.

The officers of the Board of Directors are elected biennially in July of even-numbered years. Having been reelected in July 1970, Directors Fred A. Heilbron, Raymond E. Badger, and Hans H. Doe continued to occupy the offices of Chairman, Vice Chairman, and Secretary respectively. Director Harry Griffen continued to serve as Treasurer and Director Howard G. Golem as Controller.

Because of the size of the Board, most of the matters coming before it are given initial consideration by one or more of eight permanent Committees. Results of Committee deliberations are transmitted to the full Board with recommendations for action. 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, 1972 are listed on page 8 of this report.

Special committees are occasionally appointed by the Chairman as conditions require to consider special matters. During the report year, a special Fourth Pipeline Celebration Committee, chaired by Director David R. Shepardson, arranged a celebration on July 29, 1971, marking completion of Phase I, Pipeline No. 4.

Director Harry Griffen was reappointed to the Board in July 1971 by Helix Irrigation District.

Director Cleo Osburn was reappointed in August 1971 by the City of National City.

Director F. D. Fitzsimmons was appointed in August 1971 by Yuima Municipal Water District to succeed Director E. W. Blom.

Director Glenn M. Reiter was appointed in September 1971 by Otay Municipal Water District to succeed Director Ralph W. Chapman, who had resigned.

In October 1971, Director John B. Gibson was appointed by Helix Irrigation District to fill an additional seat to which that agency was entitled.

The passing of Director Fred W. Simpson, who had represented the City of San Diego on the Authority Board since its organization, was commemorated in November 1971.

Director Hadley Johnson was appointed in January 1972 by Valley Center Municipal Water District to succeed Director Cartwright Smith.

During May 1972, three directors were reappointed: Director David R. Shepardson by Poway Municipal Water District; Director Walter R. Beck by Rainbow Municipal Water District, and Director Hans H. Doe by Bueno Colorado Municipal Water District. A resolution in memoriam for Director Beck was adopted during the June 1972 Board meeting.

Director Charles A. Crytser was reappointed in June 1972 by Rincon del Diablo Municipal Water District.

During the July and August 1971 Board meetings, Chairman Heilbron awarded service emblems to Directors as follows: Harry Griffen,





15 years; John E. Langan, and Lloyd L. Lee, 10 years; Edith Kamm and Cartwright Smith, six years; George F. Yackey, three years.

Under the County Water Authority Act, as originally written, an unlimited number of members could be appointed to the Water Authority Board of Directors as member agencies increased in assessed valuation. To maintain the Board at a viable size, the Water Authority requested, and the State Legislature approved, an amendment to the Act. Now, each member agency is entitled to one representative plus one additional representative for each five percent of the total Authority assessed valuation contained within the member agency's boundary. Under present conditions, the Board is limited to 35 members.

## Administration

At the close of the fiscal year, the Water Authority had a staff of 49, including six temporary employees. Of this number, 24 are engaged in administration, engineering, financial, operations, mainteance, stenographic and clerical positions. Another 25 serve in new project engineering design, surveying and inspection capacities or in temporary positions.

In September, Mrs. Betty C. Modesto was named Deputy Treasurer.

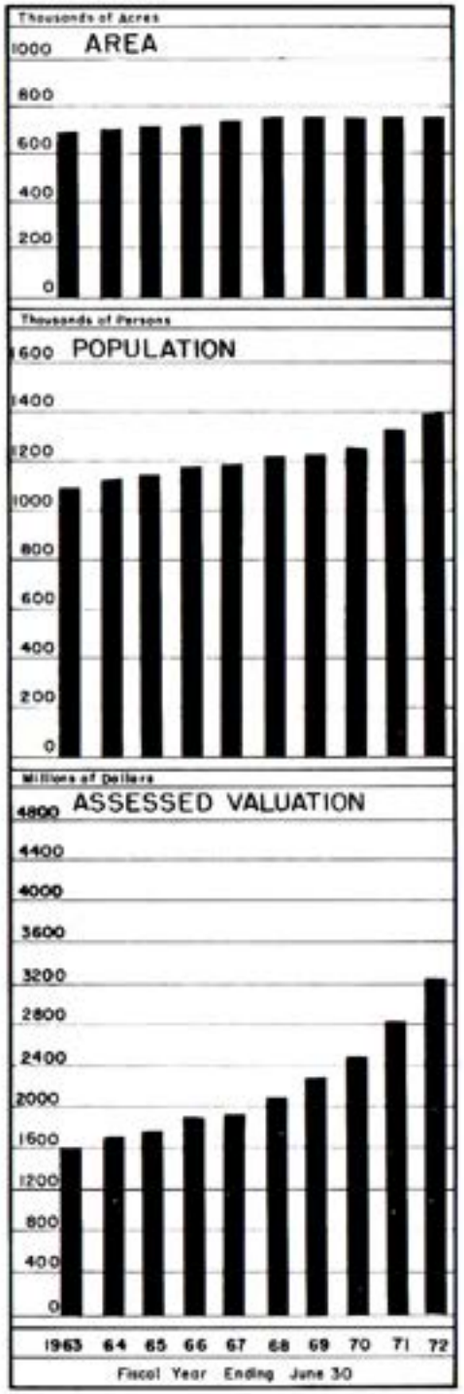
The California Section of the American Water Works Association, during its Fall 1971 Convention, honored General Manager and Chief Engineer Linden R. Burzell with its George Elliott Memorial Award for outstanding service.

A new position, Director of Finance, was created by the Board of Directors at its December meeting. The former Chief Accounting Officer, Mr. Henry G. Lozano, was appointed to the position.

Five employees completed a seven semester course on water works practices at San Diego City College in January 1972. The employees were Messrs. Laurence E. Bragg, Jack C. Webb, Robert L. Patterson, Ira M. Spell, and Dennis L. Heinen.

Superintendent Joseph E. Lester retired June 1, 1972, after 25 years of service to the Water Authority. He was succeeded by Mr. Irwin E. Nichols, former Senior Systems Operator. Mr. Laurence E. Bragg was appointed to fill the vacancy created by Mr. Nichol's promotion.

Ira M. Spell, Harvey Winkle and Robert L. Patterson earned American Water Works Association certification as System Operators Grade IV. Jack C. Webb was certified as System Operator Grade III.




# WATER AUTHORITY COMPOSITION

## Area

The area of the Authority increased during the fiscal year from 755,631 acres (1,181 square miles) to 759,537 acres (1,187 square miles), a net gain of 3,906 acres. The Reclamation Plant Annexation of 70.5 acres and the San Luis Rey No. 8 Annexation of 152.4 acres were both completed by the City of Oceanside in November 1971. Largest addition to the Authority during the year was Ramona Municipal Water District's Concurrent Annexation No. 5 consisting of 3,650 acres, completed in May 1972.

Ninety-four percent of San Diego County's total population resides within the Water Authority boundary, which encompass 28% of the 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 been caused by the expansion of incorporated cities into areas within the boundaries of other member agencies.

The area within each member agency, the changes therein during the year, and the percentage of each agency's area within the Authority are shown in Table 1, page 46. The City of San Diego covers the





largest area, equal to 26.69 percent of the total Authority area. The City of Del Mar encompasses the smallest area among Water Authority members with 1,082 acres.

The Authority's 1971 Statement of Change of Boundaries, which State law requires be filed by the Executive Secretary of the Board of Directors prior to January 1 of each year, was filed with the Metropolitan Water District of Southern California, the San Diego County Assessor and the State Board of Equalization. This statement, which covered the 1971 calendar year, indicated 24 changes of member agency boundaries, four of which 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 for levying taxes as established each August by the Authority Board.

## Population

The growth of population within the Water Authority service area continued during the year. At the close of the fiscal year, it is estimated that total population within the Authority was 1,391,000. Census figures for each decade since 1910, and estimated population figures for the years 1955, 1965, and 1972, are shown in Table 2, page 47. Data pertaining to population within member agencies are shown in Table 3, page 48.

The City of San Diego is the most populous member agency with 750,500 persons or 54 percent of the total residing within the Authority. 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 Irrigation District, with 8.58 persons per acre.

The average population per acre for the entire Water Authority area is now 1.83 or 1,172 persons per square mile.

## Assessed Valuation

The San Diego County Assessor determines the assessed valuation of all taxable property within the Water Authority. This assessed valuation, considered in terms of the Authority's budgetary requirements, provides the basis for the Board's determination of the tax rate. The assessed valuation within each member agency determines the number of representatives and the total number of votes to which each agency is entitled. The County Auditor certified to the Authority the assessed valuation of taxable property for the 1971-72 tax levy was $3,275,533,487, an increase of $434,070,527 or 15.3% over 1970-71.

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 49. Also shown in Table 4 are the assessed valuation figures for 1972-73, which were received by the Authority before compilation of this report. According to these figures, taxable property within the Authority has been assessed at $3,634,092,751, an increase of $358,559,264 or 10.9 percent. The average assessed valuation for the Authority has increased from $4,335 per acre in 1971-72 to $4,785 per acre in 1972-73.

# WATER SUPPLY AND CONSUMPTION

### Source and System

At present, the entire water supply of the 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 payments in the form of taxes and annexation charges to MWD, but not payments for water, the Authority has a preferential right to 8.8 percent of Metropolitan's total supply. MWD delivered municipal water throughout the year on the basis of requirements. It has never invoked preferential right as the basis for deliveries.

MWD diverts water from the Colorado River Aqueduct into the San Diego Aqueduct near San Jacinto. The Water Authority accepts delivery at a point approximately six miles south of the San Diego-Riverside County line. Approximately 900 acre feet of storage is provided at San Jacinto Reservoir near the northern end of the first two pipelines. No storage is now available on the second two pipelines. However, MWD is now building the Robert A. Skinner Dam which will impound Lake Skinner, a 40,000 acre foot capacity reservoir. The dam, located in southern Riverside County, is scheduled for completion in early 1973. The San Diego Canal, with 1,000 cubic feet per second capacity, will deliver water to Lake Skinner from both the California Aqueduct and the Colorado River Aqueduct.

The First San Diego Aqueduct, (Pipelines No. 1 and 2) has a capacity of 196 c.f.s. Pipeline No. 3, part of the Second San Diego Aqueduct, has a nominal capacity of 250 c.f.s. Pipeline No. 4, also part of the Second San Diego Aqueduct, has a capacity of 380 c.f.s. Pipeline No. 4 has been in use as far south as the Cross-connection since June 1971. The complete pipeline to Miramar Reservoir will be ready for use by early 1973.

### Deliveries and Rates

The four pipelines of the San Diego Aqueducts delivered a total of





349,730 acre feet during the fiscal year, as compared to the 282,638 acre feet delivered during the previous year. The quantity delivered exceeded the capacity of Pipelines 1, 2, and 3 by 29,730 acre feet. Since these lines were operated at full capacity during the year, the need for Pipeline No. 4 commencing July 1, 1971, has been amply demonstrated.

The lowest rate of flow occurred in December 1971 during which month more than half the year's rain fell. Several stormy periods left a total of 3.27 inches of rain at Lindbergh Field. Low flow was 35 c.f.s. and low monthly average flow was 300 c.f.s., both of which occurred in December. Direct use of water decreased sufficiently to permit delivery of 6,387 acre feet to the City of San Diego for storage in San Vicente Reservoir despite a six-day shutdown of the Colorado River Aqueduct. Total flow in the San Diego Aqueducts that month was 18,452 acre feet.

During June 1972, the aqueducts were operated at the highest peak rates of flow and at the greatest monthly rate in the history of the Water Authority. Peak was 625 c.f.s.; monthly total was 34,676 acre feet.

Water deliveries to member agencies are shown in Table 5. The agencies purchased 353,607 acre feet during the year. An additional 19,219 acre feet was placed in storage by the Authority, and 3,900 acre feet was stored within the County by Metropolitan. Member agencies withdrew a total of 15,732 acre feet from Authority storage.

The quantitites of water delivered to individual member agencies for the eight-year period from 1964 to 1972 are shown in Table 6, 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 showed a 27.5 percent increase over 1970-71.

The Water Authority charge for water is the rate charged by Metropolitan plus a surcharge of $1.25 per acre foot. Prior to September 1, 1964, the surcharge was $2.00. In August of that year, the Board adopted a resolution which reduced the rate to its present level, an amount which is sufficient, presently, to pay all Authority expense except capital cost.

The Metropolitan Water District maintains a policy of announcing 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. A summary of Authority water rates for untreated Colorado River water supplied and to be supplied to member agencies since July 1, 1958, 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 | 7/1/73 | 52.00 | 1.25 | 53.25 | 28.50 | 24.75 |
| 7/1/73 | 7/1/75 | 56.00 | 1.25* | 57.25* | 31.00 | 26.25* |

*Subject to change.

After completion of the State Water Project and Skinner Dam, water delivered to the Authority will be a blend of northern and Colorado River waters. It is anticipated that when the first delivery of State Project water is made to San Diego, now scheduled for 1975, Metropolitan rates will include a surcharge for the high quality water from the north. This surcharge, designated "equalization charge" is presently set at $10.00 per acre foot. Adjacent to Lake Skinner the Metropolitan Water District will construct the R.A. Skinner Filtration Plant. Water which has gone through the plant will carry an additional surcharge of $7.00 per acre foot during the 1974-75 fiscal year. Filtered water will be transported in Pipeline No. 3.

As indicated in the summary, agricultural water users benefit by a lower water rate granted as a rebate by Metropolitan. To obtain the rebate, the Authority must certify to Metropolitan the quantities of water so used. Rebates granted to the Authority are paid in full to the agencies which certify such water was used for agricultural purposes. Agricultural water users, in turn, are credited with the rebate by the supplying agency.

### Water Production of Member Agencies

"Water production" describes that quantity of water which an agency must produce from all its sources to meet the demands of its



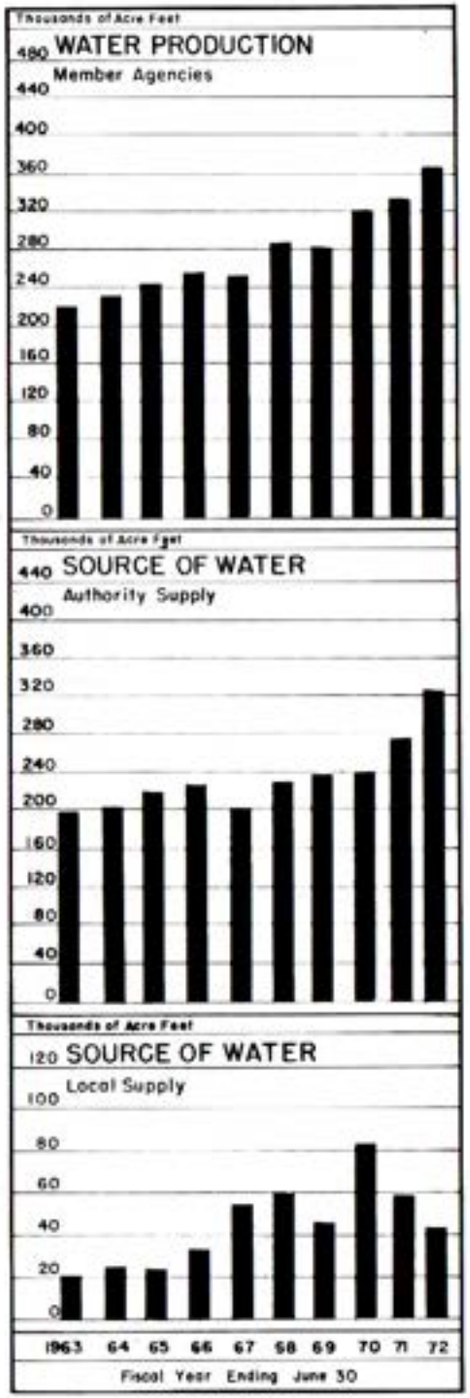


consumers, plus the losses which occur between the source of supply and the consumers, including leakage, losses from breaks, evaporation from distribution reservoirs, and waste resulting from normal operations. Sources of supply may include impounding reservoirs, wells, and the Authority system.

The total water production of the twenty-two member agencies is shown in Table 7. Total water production increased from 336,043 acre feet during 1970-71 to 367,945 acre feet during 1971-72, a 9.5 percent increase. This is the largest amount of water used during a year within the Authority area. The greatest monthly production was 44,024 acre feet in August 1971. This was a ten percent increase over production in August 1970, the previous year's peak month. The smallest monthly production occurred in December 1971, when 17,622 acre feet was produced. This was 29 percent more water than was produced in December 1970, the previous year's low month.

Rain and runoff was far below normal this fiscal year. Therefore, only 36,663 acre feet was available to member agencies from local sources, or ten percent of total use.

The wells in Pauma Valley produced 2,272 acre feet of water for the several agencies within the Yuima District. The



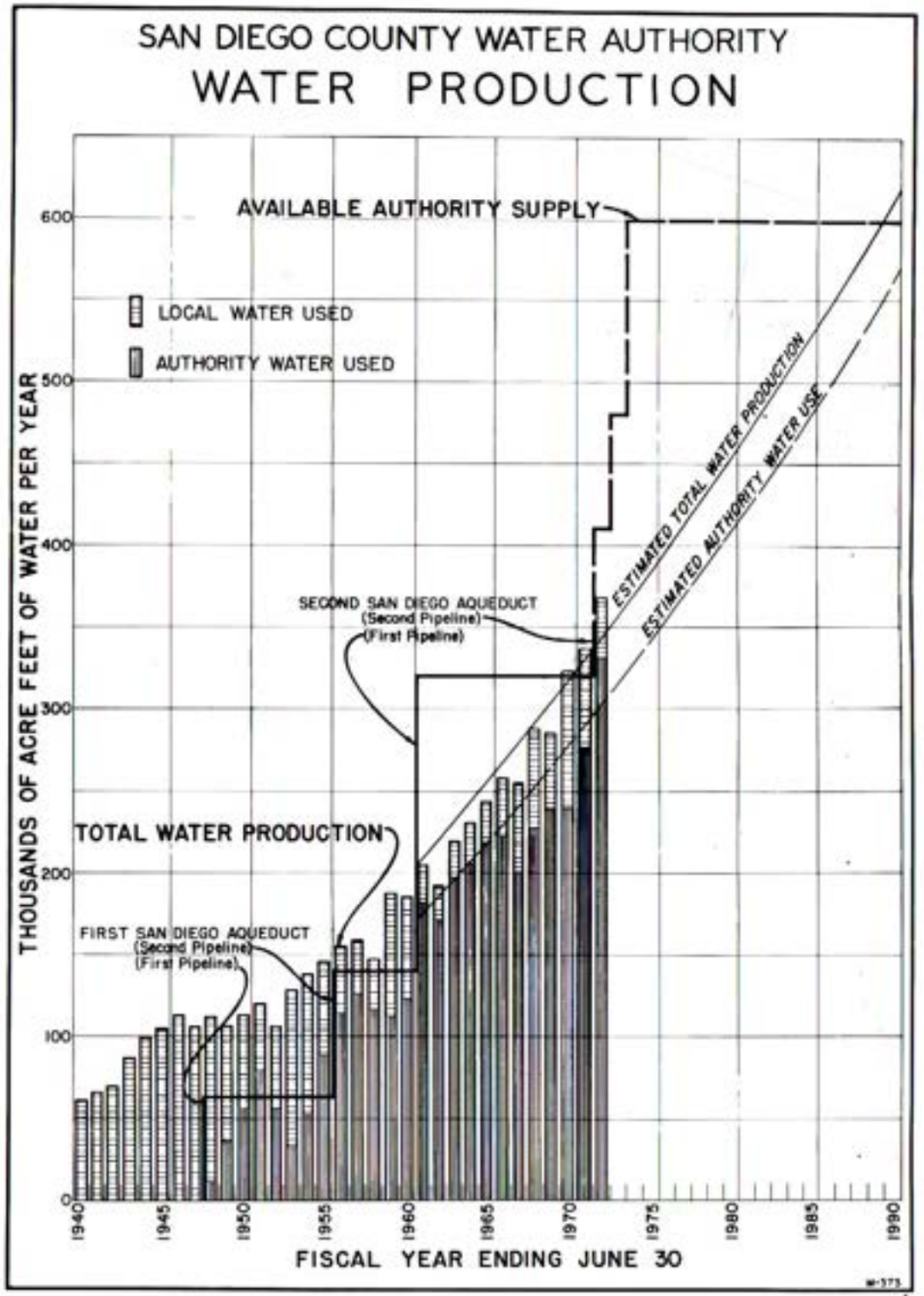



*Figure B. Water Production of Authority Member Agencies*





San Luis Rey River system and the Warner Ranch wells owned by the Vista Irrigation District, a sub-agency of Bueno Colorado Municipal Water District, produced 8,149 acre feet for distribution within Bueno Colorado Municipal Water District, Rincon del Diablo Municipal Water District and the City of Escondido. California American Water Company produced approximately 3,704 acre feet of local water within its service area which included National City and South Bay Irrigation District. The most extensive reservoir system within San Diego County Water Authority is owned by the City of San Diego. The City system produced 18,099 acre feet of local water during the year, including 6,548 acre feet which was delivered for use in areas outside of the Authority. Detailed statistics on water production are in Table 8.

