

SAN DIEGO COUNTY
WATER AUTHORITY



EIGHTEENTH ANNUAL REPORT
1964

SAN DIEGO COUNTY WATER AUTHORITY
ORGANIZED JUNE 9, 1944

EIGHTEENTH
ANNUAL REPORT
of Authority Operations

For

Fiscal Year Ending June 30, 1964

Linden R. Burzell
General Manager and Chief Engineer

SAN DIEGO, CALIFORNIA

1964

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SAN DIEGO COUNTY WATER AUTHORITY

Member Agencies, Date of Entry and
Representatives on Board of Directors on June 30, 1964

Cities

Del Mar Nov. 23, 1962 . O. B. Sholders
Escondido Oct. 9, 1950 . Lloyd M. Mitchell
National City . . . June 9, 1944 . Charles G. Kerch
Oceanside June 9, 1944 . Robert A. Weese
San Diego June 9, 1944 . Baylor Brooks
R. E. Graham
Fred A. Heilbron
George R. Henderson
George Kerrigan
H. Fred Landgraf
Fred W. Simpson
J. Stacey Sullivan
Arthur C. Wells

Irrigation Districts

Helix June 9, 1944 . Michael Fletcher
Harry Griffen
Wm. G. Sloan
San Dieguito . . . Dec. 13, 1948 . Charles W. Hales
Santa Fe Dec. 13, 1948 . R. E. Budger
South Bay Nov. 3, 1952 . Lloyd L. Lee
Walter L. Steele

(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
Olivenhain July 25, 1960 . Howard G. Golem
Otay Oct. 26, 1956 . Ralph W. Chapman
Poway April 21, 1954 . David R. Shepardson
Rainbow April 10, 1954 . Walter R. Beck
Ramona August 27, 1957 John E. Langan
Rincon del Diablo . June 14, 1954 . Charles A. Cryster
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 . C. P. Kane
Yuima Dec. 16, 1963 . E. W. Blom

Public Utility District

Fallbrook June 9, 1944 . Franz R. Sachse

**OFFICERS OF BOARD OF DIRECTORS
1963-64**



Chairman
Fred A. Heilbron
San Diego
7-44 to 6-64



Vice Chairman
R. E. Badger
Santa Fe
Irrigation District
9-57 to 6-64



Secretary
Hans H. Doe
Bueno Colorado
Municipal Water District
6-54 to 6-64



Treasurer
Harry Griffen
Helix
Irrigation District
7-56 to 6-64



Controller
Howard G. Golem
Olivenhain Municipal
Water District
1-62 to 6-64

EXECUTIVE OFFICERS



Linden R. Burzell
General Manager and
Chief Engineer



W. H. Jennings
General Counsel

BOARD OF DIRECTORS

1963-64

For Officers, see Page 5



Walter R. Beck
Rainbow Municipal
Water District
9-62 to 6-64



E. W. Blom
Yuima Municipal
Water District
1-64 to 6-64



Baylor Brooks
San Diego
5-54 to 10-60
4-62 to 6-64



Mac Carnohan
Carlsbad Municipal
Water District
12-59 to 11-63



Ralph W. Chapman
Otay Municipal
Water District
1-64 to 6-64



Charles A. Crytser
Rincon del Diablo
Municipal Water District
6-54 to 6-64



Michael Fletcher
Helix
Irrigation District
10-63 to 6-64



R. E. Graham
San Diego
7-63 to 6-64



Charles W. Hales
San Dieguito
Irrigation District
6-58 to 6-64



G. R. Henderson
San Diego
10-55 to 6-64



C. P. Kane
Valley Center
Municipal Water District
2-59 to 3-61
8-61 to 6-64



Allan O. Kelly
Carlsbad Municipal
Water District
11-63 to 6-64



Charles G. Kerch
National City
5-57 to 6-64



George Kerrigan
San Diego
9-53 to 6-64

BOARD OF DIRECTORS

1963-64

(Continued)



Lawrence C. Kuebler
Otay Municipal
Water District
2-61 to 1-64



H. Fred Landgraf
San Diego
10-55 to 6-64



John E. Langan
Ramona Municipal
Water District
4-61 to 6-64



Lloyd L. Lee
South Bay
Irrigation District
4-61 to 6-64



Lloyd M. Mitchell
Escondido
12-56 to 6-64



Charles C. Price
Rio San Diego
Municipal
Water District
7-58 to 6-64



Franz R. Sachse
Fallbrook Public
Utility District
7-49 to 12-50
10-56 to 6-64



David R. Shepardson
Poway Municipal
Water District
4-54 to 6-64



O. B. Sholders
Del Mar
4-63 to 6-64



Fred W. Simpson
San Diego
7-44 to 6-64



Wm. G. Sloan
Helix
Irrigation District
11-59 to 6-64



Walter L. Steele
South Bay
Irrigation District
9-62 to 6-64



Stacey J. Sullivan
San Diego
7-62 to 6-64



Robert A. Weese
Oceanside
3-53 to 6-64



Arthur C. Wells
San Diego
2-53 to 6-64

COMMITTEES OF THE BOARD

June 30, 1964

ENGINEERING AND OPERATIONS COMMITTEE

William G. Sloan, Chairman
 Robert A. Weese, Vice Chairman
 R. E. Badger
 E. W. Blom
 Baylor Brooks
 Ralph W. Chapman
 Hans H. Doe
 Howard G. Golem
 R. E. Graham
 Charles W. Hales
 George R. Henderson
 Allan O. Kelly
 Lloyd L. Lee
 Oliver B. Sholders

WATER PROBLEMS AND POLICY COMMITTEE

Hans H. Doe, Chairman
 George R. Henderson, Vice Chairman

R. E. Badger
 Baylor Brooks
 Charles A. Crytser
 R. E. Graham
 Harry Griffen
 Fred A. Heilbron
 Lloyd L. Lee
 Lloyd M. Mitchell
 Franz R. Sachse
 Fred W. Simpson
 J. Stacey Sullivan

ORGANIZATION AND PERSONNEL COMMITTEE

Fred W. Simpson, Chairman
 David R. Shepardson,
 Vice Chairman
 Ralph W. Chapman
 Michael Fletcher
 Howard G. Golem
 Charles W. Hales
 Charles G. Kerch
 John E. Langan
 Charles C. Price
 William G. Sloan
 Robert A. Weese

FINANCE AND INSURANCE COMMITTEE

Arthur C. Wells, Chairman
 Harry Griffen, Vice Chairman
 Walter R. Beck
 E. W. Blom
 Charles A. Crytser
 Michael Fletcher
 George Kerrigan
 H. Fred Landgraf
 John E. Langan
 Lloyd M. Mitchell
 Charles C. Price
 Oliver B. Sholders
 Walter L. Steele
 J. Stacey Sullivan

LEGAL AND CLAIMS COMMITTEE

Franz R. Sachse, Chairman
 David R. Shepardson, Vice Chairman
 Walter R. Beck
 Allan O. Kelly
 Charles G. Kerch
 George Kerrigan
 H. Fred Landgraf
 Walter L. Steele
 Arthur C. Wells

LANDS AND RIGHTS OF WAY COMMITTEE

Lloyd M. Mitchell, Chairman
 Charles G. Kerch, Vice Chairman
 Harry Griffen
 H. Fred Landgraf
 Lloyd L. Lee
 Franz R. Sachse
 David R. Shepardson

ADMINISTRATIVE CODE COMMITTEE

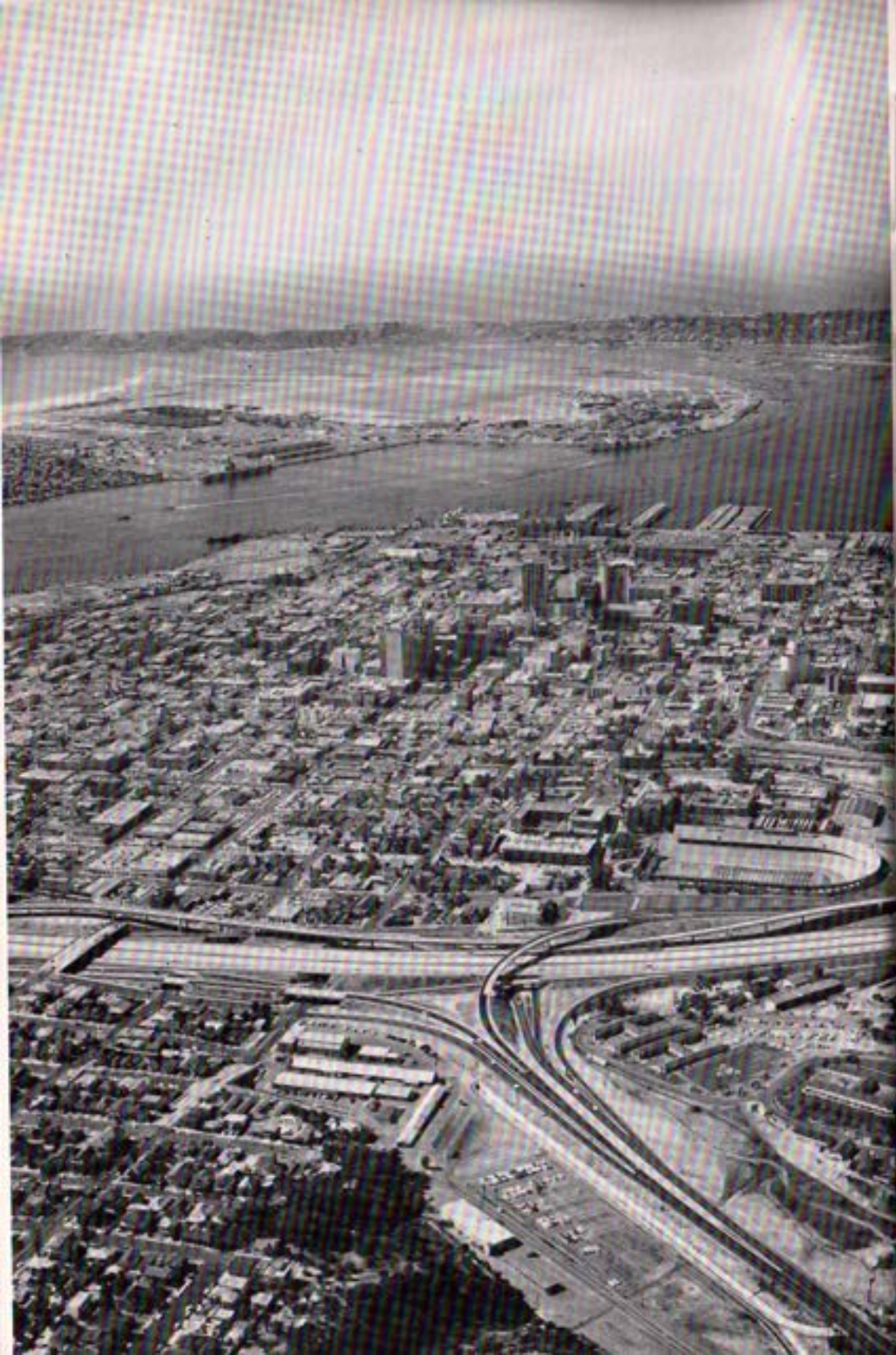
Charles C. Price, Chairman
 Harry Griffen
 Lloyd L. Lee

EXECUTIVE OFFICERS AND OPERATING STAFF

General Manager and Chief Engineer Linden R. Barzell
 General Counsel William H. Jennings
 Assistant Chief Engineer Allen H. Jones
 Chief Accounting Officer Henry Lozano
 Treasurer Harry Griffen
 Controller Howard G. Golem
 Executive Secretary and Deputy Treasurer Maxine M. McKinley
 Superintendent, Maintenance and Operation Joseph E. Lester

AUTHORITY HIGHLIGHTS
 IN BRIEF

	1963-64	1962-63	Percent Change
GROWTH OF AREA			
Number of Agencies	21	20	+ 5.0
Total Area - Acres	714,945	695,654	+ 2.8
Population	1,125,000	1,090,200	+ 3.2
Assessed Valuation	\$1,709,700,900	\$1,628,736,170	+ 5.0
OPERATIONS			
Water Imported by Authority - ac. ft.	231,935	220,472	+ 5.2
Water Production of Agencies - ac. ft.	231,548	219,281	+ 5.6
Local Water Used - ac. ft.	25,448	21,543	+ 18.1
Authority Water Used - ac. ft.	206,100	197,738	+ 4.2
Miles of Pipe Line	160.6	161	- 0.2
Miles of Patrol Roads Maintained	47	50	- 6.0
Number of Service Connections	50	46	+ 8.7
Number of Employees	28	29	- 3.4
FINANCIAL			
Revenues:			
Water Revenue	\$5,151,832	\$4,377,250	+ 17.7
Other Revenue	722,491	712,399	+ 1.4
Taxes	1,903,530	1,817,697	+ 4.7
Expenditures:			
Operation and Maintenance	\$ 230,805	\$ 264,821	- 12.8
Purchase of Water	4,730,906	4,037,107	+ 17.2
New Construction	285,185	176,321	+ 61.7
Payments on Outstanding Debt	1,169,030	1,154,892	+ 1.2
Total Investment in Plant:			
Total Fixed Assets	\$98,679,629	\$95,795,298	+ 3.0
Long-term Debt	65,231,674	61,274,852	+ 6.5



Board of Directors
San Diego County Water Authority
Building

Gentlemen:

Transmitted herewith is the Eighteenth Annual Report of the Authority, covering activities of the fiscal year ending June 30, 1964.

The two aqueducts of the Authority provided all of the water required by member agencies during the past year, with some margin for growth and expansion. It is of significance that during this fiscal year the first appropriation of money was made to initiate studies which will determine the sizing and timing of the second barrel of the Second San Diego Aqueduct.

On October 1, 1963, Mr. Richard S. Holmgren retired after eleven years of service as General Manager and Chief Engineer and almost twenty years' total service. Mr. Holmgren left a well-trained and efficient organization, fully capable of carrying on the responsibilities of the Authority.

During the period October 1 to December 31, 1964, Mr. Allen H. Jones, Assistant Chief Engineer, carried on as Acting General Manager.

It has been my pleasure to serve the Water Authority since January 1, 1964.

Very truly yours,

London R. Burgell

General Manager and Chief Engineer

November 12, 1964

City of San Diego



Fred A. Heilbron
Chairman, Board of Directors
1944-1964

The San Diego County Water Authority completed its twentieth year of service on June 9, 1964. At the June meeting of the Board of Directors service pins were awarded to directors and staff members. Twenty-year service awards were made to Chairman Heilbron for continuous service since the formation of the Authority as director and chairman. Twenty-year awards were also presented to Director Fred W. Simpson, General Counsel William H. Jennings, and recently retired General Manager and Chief Engineer, Richard S. Holmgren.

SAN DIEGO COUNTY WATER AUTHORITY REPORT OF ACTIVITIES FISCAL YEAR 1963-64

ADMINISTRATION

Board of Directors

The governing body of the San Diego County Water Authority is the Board of Directors, which consists of thirty-two members, appointed by the member agencies. The Water Authority Act provides for a Board of Directors, made up of one director from each member agency, and one additional member for each \$100,000,000 of assessed valuation. At the present time the City of San Diego is represented by nine directors, the Helix Irrigation District by three, and the South Bay Irrigation District by two. The remaining member agencies are represented by one director each.

Officers of the Board of Directors are elected bi-annually by a vote by the Board of Directors in July of even-numbered years. Directors Fred A. Heilbron, Ray E. Badger, and Hans H. Doe continue to occupy the offices of Chairman, Vice Chairman, and Secretary, respectively. The office of the Treasurer, a part-time appointive position, is held by Director Harry Griffen. The office of Controller, another part-time appointive position, is held by Director Howard G. Golem.

The Board of Directors has established seven permanent committees. Each director serves on two committees as outlined in Section 2.2 of the Administrative Code. The work of the Board is processed through the seven committees according to the problem concerned. The results of committee action are transmitted to the Board of Directors with a recommendation for action. The standing committees are Finance and Insurance; Engineering and Operations; Organization and Personnel; Water Problems and Policy; Lands and Rights of Way; and Administrative Code. Membership on the committees is determined by the Chairman of the Board. Committee assignments are shown on page 8 of this report. As special problems arise, special committees are established to meet the needs.

SAN DIEGO COUNTY WATER AUTHORITY

The following changes in board membership occurred during the year: In July of 1963, Director Paul Beermann's resignation from the board as a representative of the City of San Diego was accepted, and Mr. Ralph Graham was appointed to fill the vacancy. Mr. Michael Fletcher was appointed to the Board in October, 1963, to become the third representative of the Helix Irrigation District. In November of 1963, following the resignation of Director Mac Carnohan, Mr. Allan O. Kelly was appointed to represent the Carlsbad Municipal Water District. In January of 1964, Mr. E. W. Blom was appointed director to represent the Yuima Municipal Water District, a recent annexation to the Water Authority. In January of 1964, Mr. Ralph W. Chapman was appointed to represent the Otay Municipal Water District, to succeed Director Lawrence C. Kuebler who resigned in January of 1964.

Administrative Staff

On October 1, 1963, Mr. Richard S. Holmgren, General Manager and Chief Engineer, resigned after almost twenty years of continuous service to the Authority. Mr. Holmgren served the Authority ably and faithfully from the time of construction of the first barrel of the First San Diego Aqueduct through the construction of the second barrel of the First San Diego Aqueduct and the expansion program which brought the Second San Diego Aqueduct into being. Mr. Holmgren resigned to become associated with the consulting engineering firm, James M. Montgomery, Pasadena, California. Soon after the beginning of this fiscal year, Mr. Charles L. Royer passed away after having served the Authority since March, 1947. Mr. Henry Lozano was appointed as Acting Chief Accounting Officer and later as Chief Accounting Officer. The only other change in personnel came as a result of the completion of the design of the cross-connection pipeline at which time Mr. Ogden Buckley resigned from the Authority to accept employment in Arizona.

Employee Relations

The Authority provides its employees with medical and hospital benefits through a contract with the California Physicians Service. The entire expense of this benefit is carried by the Authority. Em-

ADMINISTRATION

ployees have the option of extending the coverage to members of their families at the expense of the employee. The Authority also maintains a retirement contract with the State of California. Under this contract, employees are members of the State Employees Retirement System. The employees contribute the major cost of this benefit through monthly deductions from their salaries. The State Employees Retirement System is combined with the Federal Social Security program so that contributions from payroll deductions go to the Federal Government as well. Retirement is mandatory at the age of seventy under the State program.

After one year of continuous employment, each employee receives a 12-working day vacation per year. After five years, each employee is entitled to a 15-day working day vacation annually. Sick leave benefits accumulate at the rate of one day for each month of employment after six months of continuous employment.

Public Relations

The Authority does not have a public relations department. However, personnel are assigned to that function as a collateral duty. The officers of the Board, together with its General Manager, work with representatives of the local news media so that accurate and complete coverage of Authority activities is reported.

There is a continuing demand by the public for information concerning the availability of water in the area. Board members, the General Manager, and other staff representatives have made numerous personal appearances before service clubs, schools, and other groups to explain how San Diego County gets its water supply from the Water Authority.

Water Authority board members on the Metropolitan Water District board sponsored several trips over the Water Authority and Metropolitan Water District systems during the year. Approximately one hundred local business and civic leaders were conducted over the systems from San Diego to San Jacinto and easterly along the Colorado River Aqueduct to the Colorado River.

The Water Authority continues to participate in a public relations program conducted by the Six Agency Committee. Mr. Fred W.

