

SAN DIEGO
COUNTY WATER AUTHORITY



THIRTIETH ANNUAL REPORT
1976

SAN DIEGO COUNTY WATER AUTHORITY

Organized June 9, 1944

THIRTIETH ANNUAL REPORT

OF AUTHORITY OPERATIONS

FOR FISCAL YEAR ENDING JUNE 30, 1976

Linden R. Burzell

General Manager and Chief Engineer

SAN DIEGO, CALIFORNIA

1976

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SAN DIEGO COUNTY WATER AUTHORITY
*Member Agencies, Date of Entry, and
 Representative on Board of Directors on June 30, 1976*

CITIES

Del Mar	Nov. 23, 1962
Wallace Beron	
Escondido	Oct. 9, 1950
Robert M. Dodd	
National City	June 9, 1944
Tom Crownover	
Oceanside	June 9, 1944
David Rorick, Jr.	
San Diego	June 9, 1944
Lois A. Brozey, Charles F. Cooper, John M. Cranston, Janet Erickson, R. E. Graham, Gaylord Henry, Lawrence Hirsch, George Kerrigan, Roy W. Lessard, Arthur H. Marston, Jr., John P. Starkey	

IRRIGATION DISTRICTS

Helix	June 9, 1944
John B. Gibson, Harry Griffen, M. J. Shelton	
San Dieguito	Dec. 13, 1948
Frank J. Cermak	
Santa Fe	Dec. 13, 1948
R. E. Badger	
South Bay	Nov. 3, 1952
Lloyd L. Lee, John N. Williams	

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

MUNICIPAL WATER DISTRICTS

Bueno Colorado	June 11, 1954
French J. Berry	
Carlsbad	June 16, 1954
Allan O. Kelly	
De Luz Heights	June 28, 1967
George Yackey	
Olivenhain	July 25, 1960
Howard G. Golem	
Otay	Oct. 26, 1956
Glenn M. Reiter	
Poway	April 21, 1954
David R. Shephardson	
Rainbow	April 10, 1954
Pat N. Scott	
Ramona	August 27, 1957
Garry L. Butterfield	
Rincon del Diablo	June 14, 1954
Charles A. Crytser	
Rio San Diego	June 7, 1956
Charles C. Price	

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

Valley Center	May 9, 1955
Peter J. Nieblas	
Yuima	Dec. 16, 1963
Hans H. Doe	

PUBLIC UTILITY DISTRICT

Fallbrook	June 9, 1944
Paul K. Algert	

OFFICERS OF BOARD OF DIRECTORS



**Chairman
 HANS H. DOE**
*Yuima Municipal
 Water District
 6-54 to 6-76*



**Vice Chairman
 LLOYD L. LEE**
*South Bay
 Irrigation District
 4-51 to 6-76*



**Secretary
 JOHN M. CRANSTON**
*San Diego
 10-64 to 6-76*



**Treasurer
 HARRY GRIFFEN**
*Helix
 Water District
 7-56 to 6-76*



**Controller
 GEORGE KERRIGAN**
*San Diego
 9-53 to 6-76*



**Assistant Treasurer
 JOHN N. WILLIAMS**
*South Bay
 11-70 to 6-76*

EXECUTIVE OFFICERS



LINDEN R. BURZELL
*General Manager and
 Chief Engineer*



PAUL D. ENGSTRAND
General Counsel

ADMINISTRATIVE STAFF



B. L. OGDEN
*Assistant Chief
 Engineer*



HENRY LOZANO
*Director of
 Finance*



I. E. NICHOLS
Superintendent



JANET RAVIART
Executive Secretary

BOARD OF DIRECTORS
1975-76
For Officers, See Page 5



PAUL K. ALGERT
*Fallbrook Public
Utility District*
7-74 to 6-76



R. E. BADGER
*Santa Fe
Irrigation District*
9-57 to 6-76



WALLACE BERON
Del Mar
3-75 to 6-76

Photo
not
Available

FRENCH J. BERRY
*Buena Colorado
Municipal Water District*
6-76 to 6-76



LOIS A. BROZEY
San Diego
8-74 to 6-76



GARRY L. BUTTERFIELD
*Ramona Municipal
Water District*
7-75 to 6-76



FRANK J. CERMAK
*San Dieguito
Irrigation District*
7-66 to 6-76



CHARLES F. COOPER
San Diego
4-73 to 6-76



TOM CROWNOVER
National City
6-76 to 6-76



CHARLES A. CRYTSER
*Rincon del Diablo
Municipal Water District*
6-54 to 6-76



ROBERT M. DODO
Escondido
1-70 to 6-76



JANET ERICKSON
San Diego
2-74 to 6-76



F. D. FITZSIMMONS
*Yulma Municipal
Water District*
8-71 to 6-76



JOHN B. GIBSON
Helix
Water District
10-71 to 6-76



HOWARD G. GOLEM
*Olivenhain Municipal
Water District*
1-62 to 6-76



R. E. GRAHAM
San Diego
7-63 to 6-76

BOARD OF DIRECTORS
1975-76
(Continued)



GAYLORD L. HENRY
San Diego
11-64 to 6-76



LAWRENCE HIRSCH
San Diego
5-73 to 6-76



HADLEY JOHNSON
*Valley Center
Municipal Water District*
1-72 to 2-76



ALLAN O. KELLY
*Carlsbad Municipal
Water District*
11-63 to 6-76



ROY W. LESSARD
San Diego
5-73 to 6-76



JUDITH McCONNELL
San Diego
4-73 to 9-75



ARTHUR H. MARSTON, JR.
San Diego
12-74 to 6-76



PETER J. NIEBLAS
*Valley Center
Municipal Water District*
2-76 to 6-76



CLEO OSBURN
National City
3-70 to 6-76



LELAND D. PRATT
Helix
Water District
11-69 to 10-75



CHARLES C. PRICE
*Rio San Diego
Municipal Water District*
7-58 to 6-76



GLENN M. REITER
*Otay Municipal
Water District*
9-71 to 6-76



DAVID RORICK, JR.
Oceanside
8-63 to 6-76



PAT N. SCOTT
*Rainbow Municipal
Water District*
9-74 to 6-76



M. J. SHELTON
Helix Water District
2-48 to 6-56
10-65 to 6-76



DAVID R. SHEPARDSON
*Poway Municipal
Water District*
4-54 to 6-76

**BOARD OF DIRECTORS
1975-76
(Continued)**



JOHN P. STARKEY
San Diego
10-75 to 6-76



GEORGE YACKEY
*De Luz Heights
Municipal Water District*
6-68 to 6-76

**DIRECTORS REPRESENTING SDCWA ON
METROPOLITAN WATER DISTRICT
BOARD OF DIRECTORS**



R. E. BADGER
3-73 to 6-76



JOHN M. CRANSTON
12-74 to 6-76



HANS H. DOE
7-59 to 6-76



HARRY GRIFFEN
1-63 to 6-76



LLOYD L. LEE
10-73 to 6-76

ADMINISTRATIVE CODE

Roy W. Lessard, Chairman
Allan O. Kelly, Vice Chairman
R. E. Badger
Frank J. Cermak
John M. Cranston
John B. Gibson
Gaylord L. Henry
Lloyd L. Lee
George F. Yackey

ENVIRONMENTAL POLICY

M. J. Shelton, Chairman
Charles F. Cooper, Vice Chairman
Paul K. Algert
Wallace Beron
John M. Cranston
Janet Erickson
Arthur H. Marston, Jr.
Charles C. Price
David Rorick, Jr.