A comparison of water production by the member agencies can be found in Table 9. This table lists water production based on area and population in acre feet per acre per year, and acre feet per capita per year. The water systems of member agencies are serving an estimated 343,200 acres out of the 759,537 acres or 45 percent of the total area of the County Water Authority.

The volume of water used per year per unit area varies a great deal depending on the state of development, type of soil, type of crop, and on other variables. The Rainbow and Valley Center Municipal Water Districts are intensively irrigated agricultural districts with annual water requirements of 2.20 and 1.50 acre feet per acre, respectively. The relatively undeveloped Otay Municipal Water District and Ramona Municipal Water District report 0.38 and 0.34 of an acre foot per acre, respectively. Water production information for the De Luz District was not available during preparation of this report. The Authority average for 1971-72 was 1.07 of an acre foot per acre on the 343,200 acres served.

Per capita water use within the Authority was 0.26 of an acre foot per year. Rainbow Municipal Water District reports 4.78 acre feet per capita based on a population of 4,600 persons which reflects the high agricultural demand.

Figure B shows the combined water production of the Authority member agencies and compares production with available local supply.

Columns representing annual production are shaded to show contrast between water obtained from local sources and that which has been supplied by the Water Authority from the Colorado River. The chart shows the expanding use of Authority water and the year to year changes in the quantity of available local water.

Projections of future production of water are based on the assumption that additional water will be available when needed. The staff of

the Authority has predicted that aqueduct facilities now in operation will be adequate to meet all foreseeable demands on the Authority for raw water service until completion of additional facilities of the Second San Diego Aqueduct now under construction.

### Agricultural Water Use

Agricultural water use amounted to 24.7 percent of the total of 367,945 acre feet produced by Authority agencies. The Metropolitan Water District allows a rebate for water used for agriculture. A rebate of $26.00 per acre foot during the fiscal year justified extensive record keeping and reporting by member agencies. In order to obtain the rebate, each agency must certify to the Authority, with supporting data, the total quantity of water used for agricultural purposes. Table 10 shows quantities of water used in agriculture. This year's report shows that Valley Center Municipal Water District had the highest percentage of agricultural water use at 93.4 percent.

### Authority Facilities

The Authority system consists of the following facilities: The two San Diego Aqueducts south of Metropolitan's delivery point which is approximately six miles south of the Riverside County line; a portion of the Fallbrook-Oceanside Branch, extending southwesterly from the First San Diego Aqueduct at Rainbow; and the La Mesa-Sweetwater Branch Line, extending from the First Aqueduct at Slaughterhouse Canyon through Lakeside to a terminal point at Sweetwater Reservoir; plus a cross over aqueduct between the Second Aqueduct in Twin Oaks Valley to a point on the First Aqueduct just north of the City of Escondido. Treatment facilities are provided in a chlorination station in Rainbow Pass just north of the North San Diego County line where flows in both aqueducts are chlorinated. A temporary chlorination station has been constructed at Auld Valley to serve Pipeline No. 4.

The Authority does not own or operate storage facilities. It does, however, have a contractual right to store up to 40,000 acre feet of water in San Vicente Reservoir. The privilege results from an agreement with the City of San Diego which expires October 31, 1973. Under this agreement, the City charges $2.20 per acre foot for the maximum amount of water in storage each year, plus fifty cents per acre foot to cover pumping charges for any water transferred from storage to the City. Under the agreement 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 13,254 acre feet of water was placed in San Vicente Reservoir by the Authority for the account of its member agencies. A total of 15,255 acre feet was withdrawn, and 1,101 acre feet was lost by evaporation. The net result of the year's activities was a decrease of 3,102 acre feet to 21,613 acre feet in storage on June 30, 1972. Storage statistics are shown in Table 11. The Helix





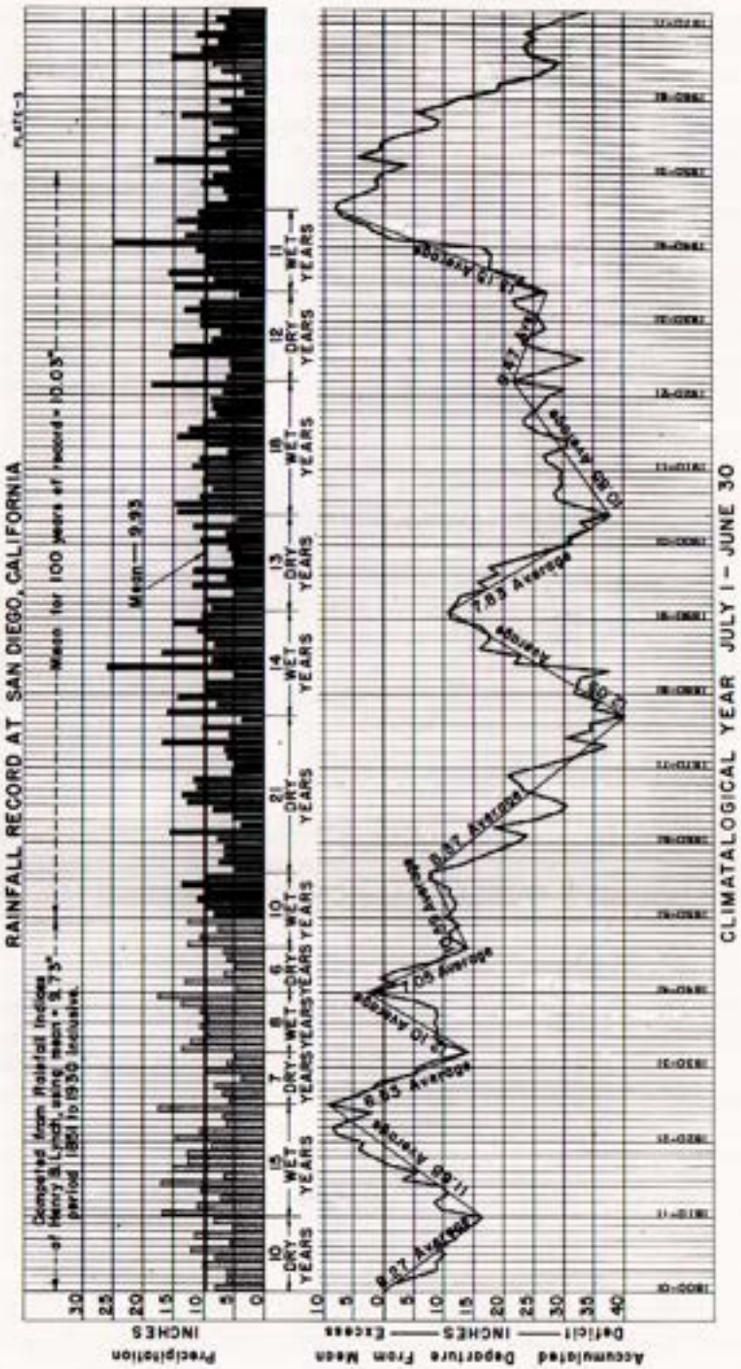



*Figure C. Rainfall Record at San Diego, California.*

Irrigation District had the largest amount credited to its account at year's end, totaling 3,744 acre feet or about 17 percent of all Authority water stored in San Vicente Reservoir.

The Authority also has an agreement with the City of San Diego which permits it to store up to 2,500 acre feet of water in the City's Lower Otay Reservoir, which is the terminus of the Second San Diego Aqueduct. This storage is for operational purposes only, and the water is transferred to the City of San Diego when water is requested by the City at this location. Storage capacity for member agencies is not provided at Lower Otay Reservoir. The City of San Diego makes a charge of $1.00 per acre foot for the maximum amount of storage in any 12 month period or part thereof with a minimum annual charge of $1,000 for use of the reservoir. In addition, there are pumping charges which vary from $2.25 to $1.50, depending on the elevation of the water in the reservoir.

The City of San Diego prefers to take direct deliveries of water at Otay from the aqueduct at a rate of flow determined by their treatment plant requirements. The City prefers not to have water delivered into the lake. For this reason, very close control is exercised by the Authority personnel in order to prevent spillage from the aqueduct into the Reservoir.

The Authority maintains a telemetering and supervisory control system which provides operators at Escondido with the rate of incoming flows from Metropolitan Water District, remote control and rate of flow indication in the Cross-Over Aqueduct and numerous service outlets along both the first and second aqueduct.

Communications with Metropolitan's San Jacinto operation center are maintained by a two-way radio system between the Authority's operation center and San Jacinto.

### Water Quality

Chemical constituents of dissolved solids in the aqueduct water are shown in Tables 12 and 13. The breakdown is based on analyses of water delivered to the aqueducts at San Jacinto as made by the laboratory of the Metropolitan Water District at the La Verne treatment plant. Variation in total hardness ranged from a high of 360 p.p.m. to a low of 336 p.p.m. Hardness is reported as p.p.m. equivalent of calcium carbonate. Water temperatures varied from a low of 53° F. recorded in December 1971, and January 1972, to a high of 82° F. reported in August and September 1971.

### Water Treatment

Throughout the year, Authority water continued to meet or exceed the minimum bacteriological quality standards as set forth 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.





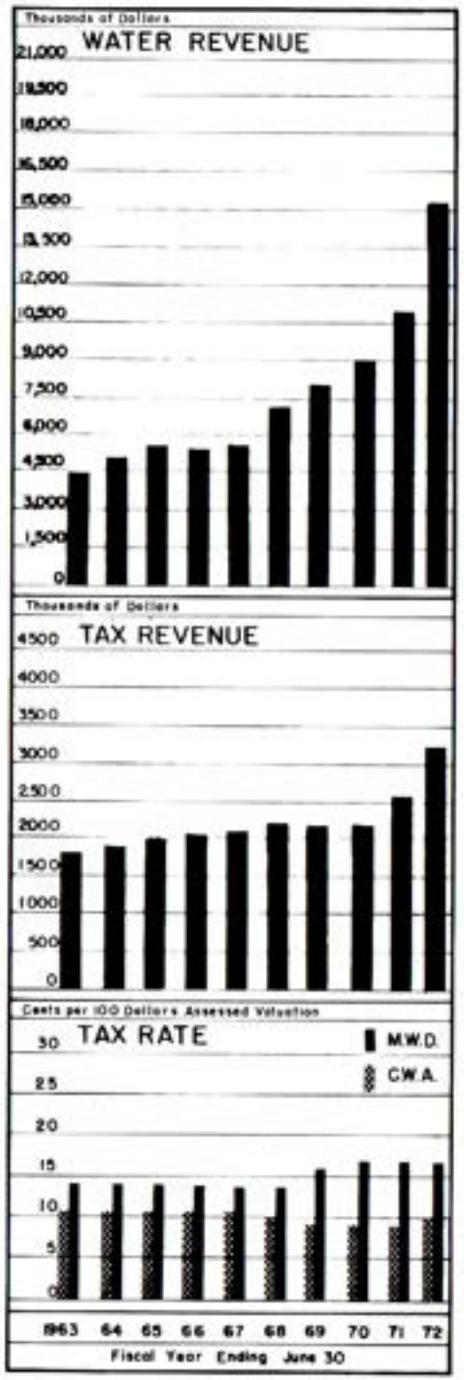
Over a period of years, the Metropolitan Water District and the Authority have controlled bacterial growth on aqueduct pipe walls by "slugging" with chlorine. A continuous chlorination program has been in operation on the Authority's portion of the aqueducts since 1965. The current policy is to apply chlorine on a continuous basis except for limited periods occasioned by mechanical shutdowns. The continuous chlorination program has proved successful and has resulted in fewer service problems. The rate of application of chlorine by the Authority ranged from 0.75 p.p.m. to 2.5 p.p.m., depending upon chlorine demand, temperature of the water, and other variables. A leak detector and automatic shutoff value system provide protection against chlorine leakage. The chlorination station located in Rainbow Pass, serves Pipeline 1, 2, and 3. The temporary chlorination station in Auld Valley serves Pipeline 4.

Several member agencies have large agricultural developments which are based on the use of irrigation water obtained from the Authority. The State Health Department has continued to recognize that Colorado River water supplied by the Authority meets drinking water standards after sterilization with chlorine. Current practice is to require dual chlorination with a time interval of at least one-half hour between the two points of application, where member agencies provide dual domestic and irrigation service. Six filtration plants are in operation within the Authority. These plants provide filtered water to the service area of seven member agencies: City of San Diego, City of National City, City of Del Mar; and San Dieguito, Santa Fe, South Bay and Helix Irrigation Districts.

On February 28, 1969, a report was completed by a group of Water Authority member agencies designated, "The Filtration Study Group". The report concluded that the best way for agencies in the northern part of San Diego County to obtain filtered water would be to request that Metropolitan provide this service in Pipeline No. 3. During the year studies continued and additional member agencies indicated that they too prefer to receive filtered water. Accordingly, prior to completion of this report the Board of Directors of the SDCWA requested that Metropolitan construct a Treatment Plant at Lake Skinner with initial capacity of 150 M.G.D. Indications are that Filtered water serivce will be available to the Water Authority from the plant by 1975.

### 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 if the total demand for water exceeds the amount available to the Authority to deliver.




The quantity of water to which an agency has a preferential right, in such an event, is that portion of the available Authority water supply which bears the same relation to the whole as the total accumulation of the amounts paid by the agency toward the capital cost of the Authority works, bears to the total of such payments received from all agencies.

Allocation by preferential right will be invoked only when the combined demand for water exceeds the capacity of the Authority to deliver and agreement cannot otherwise be reached. When water and capacity are available, agencies may purchase water without limit.

Before construction of the Second San Diego Aqueduct, demand exceeded system capacity on several occasions; however, voluntary agreement between member agencies and the Authority permitted operation without resort to the provisions of Section 5.11 of the Authority Act. The percentage allocations in effect as of June 30, 1972 and the corresponding flows available from the present aqueduct system are shown in Table 14.

## Future Supplies

The Water Authority obtains its water from The Metropolitan Water District of Southern California. At the present time all of the water





comes from the Colorado River by way of the Colorado River Aqueduct. The Metropolitan Water District 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.

The first major step to obtain additional water was undertaken on November 4, 1960, when the District entered into a contract with the State of California for 1,500,000 acre feet of water annually (contract subsequently amended to provide 2,011,500 acre feet) from the State aqueduct system (Feather River Project). As a result of the U.S. Supreme Court's decision in the Case of "Arizona vs. California", less water may be available to the District annually than the 1,212,000 acre feet that the Colorado River Aqueduct is capable of bringing into Southern California. For this reason, the Metropolitan Water District's contract with the State of California was amended to increase Metropolitan Water District's quantity of State Project water from 1,500,000 to 2,011,500 acre feet per year.

The California Aqueduct, the key feature of the State Project for water supply was almost completed as this report was written. Only Perris Reservoir, terminal storage facility on the 444 mile aqueduct, needs completion before the system is operational. Oroville Dam was completed and filled in 1967. The Hyatt and Thermalito power plants have been generating electricity since 1968. The Delta, San Luis, Dos Amigos, Buena Vista, Wheeler Ridge, Wind Gap, Edmonston and Pearblossom pumping plants are all operational. Water has been placed in storage at Silverwood Lake. Devil Canyon power plant is nearing completion and the Santa Ana Pipeline has been installed. Perris Dam has been topped out and will be completed before publication of this report.

State Project water is being delivered to Metropolitan Water District through the West Branch at Castaic Reservoir. MWD, in turn, is supplying its member agencies in Ventura and Los Angeles counties with water from northern California.

Water from Northern California will be available to the Water Authority early in 1975, following completion of Skinner Dam and Filtration Plant.

Responsible forecasts indicate that water from the Colorado River and from the State Project will meet the growing requirements of the Metropolitan Water District's member agencies beyond the year 1990, perhaps 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 1990, when additional supplies may be required, many plans have been proposed which call for development of projects

*Placing 35 ton, 96 inch prestressed concrete cylinder pipe in trench.*

*Earth slide in East bank of deep cut in Los Penasquitos area.*

on the undeveloped rivers in Northern California, the Columbia River, and perhaps in Canada. These many proposals, together with waste water reclamation, weather modification, geothermal water development, and sea water desalting, are being investigated by the Water Authority, The Metropolitan Water District, the State of California, and the Federal Government.

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

# DESIGN AND CONSTRUCTION

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

On June 7, 1966, Metropolitan Water District voters approved Proposition W for $850,000,000 and San Diego County voters additionally approved Proposition V for $30,000,000. The Metropolitan bond issue provides funds for expansion of its system to provide for delivery of State Project water. Among the facilities which have been constructed is an Inland Feeder System which connects Perris Reservoir with the San Diego Aqueducts.

First constructed was San Diego Pipeline 4 from the end of the San Diego Canal in Auld Valley, site of Lake Skinner, to the San Diego County Water





Authority delivery point, approximately six miles south of the Riverside-San Diego County line. This pipeline, completed in early 1971, is approximately 100,000 feet in length and was designed to provide the Authority with an additional 380 c.f.s. of capacity.

On the Water Authority's portion of the new line, Phase I, from the MWD delivery point to the Cross-connection near San Marcos, was completed and operational in mid-1971.

Phase II, 96-inch mortar lined and coated welded steel pipe 11 miles from the Cross-connection to Escondido Creek, was completed in May 1972.

*Steel plate special reducer being lowered into place.*

Contract documents for construction of Phase III, from Escondido Creek to Miramar Reservoir, were signed November 4, 1971. Completion of this section, and of the fourth pipeline, is scheduled for early 1973. Phase III consists of 12 miles of 96-inch prestressed concrete pipe.

The firm of James M. Montgomery, Consulting Engineers, Inc., was hired in April 1972 to assist the staff with study of aqueduct operation as it affects member agencies. Recommendation for the study came from the Operating Heads of the member agencies. Development of the study will depend on tentative conclusions reached in the first phase.

Construction of an intertie between Pipelines No. 3 and 4 at Olivenhain Service Connection No. 1 was completed and placed in service during May 1972. This connection serves as a safety outlet, so that water which spills over the weir at the diversion structure is returned to Pipeline 3.

Design personnel continued to develop the design of the Pomerado Pipeline, Specification 224, a joint project with the City of San Diego to extend Pipeline 4 south of Miramar Reservoir. Initially this 84" pipeline will convey filtered water from Miramar Filter plant southerly to a terminal point near Shepard Canyon. The project will be ready for bidding in September 1972.

# OPERATION AND MAINTENANCE OF AQUEDUCTS

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

## Operation and Maintenance

*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 varied 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 on Palomar Mountain. The Authority maintains 15 mobile units in operation, maintenance, and construction.*

August 1971, was the first month of full time operation of Pipeline No. 4, Phase I. The added capacity permitted delivery of sufficient water to meet full demands of member agencies during an extremely hot period. A chlorination plant was completed at Auld Valley during July to serve this pipeline.

Water demands remained unusually high during September. Actual orders from member agencies exceeded the flow by 57 c.f.s. on September 9. During the first half of October, water demands remained high and for several days during the first week, it was not possible to meet all requests for water. Later, Pipeline No. 4 was taken out of service to permit final cleaning and testing of a portion of the 96 inch line immediately south of the diversion structure of the crossover pipeline.

Service connections at Valley Center No. 3 and No. 5, Yuima No. 1, Oceanside No. 2, and Helix No. 2 were converted to digital supervision control units.