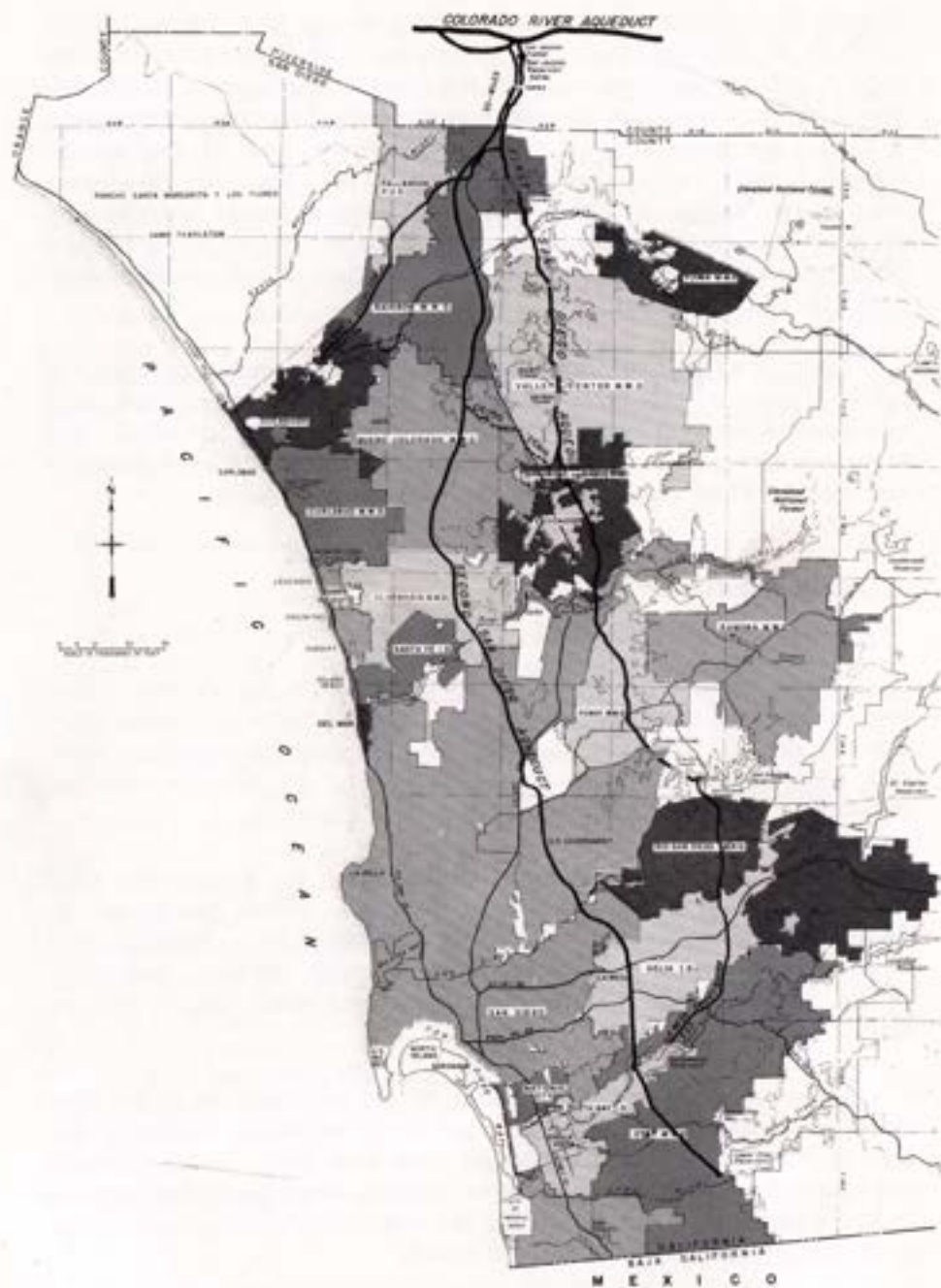


Figure A. Authority area within San Diego County

Simpson, a Director on the Water Authority Board, is the representative on the Six Agency Committee, as well as a member of the Colorado River Board. The Six Agency Committee handles the publicity and public relations on the Colorado River matters, while the Colorado River Board is the official state agency, set up by the State Legislature to protect the water rights of Southern California in the Colorado River.

GROWTH OF AUTHORITY

Area

The area of the Authority was increased by 19,291 acres during the fiscal year, bringing the total acreage within the Authority as of June 30, 1964, to 714,945 acres or 1,117 square miles.

The largest separate annexation was that of the Yuima Municipal Water District. This District covers essentially the entire Pauma Valley and amounts to 12,400 acres. In addition, the City of San Diego annexed 4,098 acres in the Los Penasquitos area together with several smaller tracts. The Ramona Municipal Water District annexed 2,265 acres. The City of Escondido annexed 1,412 acres, but this area was already in the Authority as part of other districts. The balance of the annexations occurred in small tracts.

The area within the boundaries of the Authority now represents 26.2 per cent of the area within the County of San Diego. Seventy-nine per cent of that acreage lying between Cleveland National Forest and the Pacific Ocean is in the County Water Authority as shown on Figure A.

Overlapping areas continue to exist in the area of the Authority although efforts are being made to encourage elimination of these areas.

An overlapping area is land lying within the boundaries of two member agencies. The overlapping portion was originally in one agency and subsequently was annexed by the other which was better able to serve the area with water. The major overlapping areas are primarily due to the expansion of cities into areas already lying within the boundaries of the Authority.

SAN DIEGO COUNTY WATER AUTHORITY

At the present time there is a total of 15,230 acres lying within cities which overlap into adjacent districts. The Authority Act contains provisions whereby an overlapping area may be excluded from an agency, or an area may be excluded from an agency and annexed to another by mutual consent, without the area being excluded from the Authority or the Metropolitan Water District, provided permission to do so is first obtained from the Authority.

The area within each member agency, the changes which have occurred therein during the past year, and the percentage of each agency's area to that of the entire Authority are shown in Table 1. As shown in this table, the City of San Diego continues to have the largest area, equal to 27.0 per cent of the total area within the boundaries of the Authority.

During December of 1963, the Yuima Municipal Water District completed its annexation to the Authority and became the twenty-first member agency. This district is largely an agricultural area at the present time with an estimated population of 650 in its 12,400 acre area.

The following annexations to existing member agencies have been informally approved: They are the Rincon No. 3 Concurrent Annexation, consisting of seven parcels totaling 440 acres, lying easterly and southerly of the present district boundaries and extending to the City of San Diego's Hodges Reservoir property; the Rainbow No. 3 Concurrent Annexation, consisting of 10,960 acres, lying generally easterly of the present district boundaries, directly south of the Riverside County line; the Olivenhain No. 1 Concurrent Annexation, consisting of five parcels, totaling 2,934 acres. The DeLuz Heights Municipal Water District, consisting of an existing district of 10,000 acres, lying westerly of the Fallbrook Public Utilities District, was given informal approval by the Authority on May 14, 1964.

The Authority's 1963 Statement of Change of Boundaries, under state law required to be filed by the Secretary of the Board of Directors prior to February 1, 1964, was filed with the State Board of Equalization January 29, 1964, the County of San Diego January 28, 1964, and the Metropolitan Water District of Southern California January 28, 1964. As shown on the Statement, there were 46 changes made during the year, of which only 8 changed the boundaries of the Authority either by annexation or by exclusion. This Statement is the basis for determination of the assessed valuation by the Assessor of

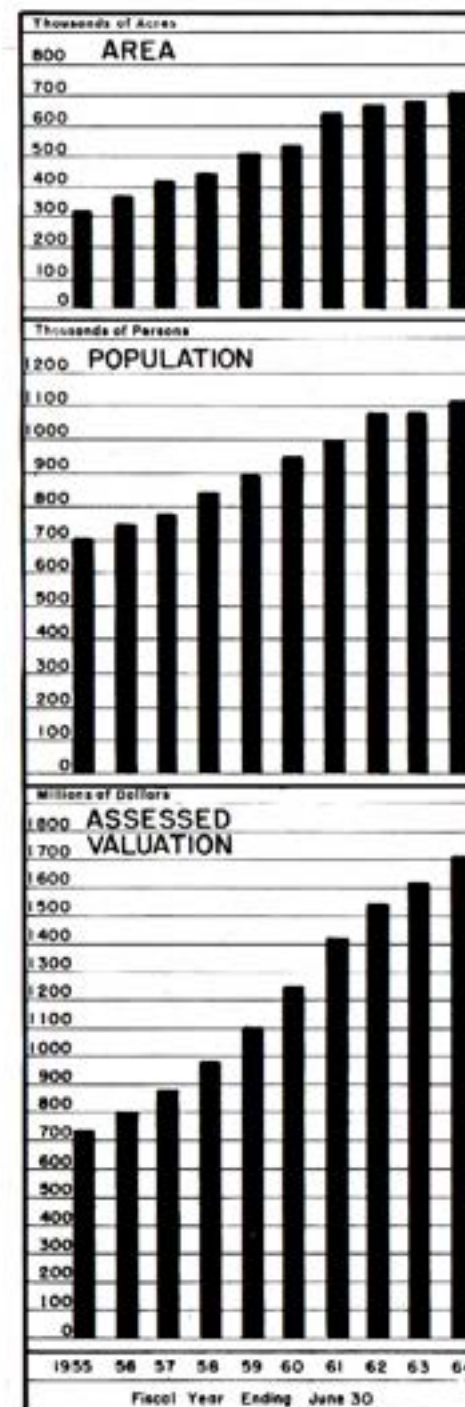
GROWTH OF AUTHORITY

the County of San Diego who levies the Authority tax rate which is established in August by the Authority Board of Directors.

Population

The total population within the Authority area continues to grow at a slightly lower rate than the average growth rate for the last five years. The population census figures for each decade, as indicated from 1910-60, together with the estimated population for the years of 1961, 1962, 1963, and 1964, are shown in Table 2. Data pertaining to individual member agencies are shown in Table 3.

The city of San Diego continues to have the largest population totaling 638,700 persons, or 57 per cent of the total population residing within the boundaries of the Authority. The Olivenhain District, having the smallest population, also shows the greatest per cent of increase since 1960, equal to an annual increase of 21 per cent. The City of La Mesa continues to be the most densely populated within the Authority with a population



SAN DIEGO COUNTY WATER AUTHORITY

density of 7.23 persons per acre. The Cities of National City and El Cajon have densities closely approximating that of the city of La Mesa. The average population per acre of the Authority remains at 1.57 persons per acre, or 1,007 persons per square mile.

Assessed Valuation

The Authority keeps its records of boundary changes up to date with the Assessor of San Diego County through a Statement of Change of Boundaries which is filed annually. The Assessor for the County of San Diego determines the assessed valuation of all taxable property lying within the Authority boundaries. This assessed valuation becomes the basis for the Authority's tax levy. The Auditor of the County of San Diego certified to the Authority that the assessed valuations of taxable property to be used for the 1963-64 tax levy was \$1,709,700,900, an increase of \$80,964,730 or five per cent above the 1962-63 assessed valuation. The assessed valuation of taxable property as shown on this statement for each member agency of the Authority is shown in Table 4. The average assessed valuation for the Authority increased from \$2,341 per acre to \$2,501 per acre. Prior to completing this report, the assessed valuation for 1964-65 was received and has been included in Table 4 for convenience. This table indicates that an increase of \$78,687,870 occurred in the assessed valuation of taxable property within the boundaries of the Authority during the past year.

WATER SUPPLY AND CONSUMPTION

Water Supply and System

The Metropolitan Water District of Southern California, of which the Authority is a constituent member agency, continues to supply Colorado River water as the only water supply for the Authority. At the present time, the Authority has a preferential right to the District's water supply of about 8 per cent. This preferential right results from payments in the form of taxes and annexation charges paid to Metropolitan. The money paid to the Metropolitan Water District

WATER SUPPLY AND CONSUMPTION

for the purchase of water is not included in the calculation of preferential right. The Metropolitan Water District distributed water during the fiscal year on the basis of water orders, and did not invoke preferential right as a basis for water deliveries. The Secretary of the Department of The Interior of the United States Government declared during the spring of 1964 that Colorado River water use must be reduced by 10 per cent by all agencies in the lower basin states. The Metropolitan Water District and other water users have objected to this arbitrary ruling, and there have been no reductions or restrictions made on Water Authority water orders.

Substantial water is stored by the District in Lake Mathews during off-peak periods for delivery to its member agencies during the peak summer months. Water delivered to the Authority is diverted from the Colorado River Aqueduct at San Jacinto and received at a point approximately six miles inside San Diego County.

The Authority's First San Diego Aqueduct was operated at or near capacity for a considerable portion of the year. Maximum capacity remains at 196 c.f.s. The Second San Diego Aqueduct has a capacity of 250 c.f.s. and was operated at or near capacity for nearly three months. The three months of highest average flow in the two aqueducts were July and August, 1963, and June, 1964, with average delivery flow of 421,435 and 437 c.f.s., respectively. There remained very little surplus carrying capacity during the period July through September which means that Authority agencies must rely on storage to a greater extent during peak summer months.

The total flow in the Authority system was 231,947 acre feet as compared with 220,472 acre feet during the previous year. This annual flow is 72 per cent of the maximum of 320,000 acre feet which could be delivered assuming continuous operation of both aqueducts at maximum capacity for the entire year.

Minimum rates of flow occurred in December of 1963, during a routine shut-down of the Metropolitan section of the

Relocation of Second Aqueduct due to widening of U.S. Highway 395 near Poway



SAN DIEGO COUNTY WATER AUTHORITY

aqueducts and later during February, 1964, when the Second San Diego Aqueduct was shut down to permit installation of new pipe across Highway 395, while grade changes and widening were in progress. Minimum monthly delivery occurred in February, 1964, when but 9,356 acre feet was delivered. Maximum monthly delivery rate occurred in August of 1963, when 27,303 acre feet was delivered. Detailed statistics on sale of water are shown in Table 5.

Water Deliveries and Rates

The actual quantity of water delivered to each member agency is shown in Table 5. The total quantity of water sold to member agencies was 229,812 acre feet, 3,540 acre feet was placed in storage, and 1,467 acre feet was removed from storage to meet peak demands. Based on this year's experience, there is still ample capacity to meet the requirements of member agencies for several years to come if sufficient water is stored in off-peak months when the aqueducts are not being used to capacity.

The quantities of water delivered to individual member agencies for the eight-year period from 1956 to 1964 are shown in Table 6, together with the total quantity of water purchased by each agency since the Authority first began delivery of water in 1947. The table shows that this year's sales were larger than 1962-63 by 5.7 per cent.

The Authority continues to deliver water by contract to two governmental agencies for the Metropolitan Water District. These agencies are the State Forestry Camp, located east of Rainbow within the proposed Rainbow Concurrent No. 3 Annexation, and the Convair Missile Testing Facility, located in Sycamore Canyon on the Camp Elliott Reservation. The total quantity of water sold under these contracts totaled 63 acre feet, compared with 78 acre feet sold the previous year.

The rate charged for water delivered by the Authority has been the price charged the Authority by Metropolitan plus an override of \$2.00 per acre foot. The Authority has been able to operate its system since the first water was delivered in 1947 based on the \$2.00 per acre foot override. During August of 1964, the Board of Directors of the Authority reduced the override rate to \$1.25 per acre foot effective September 1, 1964, until further notice.

WATER SUPPLY AND CONSUMPTION

The Metropolitan Water District has found it necessary to increase its water rates in recent years and presently follows a policy of declaration of its water rates several years in advance. A summary of water rates in effect for the untreated Colorado River water supplied to Authority members since July 1, 1958, is as follows:

WATER RATES

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	28.00	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		31.00	1.25*	32.25	14.00	18.25

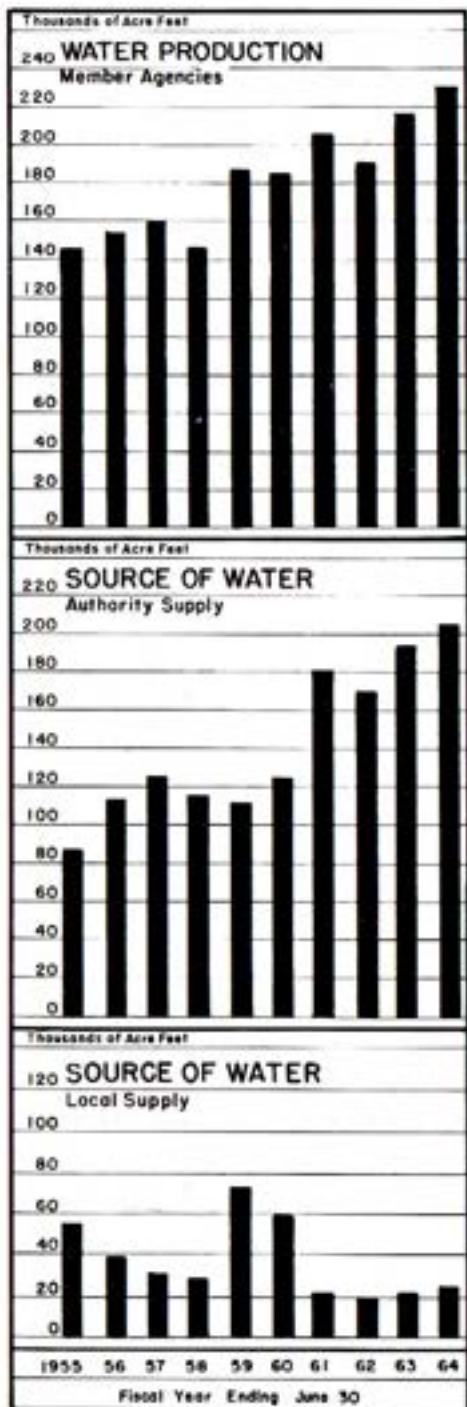
*Subject to possible change.

In order to obtain the agricultural rebate, it is necessary to certify to the Metropolitan Water District as to the quantities of water used for agricultural purposes. Rebates made to the Authority by the district are paid in full to all agencies which had previously certified that such water was used for agricultural purposes.

Water Production of Member Agencies

The term "water production" is used to designate the quantity of water which an agency must produce from all of its sources of supply to meet not only the current demands of its consumers, but also the losses which occur between the source of supply and the consumer including leakage, losses from breaks, evaporation from distribution reservoirs, or wastage resulting from normal operations. Sources of supply may include impounding reservoirs, wells, or the Authority system.

The total water production of the twenty-one member agencies is shown in Table 7. Water production did not increase markedly and six agencies produced less water than the previous year. The total net increase from 219,280 acre feet to 231,548 acre feet was largely due to the annexation of the Yuima Municipal Water District which had



a local water production of 8,625 acre feet. This drop-off in rate of expansion is considered normal after the previous year's sharp increase of 14 per cent.

The maximum monthly production occurred in August, 1963, when 27,263 acre feet of water was required to meet the combined demand of the member agencies' consumers. This amounts to an increase of 3.7 per cent over the previous year's maximum monthly production. The minimum monthly production occurred in February of 1964, when 14,145 acre feet of water was produced. Due to the relatively dry winter, this was 2,552 acre feet more water than was used in the minimum month of the previous year.

Many Authority agencies have local water supplies available to their service areas. In recent years, the production of local water has dropped off due to decreased groundwater production and decreased local runoff into reservoirs.

The wells in Pauma Valley produced 8,625 acre feet of water for the several agencies within the Yuima

District. Other substantial local supplies are Lake Henshaw and the Warner Ranch wells owned by the Vista Irrigation District, a sub-agency of Bueno Colorado Municipal Water District. Production by the Vista system was distributed within Bueno Colorado Municipal Water District, Rincon Municipal Water District, and the City of Escondido, and totaled 7,132 acre feet. The California Water and Telephone Company produced approximately 3,400 acre feet of local water within its service area which includes National City and South Bay Irrigation District. The City of San Diego produced about 4,500 acre feet of local water from its extensive reservoir system; however, this water was used in areas outside of the Authority. The detailed statistics on water production can be found in Table 8.

A comparison of water production by the member agencies can be found in Table 9. This table gives water production based on area and population in acre feet per acre per year, and acre feet per capita per year. This year's report indicates that the water systems of member agencies are serving 294,250 acres out of the 714,945 acres, or 41 per cent of the total area.

Water production per unit area served per year varies a great deal depending on the stage of development of the area in question. Yuima Municipal Water District is an intensively irrigated agricultural district and reports water production of 2.61 acre feet per acre. Fallbrook Public Utility District reports 1.45 acre feet per acre while the relatively undeveloped areas of Olivenhain Municipal Water District and Ramona Municipal Water District report 0.12 and 0.13 of an acre foot per acre, respectively. The Authority average remains at 0.77 of an acre foot per acre over the 294,250 acres served.

Per capita water use, Authority wide, did not change from the 0.20 of an acre foot per capita of the previous year. The areas of intensive agricultural development continue to indicate the highest per capita water use. Yuima Municipal Water District reports 13.27 acre feet per capita based on a population figure of 650.