LEGAL AND CLAIMS

Lawrence Hirsch, Chairman
Pat N. Scott, Vice Chairman
Charles F. Cooper
John M. Cranston
Howard G. Golem
Gaylord L. Henry
George Kerrigan
Peter J. Nieblas
John N. Williams

LAND AND RIGHTS OF WAY

Robert M. Dodd, Chairman
Lois A. Brozey, Vice Chairman
Paul K. Algert
Wallace Beron
Garry L. Butterfield
Charles A. Crytser
John B. Gibson
Allan O. Kelly
Peter J. Nieblas
Charles C. Price
David R. Shepardson

ORGANIZATION AND PERSONNEL

John N. Williams, Chairman
Frank J. Cermak, Vice Chairman
Wallace Beron
Robert M. Dodd
Harry Griffen
George Kerrigan
Charles C. Price
David R. Shepardson
John P. Starkey
George F. Yackey

ENGINEERING AND OPERATIONS

Glenn M. Reiter, Vice Chairman
R. E. Badger
Frank J. Cermak
Charles A. Crytser
Robert M. Dodd
Howard G. Golem
Ralph E. Graham
Lawrence Hirsch
Allan O. Kelly
George Kerrigan
Lloyd L. Lee
Arthur H. Marston, Jr.
M. J. Shelton
John P. Starkey

FINANCE AND INSURANCE

Howard G. Golem, Chairman
Paul K. Algert, Vice Chairman
Lois A. Brozey
Garry L. Butterfield
John B. Gibson
Harry Griffen
Gaylord L. Henry
Roy W. Lessard
David Rorick, Jr.
Pat N. Scott
John P. Starkey
John N. Williams

PUBLIC INFORMATION

David Rorick, Jr., Chairman
Janet Erickson, Vice Chairman
Lois A. Brozey
Garry L. Butterfield
Ralph E. Graham
Roy W. Lessard
Peter J. Nieblas
Glenn M. Reiter
Pat N. Scott

WATER PROBLEMS AND POLICY

David R. Shepardson, Chairman
George F. Yackey, Vice Chairman
R. E. Badger
Charles F. Cooper
Charles A. Crytser
Janet Erickson
Ralph E. Graham
Harry Griffen
Lawrence Hirsch
Lloyd L. Lee
Arthur H. Marston, Jr.
Glenn M. Reiter
M. J. Shelton

STATISTICAL SUMMARY

	1974-75	1975-76	Percent Change
GROWTH OF AREA			
Number of Agencies	22	22	-
Total Area - Acres	* 763,441	763,445	0
Population	1,527,520	1,559,360	+2.1
Assessed Valuation	\$4,775,761,282	\$5,415,953,304	+13.4
OPERATIONS			
Water Imported by Authority-ac. ft.	388,485	425,851	+9.6
Water Production of Agencies-ac. ft.	384,457	442,209	+15.0
Local Water Used-ac. ft.	27,802	29,950	+7.7
Authority Water Used-ac. ft.	356,655	412,259	+15.6
Miles of Pipe Line	204	204	0
Miles of Patrol Roads Maintained	100	100	0
Number of Service Connections	60	63	+5.0
FINANCIAL			
Revenues:			
Water Revenue	\$ 18,449,691	\$ 21,687,680	+17.6
Other Revenue	989,181	693,618	-29.9
Taxes	5,235,728	5,893,073	+12.6
Expenditures:			
Operation and Maintenance	\$ 725,454	\$ 877,536	+21.0
Purchase of Water	18,399,771	20,677,590	+12.4
Payments on Outstanding Debt	2,229,029	2,329,030	+4.5
Total Investment in Plant:			
Total Fixed Assets	\$ 188,688,677	\$ 196,630,370	+4.2
Long-Term Debt	76,665,196	74,038,250	-3.5

*Area of City of San Diego corrected per Planning Dept. data.

San Diego County Water Authority

2750 Fourth Avenue, San Diego, California 92103 (714) 297-3218

Ernest L. Lee, Chairman
John M. Draxton, Vice Chairman
David R. Shepperson, Secretary
Linden R. Burszell, General Manager
and Chief Engineer
Paul D. Engstrand, General Counsel

December 7, 1976

Board of Directors
San Diego County Water Authority

The Thirtieth Annual Report of the Authority, covering activities during the fiscal year ending June 30, 1976, has been prepared and is transmitted herewith.

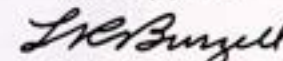
All facilities necessary for distribution of treated water in the San Diego Aqueduct system were complete at year's end, and Metropolitan Water District commenced treated water service late in September 1976 when the Robert A. Skinner Treatment Plant went on line. The Water Authority now has available up to 150 million gallons per day capacity from the Skinner Plant, and additional lesser amounts will become available under agreements with the City of San Diego, Helix Water District, and Poway Municipal Water District. Based on the progress being made on several construction projects, the Water Authority will have adequate treatment capacity available early in 1977 sufficient to justify authorization for the introduction of State Project water into the system in April 1977.

During the year, the Water Authority requested certain changes in its act. The changes were approved by the State Legislature and became law January 1, 1977. Under the new law, the Authority may incur indebtedness up to 1/10 of 1% of the assessed valuation of taxable property in the Authority based on an affirmative vote of 3/4 of the members of the board. The new law also provides for incurring indebtedness up to 1/2 of 1% of the assessed valuation to repair damages caused by a disaster also based on a vote of 3/4 of the members of the board. Finally, the act changes permit annexation of federal military reservations, a change which was needed before the Authority could annex Camp Pendleton, thereby permitting water service to federal leased property including the San Onofre Nuclear Generating facility and State Park. Supplementary water service also will be available to the military base up to a maximum of 15,000 acre feet per year when the annexation of the 127,000 acre military enclave is completed.

Shortly after the end of the fiscal year, the Water Authority entered into a contract with Channel Constructors, Inc. to construct a portion of the Second Pipeline Second San Diego Aqueduct from Shepard Canyon to the Alvarado Treatment Plant. This contract for \$5,472,100 will provide needed raw water service to the City of San Diego's Alvarado Treatment Plant by the fall of 1977.

The Authority's financial position remains strong. Net revenues exceeded expenses by \$1,760,655 in the General Fund, reflecting the Board of Directors policy to construct facilities required during the next two or three years from reserves and current revenues.

Very truly yours,



L. R. Burszell
General Manager and Chief Engineer

LRB/sh

Member Agencies

CITIES: Del Mar, Escondido, National City, Oceanside, San Diego • IRRIGATION DISTRICTS: Helix, San Diego, Santa Fe, South Bay
PUBLIC UTILITY DISTRICTS: Fairbrook • MUNICIPAL WATER DISTRICTS: Buena, Colorado, Carlsbad, De Luz Heights, Olivenhain, Otay, Poway, Ramon, Ramona, Rincon Del Diablo, Rio San Diego, Valley Center, Yuma