Maintenance crews installed the first two fabricated vent covers on vent structures of Pipeline 3 in July 1971, as part of a long-range program to close all open vents to reduce the possibility of vandalism or contamination.

Several stormy periods in early December left 3.27 inches of rainfall in San Diego. Direct use of water decreased sufficiently to permit delivery of 6,387 acre feet to the City of San Diego for storage in San Vicente Reservoir despite a six day shutdown of the Colorado River Aqueduct. The shutdown permitted Water Authority crews time to isolate and make repairs in several miles of Pipeline No. 2 south of Escondido. During the shutdown, delivery of water to member agencies was restricted to flow available from storage in San Jacinto Reservoir.

The Water Authority purchased a surplus 6 x 6 truck crane, in nearly new condition, from the Civil Defense Program.

Two foot patrols of the San Diego aqueducts were completed, one in the spring and one in the fall. No leaks were found and no new encroachments or unusual maintenance problems were noted.

During June 1972, the San Diego aqueducts were operated at the highest peak rates of flow and at the maximum monthly rate in the history of the Water Authority, 625 cfs and 34,676 acre feet respectively. The fiscal year ending June 30, 1972 also recorded the highest aqueduct delivery for any twelve month period of 349,730 acre feet. The average flow for the fiscal year exceeded the capacity of Pipelines 1, 2 and 3, thereby demonstrating the year round need for Pipeline 4 commencing July 1, 1971.

Routine Aqueduct operations, patrol and maintenance activities continued throughout the year with particular attention being given to roadgrading, clearing fire breaks around structures, pumping, cleaning and painting metal work in line structures and flushing and servicing air and vacuum and blowoff valves.

## Special Activities

Completion of construction on Phase I, Pipeline No. 4, was marked July 29, 1971, by ceremonies at the end of the San Diego Canal, in Auld Valley, followed by a barbecue luncheon in Live Oak Park. Plans and arrangements were made by a special committee under the chairmanship of Director David R. Shepardson. Site preparation at the two locations was done by Authority field personnel. Approximately 300 guests attended the celebration and barbecue.

A large group of Water Authority Board members, staff, and guests attended the dedication of the Edmonston Pumping Plant on October 7,

1971. Governor Ronald Reagan gave the signal which started the first water from the California Aqueduct over the Tehachapi Mountains.

Director Harry Griffen was elected to a two year term as president of the Irrigation Districts Association of California (IDA) during that organization's Fall 1971 convention, November 30 to December 3, 1971, in San Diego. The Water Authority has four representatives on the IDA Board of Directors: Directors Griffen, Doe and Price, and General Manager and Chief Engineer Burzell. Directors Griffen and Doe are also members of the IDA Executive Committee.

Ten members of the Board of Directors participated in a two day annual inspection of the aqueducts on March 23 and 24, 1972. The inspection, sponsored by the Engineering and Operations Committee, covered many critical operating and maintenance situations and related them to the proposed 1972-73 budget items.

On April 27 and 28, 1972, the Water Authority and the Metropolitan Water District co-sponsored a tour of the Sacramento-San Joaquin Rivers Delta for directors and guests. Participating in the tour were representatives of the Army Corps of Engineers, Department of Water Resources, Department of Fish and Game, Contra Costa County Water District, Delta Water Agency and others with varying views on the proposed Peripheral Canal.

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 the California State University, San Diego, was held May 12, 1972, in San Diego.

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 related to individual areas, history and purpose of the Authority, the Colorado River water supply, and the anticipated State Water Project supply.

Under direction of the Public Information and Education Committee, information concerning Authority policies and programs was prepared and distributed to the news media by the Authority's public relations consultant.

**San Diego Water News,** a quarterly publication first issued during the 1970-71 fiscal year, was continued with the intent on of keeping interested persons informed on Authority activities. Approximately 450 copies of each edition were distributed to water agencies, cities, chambers of commerce, banks, schools and individuals.





Again this year, the Authority displayed its exhibit of photographs and graphics at the Southern California Exposition at Del Mar during late June and early July.

Additional motion picture footage of construction along the fourth pipeline was added to the archives during the year.

### Policies

During the 1971-72 fiscal year, the Board of Directors passed several resolutions in support of, or in opposition to, actions of other agencies.

A resolution supporting vigorous defense of the operating criteria adopted by the Secretary of Interior for Lake Powell, and as opposed in the Rainbow Bridge National Monument lawsuit, was passed during the August 1971 meeting. Also approved during that meeting was a resolution reaffirming support for Imperial Valley geothermal resource feasibility studies.

The Colorado River Basin Salinity Control Program, proposed by the Colorado River Board of California, won support from the Authority Board during its April 1972 meeting. A Texas Tech University Program concerned with documentation of historical water projects of engineering significance was given financial support by the Authority during that same meeting.

Proposition 9 on the June 1972 California ballot, called the Pollution Initiative, was opposed by the Water Authority Board in a resolution passed at its May meeting.

## LEGAL DEPARTMENT

No serious litigation involving the Authority occurred during the year. Continued acitivity in the acquisition of rights of way for the Second Aqueduct was carried on. The Board, upon recommendation of its Lands and Rights of Way Committee, authorized settlement of about $384,000 of acquisitions during the year. This brought the total amount of money authorized for land acquisitions for the Second Aqueduct to $974,500.

Efforts were continued by Authority personnel to minimize inconvenience to property owners involved with over 33 miles of 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 aqueducts 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 $90,679.08 was received during the year as payments on settlement of the pipe anti-trust suits which make the total amount received from that settlement by the Authority $1,608,718.61 including interest.

Mr. William H. Jennings, Water Authority General Counsel since its organization in 1944, resigned in October 1971. The Board subsequently appointed him General Counsel Emeritus. Mr. Paul D. Engstrand was appointed to succeed Mr. Jennings.

# 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 obligation.

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, 1972, income was received in the total amount of $20,530,820. Disbursements during this same period totaled $29,310,332. As of June 30, 1972, the Treasurer had under his control, funds and investments totaling $15,362,209.





Income received was in the following categories:

| | | |
|---|---|---|
| Sale of Water | $15,298,275 | |
| Taxes including annexation charges | 3,257,026 | |
| Interest earned on Investments | 1,285,539 | |
| Contract Payments from Metropolitan Water District including interest of $125,635 | 582,438 | |
| Miscellaneous | 107,542 | |
| Total income | | $20,530,820 |

Disbursements were as follows:

| | | |
|---|---|---|
| Purchase of water | $15,065,522 | |
| Outlay for Property, Plant & Equipment | 8,935,628 | |
| Operation & Maintenance | 505,140 | |
| Debt Service, Principal & Interest | 4,804,042 | |
| Total Disbursements | | $29,310,332 |

As of June 30, 1972, the Treasurer's accountability for $15,362,209 was invested as follows:

| | | |
|---|---|---|
| Demand Deposit | $ 44,209 | |
| Time Deposits | 15,318,000 | |
| Total | | $15,362,209 |

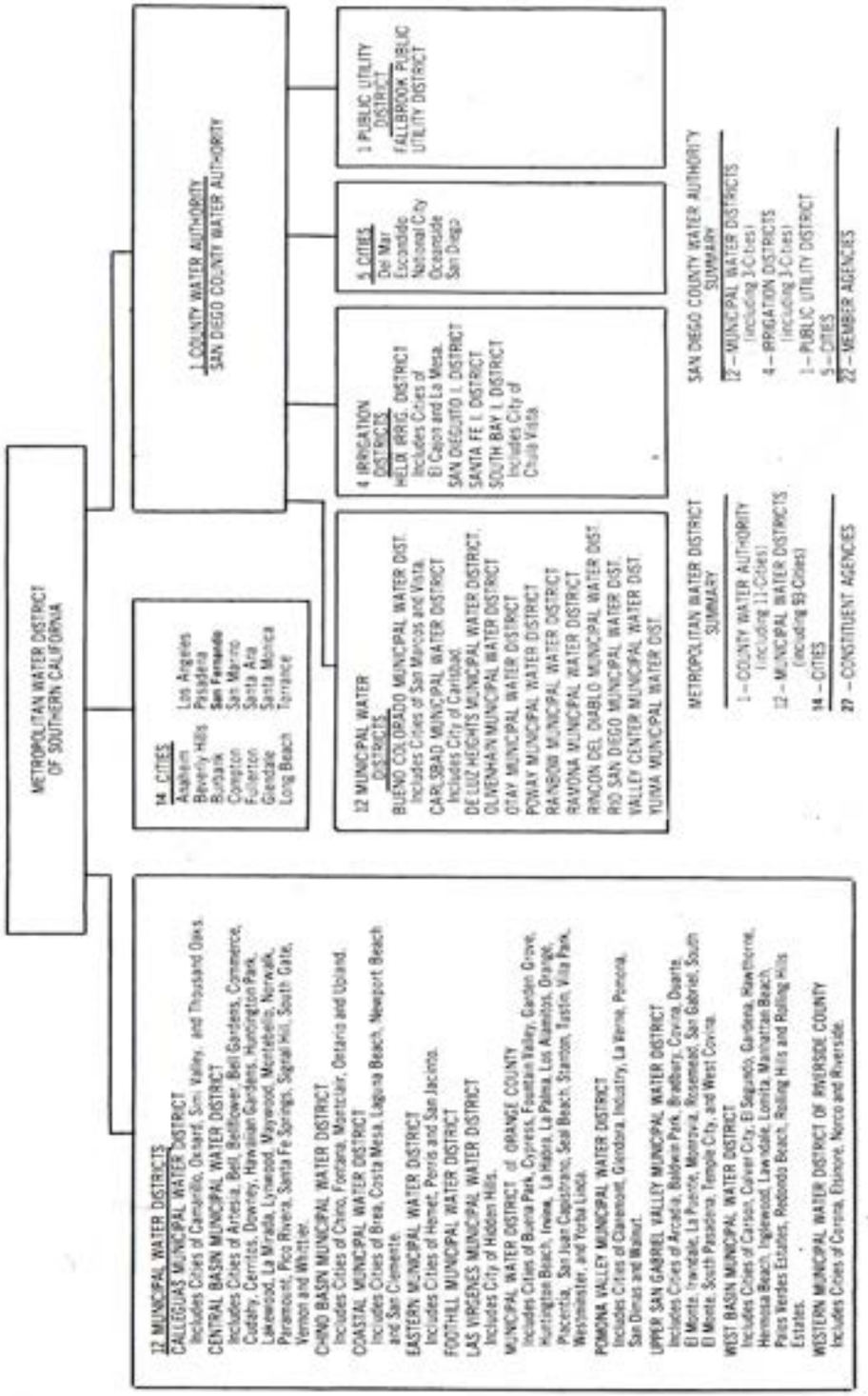
# MEMBERSHIP IN THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

The Authority receives its entire supply of water from The Metropolitan Water District of Southern California and works very closely with that District. A brief outline of the District's organization and operations may be of interest to readers of this report.

The Metropolitan Water District was organized in 1928 under the then newly-enacted Metropolitan Water District Act. The Act originally permitted annexation of cities only. Later, the Metropolitan Act was amended to allow inclusion of districts. The Metropolitan and Authority Acts are quite similar.

## COMPOSITION OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

JUNE 30, 1972






## MEMBERSHIP IN THE METROPOLITAN WATER DISTRICT

The District is governed by a Board of Directors. Each director represents a member agency and is appointed by the Chief Executive Officer of that agency with approval from its legislative body. Under the Metropolitan Water District Act as it existed on July 1, 1971, each member agency is entitled to one director on Metropolitan's Board, plus an additional director for each $1 billion of assessed valuation. During the 1971-72 legislative session, the Act was amended to provide for an additional director to a member agency for each 3 percent of the total Metropolitan's assessed valuation. Some agencies have several directors serving on the Board; others have but one. Figure D, page 38, lists the 27 member agencies of The Metropolitan Water District.

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

Chairman Fred A. Heilbron is a member of the Engineering and Operations Committee and the Water Problems Committee. He has served on the Metropolitan Board for 25 years and was presented with a pin honoring that service on January 11, 1972.

Director Hans H. Doe, is a member of the Executive Committee, the Engineering and Operations Committee, the Organization and Personnel Committee, and the Special Advisory Committee on Nuclear Power and Desalting Plant. He has served on the Metropolitan Board for 12 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 nine years.

On September 10, 1971, Director Ralph E. Graham was appointed to the Metropolitan Board by Chairman Heilbron, with approval from the Authority Board. The increased assessed valuation of property within the Water Authority, as announced by the San Diego County Assessor in August, created the seat on the Metropolitan Board to which Director Graham was appointed. He has subsequently been appointed to Engineering and Operations and Land Committees.

As of June 30, 1972, the Authority had a total of 311 votes out of 2,748, or 11.31 percent of the total. Each member agency of the Board is entitled to vote on all questions coming before the Board and to cast one vote for each ten million dollars, or major fractional part thereof, of assessed valuation of taxable property in the member public agency.

When a member agency is represented at a board meeting by more than one director, each director is entitled to vote a proportionate

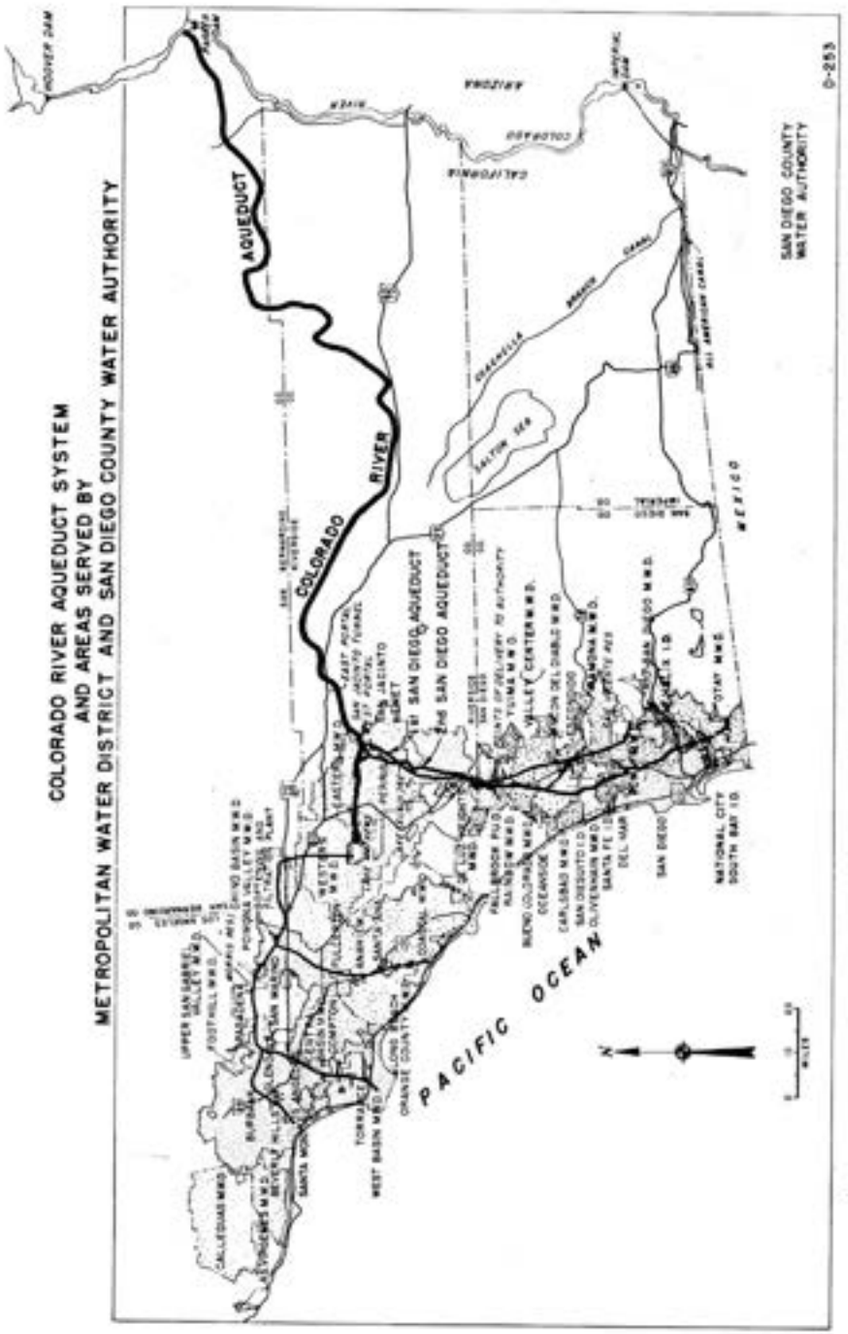



*Figure E. Water Systems of Metropolitan Water District and San Diego County Water Authority*



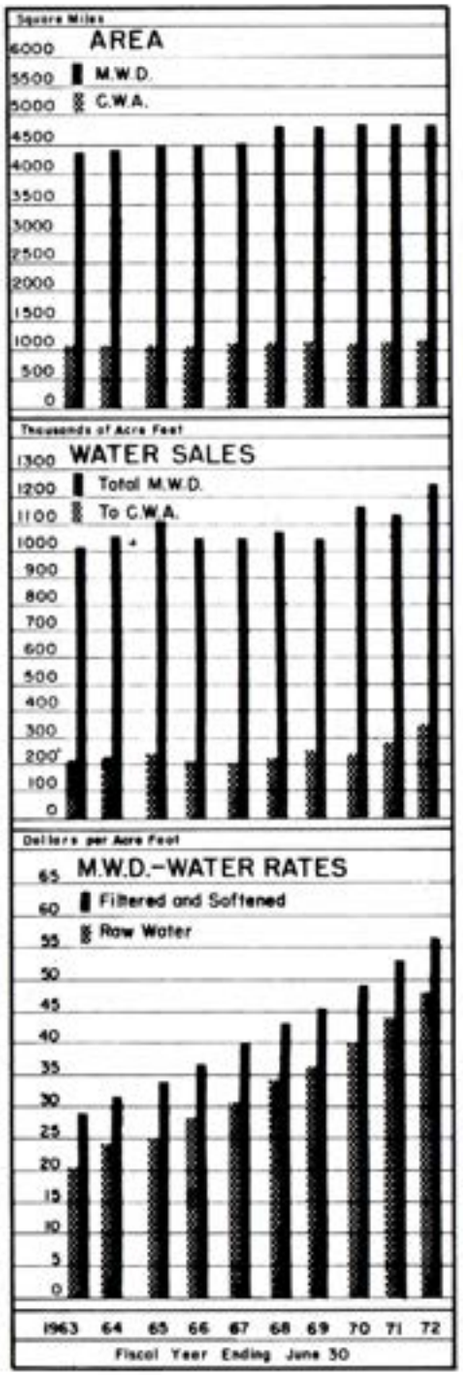


fraction of the total number of votes to which the member agency is entitled.

As shown in Figure D, the District is comprised of 27 member agencies, consisting of 13 original cities, one county water authority, 12 municipal water districts, and one city added recently. Portions of Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties are served water by the Metropolitan Water District. Within these districts there is a total of 124 incorporated cities. During the year, 17,687 acres were annexed to the District, of which 3,906 acres were also annexed to the Authority. As of June 30, 1972, District area equaled 4,833 square miles (3,093,303 acres), of which 1,187 square miles (759,537 acres) or 24.6 percent lie within the boundaries of the Water Authority.

## Assessed Valuation

Total assessed valuation of taxable property lying within the boundaries of the District as determined by the assessors of the several counties for use in levying taxes for fiscal year 1971-72 is $29,023,413,462 an increase of $1,418,349,160 or 5.1 percent over the assessed valuation of $27,605,064,302 for the 1970-71 fiscal year. An amount of $434,070,527 or 30.6 percent of this increase occurred within the boundaries of the Authority.



### Water Sales

A total of 1,247,542 acre feet of water was delivered by the District during fiscal year 1971-72. Of this amount, a total of 356,598 acre feet or 28.6 percent was delivered to the Authority. All water delivered to the Authority is untreated Colorado River water. The District operates a filtration and softening plant at La Verne, California, with a capacity of 400 million gallons per day; the Robert B. Diemer Filtration Plant at Yorba Linda, which has a capacity of 400 million gallons per day; and the Joseph Jensen Filtration Plant at Granada Hills, which was placed in operation in May 1972, with a 200 million gallons per day capacity, to treat water delivered to Metropolitan from the West Branch of the California Aqudeuct. The Authority can not be served from any of these plants. The Robert A. Skinner Filtration Plant at Auld Valley, is scheduled for completion in 1975, and will provide treated water to the Authority. It will have an initial capacity of 150 million gallons per day.