Water used for agricultural purposes was 32.3 per cent of the total of 231,548 acre feet produced by Authority agencies. A rebate from the Metropolitan Water District for water used for agricultural purposes makes accurate reporting a necessity. Each agency must certify monthly to the Authority with substantiating data the total quantity of water used for agricultural purpose in order to obtain the rebate. The rebate amounts to \$9.00 per acre foot for water used

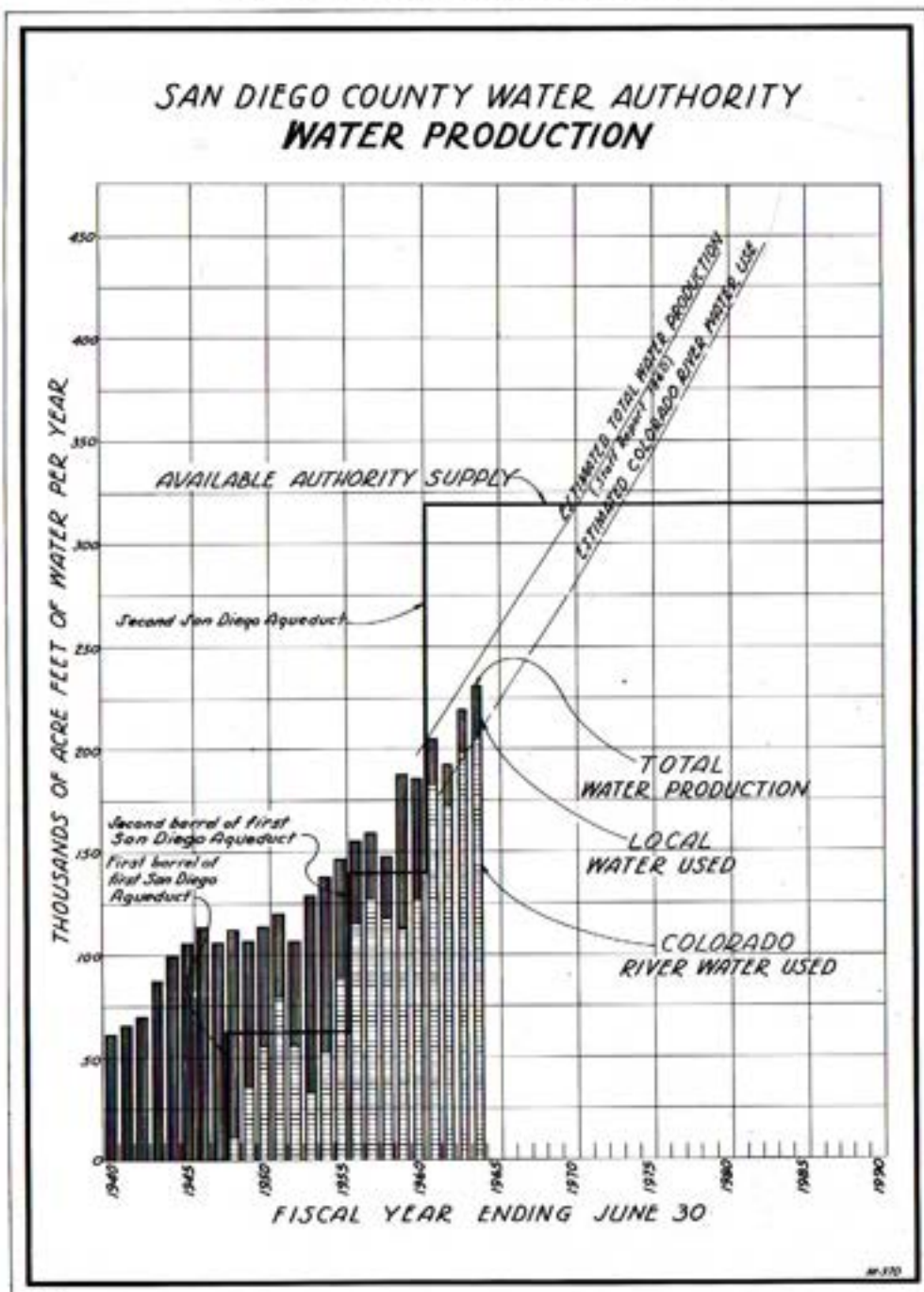


Figure B. Water Production of Authority Member Agencies

directly from the aqueducts for agricultural purposes and varies down to \$3.00 per acre foot, depending on the rebate set at the time the water was placed into storage. Agricultural use of water is reported in Table 10. This year's report indicates that Yuima Municipal Water District had the highest percentage of agricultural water use.

The combined production of water of Authority member agencies is graphically illustrated on Figure B, together with the estimated available water supply. The columns which represent annual production have been shaded to differentiate between Colorado River water obtained from the Authority system and water obtained from local sources. The chart indicates a continuing trend of expanding use of Authority supplies and decreasing use of local supplies.

A projection of probable future production of water has been made with the assumption that water will be available when needed.

The forecast of Colorado River water use when compared to capacity of the present aqueducts indicates that additional facilities may be required in the early years of the next decade.

The Board of Directors has authorized a study of future water requirements within the Authority to up-date the staff report of 1960. This new report is scheduled for completion during February, 1965. Detailed forecasts of the timing of additional aqueducts will be made a part of this study.

Authority Facilities

The Authority system consists of the following facilities: That portion of the two San Diego Aqueducts lying southerly of Metropolitan's delivery point, approximately six miles south of the North County line; a portion of the Fallbrook-Oceanside Branch Line, extending Southwesterly from the First San Diego Aqueduct at Rainbow; the La Mesa-Sweetwater Branch Line, extending from the First Aqueduct at Slaughterhouse Canyon through Lakeside to a terminal point at the Sweetwater Reservoir; and the Chlorination Station in Rainbow Pass, where flows in both aqueducts are chlorinated.

The Authority has no storage facilities of its own. It does, however, have the right to store up to 20,000 acre feet of water in San

SAN DIEGO COUNTY WATER AUTHORITY

Vicente Reservoir. This privilege results from an agreement with the City of San Diego which expires October 31, 1964. Under this agreement, the City receives \$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 to the City from storage. Under the agreement, the first water discharged over the spillway would be that stored to the Authority's account. During the low-demand months, a total of 3,504 acre feet of water was placed in San Vicente Reservoir by the Authority to the accounts of its member agencies, 1,353 acre feet was withdrawn to meet peak demands in excess of the capacity of the aqueducts to deliver, and 1,064 acre feet was lost by evaporation. The net result of the year's storage activities was an increase of 1,087 acre feet to 17,639 acre feet in storage as of June 30, 1964. The changes in storage credited to each member agency are shown in Table 11. The Rainbow District had the largest amount credited to its account, totaling 4,963 acre feet or about 28 per cent of all Authority water stored in San Vicente Reservoir. The agreement for storage in San Vicente Reservoir is expected to be renewed under the same terms and conditions before its expiration in October, 1964.

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 Otay Reservoir, the terminus of the Second San Diego Aqueduct. This storage is for operational purposes only, and this water is transferred to the City of San Diego when water is requested by the City at this location. Storage capacity for member agencies such as is available in San Vicente Reservoir is not provided at Otay Reservoir. An annual charge is made by the City of San Diego of \$1.00 per acre foot for the maximum amount in 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.

The first water was placed in Otay Reservoir in March, 1961. The first delivery of water to the City of San Diego through a temporary service connection located in Otay Park was made in December, 1962. Except during the summer months, the City has taken very little water from this connection. Therefore, very close observation must be exercised by Authority operating personnel to prevent spillage from the aqueduct into Otay Reservoir.

WATER SUPPLY AND CONSUMPTION

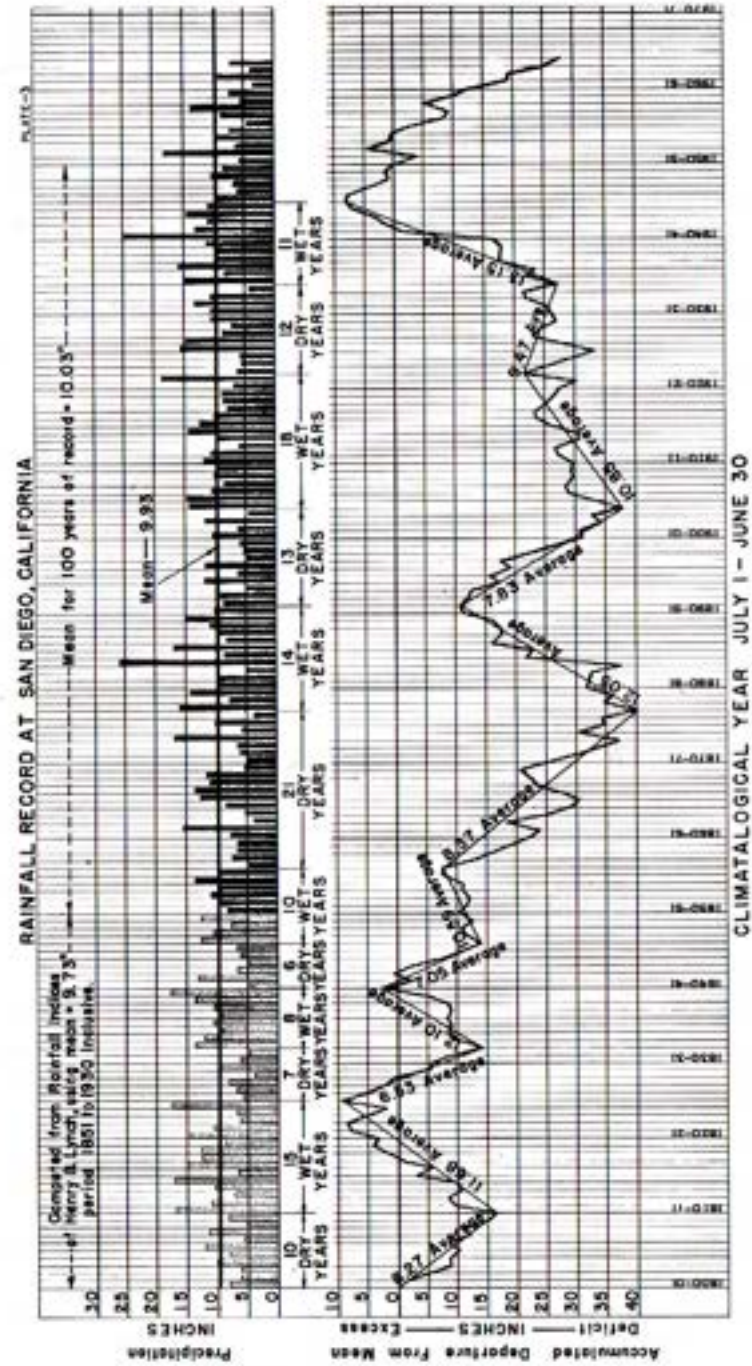


Figure C. Rainfall Record at San Diego, California

SAN DIEGO COUNTY WATER AUTHORITY

Water Quality

Chemical constituents of dissolved solids in the aqueduct water are shown in Tables 12 and 16. The breakdown is based on analyses of water delivered to the aqueducts at San Jacinto made in the chemical laboratory of the Metropolitan Water District at La Verne, California. Variation in total hardness ranged from a high of 339 p. p. m. to 307 p. p. m., reported as p. p. m. equivalent of calcium carbonate. Water temperature variation was over a 33° F. range. Low temperature of 48° F. was recorded in January, 1964, and the high temperature of 81° F. was reported in August, 1963.

Chlorination

It has been demonstrated that Authority water will meet or exceed the minimum bacteriological quality standards as set forth in the United States Public Health Service Drinking Water Standards of 1962 after dual treatment by chlorination.

In the service areas of several member agencies, large agricultural developments are based on use of irrigation water at reasonable water rates. The State Health Department has recognized this economic problem, and has for the time being agreed that filtration facilities may be delayed if the water is twice treated by chlorination with a time interval of at least one-half hour between the two points of application.

When untreated water is carried in the aqueducts, deposits of bacterial growth form on the interior of the pipe walls. For many years, the Authority followed a program for control of bacterial growth by slugging with chlorine. The slugging technique was used twice weekly for four-hour periods. Recent experiments indicated that existing equipment was suitable for continuous application of chlorine and such a program could be maintained for comparatively little added expense. Continuous chlorine treatment provides the member agencies with several benefits, among which are reduced service problems due to effect of slugs of chlorine reaching consumers, more uniform quality, and elimination of need for providing a second chlorination station. The Authority budget for 1964-65 provides for continuous chlorination of the aqueduct flow to an average

WATER SUPPLY AND CONSUMPTION

rate of 1.0 p. p. m. Indications are that this policy will continue in effect for some years.

During construction of the First Barrel of the Second San Diego Aqueduct, a modern chlorination station was constructed in Rainbow Pass from which the three barrels of the First and Second Aqueducts are chlorinated. Foreseeing construction of the Second Barrel of the Second Aqueduct, the Authority also provided for chlorination of this Barrel.

Allocation of Water Among Member Agencies

The Authority Act (Sec. 5-11) establishes a method by which the water supply of the Authority can be divided among its member agencies should the combined demands for water exceed the ability of the Authority to deliver. This method sets up a basic preferential right under which a member agency can purchase at all times a proportionate part of the available water supply of the Authority. In addition, the agency also has the right to purchase its proportionate part of water to which another agency is entitled but does not use at the time.

The quantity of water to which an agency is entitled under its preferential right to purchase is that portion of the total Authority water supply which bears the same relation to the whole as the total of all payments paid to the Authority by the Agency and its tax payers, exclusive of payments for water, bears to the total amount received from all agencies.

Allocation by preferential right will come into effect only when the combined demand for water from current flow exceeds the capacity of the aqueducts. When capacity is available, agencies may purchase as much water as they desire.

Before construction of the Second San Diego Aqueduct, demands exceeded system capacity on several occasions; however, voluntary adjustments of ordered flow by member agencies permitted operation without resort to the provisions of Section 5.11 of the Authority Act. The percentage allocation in effect as of June 30, 1964, and the corresponding flow available from the present aqueduct system are shown in Table 13.

Future Supplies

The Water Authority obtains all its water supply from the Metropolitan Water District of Southern California. At the present time all of the water comes from the Colorado River through the Colorado River aqueduct. The Metropolitan Water District Board has made a statement of policy, frequently repeated over many years, that when additional water or distribution facilities are needed to meet demands of its member agencies, additional water and facilities will be available.

The first major step in obtaining additional water was undertaken on November 4, 1960, when the District entered into a contract with the State of California to obtain 1,500,000 acre feet of water from the State aqueduct system. State project water has been promised for delivery to Southern California by the year 1972, and current reports indicate that the construction is on schedule. Key features of the State project are well along in the construction phase from Oroville Dam south to San Luis Dam. Further south, portions of the canal system and contracts for tunnels in the Tehachapi Mountains are under way.

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 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 has pending contract amendments which will increase the quantity of State project water from 1,500,000 to 2,000,000 acre feet per year for the District.

Responsible forecasts indicate that the remaining Colorado River entitlement, together with State project water, will provide the necessary supplemental water supply for the Metropolitan Water District's member agencies until the year, 1990. During this period of time, the population of the District is expected to increase from the present 10 million to 20 million.

For the period beyond 1990, when additional supplies are required, many plans have been proposed which call for development of projects on the Columbia River, Snake River, and several of the undeveloped Northern California rivers. These many proposals, together with sea water desalting, are being studied by the Water Authority,

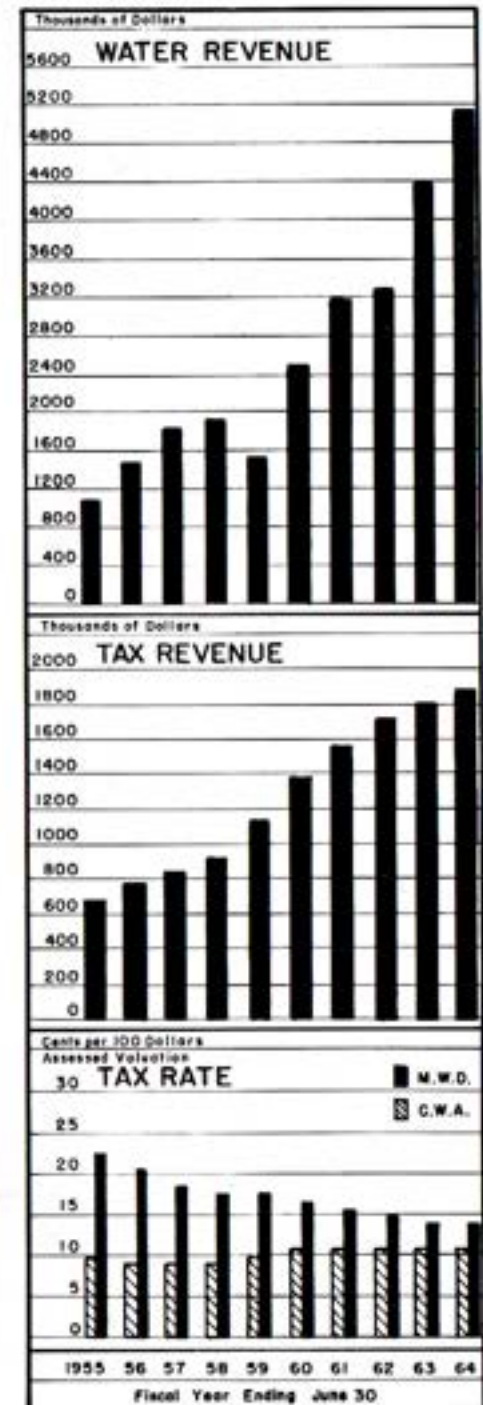
the Metropolitan Water District, the State of California, and the Federal Government.

Figure B shows the increase in water requirements in the area of the Authority since 1940. Planning is now underway to determine the timing of construction of the second barrel of the Second San Diego Aqueduct. Two and one-half to three years are necessary for lead time to design and construct the second barrel. Staff studies now underway, which are scheduled for completion by February, 1965, will describe necessary facilities and recommend the timing of construction, now estimated to be sometime during the period 1969 to 1974.

OPERATION AND MAINTENANCE

Maintenance Headquarters

The Authority conducts its system operation and maintenance from a center located at 660 West Fifth Avenue in Escondido. The





Road Grader Crew

Superintendent, Mr. Joseph E. Lester, supervises all operational activities as well as maintenance functions from this location. The field employees now number eleven. Operation of the aqueducts over the wide range of flow conditions required to meet the demand of member agencies, requires that operators be on call twenty-four hours a day. The Superintendent resides in a company-owned house at the Escondido center where he is in constant touch with all operations.

Patrol

In addition to aqueduct operational functions, the Authority patrols the aqueducts on a routine basis to keep down vandalism, watch for leaks and plan for maintenance of structures, gates, culverts, and access roads. Seventeen vehicles are required for maintenance and patrol of the aqueducts, from a point near the Riverside County line to the terminus of the Second Aqueduct at Otay Reservoir, near the international boundary line with Mexico. During the fiscal year, 166,600 miles were logged by Authority vehicles.

CROSS-CONNECTION PROJECT

The field force uses a variety of equipment to maintain the facilities. Road graders, welders, bulldozer, compressor, and a well-equipped shop are maintained. Personnel have experience and training in related skills required to maintain, repair, and replace facilities.

Operating personnel are dispatched by radio. Base stations are maintained in San Diego and Escondido with a repeater mounted on Palomar Mountain. Four mobile units are regularly operating on independent assignments subject to immediate call for emergency action or routine change in water delivery to member agencies.

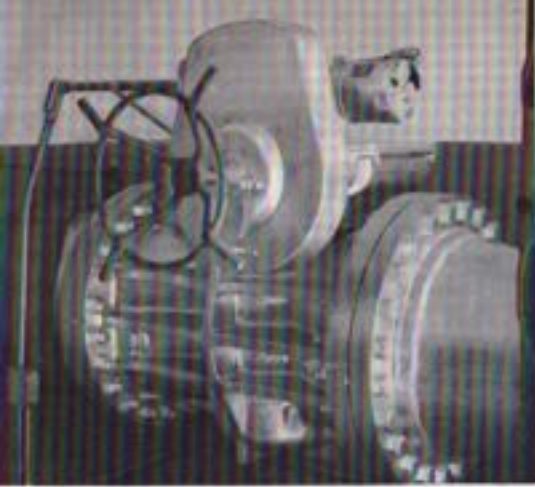
CROSS-CONNECTION PROJECT

During the 1963-64 fiscal year, final surveys were completed and rights-of-way parcels were mapped and acquired. Of the 74 total parcels required, 54 were obtained by Mr. Alfred May, Right-of-way Agent. The remaining 20 parcels were acquired by eminent domain proceedings. However, owners of most of the remaining parcels have shown indications of willingness to reach an early settlement.

By the end of the year, design had been completed and plans and specifications were out for bids. Shortly after the end of the year, ten bids were received for Specification No. 211, cross-connection pipeline. Twelve bids were received on Specification No. 212, diversion and terminal structures. The low bids of Einer Brothers, Inc. for the pipeline, \$2,284,884.24, and J. Putnam Henck for the structures, \$158,700., were accepted.

This facility will form an important part of the Authority's system and will add 40,000 feet of 66-inch diameter pipeline to the aqueduct system.

Project field quarters have been established at Escondido headquarters under the direction of Mr. Lee D. Purdin, Project Construction Engineer. The design section was established in the San Diego office under the direction of Mr. Robert H. Wilken, Senior Design Engineer.



Typical installation of plug valve with automatic operator

SERVICE CONNECTIONS

As of July 1, 1963, there was a total of 46 service connections on the Authority's system, ranging in capacity from 2 to 180 c.f.s. Water is delivered as requested, and flow is regulated by a control valve which is operated by Authority personnel.

There were four new service connections constructed during the fiscal year which are briefly described as follows:

San Diego No. 7 Temporary Service Connection

This temporary service connection, located near the terminus of the Second San Diego Aqueduct in Otay Park, serves the City of San Diego's South Bay area through its Otay Filtration Plant. The City is making studies to determine the best location for a new filter plant to serve this area, and when this plant is completed, a new permanent connection will be installed. Temporary service connections are installed for a maximum period of eighteen months.

San Diego—Los Penasquitos Temporary Service Connection

This service connection is located on the Second San Diego Aqueduct about four miles south of the San Dieguito River. It was installed to serve the Los Penasquitos Development, including construction of a golf course, and also to supply water to the contractor constructing the City's 36-inch pipeline from Miramar filter plant to Rancho Bernardo subdivision project. This service connection will be removed



Construction of San Dieguito-Santa Fe Service Connection

SAN DIEGO COUNTY WATER AUTHORITY

when the City's pipeline is completed. The connection is at an existing air valve structure and consists of a 6-inch Badger meter with a capacity of 1000 g.p.m. and a 6-inch gate valve to regulate the flow.

San Diego No. 8 Service Connection

The location of this service connection is on the Second San Diego Aqueduct about one mile south of Miramar Reservoir and serves the U. S. Navy Fire Fighting School. The connection is supplied from an existing blowoff which was altered to permit the installation and still continue to perform its primary function.

The meter is a 4" x 1" Hersey Compound meter having a capacity of 500 g.p.m. and the flow is controlled by a 6-inch plug valve.

San Dieguito-Santa Fe No. 1 Service Connection

This service connection is located on the Second San Diego Aqueduct about one mile north of the San Dieguito River and will supply water to the San Dieguito Reservoir which is used by the City of San Diego, the San Dieguito Irrigation District, and the Santa Fe Irrigation District.