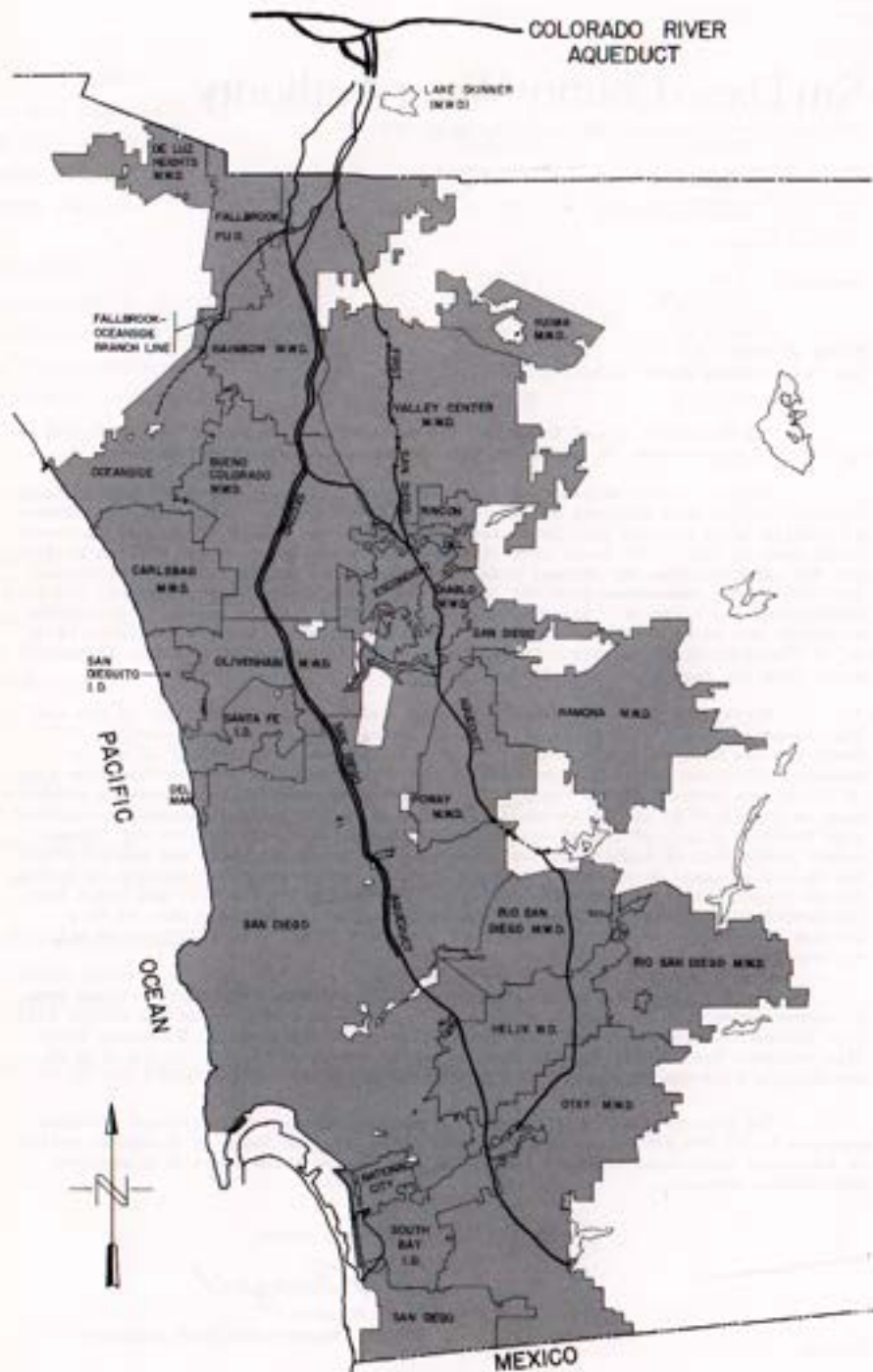


Figure A. Authority Area Within San Diego County.

FISCAL YEAR 1975-1976

The major emphasis of San Diego County Water Authority activities during the 1975-76 fiscal year was on preparation for the introduction of State Water Project supplies into the Authority system in mid-1977. One important step was negotiation between the Authority and several of its member agencies for treatment of water to supplement the treated water provided by the Metropolitan Water District of Southern California (MWD) from the R. A. Skinner Filtration Plant. Another important step was establishment of a rate structure to cover treatment costs. A third important step was the engineering and construction of pipelines, connections, and other facilities to provide treated water to agencies which will require the service and to provide untreated water to agencies which have plants of their own. Engineering and negotiations for right-of-way for the Pipeline 4 Extension to the City of San Diego's Alvarado Treatment Plant were important efforts in this area.

As a vital element in the provision of more than 90 percent of the water used in San Diego County, the Authority must plan well ahead to assure meeting its commitments. Organized in 1944 under the County Water Authority Act, the Authority's purpose is to provide imported water for municipal, domestic, and other beneficial uses to its 22 member agencies. The only source available to the Authority at present is MWD's Colorado River Aqueduct. MWD is also the distributor to its member agencies of water from the State Project. The San Diego connection to this source is expected in mid-1977. Water purchased from MWD is, in turn, sold at wholesale to Authority member agencies.

The Authority is a public corporation with the right to sue and to be sued and to acquire, hold or dispose of real and personal property. Its powers, privileges, and duties are exercised through a Board of Directors. As with a municipal corporation, it can exercise power of eminent domain and is empowered to construct and maintain works and facilities across or along public lands. It may borrow money and incur indebtedness up to a maximum of 15 percent of taxable property in its area. It may levy and collect taxes, enter into contracts, employ personnel and establish offices, and may join other public corporations for the purpose of carrying out its powers.

BOARD OF DIRECTORS

General

There are 35 members of the San Diego County Water Authority Board of Directors, all of whom serve without pay from the Authority. Each is appointed by the chief executive officer of the agency represented, with approval by the governing body of that agency. Of the 22 member agencies, only three are represented by more than one director: City of San Diego by eleven; Helix Water District by three; and South Bay Irrigation District by two. For every full five percent of total Authority assessed valuation contained within a member agency's boundary, an additional representative may be appointed to the Board.

Officers of the Board of Directors are elected in July of even-numbered years. In July 1974, Hans H. Doe was elected Chairman of the Water Authority Board; Lloyd L. Lee, Vice Chairman; and John Cranston, Secretary. Appointed as Treasurer was Harry Griffen; as Assistant Treasurer, John Williams; and as Controller, George Kerrigan.

To facilitate matters, most business coming before the Board is considered first by one or more of its committees. Each committee then reports to the full Board, which makes the necessary decisions. In all, there are 9 standing committees: Engineering and Operations, Finance and Insurance, Organization and Personnel, Water Problems and Policy, Lands and Rights of Way, Legal and Claims, Administrative Code, Public Information, and Environmental Policy.

During the July 1975 Board meeting, Chairman Doe presented a three-year service emblem to Director Hadley Johnson. During the August meeting, the Chairman presented a six-year service emblem to Director Leland Pratt.

Mr. Garry L. Butterfield was seated at the July 1975 meeting to represent Ramona Municipal Water District for the unexpired term of Director John E. Langan, who resigned. Director Butterfield was reelected at the October meeting for a term which will expire on October 2, 1981.

Also at the October meeting, Mr. John P. Starkey was seated as a City of San Diego representative. He replaced Director Judith McConnell, who resigned. His term will expire March 5, 1979.

Mr. Peter J. Nieblas was seated at the February board meeting to represent Valley Center Municipal Water District. He replaced Director Hadley Johnson, and his term will expire January 13, 1978.

Director F. D. Fitzsimmons, who represents Yuima Municipal Water District, was reelected at the March meeting for a term which expires January 9, 1982.

At the June meeting, French J. Berry was seated as the representative of Buena Colorado Municipal Water District, replacing Director Hans Doe. Director Doe was seated to represent Yuima Municipal Water District as the replacement for Director Fitzsimmons, who resigned. Chairman Doe's term will expire January 9, 1982. Also during the June meeting, Mr. Tom Crownover was seated as the City of National City's representative. He replaced Mr. Cleo Osburn, who resigned. His term will expire July 15, 1977.

His removal as representative of Buena Colorado Municipal Water District also removed Director Doe from his Board of Directors chairmanship. After his installation as the Yuima MWD representative, he was unanimously elected Chairman to fill the unexpired term. Director Fitzsimmons was given the honorary title of Director Emeritus by unanimous action of the Board.

Policies

Some of the important policy decisions reached by the Board during the year covered by this report were:

A Staff Risk Management Committee was established by Board action during the August meeting. The Committee will consist of the General Manager and Chief Engineer, the Assistant Chief Engineer, the Finance Director, the Superintendent, the General Counsel, and the Authority's Insurance Broker of Record.

Two statements concerning the effect on Authority policy of the introduction of State Project water into the San Diego Aqueducts were adopted by the Board at the January meeting. First was, "The SDCWA will continue to deliver raw water to its member agencies at all present service connections which serve treatment plants. Where changed conditions make this impractical and it becomes necessary to deliver treated water, the Water Authority will apply a credit to the established price for treated water to take into account the increased costs to the member agencies for a service that they do not desire." The second was, "The SDCWA will deliver treated water to its member agencies at all service connections installed prior to December 1, 1975, upon request and at an elevation equal to that now available."

A resolution passed at the February meeting urged Governor Edmund G. Brown, Jr., and members of the State Legislature not to disturb the governmental structures pertaining to the Colorado River Board. This action was taken in response to publication of the Governor's proposed budget in which the Colorado River Board had been eliminated.

Also adopted in February was a resolution approving a contract with Rio San Diego Municipal Water District for construction of water distribution facilities for treated water from Helix Water District.

"Deep concern about and opposition to the Nuclear Safeguard Initiative (Proposition 15)" was expressed by the Board in a resolution passed in April. The resolution noted the Authority's heavy dependence on energy to pump the water supply for the San Diego area and urged that all options for energy be left open.

Peaking charges for treated water delivered during fiscal year 1976-77 were set by formula and adopted by resolution of the Board in April.

Also in April, an agreement with Helix Water District for treated water from its Levy Plant and for delivery of treated water to Helix from Pipeline 3 was approved by the Board.