### Tax Rate

The Metropolitan Water District retained its tax rate of 17¢/$100 of assessed valuation for 1971-72. In 1946 when the Authority annexed to the District the tax rate was 50¢/$100.

The tax rate for each year of operation is shown in Table 19. The total District tax levy including regular and special taxes in 1971-72 was approximately $58,869,943, of which $6,373,497 or 10.8 percent was levied against taxable property within the boundaries of the Authority. When the annexation fee is not paid in full in cash at the time of annexation, the Metropolitan Water District, by agreement, levies a special tax each year for 30 years to yield the total agreed upon annexation fee in substantially equal installments. As of June 30, 1972, member agencies of the Authority had assumed back-tax liability totaling $27,509,329 of which a total of $14,409,916 had been paid by the start of the 1971-72 fiscal year.

## MEMBERSHIP IN COLORADO RIVER BOARD OF CALIFORNIA

The Colorado River Board of California is an agency of the State devoted to matters concerning 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. Vice 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, 44-1/2 percent; Los Angeles Department of Water and Power, 28-1/2 percent; Imperial Irrigation District, 19 percent; Coachella Valley, five percent; Water Authority, two percent; and Palo Verde Valley, one percent.

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Table 1

AREA - AUTHORITY MEMBER AGENCIES

| Member Agencies | Area Within Authority As of 6/30/71 (Acres) | Changes During Year (Acres) | | As of 6/30/72 (Acres) | Percent of Total Authority Area 6/30/72 |
|---|---|---|---|---|---|
| Bueno Colorado M.W.D. | 48,920 | +10 | (2) | 48,930 | 6.44 |
| In City of San Marcos | (7,700) | 0 | | (7,700) | (1.01) |
| In City of Vista | (7,040) | 0 | | (7,040) | (0.93) |
| Carlsbad M.W.D. | 20,212 | 0 | (3) | 20,212 | 2.66 |
| In City of Carlsbad | (8,490) | (+110) | | (8,600) | (1.13) |
| 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 | 10,940 | +746 | | 11,686 | 1.54 |
| Fallbrook Public Utility District | 15,759 | 0 | | 15,759 | 2.07 |
| Helix Irrigation District | 31,462 | -8 | (4) | 31,454 | 4.14 |
| In City of El Cajon | (7,754) | 0 | | (7,754) | (1.02) |
| In City of La Mesa | (4,979) | (+34) | | (5,013) | (0.66) |
| National City, City of | 5,380 | 0 | | 5,380 | 0.71 |
| Oceanside, City of | 22,830 | +947 | | 23,777 | 3.13 |
| Olivenhain M.W.D. | 27,558 | 0 | (5) | 27,558 | 3.63 |
| Otay M.W.D. | 63,883 | +10 | (6) | 63,893 | 8.41 |
| Poway M.W.D. | 22,980 | 0 | | 22,980 | 3.03 |
| Rainbow M.W.D. | 47,744 | (1) -701 | (10) | 47,043 | 6.19 |
| Ramona M.W.D. | 43,837 | +3650 | | 47,487 | 6.25 |
| Rincon del Diablo M.W.D. | 18,621 | (1) -746 | (7) | 17,875 | 2.35 |
| Rio San Diego M.W.D. | 54,258 | -2 | (8) | 54,256 | 7.14 |
| San Diego, City of | 202,704 | 0 | | 202,704 | 26.69 |
| San Dieguito Irrigation District | 4,914 | 0 | | 4,914 | 0.65 |
| Santa Fe Irrigation District | 10,184 | 0 | | 10,184 | 1.34 |
| South Bay Irrigation District | 15,610 | 0 | (9) | 15,610 | 2.06 |
| In City of Chula Vista | (10,340) | (+1720) | | (12,060) | (1.59) |
| Valley Center M.W.D. | 62,110 | 0 | | 62,110 | 8.18 |
| Yuima M.W.D. | 12,813 | 0 | | 12,813 | 1.69 |
| Total Authority Area | 755,631 | +3906 | | 759,537 | 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 8276 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 606 acres overlapping in City of National City.

(10) Does not include 701 acres overlapping in City of Oceanside.





Table 2

POPULATION GROWTH - COUNTY AND AUTHORITY AREA

1910 to 1972

(Includes Resident Military Personnel)

| Year (as of April 1) | COUNTY Total Population (1) | COUNTY Average Annual Growth | AUTHORITY Total Population | AUTHORITY Average Annual Growth | Percent of County Population in Authority |
|---|---|---|---|---|---|
| 1910 | 61,665 | | | | |
| | | 5,058 | | | |
| 1920 | 112,248 | | | | |
| | | 9,741 | | | |
| 1930 | 209,659 | | | | |
| | | 7,969 | | | |
| 1940 | 289,348 | | | | |
| 1946 (3) | 502,804 | 26,746 | (3) 440,659 | | 88 |
| 1950 | 556,808 | | (2) 451,886 | 2,807 | 81 |
| | | 42,478 | | 50,083 | |
| 1955 (4) | 769,200 | | (2) 702,300 | | 91 |
| | | 52,762 | | 50,820 | |
| 1960 | 1,033,010 | | (2) 956,400 | | 93 |
| | | 32,198 | | 38,720 | |
| 1965 (4) | 1,194,000 | | (5) 1,150,000 | | 96 |
| | | 23,360 | | 21,000 | |
| 1970 | 1,310,800 | | (5) 1,255,000 | | 96 |
| | | 86,900 | | 79,700 | |
| 1971 (4) | 1,397,700 | | (5) 1,334,700 | | 95 |
| | | 77,300 | | 56,300 | |
| 1972 (4) | 1,475,000 | | (5) 1,391,000 | | 94 |

(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.

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

| Member Agencies | Area 6/30/72 Acres | Population - U.S. Census 1960 (1) | 1970 (1) | Decade Increase 1960-70 Percent | 1972 Estimate (2) | Annual Increase 1970-72 Percent | Density of Population 1972 Per Acre | Per Sq. Mile |
|---|---|---|---|---|---|---|---|---|
| Bueno Colorado M.W.D. | 48,930 | 31,500 | 39,000 | 24 | 45,500 | 8 | 0.93 | 595 |
| In City of San Marcos | (7,700) | ----- | (3,900) | -- | (5,500) | 21 | 0.71 | 457 |
| In City of Vista | (7,040) | ----- | (24,600) | -- | (27,000) | 5 | 3.84 | 2,455 |
| Carlsbad M.W.D. | 20,212 | 10,000 | 15,500 | 55 | 15,500 | 0 | 0.77 | 491 |
| In City of Carlsbad | (8,600) | (9,400) | (14,850) | 58 | (15,400) | 2 | 1.79 | 1,146 |
| Del Mar, City of | 1,082 | ----- | 3,900 | -- | 4,500 | 8 | 4.16 | 2,662 |
| De Luz Heights M.W.D. | 11,830 | ----- | 150 | -- | 150 | 0 | 0.01 | 8 |
| Escondido, City of | 11,686 | 18,500 | 36,000 | 95 | 43,500 | 10 | 3.72 | 2,382 |
| Fallbrook Public Utility District | 15,759 | 10,000 | 12,000 | 20 | 12,800 | 3 | 0.81 | 523 |
| Helix Irrigation District | 31,454 | 122,100 | 163,000 | 33 | 172,300 | 3 | 5.48 | 3,509 |
| In City of El Cajon | (7,754) | (37,300) | (50,900) | 36 | (57,900) | 7 | 7.47 | 4,779 |
| In City of La Mesa | (5,013) | (29,900) | (38,800) | 30 | (43,000) | 5 | 8.58 | 5,490 |
| National City, City of | 5,380 | 32,300 | 39,000 | 21 | 43,000 | 5 | 7.99 | 5,115 |
| Oceanside, City of | 23,777 | 24,700 | 40,700 | 65 | 45,300 | 6 | 1.91 | 1,219 |
| Olivenhain M.W.D. | 27,558 | 200 | 2,000 | 900 | 5,500 | 88 | 0.20 | 128 |
| Otay M.W.D. | 63,893 | 5,400 | 19,400 | 259 | 22,900 | 9 | 0.36 | 229 |
| Poway M.W.D. | 22,980 | 4,800 | 14,000 | 192 | 17,000 | 11 | 0.74 | 473 |
| Rainbow M.W.D. | 47,043 | 2,800 | 4,200 | 50 | 4,600 | 5 | 0.10 | 63 |
| Ramona M.W.D. | 47,487 | 5,600 | 6,800 | 21 | 7,100 | 2 | 0.15 | 96 |
| Rincon del Diablo M.W.D. | 17,875 | 14,000 | 18,900 | 35 | 19,700 | 2 | 1.10 | 705 |
| Rio San Diego M.W.D. | 54,256 | 25,500 | 46,000 | 80 | 57,600 | 13 | 1.06 | 679 |
| San Diego, City of | 202,704 | 557,200 | 675,800 | 21 | 750,500 | 6 | 3.70 | 2,370 |
| San Dieguito Irrigation District | 4,914 | 15,000 | 21,800 | 45 | 20,900 | -- | 4.25 | 2,722 |
| Santa Fe Irrigation District | 10,184 | 7,700 | 8,600 | 12 | 9,900 | 8 | 0.97 | 622 |
| South Bay Irrigation District | 15,610 | 64,300 | 80,000 | 24 | 83,000 | 2 | 5.32 | 3,403 |
| In City of Chula Vista | (12,060) | (42,400) | (64,500) | 52 | (74,000) | 7 | 6.14 | 3,927 |
| Valley Center M.W.D. | 62,110 | 3,600 | 7,000 | 94 | 8,500 | 11 | 0.14 | 88 |
| Yuima M.W.D. | 12,813 | ----- | 1,250 | -- | 1,250 | 0 | 0.10 | 62 |
| Total Authority | 759,537 | 955,200 | 1,255,000 | | 1,391,000 | 5 | 1.83 | 1,172 |
| San Diego County | 2,725,100 | 1,033,010 | 1,310,800 | 27 | 1,475,000 | 6 | 0.54 | 346 |

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





Table 4
ASSESSED VALUATIONS - AUTHORITY MEMBER AGENCIES AND COUNTY

| Member Agencies | Area 6/30/72 Acres | Assessed Valuation - Secured and Unsecured 1970-71 Total | 1971-72 Total | Percent Increase | 1972-73 Total | Per Acre |
|---|---|---|---|---|---|---|
| Bueno Colorado M.W.D. | 48,930 | $ 104,432,584 | $ 113,261,336 | 8.5 | $ 135,309,178 | 2,765 |
| Carlsbad M.W.D. | 20,212 | 67,825,878 | 75,116,953 | 10.7 | 88,665,121 | 4,387 |
| Del Mar, City of | 1,082 | 13,560,772 | 17,325,957 | 27.8 | 18,232,666 | 16,851 |
| De Luz Heights M.W.D. | 11,830 | 1,645,592 | 1,686,636 | 2.5 | 2,234,993 | 189 |
| Escondido, City of | 11,686 | 71,973,043 | 90,326,658 | 25.5 | 97,001,431 | 8,301 |
| Fallbrook Public Utility District | 15,759 | 29,257,954 | 30,178,005 | 3.1 | 31,446,925 | 1,995 |
| Helix Irrigation District | 31,454 | 305,469,953 | 358,926,110 | 17.5 | 387,395,781 | 12,316 |
| National City, City of | 5,380 | 56,827,889 | 62,396,896 | 9.8 | 68,421,364 | 12,718 |
| Oceanside, City of | 23,777 | 83,229,059 | 86,786,102 | 4.3 | 110,527,251 | 4,648 |
| Olivenhain M.W.D. | 27,558 | 18,706,149 | 25,149,980 | 34.4 | 27,997,953 | 1,016 |
| Otay M.W.D. | 63,893 | 50,649,760 | 64,080,236 | 26.5 | 69,874,390 | 1,094 |
| Poway M.W.D. | 22,980 | 30,440,775 | 33,546,175 | 10.2 | 48,250,490 | 2,100 |
| Rainbow M.W.D. | 47,043 | 35,375,264 | 39,466,170 | 11.6 | 40,346,433 | 858 |
| Ramona M.W.D. | 47,487 | 18,165,253 | 18,894,568 | 4.0 | 21,510,574 | 453 |
| Rincon del Diablo M.W.D. | 17,875 | 35,418,390 | 44,317,614 | 25.1 | 47,337,149 | 2,648 |
| Rio San Diego M.W.D. | 54,256 | 74,389,454 | 91,326,425 | 22.8 | 106,802,068 | 1,968 |
| San Diego, City of | 202,704 | 1,547,759,726 | 1,767,640,498 | 14.2 | 1,950,022,383 | 9,620 |
| San Dieguito Irrigation District | 4,914 | 36,535,632 | 43,574,019 | 19.3 | 46,589,566 | 9,481 |
| Santa Fe Irrigation District | 10,184 | 38,352,916 | 46,174,207 | 20.4 | 54,171,601 | 5,319 |
| South Bay Irrigation District | 15,610 | 188,943,751 | 222,678,405 | 17.9 | 237,310,585 | 15,202 |
| Valley Center M.W.D. | 62,110 | 25,991,148 | 33,924,345 | 30.5 | 35,361,536 | 569 |
| Yuima M.W.D. | 12,813 | 6,512,018 | 8,756,192 | 34.5 | 9,283,333 | 725 |
| Total Authority | 759,537 | $2,841,462,960 | $3,275,533,487 | 15.3 | $3,634,092,751 | 4,785 |
| San Diego County (1) | 1,250,000 | $3,027,906,124 | $3,482,821,910 | 15.0 | $3,853,612,531 | 3,083 |

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

Table 5
SALES OF COLORADO RIVER WATER - FISCAL YEAR 1971-72

(All Figures in Acre Feet)

| Member Agencies | July | August | Sept. | Oct. | Nov. | Dec. | Total 6 Months |
|---|---|---|---|---|---|---|---|
| Bueno Colorado M. W. D. | 1,424.9 | 1,758.9 | 1,596.3 | 1,048.7 | 538.8 | 263.7 | 6,631.3 |
| Carlsbad, M. W. D. | 1,118.1 | 1,256.0 | 1,190.1 | 877.0 | 715.5 | 280.0 | 5,436.7 |
| Del Mar, City of | 131.4 | 74.7 | 118.2 | 68.5 | 61.3 | 48.6 | 502.7 |
| De Luz Heights M. W. D. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Escondido, City of | 757.3 | 984.5 | 1,591.1 | 1,219.8 | 1,091.7 | 620.8 | 6,185.2 |
| Fallbrook P. U. D. | 1,510.1 | 1,696.8 | 1,541.6 | 1,297.0 | 910.3 | 375.2 | 7,321.0 |
| Helix I. D. | 2,508.1 | 3,400.1 | 3,245.3 | 2,819.2 | 2,128.0 | 1,381.3 | 15,482.0 |
| National City & South Bay I. D. | 1,534.6 | 1,540.4 | 1,929.5 | 1,615.3 | 1,273.8 | 914.1 | 8,807.7 |
| Oceanside, City of | 1,387.5 | 1,550.2 | 1,332.5 | 1,096.1 | 931.6 | 651.5 | 6,949.4 |
| Olivenhain M. W. D. | 277.8 | 310.0 | 246.3 | 149.4 | 100.0 | 54.8 | 1,138.3 |
| Otay M. W. D. | 1,337.4 | 1,516.9 | 1,611.2 | 1,111.8 | 734.1 | 326.0 | 6,637.4 |
| Poway M. W. D. | 681.6 | 754.7 | 655.8 | 447.9 | 309.2 | 152.5 | 3,001.7 |
| Rainbow M. W. D. | 2,459.6 | 2,796.5 | 2,560.8 | 2,089.2 | 1,445.4 | 698.7 | 11,970.2 |
| Rincon M. W. D. | 282.4 | 292.2 | 262.5 | 187.4 | 128.3 | 72.7 | 1,225.5 |
| Rincon del Diablo M. W. D. | 1,026.4 | 1,068.8 | 356.8 | 247.5 | 187.6 | 129.5 | 3,016.4 |
| Rio San Diego M. W. D. | 1,052.9 | 1,085.2 | 920.4 | 655.4 | 477.3 | 445.8 | 4,637.0 |
| San Diego, City of | 19,381.9 | 17,414.9 | 15,572.4 | 7,910.3 | 11,066.3 | 10,721.5 | 82,067.2 |
| San Dieguito I. D. | 573.5 | 561.2 | 451.4 | 286.4 | 353.5 | 144.0 | 2,370.0 |
| Santa Fe I. D. | 834.0 | 871.5 | 655.4 | 426.1 | 475.6 | 153.2 | 3,415.8 |
| Valley Center M. W. D. | 2,427.0 | 2,667.3 | 2,443.0 | 1,769.5 | 1,416.2 | 365.8 | 11,088.8 |
| Yuima M. W. D. | 341.6 | 388.0 | 387.3 | 215.0 | 152.0 | 19.0 | 1,502.9 |
| Total Sales to Agencies | 41,008.1 | 41,998.8 | 38,617.7 | 25,537.5 | 24,506.5 | 17,818.7 | 189,387.3 |
| Total Sales to Others | *4.8 | *2.6 | *2.3 | *21.5 | *10.8 | * 1.2 | *43.2 |
| Total Sales to Agencies and Others | 41,012.9 | 41,001.4 | 38,620.0 | 25,559.0 | 24,517.3 | 17,819.9 | 189,430.5 |
| Total to Authority Storage | 0 | 0 | 0 | 0 | +297.2 | +641.2 | +938.4 |
| Total from Authority Storage | -5,460.7 | -4,322.3 | -3,972.1 | -1,499.7 | -8.6 | -8.7 | -15,272.1 |
| Total to Metropolitan Storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total from Metropolitan Storage | -3,200.0 | -3,200.0 | -3,196.3 | 0 | 0 | 0 | -9,596.3 |
| Total Flow in Authority System | 32,352.2 | 34,379.1 | 31,451.6 | 24,059.3 | 24,805.9 | 18,452.4 | 165,500.5 |
| Rate of Flow (c.f.s.) | | | | | | | |
| To Agencies and Others | 667.0 | 681.5 | 649.0 | 415.7 | 412.0 | 289.8 | 519.0 |
| To Authority Storage | 0 | 0 | 0 | 0 | -5.0 | +10.4 | +2.6 |
| From Authority Storage | -88.8 | -70.3 | -66.7 | -24.4 | -0.1 | -0.1 | -41.8 |
| To Metropolitan Storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| From Metropolitan Storage | -52.0 | -52.1 | -53.7 | 0 | 0 | 0 | -26.3 |
| Flow in Authority System | 526.2 | 559.1 | 528.6 | 391.3 | 416.9 | 300.1 | 453.5 |

*To Authority's Contractor for Construction.