The installation was made at an existing 20-inch nozzle which was placed in the Second Aqueduct pipeline at time of construction. It consists of a 24" x 13.5" venturi tube activating a Builder's Type M totalizer - indicator - recorder meter instrument having a capacity of 40 c.f.s. Flows are controlled by a 24" plug valve, motor operated, with automatic controls to maintain a constant flow. Also at this location provisions were made for the installation of a future 20" meter with a capacity of 27 c.f.s. and for the connection to the proposed second barrel to the Second Aqueduct.

SERVICE CONNECTIONS

The first service connection to serve the Yuima Municipal Water District was under study but construction had not been authorized at the end of the fiscal year.

LEGAL ACTIVITIES

During the year the Authority remained free from litigation except that pertaining to the acquisition of rights of way and easements for the cross-connection. Of the 20 parcels requiring such proceedings, a number had been settled without trial; but it is apparent that there will remain a small group of owners with whom settlement will be impossible and which will require litigation to final judgement.

The work of Legal Counsel throughout the year was typical of the variety of activity of the Authority requiring counsel's services and supervision. Annexations of territory, either direct to the Authority, or concurrently to its member agencies, require meticulous attention to the details of legal procedure. This is true because such proceedings create important legal burdens and benefits upon the lands involved. They acquire certain rights as territory served with water through the Authority and Metropolitan, rights of great value, not lightly to be obtained, but at a burden of submitting to taxation for both present and future obligations. Consequently, due process in the annexation involves a newly formed agency; the responsibility includes approval of the proceedings followed in creating the agency as well as those for its annexation. In either type of annexation, however, the necessary filing of information with the State Board of Equalization and the County taxing officials must be performed meticulously in order that the newly annexed property be properly and legally included in the tax base of both the Authority and Metropolitan. This means supplying the necessary maps and legal descriptions upon which such proceedings are based; and because of our occasional Authority-wide elections, the proper information must be supplied to the County Registrar of Voters as well.

Many of our agencies annex portions of area in adjoining members from time to time. The status of these overlapping areas is one

SAN DIEGO COUNTY WATER AUTHORITY

requiring legal consideration by the Authority; and proceedings are available by which these overlaps can be corrected and eliminated or, if permitted to continue, be classified as within one or the other of the agencies for Authority purposes. Proceedings for either of these purposes must be carefully followed to be effective, and the Authority's counsel has established a practice of close association and cooperation with counsel for the member agencies that is mutually helpful in eliminating error.

During the year the Authority issued and sold its remaining block of \$5,000,000 in bonds of the 1957 issue. The proceeds of this sale were necessary to finance the construction of the Aqueduct's cross-connection and other purposes. The validity of these bonds requires utmost care in the preparation of the Authority's official statement and the involved procedures for advertising the sale, receiving and analyzing bids, printing of bonds and coupons, their execution and delivery. Expert bond counsel is employed by the Authority to supervise these procedures so that the purchaser's requirement for a supporting bond counsel opinion can be supplied, but the detail work must be performed by the Authority staff under the direction of its own counsel.

Major construction contracts, the notice inviting bidders thereon, the supervision of the bidding procedures, and the award and execution of the final contracts involve large sums of money and precise legal techniques. The administration and interpretation of the construction contracts after their award involves continuing legal supervision until the work is completed, accepted, and paid for. There remain other contracts affecting Authority operations, purchases, and the like, all of which require the approval of counsel and, in many instances, his participation in their preparation. There is the continuing matter of board resolutions, ordinances, changes in the Authority's Administrative Code, the preparation of letters of various sorts, statements for presentation to legislative committees, and like matters either referred to counsel or for which he is responsible under the Code or statutes.

Counsel is frequently invited to analyze and report on matters of general interest with legal overtones, such as the various proposals

LEGAL ACTIVITIES

for regional water programs or legislation, both State and Federal, involving water matters or individual projects.

A unique problem during the year arose in working out the mechanics with the City of Oceanside involving an installment sale of a portion of the Fallbrook-Oceanside branch aqueduct. Other problems, happily resolved, were involved in the several changes in the executive personnel of the organization.

The Authority's counsel cannot occupy a remote ivory tower and perform the continual duties required of him in the daily administration of the important and involved affairs of the organization. His work, while demanding, is extremely rewarding in its intimate participation in the functioning of this important and effective organization.

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 closely with that District. A brief outline of the District's organization and operation may be of interest to readers of the Authority 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, whereas the Authority Act permitted annexation of both cities and districts. Later, the Metropolitan Act was amended to include districts. In general, the Metropolitan and Authority Acts are similar.

SAN DIEGO COUNTY WATER AUTHORITY

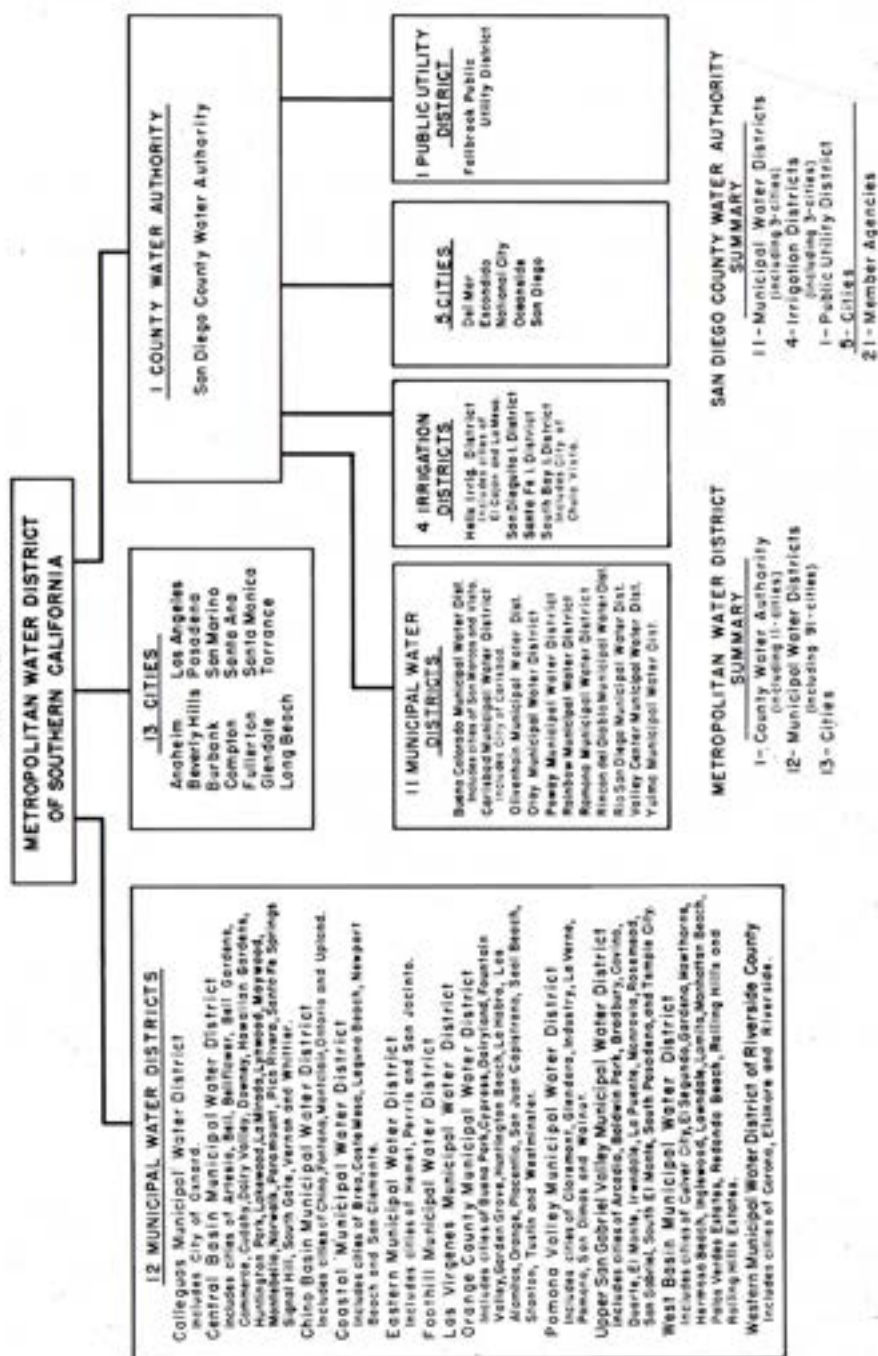


Figure D. Composition of the Metropolitan Water District of Southern California

MEMBERSHIP IN THE METROPOLITAN WATER DISTRICT

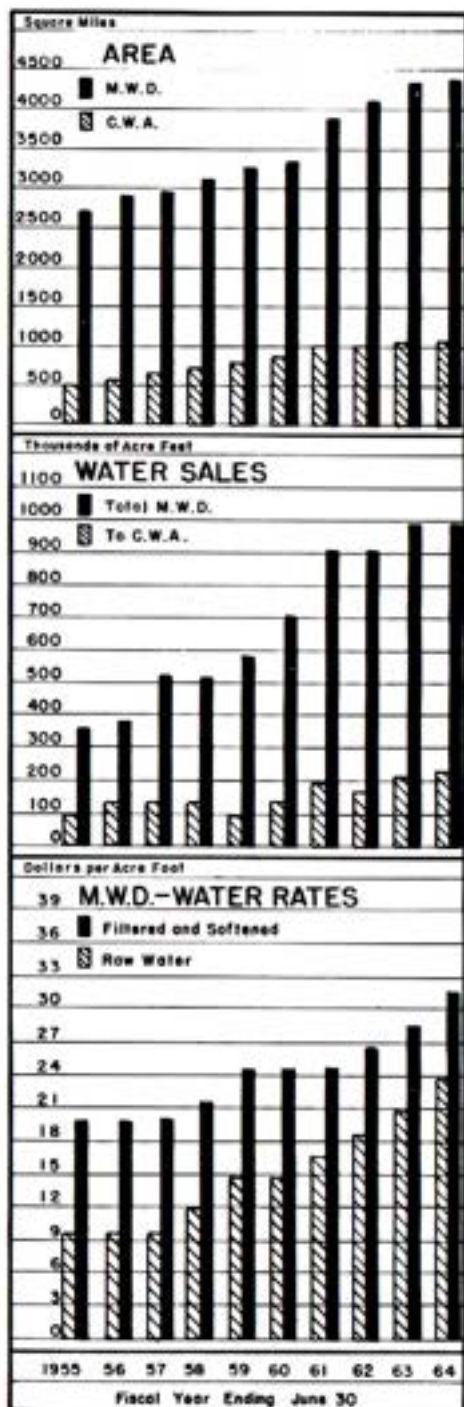
The District is also governed by a board of directors. Each director represents a constituent member agency. A member agency is entitled to one director on the Metropolitan Board of Directors plus one additional director for each \$500 million of assessed valuation. Some agencies have a large number of directors serving on the District Board while other agencies have but one. As shown on Figure D, the District is comprised of 26 member agencies.

As of June 30, 1964, the Authority had four representatives serving on the District Board of Directors. Mr. Fred A. Heilbron, Chairman of the Authority Board of Directors, serves as Secretary of the Metropolitan Water District Board of Directors, having held this office since 1946, when the Authority became a member agency of the District. He is also a member of the Finance and Insurance Committee, the Executive Committee, and the Water Problems Committee. Mr. Hans H. Doe, Secretary of the Authority Board of Directors, is a member of the Finance and Insurance Committee and the Lands and Rights of Way Committee. He has served on the Board of Metropolitan for the past five years. Mr. Harry Griffen, Authority Treasurer, was appointed to the District Board in January of 1963. Director Griffen is a member of the Finance and Insurance Committee and the Lands and Rights of Way Committee. Mr. George R. Henderson was appointed to the Board of Directors in July, 1963. Director Henderson is a member of Engineering Committee and Legal and Claims Committee.

As of June 30, 1964, the Authority had a total of 171 votes out of 1726 or 9.9 per cent of the total. When Board action is taken, the votes of an agency are cast as a unit; that is, in accordance with the majority vote of that agency's representation.

Constituent Member Agencies and Area

As shown on Figure D, the District is comprised of 26 member agencies, consisting of 13 original cities, one county water authority, and 12 municipal water districts. Portions of Ventura, Los Angeles,



Tax Rate

The District maintained its tax rate of 14¢/\$100 of assessed valuation for 1963-64. In 1946 when the Authority annexed to the District, the tax rate was 50¢/\$100. During the past 18 years, progressive reductions in the tax rate totaled 36 cents by the year 1962-63.

The Tax rate for each year of operation is shown in Table 17. The total District tax levy including regular and special taxes in 1963-64 was approximately \$29,500,000, of which \$3,028,000, or 10.3 per cent 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, 1964, member agencies of the Authority had assumed payments totaling \$20,785,809, of which a total of \$9,369,302 was paid by June 30, 1964

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SAN DIEGO COUNTY WATER AUTHORITY

Table 1

AREA - AUTHORITY MEMBER AGENCIES

Member Agencies	Area Within Authority			Percent of Total Authority Area 6/30/64
	As of 6/30/63	Changes During Year	As of 6/30/64	
	acres	acres	acres	
Bueno Colorado M. W. D.	48,998 (2)	- 24 (3)	48,974	6.85
In City of San Marcos	(5,650)	(+ 647)	(6,297)	(0.88)
In City of Vista	(6,790)	(+ 562)	(7,352)	(1.02)
Carlsbad M. W. D.	20,643 (2)	- 22 (4)	20,621	2.88
In City of Carlsbad	(6,131)	(+ 587)	(6,718)	(0.94)
Del Mar, City of	1,082	0	1,082	0.15
Escondido, City of	5,465	+1412	6,877	0.96
Fallbrook Public Utility District	15,469	0	15,469	2.16
Helix Irrigation District	31,184	+ 1 (5)	31,185	4.36
In City of El Cajon (1)	(6,407)	(+ 11)	(6,418)	(0.90)
In City of La Mesa	(4,818)	(+ 20)	(4,838)	(0.68)
National City, City of	5,066	+ 41	5,107	0.72
Oceanside, City of	20,574	+ 77	20,651	2.89
Olivinha M. W. D.	24,274	- 9 (11)	24,265	3.30
Otay M. W. D.	64,658	- 46 (6)	64,612	9.04
Poway M. W. D.	22,980	0	22,980	3.21
Rainbow M. W. D.	40,093	0 (7)	40,093	5.61
Ramona M. W. D.	39,100	+2,265	41,365	5.79
Rincon del Diablo M. W. D.	22,920 (2)	-1,387 (8)	21,533	3.01
Rio San Diego M. W. D.	54,105	0	54,105	7.57
San Diego, City of	188,624	+4,569	193,193	27.02
San Diego Irrigation District	4,929	0	4,929	0.69
Santa Fe Irrigation District	10,132	+ 9 (9)	10,141	1.42
South Bay Irrigation District	15,848 (2)	+ 14 (10)	15,862	2.22
In City of Chula Vista	(9,051)	(+ 222)	(9,273)	(1.30)
Valley Center M. W. D.	59,510	0	59,510	8.32
Yuma M. W. D.	0	+12,400	12,400	1.74
Total Authority Area	695,654	+19,291	714,945	100.00
San Diego County		2,725,100		

- (1) Revised to conform with data received from agency.
- (2) 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.
- (3) Does not include 2,608 acres overlapping in City of Oceanside, and 284 acres overlapping in City of Escondido.
- (4) Does not include 217 acres overlapping in City of Oceanside.
- (5) Does not include 3 acres overlapping in City of San Diego.
- (6) Does not include 6,747 acres overlapping in City of San Diego.
- (7) Does not include 160 acres overlapping in City of Oceanside.
- (8) Does not include 4,690 acres overlapping in City of Escondido and 1 acre overlapping in City of San Diego.
- (9) Does not include 3 acres overlapping in City of San Diego.
- (10) Does not include 217 acres overlapping in City of San Diego, and 325 acres overlapping in City of National City.
- (11) Does not include 5 acres overlapping in City of San Diego.

TABLES

Table 2

POPULATION GROWTH - COUNTY AND AUTHORITY AREA

1910 to 1964

(Includes Resident Military Personnel)

Year (as of April 1)	COUNTY		AUTHORITY		Percent of County Population in Authority
	Total Population (1)	Average Annual Growth	Total Population	Average Annual Growth	
1910	61,665				
		5,058			
1920	112,248				
		9,741			
1930	209,659				
		7,969			
1940	289,348				
1946 (3)	502,804	26,746 (3)	440,659		88
				2,807	
1950	556,808		(2) 451,886		81
		44,671		50,451	
1960	1,003,520		(2) 956,400		95
		108,080		59,100	
1961 (4)	1,111,600		(5) 1,015,500		91
		56,100		69,500	
1962 (4)	1,167,700		(5) 1,085,000		93
		3,600		5,200	
1963 (4)	1,164,100		(5) 1,090,200		94
		13,600		34,800	
1964 (4)	1,177,700		(5) 1,125,000		96

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

SAN DIEGO COUNTY WATER AUTHORITY

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

Member Agencies	Population - U. S. Census				Annual Increase 1960-1964	Density of Population 1964	
	Area 6/30/64	1950	1960	1964			Per Sq. Mile
		(1)	(1)	(2)			
Bueno Colorado M. W. D.	48,974	31,500	37,260	5	0.76	486	
In City of San Marcos	(6,297)	---	(2,950)	---	0.47	300	
In City of Vista	(7,262)	---	(21,860)	---	3.00	1,921	
Carlsbad M. W. D.	20,621	10,000	11,600	4	0.56	360	
In City of Carlsbad	(6,718)	(8,400)	(11,800)	6	1.76	1,124	
Del Mar, City of	1,082	---	3,900	---	3.51	2,245	
Eucalypto, City of	6,877	18,500	24,100	8	3.50	2,243	
Fallbrook Public Utility District	13,489	10,000	10,500	1	0.68	434	
Helix Irrigation District	31,185	44,160	148,130	5	4.73	3,040	
In City of El Cajon	(6,418)	(37,300)	(45,200)	5	7.04	4,567	
In City of La Mesa	(4,838)	(28,800)	(35,000)	4	7.23	4,680	
National City, City of	5,107	32,300	34,650	2	6.78	4,342	
Oceanside, City of	20,651	24,700	32,800	8	1.59	1,017	
Olivehain M. W. D.	24,265	200	370	21	0.02	10	
Oxay M. W. D.	64,612	5,400	9,450	19	0.15	94	
Poway M. W. D.	22,980	4,800	8,200	18	0.36	228	
Rainbow M. W. D.	40,093	2,800	3,300	4	0.08	53	
Ramona M. W. D.	41,365	5,600	5,800	1	0.14	90	
Rincon del Diabolo M. W. D.	21,533	14,000	15,550	3	0.72	462	
Rio San Diego M. W. D.	54,105	23,500	33,000	7	0.61	390	
San Diego, City of	193,184	537,200	638,700	4	3.31	2,116	
San Diego Irrigation District	4,929	15,000	18,500	6	3.75	2,402	
Santa Fe Irrigation District	10,141	7,700	8,650	3	0.85	545	
South Bay Irrigation District	15,862	64,300	72,550	2	4.87	2,927	
In City of Chula Vista	(9,273)	(42,400)	(51,100)	5	5.31	3,527	
Valley Center M. W. D.	59,510	5,000	7,500	13	0.13	81	
Yulma M. W. D.	12,400	---	550	---	0.05	34	
Total Authority	714,945	956,400	1,123,000	4	1.37	1,007	
San Diego County	2,729,100	1,053,520	1,177,700	4	0.43	277	

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

TABLES

Table 4
ASSESSED VALUATIONS - AUTHORITY MEMBER AGENCIES AND COUNTY

Member Agencies	Area 6/30/64			Assessed Valuation - Secured and Unsecured			1964-65		
	Acres	1962-63		Total	1963-64		Total	Per Acre	
		Total	Percent Increase		Total	Percent Increase		Total	Per Acre
Bueno Colorado M. W. D.	48,974	\$ 45,941,850	15.4	\$ 52,859,540	15.4	\$ 57,028,730	\$ 1,164		
Carlsbad M. W. D.	20,621	36,113,360	3.2	37,282,880	3.2	37,612,630	1,824		
Del Mar, City of	1,082	*(8,956,170)	-	8,895,690	-	9,410,200	8,697		
Eucalypto, City of	6,877	31,012,470	6.4	32,952,180	6.4	36,988,190	5,379		
Fallbrook Public Utility District	15,469	13,930,910	2.6	14,290,990	2.6	14,722,100	952		
Helix Irrigation District	31,185	204,119,880	2.7	209,695,280	2.7	217,798,250	6,984		
National City, City of	5,107	40,176,750	1.6	40,811,410	1.6	41,230,910	8,073		
Oceanside, City of	20,651	41,026,180	6.3	43,600,740	6.3	46,620,690	2,255		
Olivehain M. W. D.	24,265	2,036,420	6.4	2,187,450	6.4	2,388,810	98		
Oxay M. W. D.	64,612	25,988,200	2.9	26,732,360	2.9	27,297,690	422		
Poway M. W. D.	22,980	14,312,060	5.0	15,023,730	5.0	15,860,440	690		
Rainbow M. W. D.	40,093	10,326,860	4.3	10,775,820	4.3	11,166,610	279		
Ramona M. W. D.	41,365	6,865,130	25.5	8,614,830	25.5	8,888,500	215		
Rincon del Diabolo M. W. D.	21,533	20,867,390	5.2	21,937,870	5.2	26,061,110	1,210		
Rio San Diego M. W. D.	54,105	37,288,400	6.0	39,870,300	6.0	40,785,740	754		
San Diego, City of	193,184	941,336,990	4.0	978,639,550	4.0	1,016,815,350	5,263		
San Diego Irrigation District	4,929	23,285,340	2.3	23,827,160	2.3	24,490,490	4,969		
Santa Fe Irrigation District	10,141	19,468,740	6.2	20,667,560	6.2	20,953,370	2,066		
South Bay Irrigation District	15,862	106,700,890	5.6	112,719,210	5.6	120,749,630	7,613		
Valley Center M. W. D.	59,510	8,040,350	2.5	8,237,350	2.5	8,919,880	150		
Yulma M. W. D.	12,400	*(2,323,574)	5.5	*(2,451,040)	5.5	2,599,250	210		
Total Authority	714,945	\$1,628,736,170	5.0	\$1,709,700,900	5.0	\$1,788,388,770	\$ 2,501		
San Diego County	(1) 1,250,000	\$1,727,607,070	4.0	\$1,796,565,050	4.0	\$1,852,870,770	\$ 1,506		

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

* Estimated, not on Authority tax roll.