Proposition 3 on the June ballot, the California Safe Drinking Water Bond Act of 1976, won support from the Board at its May meeting.

Extensive negotiations over the construction of Pipeline 4 in the future Jackson Drive alignment north of Navajo Road reached a successful conclusion in May with Board approval of an agreement with Scientific Land Projects, Inc., owner of the land. Roadbed, slope and drainage improvements will be made during construction of the pipeline.

Other Action

On August 15 through 17 the Authority, with the cooperation of the U.S. Navy and several of the member agencies, hosted a tour of the Authority Service Area by the Metropolitan Water District Board of Directors and key staff.

A seminar on the Nuclear Safeguard Initiative, Proposition 15 on the June 1976 ballot, was co-sponsored by the Authority on November 21 and 22. Principal sponsor was the American Society of Civil Engineers, San Diego Chapter.

The annual Engineering and Operations Committee inspection of the aqueducts was conducted on April 29.

Administration

The executive officers of the Water Authority are Linden R. Burzell, General Manager and Chief Engineer, and Paul D. Engstrand, General Counsel. The administrative staff consists of Assistant Chief Engineer Buckley L. Ogden; Director of Finance Henry G. Lozano; Superintendent Irwin E. Nichols; and Executive Secretary Janet M. Raviart.

Administrative offices of the Authority are at 2750 Fourth Avenue, San Diego. Field headquarters are located in the Fred A. Heilbron Operations Center at Fifth and Quince Streets, Escondido.

At the end of the fiscal year, the Authority had 41 employees, five of whom were working under the Comprehensive Employment and Training Act; nine were engaged in administration, engineering, and financial positions; twenty-three individuals were in maintenance, stenographic, and clerical positions; and nine persons in project engineering design, surveying, and inspection.

WATER AUTHORITY COMPOSITION

Area

Only one small annexation, San Luis Rey Number 12 to the City of Oceanside, and an area correction by the City of San Diego changed the size of the Authority. Before the 3.5-acre annexation, which was completed in December 1975, the Authority encompassed 763,441 acres. After annexation the Authority area was 763,445 acres (1,192.9 square miles).

Of the population living in San Diego County, 98 percent live within the Water Authority. The Authority area is approximately 28 percent of the total county area.

The boundaries of Authority member agencies overlap in some areas. Member agencies are encouraged to eliminate such overlaps by appropriate action. Overlapping occurs, as an example, when incorporated cities annex neighboring areas already within another member agency.

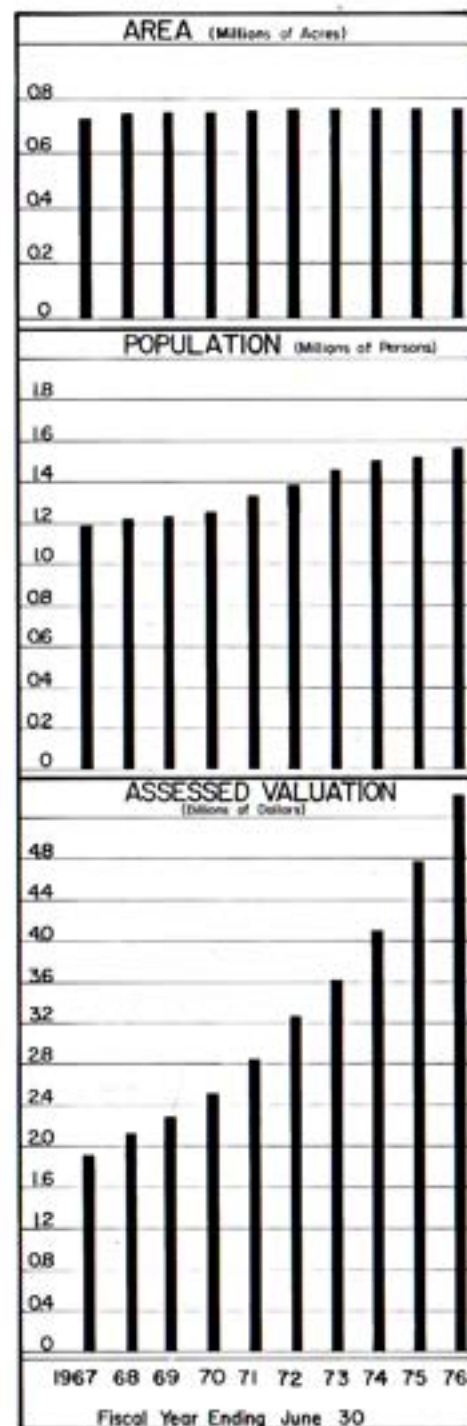
Area changes and percentage of area of each agency are shown in Table 1. The City of San Diego comprises the largest area with 204,467 acres. The smallest area is the City of Del Mar with 1,082 acres.

Under State law, a Statement of Change of Boundaries must be filed by the Executive Secretary on or before each December 31. Filing is with the Metropolitan Water District, the San Diego County Assessor, and the State Board of Equalization. The 1975 statement showed 28 changes of boundaries by member agencies. One of these changed Authority boundaries. The statement is used by the County Assessor to determine total assessed valuation within the Authority.

Assessed Valuation

The San Diego County Assessor determines the assessed valuation of all taxable property within the Authority, whether secured or unsecured. This valuation and the Authority's budget requirements provide the basis for determination of the tax rate by the Board. The number of directors and the number of votes to which each member agency is entitled are also determined by assessed valuation.

Total assessed valuation of taxable property within the Authority, according to the County Auditor's certification, was \$5,415,953,304. This was an increase of \$640,192,022 or 13.4 percent over the 1974-75 valuation of \$4,775,761,282. Certification for 1976-77, received from the County Auditor, shows taxable property within the Authority has been assessed at \$6,087,830,215, a 12.4 percent increase over 1975-76. The average assessed valuation of property within the Authority has increased from \$6,270 per acre in 1974-75 to \$7,085 per acre in 1975-76. The assessed valuation within each member agency, the total for the Authority, and the total for San Diego County are shown in Table 4.



Population

San Diego County, particularly the area served by the Authority, remains one of the fastest-growing regions of the United States. Population within the Authority area at the close of the fiscal year was estimated at 1,559,364, compared to 1,527,520 as of June 30, 1975. Population statistics are shown in Table 2. Population figures for the member agency service areas are shown in Table 3.

Largest of the member agencies in both area and population is the City of San Diego. Its population of 774,100 represents 49.6 percent of the Authority total. De Luz Heights Municipal Water District has the smallest population (180) and the lowest density, with nine persons to the square mile. The highest average population density is the City of La Mesa, part of Helix Water District, with 5.87 persons per acre.

Average population density of the entire Authority area is now 2.03 per acre or 1,306 persons per square mile.

WATER SUPPLY AND CONSUMPTION

Source

The water supply of the San Diego County Water Authority comes from the Colorado River through facilities operated and maintained by the Metropolitan Water District of Southern California (MWD). The Authority has a preferential right to 13 percent of MWD's total supply. This is a direct result of taxes and annexation charges paid to MWD. (Water sales earn no preferential rights.) MWD has never invoked preferential rights as a basis for curtailment of water deliveries.

Metropolitan Water District Facilities

Metropolitan Water District diverts water from the Colorado River Aqueduct into the San Diego Aqueducts near the West Portal of Jacinto Tunnel.

In April 1977, State Project water will be delivered to MWD from Perris Lake, terminus of the 444-mile California Aqueduct. It will flow through the Lakeview Pipeline, which parallels the Colorado River Aqueduct, but moves water in the opposite direction.

It is at the turnout for the Second San Diego Aqueduct that State water will be blended with Colorado River water. Then it will flow south into Lake Skinner - the major storage facility on the San Diego Aqueducts.

Lake Skinner was filled with Colorado River water to its total capacity of 44,000 acre feet in January 1974. Located at an elevation of 1,479 feet, this facility serves the San Diego Pipelines 3 and 4.

The Skinner Filtration Plant, now under construction, is scheduled for completion in fall 1976. It will have an initial capacity of 150 million gallons per day (mgd). An expansion of the plant, scheduled for 1979 completion, will increase its capacity to 240 mgd.