Table 5
(Continued)

| Jan. | Feb. | March | April | May | June | Total 6 Months | Yearly Total | Yearly Average c.f.s. |
|---|---|---|---|---|---|---|---|---|
| 521.1 | 673.5 | 1,099.1 | 1,357.3 | 1,407.6 | 1,309.6 | 6,368.2 | 12,999.5 | 17.91 |
| 440.0 | 543.3 | 593.1 | 733.9 | 943.8 | 659.7 | 3,913.8 | 9,350.5 | 12.89 |
| 55.3 | 49.7 | 69.2 | 80.6 | 81.6 | 95.4 | 430.8 | 943.5 | 1.30 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 565.6 | 1,088.6 | 1,453.1 | 1,548.9 | 2,201.8 | 2,041.7 | 8,899.7 | 15,084.9 | 20.78 |
| 407.3 | 713.9 | 936.2 | 1,318.4 | 1,345.6 | 1,322.5 | 5,743.9 | 13,064.9 | 18.00 |
| 1,664.5 | 1,538.0 | 2,818.2 | 3,370.8 | 3,757.9 | 3,150.8 | 16,300.2 | 31,782.2 | 43.78 |
| 1,225.4 | 1,149.4 | 1,564.4 | 2,159.1 | 2,969.9 | 2,522.8 | 11,591.0 | 20,398.7 | 28.10 |
| 653.2 | 804.7 | 948.1 | 1,111.5 | 1,273.7 | 1,231.3 | 6,022.5 | 12,951.9 | 17.87 |
| 67.6 | 88.5 | 208.6 | 257.2 | 258.7 | 229.2 | 1,109.8 | 2,218.1 | 3.10 |
| 440.4 | 466.5 | 649.6 | 754.5 | 892.1 | 1,025.3 | 4,628.4 | 10,665.8 | 14.69 |
| 157.7 | 285.4 | 464.9 | 798.1 | 1,027.0 | 758.1 | 3,491.2 | 6,492.9 | 8.94 |
| 889.4 | 1,101.0 | 1,346.4 | 2,035.4 | 2,466.6 | 2,178.0 | 10,016.8 | 21,987.0 | 30.29 |
| 104.0 | 110.5 | 242.7 | 230.2 | 262.4 | 264.8 | 1,184.6 | 2,420.1 | 3.33 |
| 164.1 | 195.4 | 252.6 | 271.1 | 263.2 | 263.1 | 1,409.5 | 4,425.9 | 6.10 |
| 410.3 | 543.8 | 718.4 | 775.2 | 925.9 | 781.8 | 4,155.4 | 8,782.4 | 12.10 |
| 8,328.1 | 10,316.0 | 10,827.6 | 9,914.7 | 9,679.7 | 14,209.8 | 63,275.9 | 145,343.2 | 200.21 |
| 228.3 | 328.5 | 418.9 | 555.2 | 537.3 | 492.5 | 2,540.7 | 4,910.7 | 6.76 |
| 208.5 | 325.6 | 549.2 | 776.3 | 792.4 | 671.9 | 3,323.9 | 6,759.7 | 9.28 |
| 427.7 | 919.9 | 1,845.2 | 2,575.0 | 1,821.7 | 1,946.0 | 9,535.5 | 20,624.3 | 28.41 |
| 12.2 | 58.3 | 177.8 | 161.5 | 229.7 | 236.8 | 867.5 | 2,330.4 | 3.20 |
| 16,970.7 | 21,309.7 | 27,153.3 | 30,593.9 | 32,989.6 | 35,291.1 | 164,219.3 | 353,606.6 | 487.09 |
| *3.2 | *23.6 | *33.7 | *37.7 | *44.1 | *87.1 | *189.4 | *232.6 | 0.32 |
| 16,973.9 | 21,324.3 | 27,187.0 | 30,631.6 | 33,033.7 | 35,378.2 | 164,408.7 | 353,839.2 | 487.41 |
| +3,718.3 | +3,847.0 | +5,698.7 | +3,628.0 | +1,935.3 | +52.9 | +18,280.2 | +19,218.6 | +26.47 |
| -30.0 | -26.0 | -37.7 | -79.0 | -223.8 | -65.3 | -459.8 | -15,731.9 | -21.67 |
| +3,000.0 | +900.0 | 0 | 0 | 0 | 0 | + 3,900.0 | + 3,900.0 | + 5.37 |
| 0 | 0 | 0 | -600.0 | -650.0 | -650.0 | - 1,900.0 | -11,496.3 | -15.83 |
| 23,662.2 | 26,047.3 | 32,248.0 | 33,580.6 | 34,095.2 | 34,675.8 | 184,229.1 | 349,729.6 | 481.75 |
| 276.1 | 370.7 | 442.2 | 514.8 | 535.9 | 593.9 | 455.4 | 487.41 | |
| +60.4 | +66.9 | +82.9 | +61.0 | +31.5 | +0.9 | +50.7 | +26.47 | |
| - 0.5 | - 0.4 | - 0.6 | - 1.4 | - 2.6 | -1.1 | - 1.5 | -21.67 | |
| +48.8 | +15.6 | 0 | 0 | 0 | 0 | +10.8 | + 5.37 | |
| 0 | 0 | 0 | -10.1 | -10.6 | -10.9 | - 5.3 | -15.83 | |
| 384.8 | 452.8 | 524.5 | 564.3 | 553.2 | 582.8 | 510.3 | 481.75 | |

Table 6
WATER SALES - 1947 to 1972

(All figures in acre feet)

| Member Agencies | 1947-64 | 1964-65 | 1965-66 | 1966-67 | 1967-68 | 1968-69 | 1969-70 | 1970-71 | 1971-72 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|
| Bueno Colorado M.W.D. | 64,026 | 10,095 | 11,377 | 9,633 | 8,325 | 8,147 | 3,235 | 6,248 | 13,009 | 134,066 |
| Carlsbad M.W.D. | 37,435 | 6,217 | 6,102 | 6,222 | 6,996 | 6,999 | 7,885 | 8,745 | 9,350 | 95,943 |
| Del Mar, City of | 0 | 0 | 178 | 652 | 767 | 722 | 868 | 855 | 944 | 4,986 |
| De Luz Heights M.W.D. | ----- | ----- | ----- | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Escondido, City of | 22,300 | 3,112 | 3,157 | 3,270 | 4,134 | 4,455 | 4,989 | 6,761 | 15,085 | 67,263 |
| Fallbrook Public Utility District | 104,678 | 10,580 | 10,764 | 9,848 | 11,031 | 10,010 | 11,143 | 11,168 | 13,065 | 192,287 |
| Helix Irrigation District | 221,588 | 28,235 | 25,965 | 18,844 | 25,200 | 22,586 | 25,059 | 30,386 | 31,782 | 429,645 |
| National City & South Bay I.D. | 154,745 | 12,597 | 9,907 | 8,548 | 12,013 | 10,996 | 15,524 | 17,186 | 20,399 | 261,915 |
| Oceanside, City of | 40,195 | 7,276 | 7,366 | 7,543 | 8,596 | 8,751 | 10,086 | 11,484 | 12,972 | 114,269 |
| Olivenhain M.W.D. | 1,503 | 814 | 810 | 803 | 1,111 | 1,189 | 1,923 | 1,606 | 2,249 | 12,107 |
| Otay M.W.D. | 14,049 | 6,045 | 6,679 | 8,268 | 9,316 | 8,471 | 9,037 | 9,769 | 10,666 | 82,300 |
| Poway M.W.D. | 15,583 | 3,196 | 3,317 | 3,423 | 3,957 | 3,882 | 4,373 | 4,648 | 6,493 | 48,874 |
| Rainbow M.W.D. | 58,456 | 11,930 | 13,591 | 12,724 | 14,535 | 13,936 | 17,659 | 18,019 | 21,987 | 182,837 |
| Ramona M.W.D. | 2,686 | 753 | 895 | 860 | 1,172 | 1,280 | 1,677 | 1,785 | 2,420 | 13,728 |
| Rincon del Diablo M.W.D. | 52,232 | 9,314 | 7,956 | 4,849 | 4,810 | 7,917 | 4,645 | 7,874 | 4,426 | 104,023 |
| Rio San Diego M.W.D. | 18,974 | 4,095 | 4,593 | 4,692 | 5,755 | 5,912 | 6,737 | 7,365 | 8,782 | 67,105 |
| San Diego, City of | 1,130,348 | 105,814 | 86,575 | 87,350 | 99,817 | 112,138 | 104,353 | 110,407 | 145,343 | 1,982,345 |
| San Dieguito Irrigation District | 22,266 | 2,724 | 2,310 | 2,481 | 1,689 | 2,878 | 14 | 2,243 | 4,911 | 41,516 |
| Santa Fe Irrigation District | 19,140 | 2,509 | 2,310 | 2,481 | 1,689 | 2,878 | 14 | 3,908 | 6,740 | 40,769 |
| Valley Center M.W.D. | 14,343 | 5,331 | 7,233 | 7,676 | 10,372 | 11,423 | 14,372 | 15,145 | 20,624 | 106,519 |
| Yuima M.W.D. | 0 | 220 | 1,703 | 2,165 | 1,985 | 2,140 | 2,018 | 2,342 | 2,370 | 14,943 |
| Total Sales to Agencies | 1,994,747 | 230,857 | 212,689 | 202,532 | 233,270 | 246,701 | 245,613 | 277,244 | 353,607 | 3,997,469 |
| Total Sales to Others | 1,158 | 54 | 73 | 32 | 18 | 5 | 65 | 208 | 233 | 1,846 |
| Total to Authority Storage | +107,588 | +9,794 | -7,814 | -4,372 | +2,462 | +20,962 | -509 | +14,345 | +19,218 | +187,067 |
| Total from Authority Storage | -83,278 | +26 | -9,728 | -3,742 | -8,919 | -12,371 | -2,454 | -8,127 | -15,732 | -144,377 |
| Total to Metropolitan Storage | ----- | ----- | +25,326 | +17,178 | +20,275 | +10,035 | -24,220 | +19,995 | +3,900 | +120,929 |
| Total from Metropolitan Storage | ----- | ----- | -17,561 | -14,099 | -18,879 | -13,340 | -18,695 | -21,030 | -11,496 | -115,101 |
| Total Flow in Authority System | 2,020,215 | 240,679 | 218,813 | 206,273 | 228,227 | 251,992 | 249,258 | 282,638 | 349,730 | 4,047,824 |
| Rate of Flow (c.f.s.) | | | | | | | | | | |
| To Agencies and Others | 166.0 | 319.0 | 294.1 | 279.8 | 321.4 | 340.8 | 339.4 | 383.2 | 487.4 | 224.4 |
| To Authority Storage | +8.9 | +13.5 | +10.8 | +6.0 | -3.4 | -28.9 | +0.7 | +19.8 | +26.5 | +10.5 |
| From Authority Storage | -6.9 | -0.1 | +13.4 | -5.2 | -12.3 | -17.1 | -3.4 | -11.2 | -21.7 | - 8.1 |
| To Metropolitan Storage | ----- | ----- | +35.0 | +23.7 | +27.9 | +13.9 | +33.4 | +27.6 | + 5.4 | + 6.8 |
| From Metropolitan Storage | ----- | ----- | -24.3 | -19.4 | -26.0 | -18.4 | -25.8 | -29.0 | -15.8 | - 6.4 |
| Flow in Authority System | 168.0 | 332.4 | 302.2 | 284.9 | 314.4 | 348.1 | 344.3 | 390.4 | 481.8 | 227.2 |

(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 1962-63 to 1971-72

(All Figures in Acre Feet)

| Member Agencies | From Local and Authority Supplies | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1962-63 | 1963-64 | 1964-65 | 1965-66 | 1966-67 | 1967-68 | 1968-69 | 1969-70 | 1970-71 | 1971-72 |
| Bueno Colorado M. W. D. | 13,763 | 12,743 | 13,022 | 13,616 | 12,551 | 14,400 | 13,341 | 15,513 | 15,511 | 17,376 |
| Carlsbad M.W.D. | 7,285 | 6,412 | 6,295 | 6,347 | 6,350 | 6,944 | 7,002 | 7,960 | 8,700 | 9,373 |
| Del Mar, City of | 684* | 691 | 629 | 650 | 652 | 767 | 722 | 868 | 855 | 944 |
| De Luz Heights M. W. D. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Escondido, City of | 3,628 | 3,953 | 4,275 | 4,556 | 4,582 | 5,580 | 5,831 | 6,459 | 8,911 | 20,299 |
| Fallbrook Public Utility District | 10,379 | 10,712 | 10,716 | 11,016 | 9,872 | 11,020 | 10,072 | 11,598 | 11,221 | 13,087 |
| Helix Irrigation District | 23,591 | 22,943 | 25,069 | 26,036 | 25,672 | 28,778 | 28,504 | 31,802 | 31,684 | 33,583 |
| National City and South Bay I.D. | 14,219 | 14,021 | 14,143 | 14,614 | 14,591 | 15,785 | 15,904 | 17,718 | 18,812 | 21,326 |
| Oceanside, City of | 5,795 | 6,664 | 7,424 | 7,447 | 7,607 | 8,688 | 8,808 | 10,134 | 11,510 | 13,000 |
| Olivenhain M. W. D. | 570 | 620 | 717 | 910 | 803 | 1,111 | 1,189 | 1,923 | 1,650 | 2,278 |
| Otay M. W. D. | 5,381 | 5,008 | 6,045 | 6,679 | 8,268 | 9,316 | 8,471 | 9,037 | 9,760 | 10,666 |
| Poway M. W. D. | 2,508 | 2,754 | 3,196 | 3,317 | 3,423 | 3,957 | 3,882 | 4,375 | 4,648 | 5,066 |
| Rainbow M. W. D. | 10,400 | 11,431 | 12,629 | 14,149 | 13,123 | 15,319 | 14,358 | 18,347 | 18,010 | 21,987 |
| Ramona M. W. D. | 744 | 825 | 859 | 1,019 | 1,039 | 1,277 | 1,390 | 1,789 | 1,932 | 2,519 |
| Rincon del Diablo M. W. D. | 11,847 | 12,108 | 11,945 | 12,613 | 11,707 | 12,813 | 12,703 | 14,642 | 13,899 | 3,076 |
| Rio San Diego M. W. D. | 3,928 | 3,936 | 4,580 | 4,988 | 4,888 | 5,810 | 6,018 | 6,956 | 7,765 | 9,015 |
| San Diego, City of: | | | | | | | | | | |
| Inside City | 89,825 | 92,451 | 95,032 | 102,174 | 103,894 | 112,841 | 113,421 | 122,630 | 130,290 | 141,815 |
| Outside City (not in Authority) | 4,278 | 4,498 | 4,922 | 5,326 | 5,432 | 5,780 | 5,396 | 6,147 | 6,056 | 6,548 |
| San Dieguito Irrigation District | 3,847 | 3,743 | 4,057 | 3,920 | 4,022 | 4,329 | 3,641 | 4,397 | 4,696 | 5,238 |
| Santa Fe Irrigation District | 3,706 | 3,958 | 3,725 | 3,968 | 3,822 | 5,344 | 5,034 | 5,958 | 6,351 | 7,175 |
| Valley Center M. W. D. | 2,902 | 3,452 | 5,331 | 7,233 | 7,676 | 10,372 | 11,423 | 14,409 | 15,146 | 18,931 |
| Yuima M. W. D. | (a) | 8,625 | 9,282* | 8,142 | 6,070 | 7,939 | 7,072 | 9,927 | 8,636 | 4,643 |
| Total | 219,280 | 231,548 | 243,893 | 258,720 | 256,044 | 288,170 | 284,182 | 322,589 | 336,043 | 367,945 |

*Use of Colorado River water began this year. All other agencies' use began prior to 1962-63. See previous reports.

(a) Not available.

Table 8

WATER PRODUCTION OF AUTHORITY AGENCIES - FISCAL YEAR 1971-72

| Member Agencies | TOTAL WATER PRODUCTION | | | SOURCE OF WATER | | | |
|---|---|---|---|---|---|---|---|
| | | | | Local Supply | | Authority Supply | |
| | as m.g.d. | as c.f.s. | as ac.ft./yr. | Amount ac. ft. | percent | Amount ac.ft. | Percent |
| Bueno Colorado M. W. D. | 15.47 | 23.94 | 17,376.2 | 4,289.0 | 24.7 | 13,087.2 | 75.3 |
| Carlsbad M. W. D. | 8.34 | 12.91 | 9,373.2 | 0 | 0 | 9,373.2 | 100.0 |
| Del Mar, City of | 0.84 | 1.30 | 943.5 | 0 | 0 | 943.5 | 100.0 |
| De Luz Heights M. W. D. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Escondido, City of | 18.07 | 27.96 | 20,299.2 | 3,860.0 | 19.0 | 16,439.2 | 81.0 |
| Fallbrook Public Utility District | 11.65 | 18.03 | 13,087.2 | 0 | 0 | 13,087.2 | 100.0 |
| Helix Irrigation District | 29.90 | 46.26 | 33,583.0 | 3,178.6 | 9.5 | 30,404.4 | 90.5 |
| National City and South Bay I. D. | 18.99 | 29.38 | 21,326.0 | 3,704.0 | 17.4 | 17,622.0 | 82.6 |
| Oceanside, City of | 11.37 | 17.91 | 13,000.2 | 0 | 0 | 13,000.2 | 100.0 |
| Olivenhain M. W. D. | 2.63 | 3.14 | 2,277.7 | 0 | 0 | 2,277.7 | 100.0 |
| Otay M. W. D. | 9.50 | 14.69 | 10,665.8 | 0 | 0 | 10,665.8 | 100.0 |
| Poway M. W. D. | 4.51 | 6.98 | 5,065.7 | 0 | 0 | 5,065.7 | 100.0 |
| Rainbow M. W. D. | 19.58 | 30.29 | 21,987.0 | 0 | 0 | 21,987.0 | 100.0 |
| Ramona M. W. D. | 2.24 | 3.47 | 2,519.3 | 99.2 | 3.9 | 2,420.1 | 96.1 |
| Rincon del Diablo M. W. D. | 2.74 | 4.24 | 3,076.4 | 0 | 0 | 3,076.4 | 100.0 |
| Rio San Diego M. W. D. | 8.03 | 12.42 | 9,014.9 | 232.5 | 2.6 | 8,782.4 | 97.4 |
| San Diego, City of: | | | | | | | |
| Inside City | 126.26 | 195.33 | 141,815.1 | 11,550.3 | 8.1 | 130,264.8 | 91.9 |
| Outside City (Not in Authority) | 5.83 | 9.02 | 6,548.2 | 6,548.2 | 100.0 | 0 | 0 |
| San Dieguito Irrigation District | 4.66 | 7.21 | 5,237.6 | 397.8 | 7.6 | 4,839.8 | 92.4 |
| Santa Fe Irrigation District | 6.39 | 9.88 | 7,174.9 | 531.5 | 7.4 | 6,643.4 | 92.6 |
| Valley Center M. W. D. | 16.86 | 26.08 | 18,931.3 | 0 | 0 | 18,931.3 | 100.0 |
| Yuima M. W. D. | 4.13 | 6.40 | 4,642.7 | 2,272.3 | 48.9 | 2,370.4 | 51.1 |
| Total | 327.58 | 506.85 | 367,945.1 | 36,663.4 | 10.0 | 331,281.7 | 90.0 |

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 1971-72

| Member Agencies | Gross Area (2) | Total Production of Water | Estimated Area Served by Water System | Water Production Per Area Served | Estimated Population | Water Production Per Capita |
|---|---|---|---|---|---|---|
| | acres | ac. ft. | acres | ac. ft./acre/yr. | | ac.ft./cap./yr. |
| Bueno Colorado M. W. D. | 48,930 | 17,376.2 | 34,750 | 0.50 | 45,500 | 0.38 |
| Carlsbad M. W. D. | 20,212 | 9,373.2 | 16,500 | 0.57 | 15,500 | 0.60 |
| Del Mar, City of | 1,082 | 943.5 | 1,080 | 0.87 | 4,500 | 0.21 |
| De Luz Heights M. W. D. | 11,830 | 0 | 0 | 0 | 150 | 0 |
| Escondido, City of | 11,686 | 20,299.2 | 9,500 | 2.14 | 43,500 | 0.47 |
| Fallbrook Public Utility District | 15,759 | 13,087.2 | 8,050 | 1.63 | 12,800 | 1.02 |
| Helix Irrigation District | 31,454 | 33,583.0 | 29,000 | 1.16 | 172,300 | 0.19 |
| National City, City of | 5,380 | 5,395.6 | 3,900 | 1.38 | 43,000 | 0.13 |
| Oceanside, City of | 23,777 | 13,000.2 | 13,100 | 0.99 | 45,300 | 0.29 |
| Olivenhain M. W. D. | 27,558 | 2,277.7 | 1,300 | 1.75 | 5,500 | 0.41 |
| Otay M. W. D. | 63,893 | 10,665.8 | 28,200 | 0.38 | 22,900 | 0.47 |
| Poway M. W. D. | 22,980 | 5,065.7 | 8,000 | 0.63 | 17,000 | 0.30 |
| Rainbow M. W. D. | 47,043 | 21,987.0 | 10,000 | 2.20 | 4,600 | 4.78 |
| Ramona M. W. D. | 47,487 | 2,519.3 | 7,350 | 0.34 | 7,100 | 0.35 |
| Rincon del Diablo M. W. D. | 17,875 | 3,076.4 | 13,250 | 0.23 | 19,700 | 0.16 |
| Rio San Diego M. W. D. | 54,256 | 9,014.9 | 16,000 | 0.56 | 57,600 | 0.16 |
| San Diego, City of | 202,704 | (1) 141,815.1 | 103,000 | 1.38 | 750,500 | 0.19 |
| San Dieguito Irrigation District | 4,914 | 5,237.6 | 4,600 | 1.14 | 20,900 | 0.25 |
| Santa Fe Irrigation District | 10,184 | 7,174.9 | 9,170 | 0.78 | 9,900 | 0.72 |
| South Bay Irrigation District | 15,610 | 15,930.4 | 9,850 | 1.62 | 83,000 | 0.19 |
| Valley Center M. W. D. | 62,110 | 18,931.3 | 12,600 | 1.50 | 8,500 | 2.23 |
| Yuima M. W. D. | 12,813 | 4,642.7 | 4,000 | 1.16 | 1,250 | 3.71 |
| Total and Average | 759,537 | 367,945.1 | 343,200 | 1.07 | 1,391,000 | 0.26 |