SAN DIEGO COUNTY WATER AUTHORITY

Table 5

SALES OF COLORADO RIVER WATER - FISCAL YEAR 1963-64

(All Figures in Acre Feet)

Member Agencies	July	August	Sept.	Oct.	Nov.	Dec.	Total 6 Months
Buena Colorado M. W. D.	1,470.3	1,513.7	923.7	652.2	311.7	384.8	5,256.4
Carlsbad M. W. D.	909.4	985.2	698.1	632.1	306.1	280.2	3,721.1
Del Mar, City of	0	0	0	0	0	0	0
Escondido, City of	346.5	344.2	259.2	228.8	170.1	177.7	1,526.5
Fallbrook P. U. D.	1,355.8	1,425.7	928.4	991.3	479.2	710.6	5,891.0
Belix I. D.	3,150.1	3,076.5	2,088.1	1,937.2	1,293.6	1,697.5	13,243.0
National City & South Bay I. D.	1,426.3	1,480.5	1,025.1	944.7	654.3	500.6	6,031.5
Oceanside, City of	722.2	760.9	512.8	532.5	396.7	380.2	3,305.3
Oliveshain M. W. D.	126.9	121.1	64.7	70.4	30.6	29.0	432.7
Otay M. W. D.	703.2	764.7	532.1	629.7	254.0	319.8	3,203.5
Poway M. W. D.	372.9	376.2	260.6	241.5	107.4	154.0	1,512.6
Rainbow M. W. D.	1,326.7	1,410.7	1,050.6	969.0	704.7	881.3	6,343.0
Ramona M. W. D.	130.2	130.7	81.7	48.5	34.3	24.2	449.6
Rincon del Diablo M. W. D.	1,195.9	1,184.6	763.2	935.5	419.6	599.7	5,098.5
Rio San Diego M. W. D.	498.5	467.2	347.0	260.8	155.8	199.0	1,929.3
San Diego, City of	11,810.3	12,125.8	12,420.3	11,709.9	10,918.5	10,714.9	69,699.7
San Diegoito I. D.	319.7	319.7	309.4	319.7	309.4	0	1,577.9
Santa Fe I. D.	282.8	282.8	273.7	282.8	273.7	0	1,395.8
Valley Center M. W. D.	503.3	525.1	369.0	266.7	123.4	170.7	1,958.2
Yuima M. W. D.	---	---	---	---	---	0	0
Total Sales to Agencies	26,652.0	27,295.3	22,817.7	21,653.3	16,933.1	17,224.2	132,575.0
Total Sales to Others	7.2	7.9	7.4	5.0	3.6	4.0	35.1
Total Sales to Agencies and Others	26,659.2	27,303.2	22,825.1	21,658.3	16,936.7	17,228.2	132,610.7
Total to Authority Storage +	+ 3.7	+ 0.9	+ 16.5	+1,299.4	+1,345.3	+ 20.5	+ 2,696.3
Total from Authority Storage -	- 795.5	- 507.4	0	0	- 13.9	0	- 1,366.8
Total Flow in Authority System	25,867.4	26,746.7	22,841.6	22,957.7	18,268.1	17,248.7	133,930.2
Rate of Flow: c. f. s. to Agencies and Others	433.6	444.0	383.6	352.2	284.4	290.2	363.4
c. f. s. to Authority Storage +	+ 0.1	0	+ 0.3	+ 21.1	+ 22.6	+ 0.3	+ 7.4
c. f. s. from Authority Storage -	- 13.0	- 9.0	0	0	- 0.2	0	- 3.8
c. f. s. Flow in Authority System	420.7	435.0	383.9	373.3	307.0	290.5	367.0

TABLES

Table 5

(Continued)

Jan.	Feb.	March	April	May	June	Total 6 Months	Yearly Total	Yearly Average c. f. s.
476.9	436.3	454.7	484.2	1,003.7	1,251.5	4,101.3	9,357.7	12.9
374.5	164.2	593.0	269.5	685.5	674.7	2,671.4	6,392.5	8.8
0	0	0	0	0	0	0	0	0
170.4	194.2	165.6	218.6	279.5	298.0	1,326.3	2,832.8	3.9
612.9	682.1	609.4	663.2	928.5	1,131.5	4,625.6	10,518.6	14.5
1,406.1	1,459.6	1,338.5	1,507.0	2,405.0	2,649.1	10,765.3	24,008.3	32.1
608.4	467.1	1,338.3	915.4	1,386.5	1,428.4	6,044.1	12,975.6	16.6
388.8	425.5	411.5	512.2	670.3	683.0	3,091.3	6,396.6	8.8
10.6	20.9	28.9	39.4	84.6	83.6	268.0	700.7	1.0
232.6	238.6	280.3	257.0	331.6	464.7	1,804.8	5,608.3	6.9
134.2	174.1	136.9	205.2	244.6	346.7	1,241.7	2,754.3	3.8
571.9	586.1	649.4	723.2	1,101.9	1,221.5	4,854.0	11,197.0	15.4
46.6	31.8	30.5	40.6	56.3	79.9	279.7	729.3	1.0
548.6	652.9	489.4	543.5	963.2	1,149.3	4,346.9	9,445.4	12.0
190.8	187.5	206.7	242.4	257.4	465.2	1,550.0	3,479.3	4.8
5,376.9	3,515.0	9,041.2	6,138.5	9,397.6	12,931.6	46,400.8	116,100.5	159.9
0	0	319.7	309.4	319.7	309.4	1,258.2	2,836.1	3.9
0	0	282.8	273.7	282.8	273.7	1,113.0	2,508.8	3.4
163.6	122.9	170.7	138.7	356.9	540.8	1,493.6	3,451.8	4.8
0	0	0	0	0	0	0	0	0
11,313.8	9,352.8	16,307.5	13,481.7	20,747.6	25,982.6	97,236.0	229,811.6	316.5
3.8	3.3	4.9	3.3	5.3	7.2	27.8	62.9	0.1
11,317.6	9,356.1	16,362.4	13,485.0	20,752.9	25,989.8	97,263.8	229,874.5	316.6
+ 12.5	+ 265.0	+ 321.6	+ 123.9	+ 130.7	0	+ 853.7	+ 3,540.0	+ 4.9
0	0	- 100.5	0	0	0	- 100.5	- 1,467.3	- 2.0
11,330.1	9,621.1	16,583.5	13,608.9	20,883.6	25,989.8	98,017.0	231,947.2	319.5
184.1	162.7	266.1	226.6	337.5	436.8	269.4	316.6	
+ 0.2	+ 4.6	+ 5.2	+ 2.1	+ 2.1	0	+ 2.4	+ 4.9	
0	0	- 1.6	0	0	0	- 0.3	- 2.0	
184.3	167.3	269.7	228.7	339.6	436.8	271.5	319.5	

SAN DIEGO COUNTY WATER AUTHORITY

TABLES

Table 6
WATER SALES - 1947 to 1964
(All figures in acre feet)

Member Agencies	1947-56 (1)	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	Totals
Bueno Colorado M. W. D.	9,061	7,315	2,665	2,677	2,735	10,143	9,334	9,735	9,358	64,036
Carlsbad M. W. D.	3,071	975	1,989	3,111	3,548	5,421	5,692	7,196	6,392	37,433
Del Mar, City of	---	---	---	---	---	---	---	---	0	0
Escondido, City of	4,089	1,544	1,553	2,003	2,142	2,757	2,436	2,623	2,853	22,300
Falbrook Public Utility District	34,893	7,228	5,446	9,032	8,106	10,352	8,876	10,228	10,517	104,678
Helix Irrigation District	66,561	14,968	14,968	14,399	14,176	23,754	22,334	27,398	24,008	221,588
National City and South Bay I. D.	67,610	10,523	10,523	5,509	10,656	12,619	11,817	12,955	12,676	154,745
Oceanside, City of	8,203	3,308	3,941	3,665	3,528	3,923	3,758	4,442	6,397	40,195
Olivehain M. W. D.	---	---	---	---	---	12	230	570	101	1,503
Okay M. W. D.	0	2	199	639	1,120	1,120	1,749	5,332	5,008	14,049
Poway M. W. D.	1,653	915	681	1,311	1,567	2,305	2,609	2,908	2,754	15,543
Rainbow M. W. D.	3,614	3,965	3,328	6,094	5,662	7,613	7,458	9,503	11,197	56,456
Ranomas M. W. D.	---	---	29	169	322	469	517	651	729	2,886
Riaco del Diablo M. W. D.	7,588	3,601	2,603	3,045	2,244	7,968	6,157	7,581	9,445	52,232
Rio San Diego M. W. D.	---	---	819	1,235	2,138	2,935	2,899	3,375	3,479	18,974
San Diego, City of	425,166	83,351	89,870	41,364	93,892	83,323	87,481	104,601	116,100	1,120,348
San Diego Irrigation District	5,365	2,013	1,171	0	1,488	3,948	2,817	3,008	2,836	22,266
Santa Fe Irrigation District	4,682	1,150	998	0	1,346	3,338	2,837	2,690	2,509	19,140
Valley Center M. W. D.	1	791	769	776	1,368	2,124	2,170	2,902	3,452	14,343
Yuma, M. W. D.	---	---	---	---	---	---	---	---	0	0
Total Sales to Agencies	642,497	143,361	138,004	94,359	166,587	185,546	186,381	217,371	229,811	1,994,747
Total Sales to Others	86	69	95	275	271	115	108	78	63	1,158
Total to Authority Storage	+ 37,387	- 6,655	+ 19,452	+ 17,671	- 4,968	+ 10,668	- 7,972	+ 8,365	+ 3,540	+107,588
Total from Authority Storage	- 25,046	- 7,710	- 7,898	- 11,057	- 19,585	- 972	- 3,601	- 5,342	- 1,467	- 83,278
Total Flow in	---	---	---	---	---	---	---	---	---	---
Authority System	654,334	144,375	142,253	101,478	142,241	193,257	184,838	220,472	231,947	2,020,215
Rate of Flow:										
c.f.s. to Agencies & Others	103.2	200.3	193.0	131.0	216.1	260.6	349.3	360.4	316.6	196.0
c.f.s. to Authority Storage	+ 6.0	- 9.2	+ 14.4	+ 24.4	+ 6.8	+ 14.6	+ 11.0	+ 11.5	+ 4.9	+ 8.9
c.f.s. from Authority Storage	- 4.1	- 10.6	- 15.9	- 13.2	- 27.0	- 1.3	- 5.0	- 7.4	- 2.0	- 6.9
c.f.s. Flow in	---	---	---	---	---	---	---	---	---	---
Authority System	105.1	198.9	196.5	140.2	195.9	273.9	255.3	264.5	218.5	168.0

(1) The operation of the first Aqueduct was formally initiated on November 27, 1947. For sales in intervening years see previous reports.
(2) Rio San Diego M. W. D., encompassing Lakeside I. D., was annexed to Authority June 7, 1956. Figures prior to that date are for Lakeside I. D. only.

Table 7
WATER PRODUCTION WITHIN AUTHORITY AGENCIES - FISCAL YEARS 1954-55 to 1963-64
(All Figures in Acre Feet)

Member Agencies	From Local and Authority Supplies									
	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64
Bueno Colorado M. W. D.	13,043	13,058	11,698	15,000	13,116	14,066	11,397	13,763	12,743	
Carlsbad M. W. D.	2,972	2,991	2,607	3,923	4,980	7,091	6,711	7,285	6,412	
Del Mar, City of	---	---	---	---	---	---	---	---	---	
Escondido, City of	1,741	1,816	1,730	2,213	2,694	3,126	3,211	3,623	3,853	
Falbrook Public Utility District	8,394	8,093	10,013	9,130	10,724	8,999	10,379	10,712	10,712	
Helix Irrigation District	15,598	16,541	15,648	21,585	21,699	24,029	21,936	23,591	22,943	
National City and South Bay I. D.	13,795	12,873	12,316	14,597	13,299	14,148	13,329	14,219	14,021	
Oceanside, City of	4,653	4,369	4,204	5,107	5,081	5,374	5,038	5,795	6,664	
Olivehain M. W. D.	---	---	---	---	---	---	---	---	---	
Okay M. W. D.	---	---	---	---	---	---	---	---	---	
Poway M. W. D.	1,120	917	755	1,310	1,567	2,205	2,009	2,508	2,754	
Rainbow M. W. D.	3,535	4,834	4,052	6,976	6,748	8,771	8,533	10,400	11,431	
Ranomas M. W. D.	192	152	178	351	500	541	643	744	825	
Riaco del Diablo M. W. D.	9,804	9,451	7,581	11,753	10,359	11,502	9,832	11,847	12,108	
Rio San Diego M. W. D.	1,501	1,457	1,436	2,311	2,466	3,526	3,329	3,928	3,336	
San Diego, City of	---	---	---	---	---	---	---	---	---	
Innside City	65,715	71,250	70,052	80,560	80,795	84,345	81,156	89,825	92,451	
Outside City (not in Authority)	2,610	3,001	2,809	3,598	4,175	4,840	5,007	4,278	4,498	
San Diego Irrigation District	3,329	3,378	3,607	3,324	3,797	4,212	3,568	3,847	3,743	
Santa Fe Irrigation District	3,663	3,509	2,807	3,863	3,487	3,927	3,349	3,706	3,658	
Valley Center M. W. D.	---	---	---	---	---	---	---	---	---	
Yuma, M. W. D.	---	---	---	---	---	---	---	---	---	
Total	146,638	155,505	156,472	148,579	186,115	205,540	192,554	219,280	231,548	

† Use of Colorado River water began prior to this year. See previous annual reports.
(a) Use of Colorado River water began this year.
(b) Figures shown for Rio San Diego M. W. D. prior to 1955-56 are for Lakeside I. D. only.

SAN DIEGO COUNTY WATER AUTHORITY

Table 8
WATER PRODUCTION OF AUTHORITY AGENCIES - FISCAL YEAR 1963-64

Member Agencies	TOTAL WATER PRODUCTION				Local Supply		Authority Supply	
	as m. g. d.	as c. f. s.	as ac. ft. /yr.	as ac. ft.	Percent	Amount ac. ft.	Percent	
Bueno Colorado M. W. D.	11.35	17.55	12,742.8	3,394.1	26.6	9,348.7	73.4	
Carlsbad M. W. D.	5.71	8.83	6,412.1	0	0	6,412.1	100.0	
Del Mar, City of	0.62	0.95	691.0	0	0	691.0	100.0	
Eucalypto, City of	3.52	5.45	3,953.5	1,075.5	27.2	2,878.0	72.8	
Fallbrook Public Utility District	9.34	14.76	10,711.7	195.1	1.8	10,516.6	98.2	
Helix Irrigation District	20.43	31.60	22,943.0	154.5	0.7	22,788.5	99.3	
National City and South Bay I. D.	12.48	19.31	14,021.0	3,362.0	24.0	10,659.0	76.0	
Oceanside, City of	5.93	9.18	6,663.8	214.3	3.2	6,449.5	96.8	
Oliverholm M. W. D.	0.55	0.85	619.6	0	0	619.6	100.0	
Otay M. W. D.	4.46	6.90	5,008.3	0	0	5,008.3	100.0	
Poway M. W. D.	2.45	3.79	2,754.3	0	0	2,754.3	100.0	
Rainbow M. W. D.	10.18	15.75	11,431.2	714.2	6.2	10,717.0	93.8	
Ranoma M. W. D.	0.73	1.14	825.0	95.7	11.6	729.3	88.4	
Riescon del Diablo M. W. D.	10.78	16.68	12,108.3	2,662.9	22.0	9,445.4	78.0	
Rio San Diego M. W. D.	3.50	5.42	3,936.6	457.3	11.6	3,479.3	88.4	
San Diego, City of:								
Inside City	82.31	127.35	92,450.8	0	0	92,450.8	100.0	
Outside City (Not in Authority)	4.00	6.20	4,497.7	4,497.7	100.0	0	0	
San Dieguito Irrigation District	3.33	5.16	3,743.2	0	0	3,743.2	100.0	
Suzia Fe Irrigation District	3.52	5.45	3,957.7	0	0	3,957.7	100.0	
Valley Center M. W. D.	3.07	4.73	3,451.8	0	0	3,451.8	100.0	
Yuima M. W. D.	7.68	11.88	8,624.9	5,624.9	100.0	0	0	
Total	206.15	315.96	231,548.3	25,448.2	11.0	206,100.1	89.0	

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.

TABLES

Table 9
UNIT WATER PRODUCTION - PER ACRE AND PER CAPITA 1963-64

Member Agencies	Gross Area (2)	Total Production of Water	Estimated Area Served by Water System	Water Production		Estimated Population	Water Production Per Capita
				ac. ft.	ac. ft. /acre/yr.		
Bueno Colorado M. W. D.	48,974	12,742.8	16,830	0.76	37,200	0.34	
Carlsbad M. W. D.	20,621	6,412.1	15,000	0.43	11,600	0.55	
Del Mar, City of	1,082	691.0	1,080	0.64	3,800	0.18	
Eucalypto, City of	6,877	3,953.5	6,580	0.60	24,100	0.16	
Fallbrook Public Utility District	15,469	10,711.7	7,400	1.45	10,500	1.02	
Helix Irrigation District	31,185	22,943.0	28,270	0.81	148,130	0.15	
National City, City of	5,107	3,643.0	3,820	0.95	34,650	0.11	
Oceanside, City of	20,651	6,663.8	8,560	0.78	32,800	0.20	
Oliverholm M. W. D.	24,265	619.6	5,050	0.13	370	1.67	
Poway M. W. D.	64,612	5,008.3	21,520	0.23	9,450	0.53	
Rainbow M. W. D.	22,980	2,754.3	6,500	0.42	8,200	0.34	
Ranoma M. W. D.	40,093	11,431.2	24,970	0.46	3,300	3.46	
Rio San Diego M. W. D.	41,365	825.0	6,300	0.13	5,800	0.14	
Riescon del Diablo M. W. D.	21,533	12,108.3	11,820	1.08	15,550	0.78	
San Diego, City of	54,105	3,936.6	22,660	0.17	33,000	0.12	
(1) 193,184		71,990	1.28	638,700	0.14		
San Dieguito Irrigation District	4,929	3,743.2	4,180	0.90	18,500	0.20	
Santa Fe Irrigation District	10,141	3,577.7	8,800	0.45	8,650	0.46	
South Bay Irrigation District	15,862	10,378.0	9,320	1.11	72,550	0.14	
Valley Center M. W. D.	59,510	3,451.8	11,000	0.31	7,500	0.46	
Yuima M. W. D.	12,400	8,624.9	3,300	2.61	650	13.27	
Total and Average	714,945	227,050.6	294,250	0.77	1,125,000	0.20	

(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 1963-64

Member Agencies	WATER USED FOR AGRICULTURAL PURPOSES						Percent of Agricultural Water to Total Production
	Total Water Production (ac. ft.)	From Local Supply (%)	From Authority (ac. ft.)	From Authority (%)	Total (ac. ft.)		
	(a)	(a)	(a)	(a)	(a)		
Bueno Colorado M. W. D.	12,742.8	26.0	6,462.9	74.0	8,725.1	68.5	
Carlsbad M. W. D.	6,412.1	0	4,867.0	100.0	4,867.0	75.9	
Del Mar, City of	691.0	(a)	(a)	(a)	(a)	(a)	
Escondido, City of	3,953.5	(a)	(a)	(a)	(a)	(a)	
Fallbrook, Public Utility District	10,711.7	1.8	9,451.2	98.2	9,625.6	89.9	
Helix Irrigation District	22,943.0	0.3	6,254.0	99.7	6,273.4	27.3	
National City & South Bay I. D.	14,021.0	18.4	1,203.3	98.2	1,474.2	10.5	
Oceanside, City of	6,663.8	(a)	(a)	(a)	(a)	(a)	
Olivehain M. W. D.	619.6	0	580.5	100.0	580.5	93.7	
Otay M. W. D.	5,008.3	0	2,970.6	100.0	2,970.6	59.3	
Poway M. W. D.	2,754.3	0	1,743.7	100.0	1,743.7	63.3	
Rainbow M. W. D.	11,431.2	6.2	* 10,114.6	93.8	10,787.5	94.4	
Ramona M. W. D.	825.0	34.7	276.8	88.9	311.5	37.8	
Rincon del Diablo M. W. D.	12,108.3	1,985.9	8,035.4	80.2	10,024.3	82.8	
Rio San Diego M. W. D.	3,936.6	57.2	173.7	75.2	230.9	5.9	
San Diego, City of	96,948.5	0	5,612.5	100.0	5,612.5	5.8	
San Dieguito Irrigation District	3,743.2	(b)	(b)	(b)	(b)	(b)	
Santa Fe Irrigation District	3,957.7	(b)	(b)	(b)	(b)	(b)	
Valley Center M. W. D.	3,451.8	0	3,133.0	100.0	3,133.0	90.8	
Yuma M. W. D.	5,624.9	8,500.0	0	0	8,500.0	98.6	
Total	231,548.3	13,984.6	60,879.2	81.3	74,863.8	32.3	

(a) No report was received from agency, assumed no agricultural use.