Authority Facilities

The Authority takes delivery of water from MWD in the four pipelines of the two San Diego Aqueducts at a point approximately six miles south of the Riverside - San Diego county line, near Rainbow.

The First Aqueduct terminates in San Vicente Reservoir which is owned and operated by the City of San Diego. The Fallbrook - Oceanside Branch connects to the First Aqueduct at Rainbow. The Authority operates and maintains approximately 12.5 miles of this branch extension from Rainbow to Morro Reservoir. The La Mesa - Sweetwater Branch extends from the First Aqueduct at Slaughterhouse Canyon through Lakeside and El Cajon to its terminus at Sweetwater Reservoir. The two pipelines of the First San Diego Aqueduct share common tunnels and inverted siphons and are operated as a single unit.

The two pipelines of the Second Aqueduct, although mostly in a common right-of-way, do not share any facilities in San Diego County and are operated separately. Pipeline Three terminates in Lower Otay Reservoir. Pipeline Four ends at Miramar Reservoir. An extension of Pipeline Four, the Pomcrado Pipeline, extends the Authority system to the Tierrasanta section of the City of San Diego. A crossover pipeline carries water from the Second Aqueduct at Twin Oaks Valley to the First Aqueduct north of Escondido.

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

The First San Diego Aqueduct (Pipelines 1 and 2) has a capacity of 196 cfs; San Diego Pipeline 3 has a capacity of 250 cfs; and Pipeline 4, 380 cfs.

No storage facilities are owned or operated by the Authority. However, it does have a contractual right to store up to 40,000 af in San Vicente Reservoir. An agreement with the City of San Diego, which owns the reservoir, provides for payment to the City of \$2.20 per acre foot for the maximum amount of water in storage each year. In addition, the Authority pays the City 50 cents per acre foot for pumping water from storage into the City's system. The agreement also provides that the first water which might be lost over the spillway would be that stored by the Authority. During the fiscal year, a total of 25,530 af was placed in San Vicente Reservoir by the Authority for the accounts of

member agencies. A total of 33,715 af was withdrawn, and 1,592 af was lost by evaporation. The net result of this year's activities was a decrease of 9,777 af from 30,644 af in storage on June 30, 1975, to 20,867 af in storage on June 30, 1976. San Vicente storage statistics are shown in Table 11. Otay MWD had the largest water storage credit at year's end, with 4,116 af, or about 20 percent of the Authority storage in the reservoir.

Another Authority - City of San Diego agreement permits storage up to 2,500 af in Lower Otay Reservoir, terminus of Pipeline 3. Storage here is for operational purposes only. Water is transferred to the City when it requests delivery at this location. No storage is provided for member agencies. The City is paid \$1 per af for the maximum storage in any 12-month period. A minimum annual fee of \$1,000 is charged. The Authority also pays pumping charges, which vary from \$1.50 to \$2.25 per af depending on water elevation.

An agreement with Poway MWD provided for storage of up to 3,000 af of Authority water in Lake Poway. Terms were similar to those in the Authority - City of San Diego agreement for Lower Otay Reservoir, except that no evaporation is charged against the Authority. Because the agreement was to expire in August 1976, all Authority water was withdrawn from Lake Poway during the spring.

Dixon Reservoir can be utilized for up to 1,800 af of storage under terms of an agreement with the City of Escondido. This water must be purchased by the City during the following fiscal year. All losses are absorbed by the City. Helix Water District has a similar agreement with the Authority for storage of up to 2,000 af in Lake Jennings.

These agreements are designed to relieve seasonal peaking on the San Diego Aqueducts.

In February, the Board of Directors approved a contract with California-American Water Company for storage rights in Sweetwater Reservoir. This agreement is similar to the other storage contracts, except that the quantity of water to be stored is determined by Cal-American. In addition, the Authority storage is charged its proportional share of evaporation.

Supervision and control of the San Diego Aqueduct system is conducted from the Fred A. Heilbron Operations Center, Escondido. Delivery rate requests from member agencies are received here. Flows in the aqueducts and deliveries are controlled and monitored through a telemeter system designed and built by Authority personnel. Communications with operating and maintenance field staff and with MWD's East Valley Operations Section at Lake Skinner is by two-way radio.

Deliveries and Rates

The four pipelines of the San Diego Aqueducts delivered a total of 425,983 af during the fiscal year, as compared to 388,485 af during the previous year.¹ This was an increase of 37,498 af or nearly ten percent.

The lowest flow rates occurred in January 1976 (215cfs).² This low rate resulted from an MWD shutdown of the Colorado River Aqueduct while repairs to Freda Siphon were completed. Flow in Pipelines 1 and 2, which take water directly from the Colorado River Aqueduct, were reduced during this shutdown because of the limited availability of water from this source. The average low flow was 250 cfs in December 1975. Total deliveries from the aqueducts during that month were 19,652 af up from 18,481 af from the previous fiscal year's low month, April 1975.

¹ An acre foot of water equals 325,900 gallons.

² cfs is cubic feet per second and is used to measure the amount of water flowing through a pipeline.

Highest peak flows, as well as the highest average flows, occurred in June 1976. A peak flow of 805 cfs was the highest ever recorded by the Water Authority. This was 97 percent of total design capacity. Previous high flow was 737 cfs. Total deliveries during June were 48,110.6 af, also a new record. The previous record high was 42,391 af in July 1974.

Water deliveries to member agencies for the fiscal year are shown in Table 5. Purchases totaled 419,220 af. In addition, 8,186 af were delivered to Tijuana and 35,592 af placed in storage. Storage withdrawals were 37,015 af. 30,167 af of Authority water remained in storage at year's end. Combined Authority - member agencies storage as of June 30, 1976 was 163,182 af.

Annual water sales to individual member agencies for the eight-year period 1968 to 1976 and total water sales from 1947-1968 are shown in Table 6. Sales during the fiscal year covered by this report show an increase of nearly 14 percent over 1974-75.

Financing of Authority operations and maintenance is through a surcharge added to the MWD water price, plus other miscellaneous revenues. The surcharge during the fiscal year 1975-76 was \$1.25 per acre foot. The surcharge rate for 1976-77 has been set at \$2 per acre foot.

Capital costs have been paid from the sales of general obligation bonds, and tax revenues provide the bond service requirement. The tax rate of 11¢ per \$100 assessed valuation has remained constant for the past three years.



Lety Treatment Plant and Lake Jennings (background) owned and operated by Helix Water District. Under agreement between Helix Water District and Authority, capacity from this plant will be available to serve portions of Otay and Rio San Diego Municipal Water Districts.

The Metropolitan Water District normally announces rate increases about two years in advance. In recent years, MWD has increased its water rates annually, except during 1974. As the cost of energy for pumping increases, further MWD water rate increases are expected. During 1975-76, the MWD rate for untreated municipal and industrial water was \$58 per acre foot. Addition of the Authority surcharge brought the rate to member agencies to \$59.25.

For several years, MWD has priced State Project water higher than Colorado River supplies. This difference was \$10 during the 1975-76 fiscal year and will be \$6 during 1976-77. The differential will be eliminated in July 1977, about the time first deliveries to the Authority system are expected.