(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 1971-72

| Member Agencies | Total Water Production ac. ft. | Water Used for Agriculutral Purposes | | | | | Percent of Agricultural Water to Total Production |
|---|---|---|---|---|---|---|---|
| | | From Local Supply | | From Authority | | Total | |
| | | ac.ft. | Percent | ac.ft. | Percent | ac.ft. | |
| Bueno Colorado M. W. D. | 17,376.2 | 1,622.5 | 24.1 | 5,122.8 | 75.9 | 6,745.3 | 38.8 |
| Carlsbad M. W. D. | 9,373.2 | 0 | 0 | 3,790.3 | 100.0 | 3,790.3 | 40.4 |
| Del Mar, City of | 943.5 | (a) | | (a) | | (a) | (a) |
| De Luz Heights M. W. D. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Escondido, City of | 20,299.2 | 1,887.6 | 24.0 | 5,971.5 | 76.0 | 7,859.1 | 38.7 |
| Fallbrook Public Utility District | 13,087.2 | 0 | 0 | 10,210.7 | 100.0 | 10,210.7 | 78.0 |
| Helix Irrigation District | 33,583.0 | 149.4 | 8.4 | 1,638.1 | 91.6 | 1,787.5 | 5.3 |
| National City & South Bay I. D. | 21,326.0 | 41.9 | 9.7 | 390.4 | 90.3 | 432.3 | 2.0 |
| Oceanside, City of | 13,000.2 | 0 | 0 | 1,419.8 | 100.0 | 1,419.8 | 10.9 |
| Olivenhain M. W. D. | 2,277.7 | 0 | 0 | 1,383.9 | 100.0 | 1,383.9 | 60.8 |
| Otay M. W. D. | 10,665.8 | 0 | 0 | 5,713.6 | 100.0 | 5,713.6 | 53.6 |
| Poway M. W. D. | 5,065.7 | 0 | 0 | 1,974.6 | 100.0 | 1,974.6 | 39.0 |
| Rainbow M. W. D. | 21,987.0 | 0 | 0 | 19,981.0 | 100.0 | 19,981.0 | 90.9 |
| Ramona M. W. D. | 2,519.3 | 34.9 | 2.8 | 1,220.7 | 97.2 | 1,255.6 | 49.8 |
| Rincon del Diablo M. W. D. | 3,076.4 | 0 | 0 | 1,387.1 | 100.0 | 1,387.1 | 45.1 |
| Rio San Diego M. W. D. | 9,014.9 | 0 | 0 | 185.6 | 100.0 | 185.6 | 2.1 |
| San Diego, City of | 141,815.1 | 110.9 | 9.6 | 1,049.2 | 90.4 | 1,160.1 | 0.8 |
| San Dieguito Irrigation District | 5,237.6 | 127.7 | 7.8 | 1,512.4 | 92.2 | 1,640.1 | 31.3 |
| Santa Fe Irrigation District | 7,174.9 | 118.7 | 6.2 | 1,799.4 | 93.8 | 1,918.1 | 26.7 |
| Valley Center M. W. D. | 18,931.3 | 8.7 | 0.1 | 17,675.2 | 99.9 | 17,683.9 | 93.4 |
| Yuima M. W. D. | 4,642.7 | 1,976.9 | 45.9 | 2,326.0 | 54.1 | 4,302.9 | 92.7 |
| Total | 367,945.1 | 6,079.2 | | 84,752.3 | | 90,831.5 | 24.7 |

(a) Included in City of San Diego.





Table 11
AUTHORITY STORAGE IN SAN VICENTE RESERVOIR

(Fiscal Year 1971-72)

| Member Agencies | Total Quantity in Storage 7/1/71 ac. ft. | Placed into Storage During Fiscal Year ac. ft. | Withdrawn During Fiscal Year | | Total Quantity in Storage 6/30/72 ac. ft. |
|---|---|---|---|---|---|
| | | | By Delivery ac. ft. | By Evaporation ac. ft. | |
| Bueno Colorado M. W. D. | 1,473.7 | 1,220.0 | 939.8 | 72.9 | 1,681.0 |
| Carlsbad M. W. D. | 1,500.0 | 525.0 | 599.8 | 77.8 | 1,347.4 |
| Del Mar, City of | 0 | 0 | 0 | 0 | 0 |
| De Luz Heights M. W. D. | 0 | 0 | 0 | 0 | 0 |
| Escondido, City of | 28.4 | 0 | 28.2 | 0.2 | 0 |
| Fallbrook Public Utility District | 2,000.0 | 1,260.0 | 1,509.4 | 80.4 | 1,670.2 |
| Helix Irrigation District | 4,000.0 | 0 | 0 | 255.8 | 3,744.2 |
| National City & South Bay I. D. | 0 | 0 | 0 | 0 | 0 |
| Oceanside, City of | 463.0 | 335.0 | 372.0 | 18.3 | 407.7 |
| Olivenhain M. W. D. | 500.0 | 330.0 | 392.4 | 20.0 | 417.6 |
| Otay M. W. D. | 2,000.0 | 1,650.0 | 1,498.9 | 88.9 | 2,062.2 |
| Poway M. W. D. | 1,000.0 | 0 | 719.4 | 29.8 | 250.8 |
| Rainbow M. W. D. | 4,000.0 | 2,790.0 | 3,380.1 | 150.7 | 3,259.2 |
| Ramona M. W. D. | 300.0 | 190.8 | 178.3 | 14.6 | 297.9 |
| Rincon del Diablo M. W. D. | 1,000.0 | 810.0 | 992.0 | 23.4 | 794.6 |
| Rio San Diego M. W. D. | 667.0 | 990.0 | 444.8 | 36.6 | 1,175.6 |
| San Diego, City of | 0 | 0 | 0 | 0 | 0 |
| San Dieguito Irrigation District | 0 | 0 | 0 | 0 | 0 |
| Santa Fe Irrigation District | 0 | 645.0 | 0 | 12.2 | 632.8 |
| Valley Center M. W. D. | 5,000.0 | 1,818.0 | 3,628.2 | 183.4 | 3,006.4 |
| Yuima M. W. D. | 783.0 | 690.0 | 571.5 | 36.0 | 865.5 |
| Total | 24,715.1 | 13,253.8 | 15,254.8 | 1,101.0 | 21,613.1 |

Table 12

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

Year Ending June 30, 1972

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

| Month | Total Hardness as P. P. M. $CaCO_3$ | Non Carbonate 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 | 353 | 226 | 127 | 0 | 33.0 | 8.2 | 78 |
| August | 355 | 230 | 125 | 1 | 33.5 | 8.2 | 82 |
| September | 344 | 220 | 124 | 1 | 31.5 | 8.3 | 82 |
| October | 336 | 226 | 110 | 2 | 32.5 | 8.4 | 74 |
| November | 350 | 232 | 118 | 0 | 33.5 | 8.3 | 64 |
| December | 338 | 237 | 101 | 4 | 33.5 | 8.7 | 53 |
| January | 360 | 234 | 126 | 0 | 33.5 | 8.3 | 53 |
| February | 355 | 228 | 127 | 0 | 33.0 | 8.2 | 50 |
| March | 358 | 229 | 129 | 1 | 33.0 | 8.3 | 58 |
| April | 359 | 229 | 130 | 0 | 34.5 | 8.2 | 67 |
| May | 358 | 227 | 131 | 1 | 33.0 | 8.4 | 70 |
| June | 351 | 220 | 131 | 1 | 32.0 | 8.3 | 76 |
| Average | 351 | 228 | 123 | 1 | 33.0 | 8.3 | 67 |
| Maximum | 360 | 237 | 131 | 4 | 34.5 | 8.7 | 82 |
| Minimum | 336 | 220 | 101 | 0 | 31.5 | 8.2 | 53 |





Table 13

ANALYSIS OF COLORADO RIVER AQUEDUCT WATER
TAKEN AT WEST PORTAL OF SAN JACINTO TUNNEL
For Year Ending June 30, 1972

| Constituent | Symbol | ANALYSIS | | |
|---|---|---|---|---|
| | | Average | Maximum | Minimum |
| Silica | $SiO_2$ | 7.6 ppm | 9.7 ppm | 4.2 ppm |
| Iron | Fe | - | - | - |
| Calcium | Ca | 86 ppm | 89 ppm | 81 ppm |
| Magnesium | Mg | 33 ppm | 34.5 ppm | 31.5 ppm |
| Sodium | Na | 111 ppm | 113 ppm | 108 ppm |
| Potassium | K | 5 ppm | 6 ppm | 5 ppm |
| Carbonate | $CO_3$ | 1 ppm | 5 ppm | 0 ppm |
| Bicarbonate | $HCO_3$ | 148 ppm | 159 ppm | 113 ppm |
| Sulfate | $SO_4$ | 324 ppm | 330 ppm | 315 ppm |
| Chloride | Cl | 98 ppm | 102 ppm | 96 ppm |
| Nitrate | $NO_3$ | 1.1 ppm | 1.8 ppm | 0 ppm |
| Fluoride | F | 0.4 ppm | 0.5 ppm | 0.4 ppm |
| Total Dissolved Solids | | 741 ppm | 751 ppm | 719 ppm |
| Hardness as CaCO3 | | | | |
| Total | | 351 ppm | 360 ppm | 336 ppm |
| Carbonate | | 123 ppm | 131 ppm | 101 ppm |
| Noncarbonate | | 228 ppm | 237 ppm | 220 ppm |
| Alkalinity - Phenolphthalein | | 1 ppm | 4 ppm | 0 ppm |
| Alkalinity - Total | | 123 ppm | 131 ppm | 101 ppm |
| Free Carbon Dioxide | $CO_2$ | 1 ppm | 2 ppm | 0 ppm |
| Hydrogen Ion Concentration | pH | 8.3 ppm | 8.7 ppm | 8.2 ppm |
| Electrical Conductivity | $EC \times 10^6$ at 25°C | 1,160 ppm | 1,180 ppm | 1,130 ppm |
| Temperature | °F | 67 ppm | 82 ppm | 53 ppm |

Table 14
ALLOCATION OF RIGHT TO PURCHASE AUTHORITY WATER
As of June 30, 1972

| Member Agency | Amount Paid by Taxes to 6/30/72 | Amount Paid for Service Connections to 6/30/72 | Total Amount Paid by Each Member Agency to 6/30/72 | Amount Remaining to be Paid Under Terms of Annexation | Total Contributions Paid and Contracted for | Allocation Percentage of Auth. Supply | Allocation Equivalent Flow c.f.s. |
|---|---|---|---|---|---|---|---|
| Bueno Colorado M.W.D. ... | $ 1,084,158 | 56,654 | 1,140,812 | 0 | 1,140,812 | 3.17 | 19.81 |
| Carlsbad M.W.D. ..... | 753,244 | 7,931 | 761,175 | 0 | 761,175 | 2.12 | 13.25 |
| Del Mar, City of ..... | 228,806 | --- | 228,806 | 10,971 | 239,777 | 0.67 | 4.19 |
| De Luz Heights M.W.D. .... | 9,550 | --- | 9,550 | 7,123 | 16,673 | 0.05 | 0.31 |
| Escondido, City of ..... | 706,582 | 9,253 | 715,835 | 0 | 715,835 | 1.99 | 12.44 |
| Fallbrook P.U.D. ..... | 304,432 | 67,773 | 372,205 | 0 | 372,205 | 1.03 | 6.44 |
| Helix Irrigation District .... | 3,877,527 | 28,905 | 3,906,432 | 0 | 3,906,432 | 10.86 | 67.87 |
| National City, City of ..... | 797,649 | --- | 797,649 | 0 | 797,649 | 2.22 | 13.88 |
| Oceanside, City of ..... | 929,539 | 27,786 | 957,325 | 0 | 957,325 | 2.66 | 16.62 |
| Olivenhain M.W.D. ..... | 131,677 | 17,660 | 149,337 | 6,866 | 156,203 | 0.43 | 2.69 |
| Otay M.W.D. ..... | 461,098 | 84,617 | 545,715 | 0 | 545,715 | 1.52 | 9.50 |
| Poway M.W.D. ..... | 255,865 | 27,307 | 283,172 | 0 | 283,172 | 0.79 | 4.94 |
| Rainbow M.W.D. ..... | 268,816 | 104,769 | 373,585 | 4,983 | 378,568 | 1.05 | 6.56 |
| Ramona M.W.D. ..... | 191,311 | 3,378 | 194,689 | 21,044 | 215,733 | 0.60 | 3.75 |
| Rincon del Diablo M.W.D. ... | 499,261 | 14,527 | 513,788 | 0 | 513,788 | 1.43 | 8.94 |
| Rio San Diego M.W.D. ..... | 760,078 | 45,244 | 805,322 | 2,338 | 807,660 | 2.25 | 14.06 |
| San Diego, City of ..... | 20,528,583 | 63,080 | 20,591,663 | 0 | 20,591,663 | 57.26 | 357.97 |
| San Dieguito I.D. ..... | 461,749 | 5,758 | 467,507 | 0 | 467,507 | 1.30 | 8.13 |
| Santa Fe I.D. ..... | 428,236 | 8,129 | 436,365 | 0 | 436,365 | 1.21 | 7.56 |
| South Bay I.D. ..... | 2,190,119 | 594 | 2,190,713 | 0 | 2,190,713 | 6.09 | 38.06 |
| Valley Center M.W.D. ..... | 235,556 | 128,973 | 364,529 | 2,165 | 366,694 | 1.02 | 6.38 |
| Yuima M.W.D. ..... | 75,402 | 11,900 | 87,302 | 12,422 | 99,724 | 0.28 | 1.75 |
| Total Authority ..... | *$35,179,247 | 714,245 | 35,893,492 | 67,918 | 35,961,410 | 100.00 | **625.00 |

*Figures do not total due to omission of cents.
**Maximum capacity as of June 30, 1972.





Table 15
SAN DIEGO COUNTY WATER AUTHORITY

Statement of Tax Assessments and Collections
Fiscal Years 1945-46 to 1971-72

| 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 6/30/72 |
|---|---|---|---|---|---|---|---|---|---|---|
| Fallbrook P.U.D. ..... | $ 303,223 | 90 | 300,057 | 974 | -- | 3,420 | 42 | 62 | 304,432 | 3,257 |
| Helix I.D. ..... | 3,876,421 | 332 | 3,862,255 | 10,291 | 89 | 4,930 | 603 | 733 | 3,877,527 | 14,498 |
| City of National City ..... | 791,073 | 770 | 789,468 | 1,873 | 8 | 6,828 | 83 | 615 | 797,649 | 2,375 |
| City of Oceanside ..... | 927,633 | 689 | 925,193 | 2,226 | 5 | 2,601 | 95 | 582 | 929,539 | 3,119 |
| City of San Diego ..... | 20,362,934 | 17,637 | 15,281,904 | 28,903 | 42 | 5,260,107 | 2,424 | 44,799 | 20,528,583 | 10,863 |
| Ramona M.W.D. ..... | 187,023 | 574 | 185,044 | 822 | -- | 3,400 | 56 | 14 | 191,311 | 2,454 |
| Santa Fe I.D. ..... | 424,423 | 1,865 | 423,065 | 1,613 | 921 | 2,262 | 1,003 | 748 | 428,336 | 3,244 |
| San Dieguito I.D. ..... | 461,066 | (34) | 459,329 | 1,284 | 3 | 1,126 | 127 | 321 | 461,749 | 1,503 |
| City of Escondido ..... | 706,814 | 1,401 | 704,682 | 1,969 | -- | 26 | 29 | 136 | 706,562 | 3,523 |
| South Bay I.D. ..... | 2,192,590 | (262) | 2,184,315 | 3,390 | -- | 15,296 | 142 | 13,026 | 2,190,119 | 8,913 |
| Rainbow M.W.D. ..... | 252,574 | 71 | 246,690 | 876 | -- | 21,079 | -- | 31 | 268,816 | 5,758 |
| Poway M.W.D. ..... | 258,160 | (15) | 253,415 | 2,466 | -- | 15 | 8 | 34 | 255,865 | 4,729 |
| Bueno Colorado M.W.D. .... | 1,079,215 | 2,276 | 1,070,085 | 3,431 | 1 | 10,902 | 121 | 285 | 1,084,158 | 7,406 |
| Rincon del Diablo M.W.D. ... | 444,477 | 912 | 441,268 | 1,234 | -- | 56,800 | 1 | 43 | 499,261 | 4,121 |
| Carlsbad M.W.D. ..... | 723,755 | (1,215) | 718,740 | 1,549 | -- | 33,275 | 10 | 371 | 753,244 | 3,799 |
| Valley Center M.W.D. ..... | 227,022 | 8,424 | 233,661 | 1,372 | -- | 511 | 26 | 15 | 235,556 | 1,784 |
| Rio San Diego M.W.D. ..... | 761,420 | 872 | 755,506 | 3,837 | -- | 878 | 131 | 274 | 760,078 | 6,765 |
| Otay M.W.D. ..... | 462,953 | 129 | 459,623 | 1,605 | -- | --- | 45 | 176 | 461,098 | 3,458 |
| Olivenhain M.W.D. ..... | 136,621 | (55) | 129,747 | 736 | -- | 1,250 | --- | 56 | 131,677 | 4,919 |
| City of Del Mar ..... | 227,229 | 1,332 | 227,553 | 765 | -- | 530 | 1 | 44 | 228,806 | 1,009 |
| Yuima M.W.D. ..... | 74,524 | 214 | 73,810 | 138 | -- | 1,100 | --- | 47 | 75,402 | 927 |
| De Luz M.W.D. ..... | 8,892 | --- | 8,532 | 18 | -- | 1,000 | --- | --- | 9,550 | 359 |
| Total Member Agencies ..... | $34,906,043 | 36,024 | 29,734,362 | 71,411 | 972 | 5,429,776 | 5,141 | 62,416 | 35,179,247 | 97,930 |
| Withdrawn Areas ..... | 6,169 | 29 | 4,199 | 11 | -- | 166 | 2 | 3 | 4,294 | -- |
| Grand Total* ..... | $34,906,212 | 36,054 | 29,738,561 | 71,422 | 972 | 5,429,963 | 5,143 | 62,422 | 35,183,542 | 97,930 |

*Figures do not total due to omission of cents.