(b) Included in City of San Diego

* Does not include 275.0 acre feet placed in underground storage.

Table 11
AUTHORITY STORAGE IN SAN VICENTE RESERVOIR
(Fiscal Year 1963-64)

Member Agencies	Total Quantity in Storage 7/1/63 (acre feet)	Placed into Storage during Fiscal Year (acre feet)	Withdrawn during Fiscal Year		Total Quantity in Storage 6/30/64 (acre feet)
			By Delivery (acre feet)	By Evaporation (acre feet)	
Bueno Colorado M. W. D.	378.9	0	0	23.6	355.3
Carlsbad M. W. D.	0	0	0	0	0
Del Mar, City of	0	0	0	0	0
Escondido, City of	212.9	0	0	13.3	199.6
Fallbrook Public Utility District	492.2	240.9	219.7	24.6	488.8
Helix Irrigation District	0	0	0	0	0
National City & South Bay I. D.	0	0	0	0	0
Oceanside, City of	848.1	0	0	52.9	795.2
Olivehain M. W. D.	0	100.0	0	3.1	96.9
Otay M. W. D.	1,507.7	0	0	93.8	1,413.9
Poway M. W. D.	2,245.9	0	0	139.9	2,106.0
Rainbow M. W. D.	4,089.8	2,268.9	1,124.5	271.1	4,963.1
Ramona M. W. D.	27.9	0	0	1.8	26.1
Rincon del Diablo M. W. D.	2,510.4	0	0	156.4	2,354.0
Rio San Diego M. W. D.	1,142.5	394.1	0	83.4	1,453.2
San Diego, City of	0	0	0	0	0
San Dieguito Irrigation District	0	0	0	0	0
Santa Fe Irrigation District	0	0	0	0	0
Valley Center M. W. D.	3,095.2	0	6.7	192.3	2,894.2
YUMA M. W. D.	-	500.0	0	7.6	492.4
Total	16,551.5	3,503.9	1,352.9	1,063.8	17,638.7

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

Year Ending June 30, 1964

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	324	215	109	0	28.5	8.4	78
August	310	201	109	0	28.0	8.3	78
September	312	202	110	0	28.0	8.2	81
October	307	197	110	3	28.0	8.4	77
November	313	199	114	0	27.5	8.3	69
December	320	200	120	0	27.5	8.3	61
January	322	202	120	0	28.0	8.2	53
February	330	205	125	0	27.5	8.3	54
March	330	205	125	1	27.5	8.3	55
April	330	206	124	0	27.5	8.3	60
May	332	212	120	0	28.0	8.4	64
June	339	216	123	0	29.0	8.4	74
Average	322	205	117	0	28.0	8.3	67
Maximum	339	216	125	3	29.0	8.4	81
Minimum	307	197	109	0	27.5	8.2	53

Table 13
ALLOCATION OF RIGHT TO PURCHASE AUTHORITY WATER

As of June 30, 1964

Member Agencies	Total Amount Paid by Each Member Agency to 6/30/64	Amount Remaining to be paid under Terms of Annexation	Total Contributions Paid and Contracted for	Allocation	
				Percentage of Authority Supply	Equivalent Flow c. f. s.
Beece Colorado M. W. D.	\$ 452,964.95	\$ 0.00	\$ 452,964.96	2.65	11.92
Carlsbad M. W. D.	324,938.04	0.00	324,938.04	1.90	8.53
Del Mar, City of	23,319.00	116,854.97	140,173.97	0.82	3.09
Escondido, City of	259,128.43	0.00	259,128.43	1.52	6.84
Fallbrook Public Utility District	134,616.22	4,051.66	138,667.88	0.81	3.05
Helix Irrigation District	1,545,137.60	6,800.68	1,551,938.28	10.83	48.73
National City, City of	423,887.07	0.00	423,887.07	2.48	11.16
Oceanside, City of	399,544.36	0.00	399,544.36	2.34	10.33
Olivehain M. W. D.	11,290.05	9,132.06	20,442.11	0.12	0.54
Osay M. W. D.	144,161.93	11,470.78	155,632.71	0.91	4.10
Poway M. W. D.	83,981.22	2,198.08	86,179.30	0.50	2.25
Rainbow M. W. D.	75,000.17	1,987.58	79,987.75	0.47	2.12
Ramona M. W. D.	87,794.46	3,684.56	91,479.02	0.54	2.43
Rincon del Diablo M. W. D.	251,833.51	0.00	251,833.51	1.47	6.62
Rio San Diego M. W. D.	272,275.46	50,168.05	322,443.51	1.89	8.50
San Diego, City of	10,631,018.25	0.00	10,631,018.25	62.19	279.85
San Dieguito Irrigation District	207,120.59	4,905.13	212,115.72	1.24	5.58
Santa Fe Irrigation District	185,250.35	0.00	185,250.35	1.08	4.86
South Bay Irrigation District	953,858.13	0.00	953,858.13	5.58	25.11
Valley Center M. W. D.	69,358.16	2,660.37	72,018.53	0.42	1.89
Yulma M. W. D.	500.00	40,250.00	40,750.00	0.24	1.08
Total Authority	\$16,639,977.96	\$ 254,303.92	\$17,094,281.88	100.00	450.00

Table 14
WATER SALES BY METROPOLITAN WATER DISTRICT
Fiscal Years 1941-42 to 1963-64

Year	To Member Municipalities					
	Natural Water		Treated Water		Total to Agencies	To Others
	Acre feet	Per cent	Acre feet	Per cent	Acre feet	Acre feet
1941-42	0	0	9,372.6	100	9,372.6	70.7
1942-43	0	0	14,457.8	100	14,457.8	2,626.4
1943-44	0	0	15,874.9	100	15,874.9	3,301.8
1944-45	0	0	30,591.3	100	30,591.3	1,715.7
1945-46	0	0	46,685.8	100	46,685.8	1,264.2
1946-47	0	0	59,861.8	100	59,861.8	524.0
1947-48	41,093.5	36	71,995.4	64	113,088.9	116.8
1948-49	71,642.6	49	73,237.1	51	144,879.7	128.4
1949-50	69,308.0	49	72,936.0	51	142,244.0	23,371.6
1950-51	75,000.9	54	63,493.1	46	138,494.0	26,978.6
1951-52	66,674.3	44	84,616.1	56	151,290.4	42,464.2
1952-53	30,845.3	24	90,589.6	76	130,434.9	31,682.4
1953-54	120,773.0	51	115,590.6	49	236,323.6	7,820.7
1954-55	192,544.7	59	134,923.3	41	327,468.0	58,184.5
1955-56	190,337.2	53	169,506.4	47	359,843.6	45,562.9
1956-57	286,059.1	60	191,110.7	40	477,169.8	66,074.1
1957-58	266,024.1	57	197,900.0	43	463,924.1	75,612.8
1958-59	244,354.2	46	282,248.1	54	526,602.3	74,107.1
1959-60	425,019.0	58	304,874.8	42	729,893.8	3,523.2
1960-61	594,521.1	64	335,207.2	36	929,728.3	4,099.4
1961-62	608,811.0	66	312,975.9	34	921,786.9	3,676.9
1962-63	668,881.8	66	348,092.6	34	1,016,974.4	3,677.0
1963-64	671,853.4	63	388,553.9	37	1,060,407.3	3,776.7

Table 15
WATER PRODUCTION - METROPOLITAN WATER DISTRICT CONSTITUENT AREAS
Figures Furnished by Metropolitan Water District

Constituent Areas	1963-64			M. W. D.			Other	Percent of Total
	Amount	ac. ft.	Percent Increase or Decrease	Amount	ac. ft.	Percent of Total		
Anahem	24,439	31,180	27.6	10,815	34.0	20,563	66.0	
Beverly Hills	14,748	12,251	- 16.9	4,415	36.0	7,836	64.0	
Burbank	25,015	25,676	2.6	7,915	30.8	17,761	69.2	
Calleguas M. W. D.	52,468	59,125	12.7	3,003	5.1	55,122	94.9	
Central Basin M. W. D.	209,026	210,252	0.6	(a) 41,000	19.5	168,252	80.5	
Chino Basin M. W. D.	115,562	183,181	58.5	14,599	8.0	168,582	92.0	
Coastal M. W. D.	18,832	19,641	4.3	18,710	95.3	931	4.7	
Compton	8,059	8,306	3.1	2,530	30.5	5,776	69.5	
Eastern M. W. D.	122,925	121,332	- 1.3	34,476	28.4	(b) 86,856	71.6	
Footfall M. W. D.	14,451	15,246	5.5	8,545	59.0	6,701	44.0	
Fullerton	17,283	18,965	9.4	8,240	43.6	10,665	56.4	
Glendale	21,557	22,488	2.9	3,164	14.1	19,334	85.9	
Las Virgenes M. W. D.	237	661	191.2	320	78.7	141	21.3	
Long Beach	52,246	55,619	6.5	32,376	60.0	22,243	40.0	
Los Angeles	373,902	323,671	- 8.9	77,977	14.9	445,694	85.1	
Orange County M. W. D.	208,708	216,248	3.6	(c) 57,337	26.5	158,911	73.5	
Pasadena	33,098	33,834	2.2	19,308	57.1	14,526	42.9	
Pomona Valley M. W. D.	52,556	52,933	0.7	10,554	19.9	42,379	80.1	
San Diego C. W. A.	243,188	257,880	6.0	232,402	90.1	25,448	9.9	
San Marino	5,053	5,123	1.4	0	0	5,123	100.0	
Santa Ana	19,091	19,908	4.3	9,711	48.8	10,197	51.2	
Santa Monica	14,417	14,744	2.3	10,824	73.4	3,920	26.6	
Torrance	18,210	19,459	6.8	16,203	83.3	3,256	16.7	
Upper San Gabriel Valley								
M. W. D.	141,006	125,932	- 10.7	0	0	125,932	100.0	
West Basin M. W. D.	152,652	140,164	- 8.7	(d) 89,846	64.1	50,318	35.9	
Western M. W. D.	175,954	223,322	28.1	(e) 45,622	26.2	179,700	79.8	
Totals	2,315,605	2,419,951	4.5	780,892	31.5	1,658,159	68.5	

(a) Does not include 106,737 acre feet of untreated water delivered to Central Basin for replenishment purposes within the Central and West Basin Water Replenishment District.
 (b) Includes 4,631 acre feet tunnel seepage into San Jacinto Tunnel.
 (c) Does not include 185,438 acre feet of untreated water for replenishment purposes within Orange County.
 (d) Does not include 7,494 acre feet of treated water injected underground at the West Coast Barrier Project.
 (e) Includes 25,210 acre feet diverted to Lake Elsinore.

SAN DIEGO COUNTY WATER AUTHORITY

Table 16
ANALYSIS OF COLORADO RIVER AQUEDUCT WATER
TAKEN AT WEST PORTAL OF SAN JACINTO TUNNEL
For Year Ending June 30, 1964

Constituent	Symbol	ANALYSIS		
		Average	Maximum	Minimum
Silica	SiO ₂	9.8 ppm	10.8 ppm	9.1 ppm
Iron	Fe	---	---	---
Calcium	Ca	83.0 "	83.0 "	77.0 "
Magnesium	Mg	28.0 "	29.0 "	27.5 "
Sodium	Na	92.0 "	97.0 "	89.0 "
Potassium	K	5.0 "	5.0 "	4.0 "
Carbonate	CO ₃	0 "	4.0 "	0 "
Bicarbonate	HCO ₃	143.0 "	153.0 "	127.0 "
Sulfate	SO ₄	282.0 "	293.0 "	274.0 "
Chloride	Cl	83.0 "	89.0 "	80.0 "
Nitrate	NO ₃	1.3 "	1.9 "	0.8 "
Fluoride	F	0.4 "	0.4 "	0.3 "
Total Dissolved Solids		656.0 "	688.0 "	635.0 "
Hardness as CaCO ₃				
Total		322.0 "	339.0 "	307.0 "
Carbonate		117.0 "	125.0 "	109.0 "
Noncarbonate		205.0 "	216.0 "	197.0 "
Alkalinity - Phenolphthalein		0 "	3.0 "	0 "
Alkalinity - Total		117.0 "	125.0 "	109.0 "
Free Carbon Dioxide	CO ₂	1.0 "	2.0 "	1.0 "
Hydrogen Ion Concentration	pH	8.3	8.4	8.2
Electrical Conductivity	ECx10 ⁶ at 25°C	1,040.0	1,109.0	1,015.0

TABLES

Table 17
ASSESSED VALUATIONS AND TAX RATES OF THE
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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

(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 1964-65 were available before completion of report and are included for convenience of reader.

August 28, 1964

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

Dear Sir:

I am pleased to submit to you the financial report for the fiscal year ended June 30, 1964.

The following statements summarize the Authority's financial position and results of its operations for this fiscal year. A comparison of the current financial position with that of previous years reflects the continuance of healthy growth.

Operating requirements have been met by net revenues from the sale of water. Bonded debt and U. S. Government contractual requirements have been met primarily from the tax levy. The Metropolitan Water District's portion of contractual payments, with revenues from the Authority's investments have reduced these requirements.

The accounting system of the Authority is on a modified accrual basis. Generally, revenues are recorded when earned and expenditures are recorded upon incurrence of liability, except accrued interest on outstanding indebtedness, which is payable from appropriations of the following year.

This financial report has been prepared in accordance with generally accepted principles of municipal budgetary fund accounting, applied on a basis consistent with that of the preceding year except for the changes in the statement of revenue and expense referred to in note 7 to the financial statements.

Respectfully,



Henry Lozano
Chief Accounting Officer

PEAT, MARWICK, MITCHELL & Co.

CERTIFIED PUBLIC ACCOUNTANTS
(INCORPORATING EVERTS AND ESENOFF)
1850 FIFTH AVENUE
SAN DIEGO, CALIFORNIA 92101

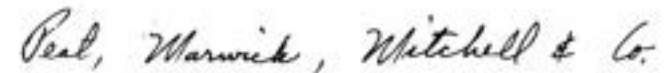
INDEPENDENT ACCOUNTANTS' REPORT

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, 1964 and the related statements of revenue and expense - general fund and changes in surplus and reserves 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.

The financial statements included in this report were prepared from accounting records kept on a modified accrual basis. In general, revenues are recorded when earned and expenditures are recorded upon incurrence of liability, except accrued interest on outstanding indebtedness, which is payable from appropriations of the following year.

In our opinion, the accompanying balance sheet and statements of revenue and expense - general fund and changes in surplus and reserves present fairly the financial position of the San Diego County Water Authority at June 30, 1964 and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year except for the changes in the statement of revenue and expense referred to in note 7 to the financial statements.



San Diego, California
August 28, 1964

SAN DIEGO COUNTY WATER AUTHORITY

FINANCIAL REPORT

Exhibit A
BALANCE SHEET
June 30, 1964

ASSETS			
CURRENT ASSETS - GENERAL FUND:			
Cash with treasurer	\$	380,189.65	
Petty cash		200.00	
Accounts receivable		678,531.40	
Inventory of water in storage		348,672.40	
Inventory of materials and supplies		2,058.97	
Investments		200,060.00	\$ 1,607,712.42
SPECIAL FUND ASSETS: (note 1)			
Reserve fund:			
Cash with treasurer	\$	371,375.56	
Due from waterworks bonds, 1957, interest and redemption fund		114,150.00	
Investments		109,360.94	594,886.50
Waterworks bonds, 1947, interest and sinking fund:			
Cash with treasurer		290,665.36	
Cash with bond paying agent		8,700.00	
Investments		45,000.00	344,365.36
U. S. Government contract fund:			
Cash with treasurer		23,842.12	
Due from Metropolitan Water District (note 2)		9,796,677.22	9,820,519.34
Waterworks bonds, 1957, improvement fund:			
Cash with treasurer		5,200,107.97	
Investments		244,000.00	5,444,107.97
Waterworks bonds, 1957, interest and redemption fund:			
Cash with treasurer		211,460.38	
Cash with bond paying agent		7,383.00	
Investments		25,000.00	243,823.38
Capital improvement fund:			
Cash with treasurer		319,666.10	
Investments		9,555.06	
Annexation charges receivable - not due		254,303.92	583,525.08
			17,031,227.63
FIXED ASSETS:			
Participation rights in Metropolitan Water District (note 3)		49,966,252.84	
Plant		52,135,675.83	
Less allowance for depreciation		3,778,103.39	48,357,572.44
Work in progress		355,803.96	98,679,629.24
			\$ 117,318,569.29

See accompanying notes to financial statements.

Exhibit A (Continued)
BALANCE SHEET
June 30, 1964

LIABILITIES, RESERVES AND SURPLUS			
CURRENT LIABILITIES - GENERAL FUND:			
Accounts payable	\$	569,867.24	
Unapplied credits for irrigation water		55,852.65	
Advances by agencies for construction		13,062.29	
Deposits by agencies for annexation		2,000.00	\$ 640,782.18
CURRENT LIABILITIES - SPECIAL FUNDS:			
Accounts payable - capital improvement fund		921.62	
Liability of waterworks bonds, 1957, interest and redemption fund to reserve fund		114,150.00	115,071.62
LONG-TERM DEBT:			
General obligation bonds payable - not due (note 4)		35,285,600.00	
Estimated balance on U. S. Government contract - First Aqueduct cost (note 5)		18,530,168.20	
Balance of annexation charges - Metropolitan Water District (note 3)		11,416,506.63	65,231,674.83
SURPLUS AND RESERVES:			
Net equity in fixed assets		33,447,954.41	
Reserve for encumbrances - capital improvement fund		11,951.32	
Reserves for debt redemption:			
Retirement of general obligation bonds	\$	474,038.74	
Retirement of U. S. Government contract		9,820,519.34	10,294,558.08
Appropriated surplus:			
Petty cash fund balance		200.00	
Reserve fund balance		594,886.50	
Waterworks bonds, 1957, improvement fund - reserve for authorized expenditures		5,428,112.85	
Capital improvement fund balance		496,032.48	
		6,517,231.83	
Incomplete projects (continuing appropriations):			
General fund	\$	10,963.90	
Waterworks bonds, 1957, improvement fund		17,995.12	
Capital improvement fund		74,619.66	103,578.58
			6,620,810.41
Unappropriated surplus:			
Invested in water in storage		348,672.40	
Invested in materials and supplies		2,058.97	
Available for appropriation		605,035.07	955,766.44
			51,331,640.66
			\$ 117,318,569.29

SAN DIEGO COUNTY WATER AUTHORITY

Exhibit B

STATEMENT OF CHANGES IN SURPLUS AND RESERVES
Year Ended June 30, 1964

	Total	General Fund	Reserve Fund
Balances, July 1, 1963	\$ 47,848,341.18	\$ 811,533.73	\$ 585,764.44
Excess of revenue over expense - general fund (Exhibit C)	235,470.04	235,470.04	
Revenue other than general fund (Schedule 2)	2,607,297.36		9,122.06
Proceeds from sale of general obligation bonds	5,072,233.77		
Additional annexation charges	40,750.00		
Refunds of prior years' expenditures	1,806.59	1,720.44	
Interfund transfer	75,441.00		
Agencies' contributions to Metropolitan Water District	3,024,763.62		
Payments on U. S. Government contracts	879,029.84		
Redemptions of waterworks bonds	290,000.00		
Additions to plant and equipment	286,880.90		
Total additions	12,513,673.12	237,190.48	9,122.06
Total beginning balances plus additions	60,362,014.30	1,048,724.21	594,886.50
Expenditures, other than general fund (Schedule 2)	2,900,423.11		
Expenditures charged to prior years' reserve for encumbrances	118.56		
Tax collection expense	4,947.26		
Decrease in amount due from Metropolitan Water District	456,802.52		
Annexation charges collected (included in revenues above)	29,985.06		
Expenditures from general fund for plant and equipment	6,352.97	6,352.97	
Decrease in special deposit for bond interest	3,737.25		
Interfund transfers	75,441.00	75,441.00	
Liability on general obligation bonds issued during the year	5,000,000.00		
Depreciation expense	525,376.88		
Net book value of portion of pipe line sold to the City of Oceanside	17,789.03		
Total deductions	9,030,973.64	81,793.97	
Balances, June 30, 1964	51,331,040.66	966,930.24	594,886.50
Analysis of surplus and reserves:			
Net equity in fixed assets	33,447,954.41		
Reserve for encumbrances	11,951.32		
Reserve for debt redemption	10,294,558.08		
Appropriated surplus:			
Incomplete projects (continuing appropriations)	103,578.58	10,963.80	
Other	6,517,231.83	200.00	594,886.50
Unappropriated surplus	955,766.44	955,766.44	
	\$ 51,331,040.66	\$ 966,930.24	\$ 594,886.50

See accompanying notes to financial statements.