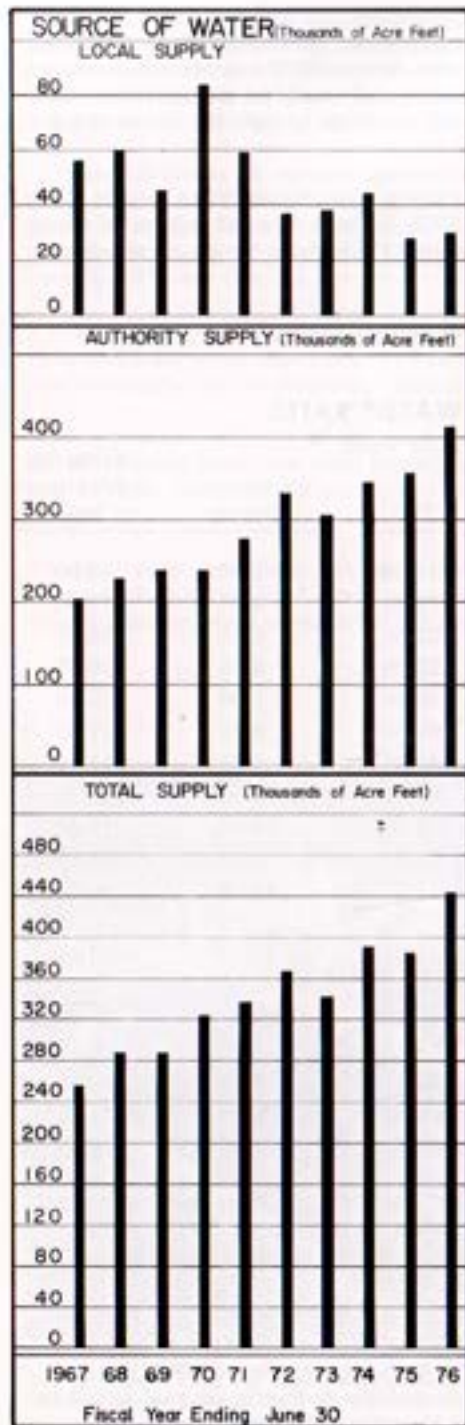
A summary of past and announced MWD and Authority rates follows:

SUMMARY OF WATER RATES
(Dollars Per Acre Foot)

From	To	MWD	Authority	Total	Agricultural Rebate	Resulting Agricultural Rate
7/1/58	1/1/61	15.00	2.00	17.00	3.00	14.00
1/1/61	1/1/62	17.00	2.00	19.00	4.25	14.75
1/1/62	1/1/63	19.00	2.00	21.00	5.50	15.50
1/1/63	1/1/64	21.00	2.00	23.00	6.75	16.25
1/1/64	7/1/64	24.00	2.00	26.00	9.00	17.00
7/1/64	9/1/64	25.00	2.00	27.00	9.75	17.25
9/1/64	7/1/65	25.00	1.25	26.25	9.75	16.50
7/1/65	7/1/66	28.00	1.25	29.25	12.00	17.25
7/1/66	7/1/67	31.00	1.25	32.25	14.00	18.25
7/1/67	7/1/68	34.00	1.25	35.25	16.00	19.25
7/1/68	7/1/69	37.00	1.25	38.25	18.00	20.25
7/1/69	7/1/70	40.00	1.25	41.25	20.00	21.25
7/1/70	7/1/71	44.00	1.25	45.25	23.00	22.25
7/1/71	7/1/72	48.00	1.25	49.25	26.00	23.25
7/1/72	8/13/73	52.00	1.25	53.25	28.50	24.75
8/13/73	7/1/75	56.00	1.25	57.25	31.00	26.25
7/1/75	7/1/76	58.00	1.25	59.25	33.00	26.25
7/1/76	7/1/77	62.00	2.00	64.00	33.00	31.00
7/1/77	7/1/78	67.00	2.00	69.00	33.00	36.00

NOTE: Above summary of water rates shows prices for Colorado River and State Project water; treatment cost of \$13.00/af for the period 7/1/76 to 7/1/77 and \$17.00/af for the period 7/1/77 to 7/1/78 must be added to above rates.

As shown in the Summary of water rates, MWD gives encouragement to agriculture through lower prices. To obtain the rebate, the Authority certifies to MWD the quantities of water used for agriculture. Rebates granted the Authority are paid in full to the member agencies. The agencies in turn credit the agricultural users.



Water Production of Member Agencies

The phrase "Water Production" describes the quantity of water an agency has obtained from all its sources to meet its consumers' needs. It includes losses between the source and the consumer. These losses result from pipeline breaks, evaporation from reservoirs, and operating shortages. Sources include impounding reservoirs, wells, and the Authority system.

The total water production of each of the 22 member agencies is shown in Table 7. An increase of 15.3 percent occurred in 1975-76 (443,239 af) over 1974-75 (384,457 af). Highest monthly production was in June 1976 when 48,915 af were used. These amounts set new monthly and annual records. The previous high month occurred in August 1972 (46,906 af). Previous high year was 1973-74 when total production reached 390,502 af. Lowest monthly production during this report year was in February (21,606 af). Compared to February 1975, lowest month of the previous year, this was an increase of 3,065 af. The Authority supplied 93 percent of the total water production within its service area during 1975-76.

The year was relatively dry. Lindbergh Field recorded 9.11 inches of rainfall, which is 96 percent of normal at that location. At Lake Cuyamaca, 29.08 inches were recorded which is 77 percent of normal. Lake Henshaw received 22.14 inches, 85 percent of normal.

The Pauma Valley wells produced 1,705 af for the several agencies within Yuima Municipal Water District. The San Luis Rey River system and the Warner Ranch wells owned by Vista Irrigation District, a sub-agency of Buena Colorado MWD, produced 3,942 af for distribution within Buena Colorado and the City of Escondido. California-American Water Company produced 1,886 af from its own sources in the Sweetwater River system and the National City wells. Cal-American delivers water in National City and in South Bay

**SAN DIEGO COUNTY WATER AUTHORITY
WATER PRODUCTION**

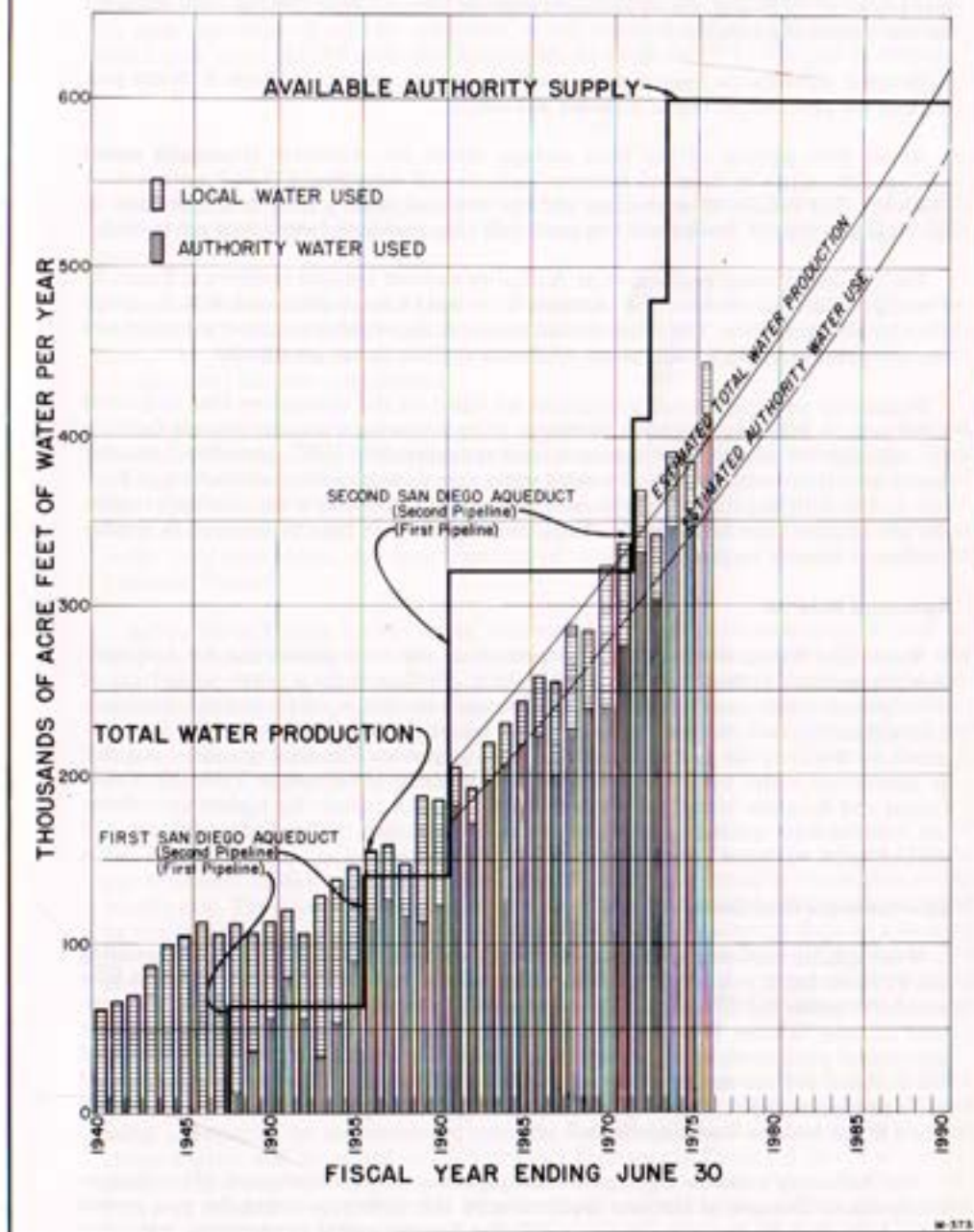


Figure B. Water Production of Authority Member Agencies

Irrigation District. Helix Water District used 4,801 af of local water. There was no production from wells in the El Monte Basin this year. The City of San Diego maintains the most extensive system of impounding reservoirs within the Water Authority. This system produced 11,946 af during the fiscal year. Of this quantity, 7,887 af were delivered for use outside the Authority.