Table 16
ASSESSED VALUATIONS AND TAX RATES
Fiscal Years 1945-46 to 1971-72

| Fiscal Year | Secured Property | Public Utilities | Unsecured Property | Total | Tax Rate per $100 Secured | Tax Rate per $100 Unsecured |
|---|---|---|---|---|---|---|
| 1945-46 | $ 212,082,975 | 28,253,700 | 29,960,130 | 270,296,805 | 0.04 | - |
| 1946-47 | 208,715,150* | 29,433,450 | 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 | 0.04 |
| 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 | 0.14 |
| 1950-51 | 306,104,930 | 43,595,730 | 44,717,740 | 394,418,400 | 0.10 | 0.10 |
| 1951-52 | 344,620,030 | 48,452,940 | 50,904,035 | 443,977,005 | 0.10 | 0.10 |
| 1952-53 | 382,948,860 | 53,208,220 | 63,996,330 | 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 | 627,062,960 | 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 | 128,785,440 | 1,001,025,660 | 0.09 | 0.09 |
| 1958-59 | 865,283,080 | 128,479,290 | 128,124,720 | 1,121,887,090 | 0.10 | 0.09 |
| 1959-60 | 979,491,050 | 145,317,290 | 134,846,730 | 1,259,655,070 | 0.11 | 0.10 |
| 1960-61 | 1,116,723,830 | 165,666,720 | 159,954,740 | 1,442,345,290 | 0.11 | 0.11 |
| 1961-62 | 1,220,810,650 | 191,276,650 | 135,149,890 | 1,567,237,190 | 0.11 | 0.11 |
| 1962-63 | 1,272,506,330 | 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 | 1,423,375,590 | 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 | 212,223,550 | 147,740,730 | 1,927,254,740 | 0.11 | 0.11 |
| 1967-68 | 1,735,209,870 | 209,136,160 | 178,641,120 | 2,122,987,150 | 0.10 | 0.11 |
| 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 | 2,755,734,087 | 213,191,301 | 306,608,099 | 3,275,533,487 | 0.10 | 0.09 |

*City of Coronado secured assessed valuations 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 1971-72

| 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** |
|---|---|---|---|---|---|---|---|---|
| 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 | 389,391 | 381,563 | 97.94 | - | 1,882 | 383,445 | 8,585 | 2.20 |
| 1948-49 | 474,320 | 459,304 | 96.84 | - | 5,916 | 465,420 | 17,685 | 3.73 |
| 1949-50 | 401,112 | 392,732 | 97.91 | 329 | 13,342 | 406,074 | 13,052 | 3.25 |
| 1950-51 | 397,970 | 390,274 | 98.07 | 373 | 8,217 | 398,492 | 12,904 | 3.24 |
| 1951-52 | 450,405 | 441,242 | 97.97 | 978 | 7,699 | 448,941 | 15,346 | 3.40 |
| 1952-53 | 594,603 | 585,417 | 98.46 | (1,140) | 12,567 | 597,985 | 10,824 | 1.82 |
| 1953-54 | 652,335 | 640,239 | 98.15 | 4,213 | 9,942 | 650,181 | 17,191 | 2.62 |
| 1954-55 | 709,678 | 695,200 | 97.96 | 1,295 | 12,638 | 707,838 | 20,326 | 2.86 |
| 1955-56 | 803,375 | 788,734 | 97.41 | (2,099) | 12,140 | 800,874 | 20,726 | 2.59 |
| 1956-57 | 874,774 | 861,461 | 98.48 | 576 | 13,056 | 874,517 | 21,580 | 2.46 |
| 1957-58 | 965,006 | 946,445 | 98.08 | 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) | 16,647 | 1,424,925 | 42,533 | 2.97 |
| 1960-61 | 1,624,733 | 1,586,169 | 97.63 | (8,720) | 21,501* | 1,607,671 | 50,874 | 3.15 |
| 1961-62 | 1,763,785 | 1,718,575 | 97.44 | (2,276) | 31,477 | 1,750,053 | 62,330 | 3.54 |
| 1962-63 | 1,816,449 | 1,775,932 | 97.77 | (3,688) | 38,134 | 1,814,066 | 61,023 | 3.37 |
| 1963-64 | 1,910,019 | 1,862,973 | 97.54 | (268) | 36,825 | 1,899,799 | 70,975 | 3.72 |
| 1964-65 | 2,000,067 | 1,948,853 | 97.44 | (6,588) | 42,596 | 1,991,450 | 73,003 | 3.66 |
| 1965-66 | 2,101,023 | 2,033,032 | 96.76 | 2,503 | 44,784 | 2,077,816 | 98,714 | 4.69 |
| 1966-67 | 2,154,994 | 2,090,637 | 97.01 | (7,164) | 54,333 | 2,144,970 | 101,573 | 4.73 |
| 1967-68 | 2,175,276 | 2,129,996 | 97.92 | (301) | 64,473 | 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 | - | 24,018 | 2,228,146 | 103,963 | 4.52 |
| 1970-71 | 2,450,123 | 2,408,899 | 98.32 | 38,500 | 104,032 | 2,512,932 | 79,655 | 3.25 |
| 1971-72 | 3,084,869 | 3,058,713 | 99.15 | 27,045 | 32,926 | 3,091,639 | 99,930 | 3.24 |

*Including adjustments of current year's levy.
**Including adjustments to current and prior years' levies.

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 6/30/71 | Fiscal Year 1971-72 | | Remaining Balance of Annexation Charges 6/30/72 |
|---|---|---|---|---|---|---|---|---|
| | | | First Year | Last Year | | Special Assessments | Tax Rate ¢/$100 | |
| Annexation Charges Completed ..... | | $741,930 | | | 741,930 | | | |
| Annexation Charges Outstanding: | | | | | | | | |
| Del Mar, City of ..... | 11-23-62 | 131,200 | 1963-64 | 1972-73 | 108,331 | 11,896 | 17¢ | 10,971 |
| De Luz Heights M.W.D. ..... | 6-28-67 | 7,400 | 1968-69 | 1977-78 | 2,592 | 624 | 14¢ | 4,184 |
| No. 1 Annex of 1969 ..... | 10-20-69 | 4,200 | 1970-71 | 1979-80 | 883 | 377 | 43¢ | 2,939 |
| Olivenhain M.W.D. | | | | | | | | |
| No. 1 Annex of 1965 ..... | 2-11-65 | 14,000 | 1966-67 | 1975-76 | 7,258 | 1,659 | 14¢ | 5,082 |
| No. 4 Annex of 1967 ..... | 11-15-67 | 3,500 | 1968-69 | 1977-78 | 1,415 | 300 | 25¢ | 1,784 |
| Rainbow M.W.D. | | | | | | | | |
| No. 3 Annex of 1967 ..... | 12-11-67 | 9,100 | 1968-69 | 1977-78 | 3,204 | 912 | 17¢ | 4,982 |
| Ramona M.W.D. | | | | | | | | |
| No. 4 Annex of 1967 ..... | 11-30-67 | 6,100 | 1968-69 | 1977-78 | 2,297 | 559 | 17¢ | 3,244 |
| No. 5 Annex of 1972 ..... | 5-17-72 | 18,300 | 1971-72 | 1980-81 | - | 500 | 0¢ | 17,800 |
| Rio San Diego M.W.D. | | | | | | | | |
| No. 4 Annex of 1970 ..... | 8- 3-70 | 3,100 | 1971-72 | 1980-81 | 500 | 261 | 41¢ | 2,338 |
| Valley Center M.W.D. | | | | | | | | |
| No. 2 Annex of 1967 ..... | 12- 4-67 | 1,650 | 1968-69 | 1977-78 | 695 | 136 | 38¢ | 819 |
| No. 3 Annex of 1967 ..... | 12- 4-67 | 2,750 | 1968-69 | 1977-78 | 1,153 | 249 | 24¢ | 1,347 |
| Yuima M.W.D. ..... | 12-16-63 | 40,750 | 1964-65 | 1973-74 | 29,599 | 3,984 | 15¢ | 7,166 |
| No. 1 Annex of 1967 ..... | 11-27-67 | 6,000 | 1968-69 | 1977-78 | 2,132 | 494 | 17¢ | 3,373 |
| No. 2 Annex of 1969 ..... | 11- 3-69 | 2,800 | 1970-71 | 1979-80 | 681 | 235 | 57¢ | 1,883 |
| Total ..... | | $902,780 | | | 902,670 | 22,191 | | 67,918 |





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 | Tax Rate 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 | - | 1,936,031,180 | .04 | .03 |
| 1933-34 | - | 1,654,403,590 | .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 | - | 1,696,966,255 | .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 | 3,443,212,922 (2) | .35 | .48 |
| 1948-49 | 578,368 | 3,883,041,225 | .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 | 6,015,691,960 | .25 | .28 |
| 1954-55 | 1,793,651 | 6,548,392,114 | .23 | .25 |
| 1955-56 | 1,876,256 | 8,514,568,335 | .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 | 12,734,205,470 | .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 | 3,067,696 | 24,016,568,274 | .16 | .14 |
| 1969-70 | 3,072,065 | 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) | - | 29,407,382,596 | .15 | .17 |

(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 1972-73 were available before completion of report and are included for convenience of reader.

Table 20

METROPOLITAN WATER DISTRICT ANNEXATION CHARGES AND BALANCES ON AUTHORITY AREAS

| Member Agencies | Date of Annexation | Amount of Annexation Charge | Remaining Balance 6/30/72 |
|---|---|---|---|
| Annexation Charges Completed | --- | $ 146,650 | $ --- |
| Annexation Charges Outstanding | | | |
| Chula Vista, City of | | | |
| Fallbrook Public Utility District | | | |
| Lakeside Irrigation District | | | |
| Helix Irrigation District | 12-17-46 | 13,045,000 | 2,818,589 |
| National City, City of | | | |
| Oceanside, City of | | | |
| San Diego, City of | | | |
| Bueno Colorado M. W. D. | 6-11-54 | 1,072,230 | 454,025 |
| Carlsbad M. W. D. | 6-16-54 | 548,100 | 232,804 |
| Del Mar, City of | 11-23-62 | 611,250 | 426,973 |
| De Luz M. W. D. | 6-29-67 | 2,002,000 | 2,297,632* |
| No. 1 Annexation of 1969 | 10-15-69 | 312,000 | 112,771 |
| Escondido, City of | 10- 9-50 | 386,000 | 330,085 |
| Fallbrook Public Utility District | | | |
| No. 1 Annexation of 1950 | 9- 1-50 | 34,600 | 7,737 |
| No. 2 Annexation of 1958 | 11-24-58 | 50,400 | 28,449 |
| Fallbrook Community Air Park | 12-22-69 | 59,600 | 64,476* |
| Helix Irrigation District | | | |
| Crest P. U. D. Annexation | 12-13-48 | 19,500 | 2,416 |
| El Cajon Dry Island Annexation | 12-26-51 | 327,450 | 136,881 |
| Helix-Wilson Ranch Annexation | 2-20-59 | 8,720 | 5,180 |
| Helix-Sunny Slope Hts. Annexation | 9-17-59 | 38,250 | 22,845 |
| Olivenhain M. W. D. | 7-25-60 | 83,880 | 52,780 |
| No. 1 Annexation of 1965 | 2-11-65 | 512,520 | 409,810 |
| No. 4 Annexation of 1967 | 11-13-67 | 74,000 | 80,919* |
| Otay M. W. D. | 10-26-56 | 273,000 | 132,992 |
| No. 3 Annexation of 1960 | 10-20-60 | 95,100 | 60,120 |
| Poway M. W. D. | 4-21-54 | 91,800 | 37,440 |
| No. 1 Annexation of 1959 | 9-21-59 | 27,150 | 16,042 |
| Rainbow M. W. D. | 4-10-54 | 167,700 | 69,759 |
| No. 1 Annexation of 1959 | 5-12-59 | 74,300 | 14,414 |
| No. 3 Annexation of 1967 | 12-6-67 | 1,728,000 | 1,994,660* |
| Ramona M. W. D. | 8-27-57 | 339,000 | 179,618 |
| No. 1 Annexation of 1959 | 5-29-59 | 42,330 | 25,339 |
| No. 2 Annexation of 1961 | 9-22-61 | 15,480 | 10,296 |
| No. 3 Annexation of 1963 | 9-20-63 | 10,560 | 7,714 |
| No. 4 Annexation of 1967 | 11-27-67 | 480,000 | 544,346* |
| No. 5 Annexation of 1972 | 5-17-72 | 732,000 | 732,000 |
| Rincon del Diablo M. W. D. | 6-14-54 | 757,200 | 322,200 |
| Rio San Diego M. W. D. | | | |
| (not including Lakeside I. D.) | 6- 7-56 | 373,260 | 181,815 |
| No. 2 Annexation of 1959 | 11- 6-59 | 109,110 | 65,058 |
| No. 3 Annexation of 1960 | 10-17-60 | 289,890 | 183,236 |
| No. 4 Annexation of 1970 | 8- 3-70 | 164,000 | 163,793 |
| San Dieguito Irrigation District | 12-13-48 | 187,100 | 41,486 |
| No. 1 Annexation of 1959 | 9-15-59 | 71,820 | 42,863 |
| Santa Fe Irrigation District | 12-13-48 | 167,000 | 28,389 |
| South Bay Irrigation District | | | |
| (not including City of Chula Vista) | 11- 3-52 | 449,370 | 160,124 |
| Valley Center M. W. D. | 5- 9-55 | 285,600 | 93,019 |
| No. 1 Annexation of 1960 | 12-12-60 | 23,700 | 14,908 |
| No. 2 Annexation of 1967 | 11-29-67 | 22,000 | 24,406* |
| No. 3 Annexation of 1967 | 11-30-67 | 507,000 | 575,388* |
| Yuima M. W. D. | 12-16-63 | 749,490 | 549,212 |
| No. 1 Annexation of 1967 | 11-21-67 | 72,200 | 113,667* |
| No. 2 Annexation of 1969 | 11-24-69 | 14,400 | 14,891* |
| Total | | $27,149,329 | $ 12,099,412 (a) |

*Greater than original annexation charge due to special assessment at maximum tax rate of 75¢/$100, in less than interest on annexation charge.

(a) Figures do not total due to omission of cents





Table 21

WATER SALES BY METROPOLITAN WATER DISTRICT

Fiscal Years 1941-42 to 1971-72

| Year | To Member Municipalities | | | | | To Others | Total |
|---|---|---|---|---|---|---|---|
| | Natural Water | | Treated Water | | Total to Agencies | | |
| | 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 |

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

| Constituent Areas | Total Water Production 1970-71 Amount ac.ft. | 1971-72 Amount ac.ft. | Percent Increase or Decrease | Source of Water Produced - 1971-72 M.W.D. Amount ac.ft. | M.W.D. Percent of Total | Other Amount ac.ft. | Other Percent of Total |
|---|---|---|---|---|---|---|---|
| Anaheim | 36,605 | 40,239 | 10.2 | (b) 6,926 | 17 | 33,403 | 83 |
| Beverly Hills | 13,946 | 14,849 | 6.5 | 9,495 | 64 | 5,354 | 36 |
| Burbank | 26,263 | 26,674 | 1.6 | 12,468 | 45 | 13,906 | 52 |
| Calleguas M.W.D. | 82,653 | 81,322 | -1.6 | (c) 37,966 | 46 | 43,356 | 54 |
| Central Basin M.W.D. | 223,214 | 232,275 | 4.1 | * 69,923 | 30 | 162,352 | 70 |
| Chino Basin M.W.D. | 168,564 | 168,978 | 0.2 | 9,612 | 6 | 159,366 | 94 |
| Coastal M.W.D. | 36,870 | 34,565 | 12.7 | 33,538 | 97 | 1,027 | 3 |
| Compton | 9,596 | 10,178 | 6.0 | 4,633 | 47 | 5,363 | 53 |
| Eastern M.W.D. | 116,925 | 127,088 | 8.7 | 29,890 | 31 | (a) 97,199 | 69 |
| Foothill M.W.D. | 16,009 | 17,643 | 10.2 | 10,329 | 59 | 7,314 | 41 |
| Fullerton | 25,317 | 27,395 | 8.1 | 13,893 | 51 | 13,502 | 49 |
| Glendale | 24,304 | 25,913 | 5.5 | 11,532 | 44 | 14,381 | 56 |
| Las Virgenes M.W.D. | 7,200 | 9,054 | 25.9 | 8,736 | 96 | 318 | 4 |
| Long Beach | 71,274 | 76,607 | 7.6 | 48,291 | 63 | 28,366 | 37 |
| Los Angeles | 561,653 | 602,596 | 3.6 | 59,848 | 10 | 542,748 | 90 |
| Orange County M.W.D. | 237,284 | 293,754 | 23.8 | (d)* 125,754 | 43 | 168,000 | 57 |
| Pasadena | 30,123 | 36,685 | 3.9 | 22,361 | 61 | 14,124 | 39 |
| Pomona Valley M.W.D. | 76,279 | 84,623 | 8.2 | 17,663 | 21 | 66,769 | 79 |
| San Diego C.W.A. | 330,724 | 367,945 | 9.6 | (e) 331,282 | 90 | 36,663 | 10 |
| San Fernando | --- | 2,465 | - | 0 | 0 | 2,465 | 100 |
| San Marino | 4,813 | 5,397 | 12.1 | 9 | 0 | 5,388 | 100 |
| Santa Ana | 27,746 | 30,450 | 9.7 | 10,413 | 34 | 20,037 | 66 |
| Santa Monica | 17,100 | 18,117 | 5.9 | 10,366 | 57 | 7,951 | 43 |
| Torrance | 33,934 | 35,114 | 4.9 | 31,642 | 86 | 3,472 | 14 |
| Upper San Gabriel Valley M.W.D. | 184,964 | 206,162 | 11.5 | * 217 | 0 | 205,945 | 100 |
| West Basin M.W.D. | 174,252 | 182,838 | 4.9 | * 134,399 | 74 | 48,436 | 26 |
| Western M.W.D. | 213,004 | 213,962 | 0.5 | 37,882 | 18 | 176,100 | 82 |
| Totals | 2,760,386 | 2,962,674 | | 1,089,788 | | 1,873,076 | |

NOTES: (a) Includes 4731 acre-feet of seepage into San Jacinto Tunnel.
(b) Does not include 7366 acre-feet delivered by M.W.D. of Orange County.
(c) Includes 3066 acre-feet delivered from storage.
(d) Does not include 9176 acre-feet delivered by Coastal M.W.D.
(e) Does not include 25,316 acre-feet delivered into storage.
* Does not include water delivered for replenishment purposes.



San Diego County Water Authority

ANNUAL FINANCIAL REPORT

YEAR ENDED JUNE 30, 1972

SAN DIEGO COUNTY WATER AUTHORITY
2750 FOURTH AVENUE
SAN DIEGO, CALIFORNIA 92103
Telephone 297-3218 — Area Code 714

October 26, 1972

BOARD OF DIRECTORS
FRED A. FELLMAN, CHAIRMAN
R. E. BADGER, VICE CHAIRMAN
HAAN H. DOE, SECRETARY

LINDEN R. BURSELL
GENERAL MANAGER
AND CHIEF ENGINEER
PAUL G. CRIGHTMAND
GENERAL COUNSEL

Mr. L. R. Bursell
General Manager and
Chief Engineer
San Diego County Water
Authority

Dear Mr. Bursell:

The San Diego County Water Authority's audited financial statements and supporting schedules are presented in the following pages. The June 30, 1972 financial position with comparative figures for 1971, is shown on Exhibit A, the results of operations on Exhibit B, statement of changes in financial position on Exhibit C and changes in equity and fund balances on Exhibit D.

Construction on Phase I of Pipeline No. 4 was completed during the year and its cost was capitalized for a total of $10,196,378.

Construction of Phase II of Pipeline No. 4 will be capitalized during fiscal year 1972-73. Authority personnel are finishing access roads. The engineering department is updating drawings to "as built".

The Kuster, Hall and Woods Construction Co. contract, for Phase III of Pipeline No. 4 for 12.34 miles of 96 inch prestressed concrete cylinder pipe from the Escondido Creek Vent to Miramar Reservoir is 53% complete. The time elapsed on this project is 32% and all the shop drawings have been completed.

The general fund water sales surcharge of $1.25 per acre foot for operation and maintenance remains in effect. Exhibit B reflects expenses over revenues of $51,099 before depreciation. Together with the net water revenues, revenues from interest earnings, annexation fees, pipe mill proceeds and miscellaneous, resulted in net revenues over expenses of $299,292 in the general fund as shown on Exhibit D.

Debt service requirements were financed from the tax rate of 10¢ per $100 of assessed valuation and interest earnings from the debt service funds and the bond fund.