FINANCIAL REPORT

Exhibit B (Continued)

STATEMENT OF CHANGES IN SURPLUS AND RESERVES
Year Ended June 30, 1964

Waterworks Bonds, 1947 Interest and Sinking Fund	U. S. Government Contract Fund	Waterworks Bonds, 1957 Improvement Fund	Waterworks Bonds, 1957 Interest and Redemption Fund	Capital Improvement Fund	Net Equity in Fixed Assets
\$405,412.64	\$10,267,417.53	\$ 447,026.70	\$ 44,878.27	\$765,861.91	\$34,520,445.96
33,544.42	1,199,494.93		1,313,400.74	51,685.21	
		5,000,000.00	72,233.77	40,750.00	
75,441.00		86.15			
					3,024,763.62
					879,029.84
					290,000.00
					286,880.90
108,985.42	1,199,494.93	5,000,086.15	1,385,634.51	92,435.21	4,480,674.36
514,398.06	11,466,912.46	5,447,112.85	1,430,562.78	858,297.12	39,001,120.32
168,500.00	1,188,104.53	3,004.88	1,295,300.00	245,513.70	
					118.56
32.70	1,486.07		3,352.15	76.34	
	456,802.52				
				29,985.06	
1,500.00			2,237.25		
					5,000,000.00
					525,376.88
					17,789.03
170,032.70	1,646,393.12	3,004.88	1,300,889.40	275,693.66	5,553,165.91
344,365.36	9,820,519.34	5,444,107.97	129,673.38	582,603.46	33,447,954.41
					33,447,954.41
				11,951.32	
344,365.36	9,820,519.34		129,673.38		
		17,995.12		74,619.66	
		5,426,112.85		496,032.48	
344,365.36	\$ 9,820,519.34	\$ 5,444,107.97	\$ 129,673.38	\$ 582,603.46	\$ 33,447,954.41

SAN DIEGO COUNTY WATER AUTHORITY

Exhibit C

STATEMENT OF REVENUE AND EXPENSE - GENERAL FUND

Year ended June 30, 1964

WATER SALES:			
Gross revenue from water sales	\$ 5,595,248.30		
Less irrigation credits	<u>443,416.70</u>		
Net revenue from water sales		\$ 5,151,831.60	
COST OF WATER SOLD:			
Water in storage July 1, 1963		319,351.40	
Water purchased	\$ 5,174,323.50		
Less irrigation credits	<u>443,416.70</u>	4,730,906.80	
Storage and pumping charges		<u>2,953.71</u>	
		5,053,211.91	
Less water in storage June 30, 1964		<u>348,672.40</u>	
Cost of water sold		4,704,539.51	
Gross margin from water sales		447,292.09	
OTHER OPERATING REVENUE:			
Water transportation charges		<u>904.50</u>	
Gross operating revenue		448,196.59	
OPERATING EXPENSE (Schedule 1)			
		<u>230,547.00</u>	
Excess of operating revenue over expense		217,649.59	
NONOPERATING REVENUE:			
Property rentals	1,906.00		
Earnings on investments	16,115.15		
Miscellaneous revenue net of refunds	<u>(200.70)</u>	17,820.45	
Excess of revenue over expense - general fund to surplus (note 7)		<u>\$ 235,470.04</u>	

See accompanying notes to financial statements.

FINANCIAL REPORT

NOTES TO FINANCIAL STATEMENTS

June 30, 1964

- (1) The Authority has uncollected taxes receivable as follows:

Waterworks bonds, 1947, interest and sinking fund	\$ 1,175.20
U. S. Government contract fund	21,097.89
Waterworks bonds, 1957, interest and redemption fund	46,842.15
Capital improvement fund	<u>1,859.93</u>
Total uncollected taxes receivable	<u>\$ 70,975.17</u>

The Authority has set up allowances for delinquency equal to the total of the uncollected taxes. Revenue from delinquent taxes is recorded when collected.

- (2) The amount due from Metropolitan Water District of \$9,796,677.22 represents the estimated balance due the Authority for its portion of the cost of the first and second barrels of the First San Diego Aqueduct. The first barrel is subject to adjustment upon final settlement by the U. S. Government.
- (3) The recorded value and equity in participation rights in the Metropolitan Water District is as follows:

Total participation rights recorded to June 30, 1964	\$ 49,966,252.84
Less unpaid balance of annexation charges due Metropolitan Water District	<u>11,416,506.63</u>
Equity in participation rights	<u>\$ 38,549,746.21</u>

- (4) On May 26, 1964 waterworks bonds with a principal amount of \$5,000,000 were sold at an effective interest rate of 3.29%. The principal proceeds are to be used primarily to build a cross-connection between the First and Second Aqueducts.
- (5) The amount payable on the U. S. Government contract relating to the first barrel of the First San Diego Aqueduct is subject to adjustment upon final settlement by the U. S. Government.
- (6) On November 13, 1963 the Authority entered into an agreement to sell a branch pipe line to the City of Oceanside. The total price (\$100,000) is subject to purchase in annual amounts of \$10,000 or more. During the year the City purchased one-tenth of the pipe line for \$10,000 and additional sections will be sold for cash in future years.
- (7) There has been a change in the method of showing depreciation and debt service expense (interest) on the statement of revenue and expense. In the past, these items were deducted on the revenue statement in arriving at a figure called "net operating income" and subsequently added back in order to present the net income figure which was transferred to surplus. The current statement shows only general fund revenues and expenses and omits reference to a "net operating income" figure. The final net income (which is transferred to surplus) is not affected by this change. The charge for depreciation for the current year (\$535,376.88) is shown, as a reduction in the equity in fixed assets; the charge for debt service for the current year (\$1,482,874.69) results in a reduction in the debt service fund balance. These final fund balances are not affected by the change in the presentation on the revenue statement.

SAN DIEGO COUNTY WATER AUTHORITY

FINANCIAL REPORT

Schedule 1

STATEMENT OF OPERATING EXPENSE

Year Ended June 30, 1964

EMPLOYMENT EXPENSES:		
Salaries and wages	\$ 143,121.75	
Legal services	12,000.00	
Temporary help	294.80	
Overtime	2,604.73	
Employee retirement - S. E. R. S.	8,803.17	
Employee retirement - O. A. S. D. I.	3,764.17	
Employee insurance	2,253.05	
	<u>172,841.67</u>	
Less charges to other appropriations	<u>27,183.12</u>	\$ 145,658.55
OTHER EXPENSES:		
Gas, electricity and water	5,183.87	
Telephone and telegraph	2,147.23	
Postage	1,004.40	
Printing, binding and reproduction expense	2,161.09	
Expense of directors	6,062.31	
Expense of staff	1,508.19	
Annual audit	2,800.00	
Fees and commissions	4,363.05	
Insurance and official bonds	7,976.38	
Memberships and subscriptions	695.22	
Protection of Colorado River rights	2,620.00	
Maintenance of buildings and grounds	1,629.72	
Maintenance of office equipment	662.88	
Engineering supplies	518.64	
Stationery and office supplies	1,551.40	
Chlorine	31,068.00	
Gasoline and diesel fuel	2,684.19	
Oils and greases	149.44	
Tires and tubes	738.60	
Automotive repair parts	1,393.76	
Outside automotive repairs and upkeep	160.69	
Maintenance supplies and small tools	6,450.68	
Radio repair and upkeep	1,812.66	
Contingencies	1,742.48	
	<u>87,084.88</u>	
Less charges to other appropriations	<u>2,196.43</u>	
		<u>84,888.45</u>
Total operating expense		<u>\$ 230,547.00</u>

Schedule 2

STATEMENT OF REVENUE - ESTIMATED AND ACTUAL

Year ended June 30, 1964

Source	Estimated Revenues	Actual Revenues	Actual Over or (Under) Estimate
Taxes, secured, current levy	\$ 1,664,690.00	\$ 1,688,122.42	\$ 23,432.42
Taxes, unsecured, current levy	175,930.00	174,786.24	(1,143.76)
Taxes, secured, prior years' levy	22,500.00	35,280.88	12,780.88
Taxes, unsecured, prior years' levy	2,500.00	1,220.40	(1,279.60)
Penalties on delinquent taxes	2,500.00	4,082.72	1,582.72
Receipts in lieu of taxes	---	1,918.96	1,918.96
Sale of water	5,534,000.00	5,151,831.60	(382,168.40)
Miscellaneous tax sales	---	37.30	37.30
Earnings on investments	70,000.00	82,137.31	12,137.31
Proceeds from sale of pipe line	---	10,000.00	10,000.00
Rentals	1,900.00	1,906.00	6.00
Contract payments from Metropolitan Water District	625,437.00	625,436.78	(.22)
Use of Authority facilities	1,200.00	904.50	(295.50)
Miscellaneous revenue	---	188.80	188.80
Total	<u>\$ 8,100,657.00</u>	<u>\$ 7,777,853.91</u>	<u>\$ (322,803.09)</u>
Distribution by Funds			
General fund	\$ 5,549,100.00	\$ 5,170,556.55	\$ (378,543.45)
Other funds:			
Reserve fund	8,000.00	9,122.06	1,122.06
Waterworks bonds, 1947, interest and sinking fund	24,670.00	33,544.42	8,874.42
U. S. Government contract fund	1,191,482.00	1,199,494.93	8,012.93
Waterworks bonds, 1957, interest and redemption fund	1,277,980.00	1,313,450.74	35,470.74
Capital improvement fund	49,425.00	51,685.21	2,260.21
Total other funds	<u>2,551,557.00</u>	<u>2,607,297.36</u>	<u>55,740.36</u>
Total All Funds	<u>\$ 8,100,657.00</u>	<u>\$ 7,777,853.91</u>	<u>\$ (322,803.09)</u>

SAN DIEGO COUNTY WATER AUTHORITY

Schedule 3
STATEMENT OF APPROPRIATIONS AND EXPENDITURES
Year ended June 30, 1964

Estimate and Authority Number	Purpose	Prior Years' Appropriation Carried Over	Appropriations 1963-64
214	Access roads, Second Aqueduct	\$ 3,596.76	\$ -
218	Service connection, San Diego, Sta. 3355+25	15,948.31	-
218	Service connection, San Diego, San Dieguito and Santa Fe, Sta. 3292+41	-	19,955.00
238	Engineering design and rights of way for cross-connection	59,747.46	142,000.00
239	Temporary service connection, San Diego, Station 5208+48	-	6,700.00
240	Service connection, Valley Center, Station 2357+30	6,432.93	-
241	Service connection, Otay, Sta. 5037+00	5,305.08	-
242	Service connection, Rainbow, Sta. 2094+37	5,927.90	-
243	Service connection, Rainbow, Sta. 2300+00	7,951.18	-
244	Report on Colorado River water quality	10,847.80	-
245	Second Aqueduct crossing U. S. Highway 395	97,392.15	-
246	Budget fiscal year 1963-64:		
	General Fund	-	5,332,700.00
	U. S. Government contract fund	-	1,188,200.00
	Waterworks bonds, 1947, interest and sinking fund	-	168,500.00
	Waterworks bonds, 1957, interest and redemption fund	-	1,295,300.00
247	Service connection, San Diego, Sta. 3913+39	-	4,850.00
248	Service connection, Yuima, Sta. 2155+00	-	14,000.00
248	Service connection, Yuima, Sta. 2155+00	-	10,000.00
249	Installation of air-conditioning equipment in Authority office	-	4,300.00
250	Engineering report on sizing and timing of second barrel of Second San Diego Aqueduct	-	10,000.00
251	Waterworks bonds, 1957 Series E, for construction of Aqueducts cross-connection	-	11,000.00
	Subtotal	212,549.57	5,207,505.00
	Less advances by agencies	25,617.09	41,500.00
	Total Authority	\$186,932.48	\$ 8,166,000.00
	<u>Distribution by Funds</u>		
	General	\$ 10,847.80	\$ 5,337,000.00
	Other funds:		
	Waterworks bonds, 1947, interest and sinking fund	-	168,500.00
	U. S. Government contract fund	-	1,188,200.00
	Waterworks bonds, 1957, improvement fund	-	21,000.00
	Waterworks bonds, 1957 interest and redemption fund	-	1,295,300.00
	Capital improvement fund	176,084.68	156,000.00
	Total other funds	176,084.68	2,829,000.00
	Total all funds	\$186,932.48	\$ 8,166,000.00

FINANCIAL REPORT

Schedule 3 (Continued)
STATEMENT OF APPROPRIATIONS AND EXPENDITURES
Year ended June 30, 1964

Expenditures 1963-64	Cancelled Appropriations	Unexpended Appropriations June 30, 1964	Encumbrances	Unencumbered Balance
\$ 330.36	\$ -	\$ 3,276.40	\$ -	\$ 3,276.40
15,348.31	-	-	-	-
16,892.71	-	3,062.29	-	3,062.29
139,424.51	-	62,322.95	516.52	61,806.43
6,062.90	637.10	-	-	-
1,813.74	4,619.19	-	-	-
671.56	4,633.52	-	-	-
319.62	5,608.28	-	-	-
2,541.31	5,409.87	-	-	-
-	-	10,847.80	-	10,847.80
88,278.10	-	9,114.05	-	9,114.05
4,963,880.42	368,819.58	-	-	-
1,188,104.53	95.47	-	-	-
168,500.00	-	-	-	-
1,295,300.00	-	-	-	-
3,472.13	1,377.87	-	-	-
2,142.42	-	11,857.58	11,434.80	422.78
-	-	10,000.00	-	10,000.00
4,184.00	-	116.00	-	116.00
23.03	-	9,976.97	-	9,976.97
2,981.85	-	8,018.15	-	8,018.15
7,909,261.50	391,200.88	128,592.19	11,951.32	116,640.87
31,773.97	22,285.83	13,062.29	-	13,062.29
\$7,868,487.53	\$368,915.05	\$115,529.90	\$11,951.32	\$103,578.58
\$4,963,064.42	\$368,819.58	\$ 10,963.80	\$ -	\$ 10,963.80
168,500.00	-	-	-	-
1,188,104.53	95.47	-	-	-
3,004.88	-	17,995.12	-	17,995.12
1,295,300.00	-	-	-	-
245,513.79	-	86,570.98	11,951.32	74,619.66
2,909,423.11	95.47	104,566.10	11,951.32	92,614.78
\$7,868,487.53	\$368,915.05	\$115,529.90	\$11,951.32	\$103,578.58

Schedule 4
SUMMARY STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
Year Ended June 30, 1964

SAN DIEGO COUNTY WATER AUTHORITY

	Cash Balance		Cash		Inter-Fund Transfers		Cash Balance June 30, 1964
	July 1, 1963	July 1, 1963	Receipts	Disbursements	In	Out	
General fund	\$ 297,678.08	\$ 297,678.08	\$5,549,638.61	\$5,265,677.20	\$ 171,793.77	\$ 373,243.61	\$ 380,189.65
Reserve fund	530,043.50	530,043.50	942,095.36	887,123.30	650,300.00	863,940.00	371,375.56
Waterworks bonds, 1947, interest and sinking fund	69,079.91	69,079.91	929,860.06	950,900.00	418,635.39	176,000.00	290,665.36
U. S. Government contract fund	13,937.79	13,937.79	1,340,566.18	1,380,466.03	256,804.18	207,000.00	23,842.12
Waterworks bonds, 1957, improve- ment fund	233,026.70	233,026.70	5,343,026.70	326,009.90	57,086.15	107,021.68	5,200,107.87
Waterworks bonds, 1957, interest and redemption fund	81,578.02	81,578.02	1,772,032.36	1,682,300.00	1,051,150.00	1,011,000.00	211,460.38
Capital improvement fund	212,758.98	212,758.98	539,547.95	565,056.63	187,325.72	54,879.92	319,666.10
Totals	\$ 1,438,102.96	\$ 1,438,102.96	\$16,416,767.22	\$11,057,563.06	\$2,793,085.21	\$2,793,085.21	\$6,797,307.14

TREASURY CASH ON DEPOSIT - June 30, 1964

Demand deposits:		
San Diego Trust and Savings Bank	\$ 25,476.99	
First National Bank of San Diego (Main Office)	156,723.05	\$ 182,200.04
Time deposits:		
San Diego Trust and Savings Bank	475,000.00	
First National Bank of San Diego (Main Office)	1,210,000.00	
First National Bank of San Diego (La Mesa Branch)	5,072,233.77	6,757,233.77
Deposits in transit		18,227.19
Less outstanding warrants		6,957,661.00
Treasury cash, June 30, 1964, as above		160,353.86
		\$6,797,307.14

FINANCIAL REPORT

Schedule 5
STATEMENT OF INVESTMENTS
Year ended June 30, 1964

Description	Date Acquired	Interest Rate	Yield	Maturity Date	Par or Maturity Value	Book Value
U. S. Treasury bills	5/27/64	3.39%	3.39%	7/30/64	\$ 75,000.00	\$ 74,555.06
U. S. Treasury notes	8/1/61	3.75	5.05	8/15/64	378,000.00	368,420.94
U. S. Treasury notes	9/15/62	3.75	3.75	8/15/67	190,000.00	190,000.00
Totals					\$643,000.00	\$632,976.00

Distribution by Funds

General fund	\$200,110.00	\$200,040.00
Reserve fund	118,940.00	109,360.94
Waterworks bonds, 1947, interest and sinking fund	45,000.00	45,000.00
Waterworks bonds, 1957, improvement fund	244,000.00	244,000.00
Waterworks bonds, 1957, interest and redemption fund	25,275.00	25,000.00
Capital improvement fund	9,675.00	9,555.06
Totals	\$643,000.00	\$632,976.00

SAN DIEGO COUNTY WATER AUTHORITY

Schedule 6
STATEMENT OF BONDS PAYABLE
June 30, 1964

Description	Rate of Interest	Date of	
		Issue	Maturity
Waterworks bonds, 1947	2½-2-1/2%	1947	1971
Waterworks bonds, 1957	1¾-6%	1957	1994

BONDED DEBT MATURITIES

Fiscal Year	Waterworks Bonds, 1947		
	Principal	Interest	Total
1964-65	\$ 150,000.00	\$15,500.00	\$165,500.00
1965-66	150,000.00	12,500.00	162,500.00
1966-67	150,000.00	9,500.00	159,500.00
1967-68	100,000.00	7,000.00	107,000.00
1968-69	100,000.00	5,000.00	105,000.00
1969-70	100,000.00	3,000.00	103,000.00
1970-71	100,000.00	1,000.00	101,000.00
1971-72			
1972-73			
1973-74			
1974-75			
1975-76			
1976-77			
1977-78			
1978-79			
1979-80			
1980-81			
1981-82			
1982-83			
1983-84			
1984-85			
1985-86			
1986-87			
1987-88			
1988-89			
1989-90			
1990-91			
1991-92			
1992-93			
1993-94			
	<u>\$ 850,000.00</u>	<u>\$53,500.00</u>	<u>\$903,500.00</u>

Waterworks bonds, 1947, dates of maturity: January 1 - Bonds and interest coupons
July 1 - Interest coupons only

FINANCIAL REPORT

Schedule 6 (Continued)
STATEMENT OF BONDS PAYABLE
June 30, 1964

Bonds			Sinking Fund		
Authorized	Issued	Outstanding	Required	Actual	Excess
\$ 2,000,300.00	\$ 2,000,000.00	\$ 850,000.00	\$ 328,475.00	\$ 335,663.36	\$ 7,190.36
35,000,000.00	35,000,000.00	34,435,000.00			
<u>\$37,000,000.00</u>	<u>\$37,000,000.00</u>	<u>\$35,285,000.00</u>			