Detailed statistics on agency water production are contained in Table 8. Water production per acre and per capita is shown in Table 9.

About 49.6 percent of the total acreage within the Authority is actually served through the water systems of member agencies (an estimated 379,307 acres out of 764,445). The volume of water used per acre per year varies a great deal depending on the stage and type of development, type of soil, crop raised, and other land use factors.

The combined water production of Authority member agencies is shown in Figure B. Shading indicates the proportion obtained from local sources compared with that supplied by the Authority. The trend toward increased dependence on imported water and changes in the quantity of local water used each year are shown graphically.

Projections of future water production are based on the assumption that additional water will be available as needed. Although these projections indicate present facilities are adequate to meet volume demands until approximately 1985, operational requirements associated with delivery of treated water may dictate earlier construction of Pipeline 5. The fifth pipeline may be needed before 1985 if treated water demands require the use of more than one pipeline. The new facility would then be required to provide additional delivery capacity.

Agricultural Water Use

Water used for agriculture was 25.0 percent of the total production by Authority member agencies (108,644 af out of 434,322). MWD provides a rebate of \$31 per af of imported water used for agriculture. The amount of the credit and the quantities involved justify extensive record keeping and reporting, in accordance with rules established by MWD, by the Authority and its member agencies. The total quantities certified as agricultural water by the agencies to the Authority are shown in Table 10. Valley Center and Rainbow Municipal Water Districts continue to have the highest agricultural use, both in total quantity and in proportion to other uses. Valley Center delivers 90.0 percent of its water for agricultural use.

Chlorination and Water Quality

Water quality factors tended to create severe problems for the Water Authority during the 1975-76 fiscal year. Algal growth, with resultant high turbidity and taste and odor problems, presented difficulties. The algae growth was primarily the result of the newness of Lake Skinner. However, untimely canal cleaning and high flow rates and other operational procedures were compounding factors. Copper sulphate treatments alleviated the problem but did not eliminate it. Installation of aerators in the reservoir is expected to be the best solution. Turbidity at Miramar ranged from a low of 0.6 Jackson Turbidity Units to 6.5 Jackson Turbidity Units.

The Authority controls algae growth in pipelines through a program of continuous chlorination. The rate of chlorine application by the Authority during the year ranged from 1.00 to 1.50 ppm depending on chlorine demand, water temperature, and other variables. The Rainbow Pass chlorination station serves Pipelines 1, 2, and 3. A temporary station near Lake Skinner serves Pipeline 4.

Chemical constituents of the dissolved solids in aqueduct water are shown in Tables 12 and 13. The analyses are based on samples taken from Lake Skinner by MWD and tested at the F. E. Weymouth Filtration Plant in La Verne. Total hardness ranged from a high of 336 parts per million (ppm) to a low of 324 ppm. The hardness was measured as the ppm equivalent of calcium carbonate, which averaged 332 ppm. Water temperature varied from a low of 50°F. recorded in January, to a high of 77°F. reported in August.

Water Treatment

The bacteriological quality standards established by the United States Public Health Service Drinking Water Standards of 1962 were met throughout the year by Authority water.

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

Member agencies serving more highly urbanized areas have, in most cases, provided for water filtration. Seven filtration plants are in operation within the Authority. They provide filtered water to eight agencies: the cities of San Diego, National City, and Del Mar; San Dieguito Water District, Santa Fe and South Bay Irrigation Districts; Helix Water District; and Poway Municipal Water District. An eighth plant, nearing completion as the fiscal year ended, has been constructed to serve the City of Escondido and Vista Irrigation District.

Before State Project water can be delivered for domestic consumption, it must receive complete treatment, which includes coagulation, sedimentation, filtration, and chlorination. The Authority and its member agencies have been studying ways to provide treatment for all agencies since early 1969. Under the plan agreed upon, part of this service will be provided by the initial 150 million-gallon-a-day (mgd) capacity of the Skinner Filtration Plant. This facility is being constructed by MWD at Lake Skinner. It is scheduled to begin operation in October 1976.

The Authority has also negotiated contracts for filtered water service from the City of San Diego, Helix Water District, and Poway Municipal Water District. A rate schedule to pay treatment costs has been formulated. It will consist of a capacity charge plus a commodity rate. The total of these charges must cover all costs for treatment service provided by the four agencies. These rates will be set annually by the Authority Board by January for the following fiscal year. The capacity charge established for fiscal 1976-77 is \$1,700 per acre foot per day based on the maximum daily use. The charge is payable monthly as 1/12th of the total due for 1975-76 peak flow rates. The 1976-77 commodity charge will be \$9.50 per af.

Delivery of treated Colorado River water is expected to begin in October 1976 when the Skinner Plant is completed. A 50-50 blend of Colorado River and State Project water is expected to be introduced into the San Diego Aqueducts during 1977. Raw blended water will be carried to the Crossover Exchange in Pipeline 4. South of the Exchange, Pipeline 3 will carry raw water to the existing treatment plants. Pipeline 3 will transport treated water from the Skinner Plant to the Exchange, from which point treated water will be in Pipeline 4. Pipelines 1 and 2 will continue to carry raw Colorado River water as far south as the Crossover connection near Escondido. The Crossover will replenish the line with raw blended water.