Very truly yours,

Henry C. Lo[illegible]
Director of Finance

MEMBER AGENCIES

CITIES
DEL MAR
ESCONDIDO
NATIONAL CITY
OCEANSIDE
SAN DIEGO

IRRIGATION DISTRICTS
DELTA
SAN DIEGUITO
SANTA FE
SOUTH BAY

PUBLIC UTILITY DISTRICTS
FALLBROOK

MUNICIPAL WATER DISTRICTS
RAINBOW
RAMONA
RINCON DEL DIABLO
RUS SAN DIEGO
VALLEY CENTER
YUIMA



PEAT, MARWICK, MITCHELL & CO.
CERTIFIED PUBLIC ACCOUNTANTS
1010 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, 1972, 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, 1972, 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.

October 13, 1972

Exhibit A

Balance Sheet

June 30, 1972
with comparative figures for 1971

| Assets | 1972 | 1971 |
|---|---|---|
| General fund (note 2): | | |
| Current assets: | | |
| Cash (including certificates of deposit) | $ 4,016,130 | 1,684,460 |
| Investments | - | 1,947,985 |
| Accounts receivable | 1,672,536 | 1,396,869 |
| Current installments of long-term receivables | 112,451 | 98,452 |
| Inventory of water in storage (note 1) | 1,236,389 | 1,015,061 |
| Prepaid expenses | 9,206 | 9,808 |
| Total current assets - general fund | 7,046,712 | 6,152,635 |
| Long-term receivables, excluding current installments: | | |
| Notes, 5%, current maturities $90,000 ($76,761 for 1971) | 146,141 | 236,146 |
| Annexation charges, current maturities $22,451 ($21,691 for 1971) | 45,466 | 50,118 |
| Total long-term receivables | 191,607 | 286,264 |
| Total general fund | 7,238,319 | 6,438,899 |
| Special funds (note 2): | | |
| Debt service reserve funds: | | |
| Cash (including certificates of deposit) | 897,367 | 855,541 |
| Investments | - | 38,321 |
| Interest receivable | 2,633 | 6,138 |
| Waterworks bonds, debt service funds: | | |
| Cash (including certificates of deposit) | 279,586 | 392,501 |
| Deposit with fiscal agent | 28,474 | 19,485 |
| Investments | - | 63,712 |
| Interest receivable | 18,214 | 54,028 |
| U.S. Government contract fund: | | |
| Cash (including certificates of deposit) | 8,325 | 46,266 |
| Investments | - | 5,727 |
| Interest receivable | - | 135 |
| Due from Metropolitan Water District (note 3) | 6,065,807 | 6,522,609 |
| Waterworks bonds, improvement funds: | | |
| Cash (including certificates of deposit) | 10,044,662 | 13,073,331 |
| Investments | - | 4,795,077 |
| Trust and agency fund (note 4): | | |
| Cash (including certificates of deposit) | 116,438 | - |
| Accounts receivable | 249,144 | - |
| Total special funds | 17,710,650 | 25,872,871 |
| Property, plant, equipment and participation rights (note 5) | 163,801,291 | 147,473,377 |
| | $ 188,750,260 | 179,785,147 |

See accompanying notes to financial statements.





| Liabilities, Reserves, Equity and Fund Balances | 1972 | 1971 |
|---|---|---|
| General fund: | | |
| Current liabilities: | | |
| Accounts payable | $ 3,207,966 | 2,629,459 |
| Advances and deposits by agencies | 18,212 | 23,364 |
| Total current liabilities - general fund | 3,226,178 | 2,652,823 |
| Special funds: | | |
| Current liabilities: | | |
| Current installments of long-term debt (note 3) | 2,869,029 | 2,774,119 |
| Matured bond principal and interest payable | 28,475 | 19,485 |
| Accounts payable | 1,725,252 | 943,662 |
| Trust and agency fund balance (note 4) | 365,582 | - |
| Total current liabilities - special funds | 4,988,338 | 3,737,266 |
| Total current liabilities | 8,214,516 | 6,390,089 |
| Long-term debt, excluding current installments (note 3): | | |
| General obligation bonds payable - not due | 58,780,000 | 59,970,000 |
| U.S. Government contracts | 10,465,999 | 11,345,029 |
| Annexation charges - Metropolitan Water District | 12,409,431 | 12,081,190 |
| Total long-term debt | 81,655,430 | 83,396,219 |
| Reserve for long-term note receivable | 236,141 | 312,907 |
| Equity and fund balances: | | |
| Equity in property, plant, equipment and participation rights (note 5) | 87,596,239 | 78,227,785 |
| Restricted balances: | | |
| Waterworks bonds, debt service fund | 297,801 | 510,242 |
| U.S. Government contract fund | 6,074,132 | 6,574,737 |
| Appropriated funds: | | |
| Debt service reserve funds | 900,000 | 900,000 |
| General fund | 166,388 | 3,174 |
| Unappropriated general fund balance | 3,609,613 | 3,469,994 |
| Total equity and fund balances | 98,644,173 | 89,685,932 |
| | $ 188,750,260 | 179,785,147 |

Exhibit B

Statement of Income and Expenses

Year ended June 30, 1972
with comparative figures for 1971

| | 1972 | 1971 |
|---|---|---|
| Operating income: | | |
| Water sales | $ 15,298,275 | 11,011,931 |
| Cost of sales: | | |
| Water in storage at beginning of year | 1,015,061 | 721,048 |
| Water purchased | 15,065,522 | 10,909,255 |
| | 16,080,583 | 11,630,303 |
| Water in storage at end of year | 1,236,389 | 1,015,061 |
| | 14,844,194 | 10,615,242 |
| Gross margin from sale of water | 454,081 | 396,689 |
| Operating expense | 505,140 | 403,965 |
| Net operating income (loss) before depreciation | (51,059) | (7,276) |
| Depreciation expense on straight-line method | 714,622 | 637,889 |
| | (765,681) | (645,165) |
| Nonoperating income: | | |
| Property taxes | 3,234,834 | 2,627,165 |
| Interest | 1,425,089 | 2,201,289 |
| Other | 90,106 | 93,415 |
| Total nonoperating income | 4,750,029 | 4,921,869 |
| | 3,984,348 | 4,276,704 |
| Nonoperating expense-interest | 2,835,012 | 2,895,500 |
| Net income | 1,149,336 | 1,381,204 |
| Provision for depreciation, an expense which did not require a current cash outlay | 714,622 | 637,889 |
| Net income before depreciation | $ 1,863,958 | 2,019,093 |

See accompanying notes to financial statements.





Exhibit C

Statement of Changes in Financial Position

Year ended June 30, 1972
with comparative figures for 1971

| | 1972 | 1971 |
|---|---|---|
| Funds provided: | | |
| Net income before depreciation | $ 1,863,958 | 2,019,093 |
| Interest capitalized during construction | 1,428,366 | 1,449,722 |
| Taxes and direct payments by member agencies to Metropolitan Water District | 6,329,128 | 5,715,188 |
| Property, plant and equipment additions funded by member agencies | 33,111 | 8,374 |
| Annexation charges | 18,300 | 3,100 |
| Decrease in long-term receivables | 94,657 | 94,080 |
| By special funds: | | |
| Waterworks bonds, debt service funds | 203,452 | 454,886 |
| U.S. Government contract fund | 500,605 | 422,645 |
| Waterworks bond, improvement funds | 7,823,746 | 9,394,702 |
| Increase in debt redemption liabilities | 103,900 | 121,195 |
| Increase in improvement fund liabilities | 781,590 | 29,195 |
| Increase in trust and agency fund balance | 365,582 | - |
| | $ 19,546,395 | 19,712,410 |
| Funds used: | | |
| Acquisition of property, plant and equipment and participation rights | 17,042,536 | 16,914,374 |
| Decrease in long-term debt | 1,740,789 | 2,385,370 |
| Decrease in reserve for long-term notes | 76,766 | 78,512 |
| Increase in trust and agency fund assets | 365,582 | - |
| Increase in working capital | 320,722 | 334,154 |
| | $ 19,546,395 | 19,712,410 |
| Changes in working capital: | | |
| Increase (decrease) in current assets: | | |
| Cash | 2,331,670 | (96,957) |
| Investments | (1,947,985) | 259,010 |
| Accounts receivable | 275,667 | 162,577 |
| Current installments of long-term receivables | 13,999 | (11,572) |
| Inventory of water in storage | 221,329 | 294,013 |
| Prepaid expenses | (603) | 3,781 |
| | 894,077 | 610,852 |
| Decrease (increase) in current liabilities: | | |
| Accounts payable | (578,507) | (261,731) |
| Deposits and advances by agencies | 5,152 | (14,967) |
| | (573,355) | (276,698) |
| Net increase in working capital | $ 320,722 | 334,154 |

See accompanying notes to financial statements.

Exhibit D

Statement of Changes in Equity and Fund Balances

Year ended June 30, 1972

| | Total | General | Debt service | Waterworks debt service | U.S. Government contract | Equity in plant, equipment and participation rights |
|---|---|---|---|---|---|---|
| Balances, July 1, 1971 | $ 89,685,932 | 3,473,168 | 900,000 | 510,242 | 6,574,737 | 78,227,785 |
| Additions (deductions): | | | | | | |
| Net income before depreciation | 1,863,958 | 299,292 | 33,358 | 877,559 | 378,425 | 275,324 |
| Provision for depreciation | (714,622) | - | - | - | - | (714,622) |
| Taxes and direct payments by member agencies to Metropolitan Water District | 6,329,128 | - | - | - | - | 6,329,128 |
| Expenditures for property, plant and equipment: | | | | | | |
| From general fund | - | (48,117) | - | - | - | 48,117 |
| From advances by member agencies | 33,111 | - | - | - | - | 33,111 |
| Increase in annexation charges | 18,300 | 18,300 | - | - | - | - |
| Waterworks bonds redeemed | - | - | - | (1,090,000) | - | 1,090,000 |
| Payments on U.S. Government contracts | - | - | - | - | (879,030) | 879,030 |
| Interest capitalized during construction | 1,428,366 | - | - | - | - | 1,428,366 |
| Interfund transfers | - | 33,358 | (33,358) | - | - | - |
| Balances, June 30, 1972 | $ 98,644,173 | 3,776,001 | 900,000 | 297,801 | 6,074,132 | 87,596,239 |

See accompanying notes to financial statements.

Notes to Financial Statements

June 30, 1972

(1) Accounting Policy

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 $18,000 and the total of equity and fund balances at June 30, 1972 would have been reduced by approximately $841,000.

The inventory of water in storage is recorded at cost (first-in, first-out). Property, plant and equipment and participation rights are recorded at cost. Depreciation is computed on the straight-line method. Investments are recorded at cost which approximates market value.

(2) Taxes Receivable

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

The fund analysis of taxes receivable is as follows:

| | 1972 | 1971 |
|---|---|---|
| General fund | $ 4,122 | 5,017 |
| Waterworks bonds, debt service funds | 75,188 | 56,246 |
| U.S. Government contract fund | 18,620 | 18,392 |
| Total taxes receivable | $ 97,930 | 79,655 |

(3) Long-Term Debt

| Description | Interest rate | Outstanding balance: Current portion | Outstanding balance: Long-term portion |
|---|---|---|---|
| General obligation bonds - not due: | | | |
| Waterworks bonds, 1957, maturing February 1, 1973 - 1994 | 1% - 6% | $ 770,000 | 30,355,000 |
| Waterworks bonds, 1966, maturing October 1, 1972 - 2004 | 4-1/2% - 5-1/2% | 420,000 | 28,425,000 |
| Total bonds | | 1,190,000 | 58,780,000 |





Notes to Financial Statements, Continued

(3) Long-Term Debt, Continued

| | Interest rate | Outstanding balance: Current portion | Outstanding balance: Long-term portion |
|---|---|---|---|
| Total bonds, forward | | $ 1,190,000 | 58,780,000 |
| U.S. Government contract: | | | |
| Authority's share: | | | |
| First pipeline | - | 250,000 | 1,111,049 |
| Second pipeline | 2.99% | 172,227 | 3,745,946 |
| | | 422,227 | 4,856,995 |
| Metropolitan Water District's share: | | | |
| First pipeline | - | 250,000 | 1,111,049 |
| Second pipeline | 2.99% | 206,802 | 4,497,955 |
| | | 456,802 | 5,609,004 |
| Total U.S. contract | | 879,029 | 10,465,999 |
| Annexation charges - Metropolitan Water District | | 800,000 | 12,409,431 |
| Total long-term debt | | $ 2,869,029 | 81,655,430 |

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.

(4) Trust and Agency Fund

On June 14, 1972, the Authority became a party to an agreement with the United States of America, the Metropolitan Water District and certain District agencies for the temporary emergency delivery of a part of the Mexican treaty waters of the Colorado River to the international boundary in the vicinity of Tijuana. One of the conditions of the agreement required that the Authority receive and disburse monies for the construction of facilities to deliver water to the international boundary. The Otay Municipal Water District will construct the new facilities and will provide the Authority with appropriate documentary support for the costs incurred. Otay may also receive advances for estimated costs from the Authority during construction. Transactions during the year are as follows:

| | |
|---|---|
| Cash received | $ 402,948 |
| Expended for construction | 37,366 |
| Balance, June 30, 1972 | $ 365,582 |

Notes to Financial Statements, Continued

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

| | 1972 | 1971 |
|---|---|---|
| Property, plant, equipment and participation rights, at cost: | | |
| Property, plant and equipment | $ 66,298,608 | 56,137,805 |
| Less accumulated depreciation | 8,489,077 | 7,806,606 |
| Net property, plant and equipment | 57,809,531 | 48,331,199 |
| Construction work in progress | 19,283,060 | 19,085,758 |
| Participation rights in Metropolitan Water District | 86,708,700 | 80,056,420 |
| Net property, plant, equipment and participation rights | 163,801,291 | 147,473,377 |
| Less: | | |
| Current installments of long-term debt | 2,869,029 | 2,774,119 |
| Long-term debt excluding current installments | 81,655,430 | 83,396,219 |
| | 84,524,459 | 86,170,338 |
| | 79,276,832 | 61,303,039 |
| Add: | | |
| Construction capital projects - waterworks bonds, improvement funds, net of construction accounts payable (subject to encumbrances of $5,113,024; $2,500,764 for 1971) | 8,319,407 | 16,924,746 |
| Equity in property, plant, equipment and participation rights | $ 87,596,239 | 78,227,785 |
| The property, plant and equipment was financed by: | | |
| General obligation bonds | 43,076,656 | 34,241,268 |
| U.S. Government contract | 14,873,407 | 14,873,407 |
| Current revenues | 7,534,907 | 6,218,388 |
| Agencies contributions | 813,638 | 804,742 |
| Total property, plant and equipment | $ 66,298,608 | 56,137,805 |





Schedule 1

Operating Expense

Year ended June 30, 1972
with comparative figures for 1971

| | 1972 | 1971 |
|---|---|---|
| Water treatment | $ 84,593 | 61,654 |
| Systems operations | 67,602 | 63,788 |
| Maintenance of structures and plant | 99,873 | 77,464 |
| Administrative and general salaries | 113,843 | 101,879 |
| General expense and supplies | 169,475 | 128,449 |
| Automotive operation, maintenance and shop expense | 34,979 | 22,443 |
| Grand total | 570,365 | 455,677 |
| Less portion charged to property, equipment and other | (65,225) | (51,712) |
| Total operating expense | $ 505,140 | 403,965 |

**Schedule 2**

Property, Plant and Equipment
and Accumulated Depreciation

Year ended June 30, 1972

| | Cost | | | Accumulated depreciation | | | Cost less accumulated depreciation | |
|---|---|---|---|---|---|---|---|---|
| | Balance June 30, 1971 | Additions, net of retirements | Balance June 30, 1972 | Balance June 30, 1971 | Additions, net of retirements | Balance June 30, 1972 | 1972 | 1971 |
| First San Diego aqueduct | $ 15,518,176 | 5,222 | 15,523,398 | 2,998,366 | 155,042 | 3,153,408 | 12,369,990 | 12,519,810 |
| Second San Diego aqueduct | 37,560,892 | 10,111,327 | 47,672,219 | 4,064,256 | 476,753 | 4,541,009 | 43,131,210 | 33,496,636 |
| La Mesa Sweetwater extension | 1,491,304 | - | 1,491,304 | 332,766 | 14,892 | 347,658 | 1,143,646 | 1,158,538 |
| Fallbrook-Oceanside line | 660,636 | (21,071) | 639,565 | 150,977 | 1,809 | 152,786 | 486,779 | 509,659 |
| San Diego headquarters | 179,102 | 1,340 | 180,442 | 35,402 | 4,285 | 39,687 | 140,755 | 143,700 |
| Escondido headquarters | 391,297 | - | 391,297 | 47,742 | 12,626 | 60,368 | 330,929 | 343,555 |
| Furniture and fixtures | 24,592 | 365 | 24,957 | 19,567 | 2,511 | 22,078 | 2,879 | 5,025 |
| Office equipment | 25,949 | - | 25,949 | 17,389 | 1,971 | 19,360 | 6,589 | 8,560 |
| Engineering equipment | 7,976 | - | 7,976 | 6,667 | 691 | 7,358 | 618 | 1,309 |
| Automotive equipment | 146,232 | 23,620 | 169,852 | 93,648 | 4,348 | 97,996 | 71,856 | 52,584 |
| Telemetering equipment | 76,627 | 12,391 | 89,018 | 1,729 | 852 | 2,581 | 86,437 | 74,898 |
| Miscellaneous equipment | 55,022 | 1,855 | 56,877 | 38,097 | 6,691 | 44,788 | 12,089 | 16,925 |
| Auld Valley chlorinator | - | 25,754 | 25,754 | - | - | - | 25,754 | - |
| Totals | $ 56,137,805 | 10,160,803 | 66,298,608 | 7,806,606 | 682,471 | 8,489,077 | 57,809,531 | 48,331,199 |

Schedule 3

Bonded Debt Maturities

June 30, 1972

| Year ended June 30, | Principal | Total Interest | Total |
|---|---|---|---|
| 1973 | $ 1,190,000 | 2,551,520 | 3,741,520 |
| 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 |
| | $ 59,970,000 | 41,791,341 | 101,761,341 |





Schedule 4

Legal Debt Margin

June 30, 1972

| | | |
|---|---|---|
| Assessed valuation for year ended June 30, 1972 | | $ 2,968,925,388 |
| Debt limit (15% of assessed valuation)* | | 445,338,808 |
| Amount of debt applicable to debt limit: | | |
| General obligation bonds payable: | | |
| Waterworks bonds, 1957 | $ 31,125,000 | |
| Waterworks bonds, 1966 | 28,845,000 | |
| Total bonded debt | | 59,970,000 |
| Contractual obligations: | | |
| To U.S. Government on first San Diego aqueduct: | | |
| On first pipeline | 2,722,098 | |
| On second pipeline | 8,622,930 | |
| | 11,345,028 | |
| To Metropolitan Water District on annexation charges | 13,209,431 | |
| Total contractual obligations | | 24,554,459 |
| Total gross indebtedness | | 84,524,459 |
| Less portion of fund balances available for debt redemption: | | |
| Waterworks bonds, debt service funds | 297,801 | |
| U.S. Government contract fund | 8,325 | 306,126 |
| Net indebtedness | | 84,218,333 |
| Legal debt margin | | $ 361,120,475 |

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

Schedule 5

Insurance Coverage

June 30, 1972

| | Amount or limit | Company |
|---|---|---|
| Excess liability, property damage and product liability | $ 5,000,000<br>5,000,000 | Insurance Co. of North America<br>Harbor Insurance Co. |
| Select liability, personal injury, property damage, bodily injury, including automobile. Deductible of $1,000 on property damage liability, except automobiles | 100,000 | |
| Medical payments, each payment | 2,000 | Great American Insurance Co. |
| Buildings and equipment - Escondido and San Diego | 461,500 | Great American Insurance Co. |
| Office block policy - unscheduled office equipment, includes telemetering | 96,500 | Great American Insurance Co. |
| Chlorination station - optional peril policy | 127,700 | Great American Insurance Co. |
| Dwelling - Escondido | 17,500 | Great American Insurance Co. |
| Contractor's equipment | 69,657 | Industrial Indemnity Insurance Company |
| Automobile - comprehensive, collision $100 deductible | Actual cash value | Great American Insurance Co. |
| Official bonds: | | |
| L. R. Burzell, 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 | Statutory | State Compensation Insurance Fund |