BONDED DEBT MATURITIES

Waterworks bonds, 1957			Total		
Principal	Interest	Total	Principal	Interest	Total
\$ 250,000.00	\$ 1,316,380.00	\$ 1,566,380.00	\$ 400,000.00	\$ 1,331,880.00	\$ 1,731,880.00
270,000.00	1,303,180.00	1,573,180.00	420,000.00	1,315,680.00	1,735,680.00
300,000.00	1,288,780.00	1,588,780.00	450,000.00	1,298,280.00	1,748,280.00
340,000.00	1,272,580.00	1,612,580.00	440,000.00	1,279,580.00	1,719,580.00
420,000.00	1,254,180.00	1,674,180.00	520,000.00	1,259,180.00	1,779,180.00
480,000.00	1,231,180.00	1,711,180.00	580,000.00	1,234,180.00	1,814,180.00
500,000.00	1,204,580.00	1,704,580.00	660,000.00	1,205,580.00	1,865,580.00
690,000.00	1,176,380.00	1,866,380.00	690,000.00	1,176,380.00	1,866,380.00
770,000.00	1,145,705.00	1,915,705.00	770,000.00	1,145,705.00	1,915,705.00
830,000.00	1,111,505.00	1,941,505.00	830,000.00	1,111,505.00	1,941,505.00
890,000.00	1,078,425.00	1,968,425.00	890,000.00	1,078,425.00	1,968,425.00
970,000.00	1,043,625.00	2,013,625.00	970,000.00	1,043,625.00	2,013,625.00
1,070,000.00	1,005,600.00	2,075,600.00	1,070,000.00	1,005,600.00	2,075,600.00
1,140,000.00	963,525.00	2,103,525.00	1,140,000.00	963,525.00	2,103,525.00
1,195,000.00	918,435.00	2,113,435.00	1,195,000.00	918,435.00	2,113,435.00
1,260,000.00	870,910.00	2,130,910.00	1,260,000.00	870,910.00	2,130,910.00
1,330,000.00	825,615.00	2,155,615.00	1,330,000.00	825,615.00	2,155,615.00
1,400,000.00	778,090.00	2,178,090.00	1,400,000.00	778,090.00	2,178,090.00
1,470,000.00	727,070.00	2,197,070.00	1,470,000.00	727,070.00	2,197,070.00
1,540,000.00	673,475.00	2,213,475.00	1,540,000.00	673,475.00	2,213,475.00
1,620,000.00	617,305.00	2,237,305.00	1,620,000.00	617,305.00	2,237,305.00
1,680,000.00	557,640.00	2,237,640.00	1,680,000.00	557,640.00	2,237,640.00
1,740,000.00	495,775.00	2,235,775.00	1,740,000.00	495,775.00	2,235,775.00
1,815,000.00	431,492.00	2,246,492.00	1,815,000.00	431,492.00	2,246,492.00
1,880,000.00	364,420.00	2,244,420.00	1,880,000.00	364,420.00	2,244,420.00
1,960,000.00	294,700.00	2,254,700.00	1,960,000.00	294,700.00	2,254,700.00
2,040,000.00	222,012.00	2,262,012.00	2,040,000.00	222,012.00	2,262,012.00
2,190,000.00	146,357.00	2,246,357.00	2,190,000.00	146,357.00	2,246,357.00
2,165,000.00	68,417.00	2,233,417.00	2,165,000.00	68,417.00	2,233,417.00
260,000.00	8,840.00	268,840.00	260,000.00	8,840.00	268,840.00
<u>\$34,435,000.00</u>	<u>\$24,396,178.00</u>	<u>\$58,831,178.00</u>	<u>\$35,285,000.00</u>	<u>\$24,449,678.00</u>	<u>\$59,734,678.00</u>

Waterworks bonds, 1957, dates of maturity: February 1 - Bonds and interest coupons
August 1 - Interest coupons only

SAN DIEGO COUNTY WATER AUTHORITY

FINANCIAL REPORT

Table F-1
STATEMENT OF TAX ASSESSMENTS AND COLLECTIONS
Fiscal years 1945-46 to 1963-64

	Tax Assessments to Date	Adjustments to Tax Assessments	Tax Collections	Interest and Penalties	Tax on Options	Receipts in Lieu of Taxes	Miscellaneous Tax-Sales	Refunds (deduct)	Net Total Collections	Uncollected June 30, 1964
Fallbrook Public Utility District	\$ 121,304.46	\$ 26.35	\$ 130,785.75	\$ 421.76	\$.52	\$ 3,425.09	\$ 7.55	\$ 13.45	\$ 134,614.22	\$ 588.46
Malco Irrigation District	1,847,865.90	(1,672.43)	1,856,486.83	4,493.55	86.08	2,952.51	592.87	479.84	1,845,137.00	9,755.07
City of National City	413,548.72	(531.73)	417,194.45	856.68	8.39	8,337.41	65.64	495.50	422,887.07	1,932.52
City of Oceanside	397,874.15	276.87	395,626.67	735.32	5.11	2,942.32	89.91	465.17	398,544.36	1,524.35
City of San Diego	10,521,722.21	5,285.34	10,504,146.22	14,818.35	42.29	151,254.74	2,018.70	41,462.03	10,621,018.25	32,852.43
Bancomex M. W. D.	85,107.58	533.08	84,582.92	315.47	-	2,965.00	1.44	6.37	87,194.66	1,036.72
Santa Fe Irrigation District	179,868.08	1,420.33	180,632.96	1,046.53	621.19	2,392.80	1,090.99	786.12	185,000.35	794.45
San Diego Irrigation District	204,932.84	(260.41)	205,597.21	694.53	3.88	1,123.14	118.17	236.84	207,120.39	1,145.22
City of Escondido	259,485.93	436.49	258,667.24	433.18	-	11.46	28.84	32.79	259,128.42	1,355.18
South Bay Irrigation District	938,128.79	(2,752.99)	931,426.43	1,528.74	.39	13,281.60	62.63	12,454.72	935,855.13	3,946.27
Bainbow M. W. D.	97,788.91	152.10	97,274.03	150.63	-	20,978.97	.72	5.40	78,600.17	687.96
Poway M. W. D.	86,211.41	(272.69)	85,675.32	318.89	-	-	1.02	14.10	85,361.22	2,382.41
Bueno Colorado M. W. D.	442,166.18	1,748.27	441,126.21	1,121.06	1.73	10,756.24	50.54	136.82	452,964.94	2,788.24
Rincon del Diablo M. W. D.	260,004.05	814.73	199,887.25	487.49	-	51,481.88	.43	22.94	251,823.51	1,032.52
Carlsbad M. W. D.	282,832.54	(228.01)	291,758.27	272.82	-	33,176.44	9.10	276.09	326,936.04	787.16
Valley Center M. W. D.	69,732.20	87.68	69,122.46	227.24	-	-	14.45	5.93	69,355.18	697.88
Rio San Diego M. W. D.	275,657.85	458.61	270,947.21	1,217.56	.65	288.00	52.44	228.92	272,275.65	3,167.75
Chay M. W. D.	145,993.41	86.47	145,871.26	351.29	-	250.90	23.85	116.57	144,161.33	2,204.02
Olivehills M. W. D.	11,129.58	5.19	11,033.51	6.36	-	500.90	-	.62	11,296.03	101.26
City of Del Mar	23,131.39	(.65)	22,818.75	-	-	500.88	-	.75	23,218.00	310.99
Yolmas M. W. D.	-	-	-	-	-	-	-	-	500.00	-
Total Member Agencies	16,622,609.93	5,795.26	16,637,541.11	29,346.76	972.63	364,097.46	4,221.49	56,811.49	16,859,977.99	75,975.17
Withdrawn areas	4,169.01	29.96	4,199.01	11.48	.15	184.94	3.49	5.35	4,294.42	-
Totals	\$16,626,978.88	\$5,726.21	\$16,561,740.12	\$29,358.24	\$972.78	\$364,282.40	\$4,224.98	\$56,816.84	\$16,864,272.41	\$76,975.17

Table F-2
ASSESSED VALUATIONS AND TAX RATES
Fiscal Years 1945-46 to 1963-64

Fiscal Year	Secured Property	Public Utilities	Unsecured Property	Total	Tax Rate Per \$100	
					Secured	Unsecured
1945-1946	\$ 212,082,975	28,253,700	29,960,130	270,296,805	0.04	
1946-1947	208,715,150 (1)	29,433,450	30,665,910	268,814,510	0.04	0.04
1947-1948	233,579,990	32,740,680	40,977,850	307,298,520 (2)	0.14	0.04
1948-1949	254,227,570	37,482,020	47,177,300	338,886,890	0.14	0.14
1949-1950	290,331,875	42,429,140	45,743,200	378,504,215	0.10	0.14
1950-1951	306,104,930	43,595,730	44,717,740	394,418,400	0.10	0.10
1951-1952	344,620,030	48,452,940	50,904,035	443,977,005	0.10	0.10
1952-1953	382,948,800	53,208,220	63,996,330	500,153,410	0.12	0.10
1953-1954	490,709,350	63,092,050	69,147,150	622,948,550	0.10	0.12
1954-1955	546,272,880	69,243,550	79,629,790	695,146,220	0.10	0.10
1955-1956	627,062,960	87,483,390	79,936,450	794,484,800	0.09	0.10
1956-1957	680,824,400	101,224,260	97,950,800	879,999,460	0.09	0.09
1957-1958	761,088,330	111,151,890	128,785,440	1,001,025,660	0.09	0.09
1958-1959	865,283,080	128,479,290	128,124,720	1,121,887,090	0.10	0.09
1959-1960	979,491,050	145,317,290	134,846,730	1,259,655,070	0.11	0.10
1960-1961	1,116,723,830	165,666,720	159,954,740	1,442,345,290	0.11	0.11
1961-1962	1,220,810,650	191,276,630	155,149,890	1,567,237,190	0.11	0.11
1962-1963	1,272,506,330	201,245,370	154,989,440	1,628,741,140	0.11	0.11
1963-1964	1,340,197,170	209,793,780	159,714,930	1,709,705,880	0.11	0.11

(1) 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.
(2) City of Coronado not included in this or subsequent total valuation.

Table F-3
TAX LEVIES AND TAX COLLECTIONS
Fiscal years 1945-46 to 1963 - 64

Fiscal Year	Tax Levy (1)	Collection of current year's taxes		Percentage of Levy Collected During Fiscal Year	Adjustments to prior years' levies fiscal year	Collection of prior years' taxes during fiscal year	Total Tax Collections	Ratio of Collections to Adjusted Tax Levy (2)	Accumulated Delinquent Taxes	Ratio of Accumulated Delinquent Taxes to Adjusted tax Levy (2)
		Fiscal Year	During Fiscal Year							
1945-46	\$ 96,131.33	\$ 94,656.21	98.47%	\$ -	\$ -	\$ 94,656.21	98.47%	\$ 1,474.82	1.53%	
1946-47	107,968.89	105,753.75	98.09	-	1,090.23	106,844.03	99.11	2,439.68	2.26	
1947-48	389,991.57	351,363.14	90.94	-	1,882.72	383,445.86	98.42	8,085.29	2.20	
1948-49	474,520.78	459,994.39	96.94	-	5,915.41	465,420.80	98.08	17,685.37	3.73	
1949-50	401,132.07	392,732.15	97.91	329.58	13,342.55	406,074.70	101.15	13,052.32	3.25	
1950-51	387,870.61	390,274.43	98.07	372.44	8,217.82	398,492.25	100.03	12,964.12	3.24	
1951-52	430,403.19	441,242.12	97.97	978.97	7,669.55	448,911.67	99.46	15,345.51	3.40	
1952-53	394,603.45	535,417.35	98.46	(1,146.34)	12,567.93	537,265.28	100.76	16,834.37	1.52	
1953-54	452,325.05	640,239.42	98.15	4,213.42	9,842.33	650,151.75	98.03	17,191.12	2.42	
1954-55	709,078.89	695,260.64	97.96	1,295.13	12,638.30	707,898.94	99.56	30,326.20	2.86	
1955-56	803,373.25	788,734.28	97.41	(2,099.58)	12,140.64	800,874.99	99.95	39,736.97	2.99	
1956-57	874,774.45	861,461.66	98.48	576.90	13,056.01	874,517.67	99.90	21,560.65	2.46	
1957-58	963,006.37	946,445.55	98.08	958.17	12,880.09	959,325.64	99.51	28,189.75	2.92	
1958-59	1,178,853.91	1,197,265.98	98.17	-	13,347.45	1,170,613.43	99.30	36,462.23	3.09	
1959-60	1,436,270.69	1,408,277.57	98.05	(5,274.26)	16,647.80	1,424,925.37	99.58	42,533.29	2.97	
1960-61	1,624,733.20	1,586,169.51	97.63	(8,730.61)	21,591.88	1,607,871.39	99.48	50,874.49	3.15	
1961-62	1,763,785.54	1,718,676.76	97.44	(2,276.45)	31,477.80	1,750,653.06	99.35	62,330.02	3.54	
1962-63	1,815,449.25	1,775,532.25	97.77	(3,688.71)	38,134.68	1,814,666.93	100.07	61,023.63	3.37	
1963-64	1,910,019.05	1,862,973.83	97.54	(1,268.07)	36,835.61	1,899,799.44	99.48	70,975.17	3.72	

- (1) Including adjustments to current year's levy.
- (2) Including adjustments to current and prior years' levies.

Table F-4
LEGAL DEBT MARGIN
June 30, 1964

Assessed valuation 1963-64 (1)	\$ 550,000.00	\$ 1,709,705,886.00
Debt limit (15% of assessed valuation) (2)	7,325,000.00	25,842.12
Amount of debt applicable to debt limit:	7,325,000.00	4,989.00
General obligation bonds:		
1947 waterworks bonds		
1957 waterworks bonds, Series A		
1957 waterworks bonds, Series B		
1957 waterworks bonds, Series C		
1957 waterworks bonds, Series D		
1957 waterworks bonds, Series E		
Total bonded debt	\$ 550,000.00	\$ 4,989.00
Contractual obligations:		
To U.S. Government on First San Diego Aqueduct:		
On first barrel	\$ 4,875,000.00	\$ 1,709,705,886.00
On second barrel	11,655,168.20	4,989.00
To Metropolitan Water District on annexation charges	18,530,168.20	
	11,416,508.63	
Total contractual obligations	29,946,674.83	
Total gross indebtedness	65,231,674.83	
Less portion of fund balances available for debt redemption:		
Waterworks bonds, 1947, interest and sinking fund	330,665.36	
U.S. Government contract fund	23,842.12	
Waterworks bonds, 1957, interest and redemption fund	122,310.39	
Net indebtedness	481,817.86	
Legal debt margin		\$ 191,705,275.03

(1) Assessed valuation (Table F-2)
Deduct excluded areas not subject to new debt

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

SAN DIEGO COUNTY WATER AUTHORITY

Table F-5
METROPOLITAN WATER DISTRICT ANNEXATION CHARGES,
ASSESSMENTS AND BALANCES ON AUTHORITY AREAS.

Member Agencies	Date of Annexation	Period of Special Assessments	
		First Yr.	Last Yr.
Annexation Charges Completed to June 30, 1963			
Outstanding as of June 30, 1963			
Chula Vista, City of)			
Fallbrook Public Utility District)			
Lakeside Irrigation District)			
Helix Irrigation District)	12-17-46	1947-48	1976-77
National City, City of)			
Oceanside, City of)			
San Diego, City of)			
Buena Colorado M. W. D.	6-11-54	1955-56	1984-85
Carlsbad M. W. D.	6-16-54	1955-56	1984-85
Del Mar, City of	11-23-62	1963-64	1992-93
Escondido, City of	10-9-50	1951-52	1980-81
Fallbrook Public Utility District			
No. 1 Annexation of 1950	8-1-50	1951-52	1980-81
No. 2 Annexation of 1958	11-24-58	1959-60	1988-89
Helix Irrigation District			
Crest P. U. D. Annexation	12-13-48	1949-50	1978-79
El Cajon Dry Island Annexation	12-20-54	1955-56	1984-85
Helix-Watson Ranch Annexation	2-20-59	1960-61	1989-90
Helix-Sunny Slope Hts. Annexation	9-17-59	1960-61	1989-90
Olivehain M. W. D.	7-25-60	1961-62	1990-91
Otay M. W. D.	10-26-56	1957-58	1986-87
No. 3 Annexation of 1960	10-20-60	1961-62	1990-91
Poway M. W. D.	4-21-54	1955-56	1984-85
No. 1 Annexation of 1959	9-21-59	1960-61	1989-90
Rainbow M. W. D.	4-10-54	1955-56	1984-85
No. 1 Annexation of 1959	5-12-59	1960-61	1989-90
Ramona M. W. D.	8-27-57	1958-59	1987-88
No. 1 Annexation of 1959	5-29-59	1960-61	1989-90
No. 2 Annexation of 1961	9-22-61	1962-63	1991-92
No. 3 Annexation of 1963	9-20-63	1964-65	1993-94
Rincon del Diablo M. W. D.	6-14-54	1955-56	1984-85
Rio San Diego M. W. D.			
(not including Lakeside I. D.)	6-7-56	1957-58	1986-87
No. 2 Annexation of 1959	11-6-59	1960-61	1989-90
No. 3 Annexation of 1960	10-17-60	1961-62	1990-91
San Dieguito Irrigation District	12-13-48	1949-50	1978-79
No. 1 Annexation of 1959	9-15-59	1960-61	1989-90
Santa Fe Irrigation District	12-13-48	1949-50	1978-79
South Bay Irrigation District			
(not including City of Chula Vista)	11-3-52	1953-54	1982-83
Valley Center M. W. D.	5-9-55	1956-57	1985-86
No. 1 Annexation of 1960	12-12-60	1961-62	1990-91
Yulma M. W. D.	12-16-63	1964-65	1993-94
Total			

FINANCIAL REPORT

Table F-5 (Continued)
METROPOLITAN WATER DISTRICT ANNEXATION CHARGES,
ASSESSMENTS AND BALANCES ON AUTHORITY AREAS

Amount of Annexation Charge	Special Assessments to 6/30/63	Fiscal Year 1963-64		Remaining Balance 6/30/64
		Special Assessments	Tax Rate \$ / \$100	
\$ 98,659	\$ 98,659.00	\$ ---	---	\$ ---
13,045,000	7,029,769.12	402,808.86	3	5,612,422.02
1,072,230	286,775.25	36,366.60	7	749,088.15
548,100	147,091.00	18,716.34	5	382,292.66
611,250	0	20,462.39	23	590,787.61
386,000	154,681.59	12,829.45	6	218,488.96
34,600	18,227.25	991.51	4	15,381.24
50,400	6,770.61	1,737.34	15	41,892.05
10,500	4,954.54	325.84	3	5,219.62
327,450	90,259.45	11,800.92	2	225,389.63
8,730	895.67	277.40	9	7,556.93
38,250	3,864.80	1,278.31	11	33,106.89
83,880	5,665.46	2,820.48	13	75,394.06
273,000	57,207.56	9,175.18	3	206,617.26
95,100	6,357.37	3,265.13	15	85,477.50
91,800	25,184.30	2,771.50	2	63,844.20
27,150	2,807.27	816.04	7	23,525.79
167,700	45,454.17	5,121.01	5	117,124.82
24,300	2,479.81	809.26	15	21,010.93
339,000	56,842.29	11,613.67	15	270,544.04
42,330	4,280.70	1,413.86	20	36,635.44
15,480	518.98	517.21	24	14,443.81
10,560	0	0	---	10,560.00
757,200	202,151.69	26,268.23	8	528,780.08
373,980	76,242.83	11,036.80	4	286,700.37
109,110	11,058.33	3,516.69	13	94,534.98
289,890	19,432.95	9,784.95	18	260,672.10
187,100	88,303.46	6,814.81	3	91,981.73
71,820	7,273.84	2,394.82	23	62,151.34
167,000	78,620.56	6,119.57	3	82,259.87
449,370	153,050.92	15,271.71	4	281,047.37
205,680	48,626.07	6,289.88	8	150,764.05
23,700	1,597.84	781.03	20	21,321.13
749,490	0	0	---	749,490.00
\$20,785,809	\$8,735,104.68	\$634,197.69		\$11,416,506.63

SAN DIEGO COUNTY WATER AUTHORITY

Table F-6
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 6/30/63	Fiscal Year 1963-64		Remaining Balance of Annexation Charges 6/30/64	
			First Year	Last Year		Special Assessments	Tax Rate \$/ \$1.00		
Annexation Charges Completed to June 30, 1963		\$180,730.00			\$695,730.00	\$	0	\$	0
Annexation Charges Outstanding as of June 30, 1963:									
Del Mar, City of	11-23-62	130,700.00	1963-64	1972-73	500.00	13,345.03	.15	116,854.97	
Fallbrook P. U. D. No. 2 Annexation of 1958 Helix I. D.	11-24-58	8,500.00	1959-60	1968-69	3,491.77	926.37	.08	4,081.66	
Summitlope Heights Annex. Olivenchain M. W. D.	9-17-59	11,600.00	1960-61	1969-70	3,637.22	1,162.10	.10	6,800.88	
Olivenchain M. W. D.	7-25-60	13,600.00	1961-62	1970-71	2,930.73	1,517.21	.07	9,152.06	
Olivenchain M. W. D.	10-20-60	16,800.00	1961-62	1970-71	3,582.10	1,747.12	.08	11,470.78	
No. 3 Annex. of 1960	9-21-59	4,000.00	1960-61	1969-70	1,335.42	466.50	.04	2,198.08	
Poway M. W. D.	5-12-59	3,500.00	1960-61	1969-70	1,134.76	377.66	.07	1,987.08	
Rainbow M. W. D.	5-28-59	6,600.00	1960-61	1969-70	2,046.31	649.13	.10	3,684.56	
No. 3 Annex. of 1963	9-20-63	1,100.00	1963-64	1963-64	0	1,100.00	Cash	0	
Rio San Diego M. W. D.	11- 6-59	18,300.00	1960-61	1969-70	5,789.06	1,895.99	.07	10,614.95	
No. 3 Annex. of 1960	10-17-60	57,100.00	1961-62	1970-71	11,568.83	5,978.07	.11	39,563.10	
No. 3 Annex. of 1960	9-15-59	8,400.00	1960-61	1969-70	2,675.99	828.86	.08	4,995.13	
No. 1 Annex. of 1969	12-12-60	3,900.00	1961-62	1970-71	848.83	390.80	.10	2,660.37	
Valley Center M. W. D.	12-16-63	40,780.00	1964-65	1973-74	0	500.00	Cash	40,280.00	
Yulima M. W. D.		\$805,580.00			\$620,191.02	\$	31,685.06	\$	234,303.92
Total									