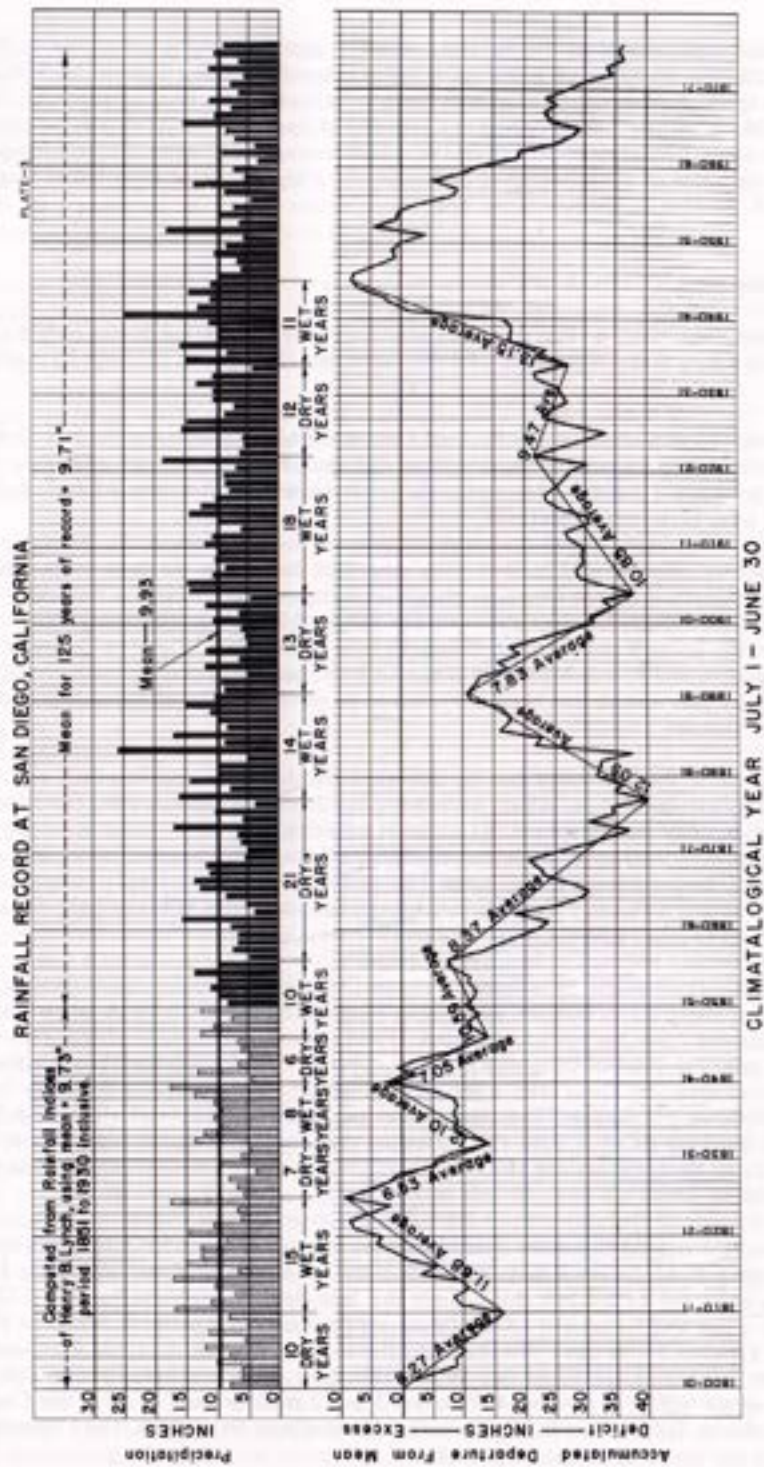
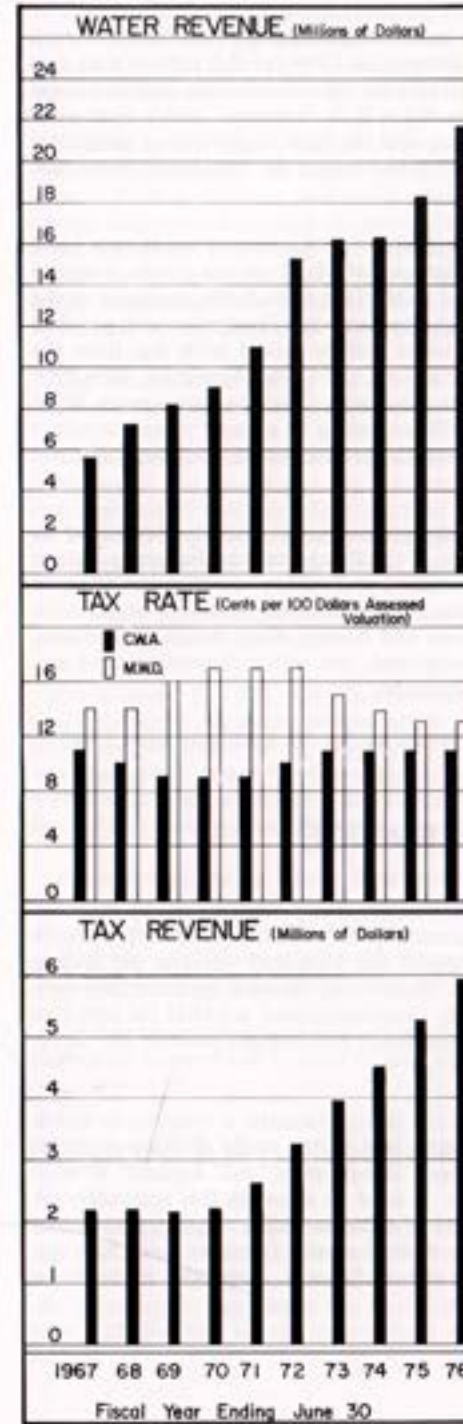


Figure C. Rainfall Record at San Diego, California.



Allocation of Water Among Member Agencies

Provisions are made in the Authority Act (Sec. 5.11) for preferential entitlement to purchase water by the separate member agencies. Also, the California Water Code provides procedures which may be followed if shortages of water occur (Water Code Sec. 350 through 358). Voluntary agreement between member agencies has made invocation of these provisions unnecessary in instances when shortages have developed. The General Manager and Chief Engineer is working with the operating heads of member agencies to develop a long-range program for handling treated water shortages. The preferential right is established by the proportion of all payments to the Authority to meet capital costs (primarily taxes and annexation fees). When water and capacity are available, agencies may purchase water without restriction. Table 14 shows the preferential right of each member agency as of June 30, 1976.

Future Supplies

It is the responsibility and the policy of the Authority to provide all the supplemental water required by its member agencies to meet the needs of their consumers. Although growth rates within the Authority service area have slackened, projections indicate a continued population increase for the foreseeable future. The long lead-time required for development of new water resources demand that attention be given now to meeting future needs.

The Authority obtains all water it distributes from the Metropolitan Water District of Southern California. At present, the only available source is the Colorado River Aqueduct. Deliveries from the State Water Project are scheduled to start in mid-1977. These aqueducts are expected to meet Authority needs until the second decade of the 21st Century. By that time, MWD's population is expected to have increased from the present 11 million to 20 million.

The MWD Board has adopted a policy that additional water and/or facilities will be provided as needed to meet demands of its member agencies. In fulfillment of that policy, MWD contracted with the State of California in 1960 for 1.5 million acre feet annually from the State Water Project. When faced with the loss of nearly half its annual Colorado River supply of 1,212,000 af because of the U. S. Supreme Court's decision in *Arizona v. California*, MWD amended its contract with the State to provide an additional 500,000 af/year. Annexations and other changes have brought the total MWD State contract to 2,011,500 af/year.

The California Aqueduct, key water supply feature of the State Project, was completed in 1973. Water from this system is available to MWD at several points. Supplies destined for San Diego County will be delivered to MWD at Lake Perris, terminus of the 444-mile aqueduct. The water will flow through the Lakeview Pipeline, which parallels the Colorado River Aqueduct. The northern water will be mixed with that from the Colorado, at the existing canal turnout for the second San Diego Aqueduct, then flow south into Lake Skinner. This reservoir has been filled with Colorado River water. When the northern water is available the reservoir will, according to present plans, contain a 50-50 blend. As Authority requirements increase, the proportion of northern water will increase.

If present projections are correct, additional water resources must be developed by the year 2010. The Authority, MWD, the State of California, various Federal agencies, and many private organizations are presently making preliminary investigation of possible supplemental water sources. The potentials of the undeveloped rivers of northern California, the Columbia River, rivers in Canada and Alaska, waste water reclamation, weather modification, geothermal water development, sea water conversion, and any other possibilities are being given careful consideration.

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

OPERATION AND MAINTENANCE

The Superintendent directs all operations and maintenance from the Fred A. Heilbron Operations Center, 610 West Fifth Avenue, Escondido. This location is the approximate center of the Authority's system. From this point, the Authority operates the system around the clock with a staff of seven persons. Since many member agencies have very small reservoir capacity, continuous and speedy communications are vital for effective operation. Telephone, two-way radio and telemetering installations provide the necessary contact and control.

Continuous routine patrol of the Aqueducts and related facilities is required to watch for vandalism and leaks and to inspect structures and access roads. Rolling stock includes patrol vehicles, road graders, bulldozers, compressors, and welders. A well-equipped shop, a part of the Heilbron Center, is used to maintain this machinery. A versatile and well-trained staff provides a variety of skills, including carpentry, painting, electrical, road-building, construction, and mechanical repair. Two-way radio base stations are located in San Diego, Escondido, and at Lake Skinner. A repeater station is on Mt. Palomar. There are 15 mobile units.

With treated water service scheduled for fall 1976, it became desirable to gain operational experience. Simulated operations were started July 1, 1975 in Pipeline 3. Although flow changes were minimal during the first month of simulation, demands for water immediately reached pipeline and treatment plant capacity.

Treated water service requires the installation of several new service connections to enable the Authority to deliver either treated or raw water as needed by the member agency. During the year, new connections were completed as follows: Escondido No. 3 to the Crossover Aqueduct to provide raw water to the Escondido - Vista Treatment Plant; Oceanside No. 2 and 3 to Pipeline 4; Helix No. 3 to Pipeline 3 for treated water service in exchange for water treated at the Levy Plant for use by Otay and Rio San Diego Municipal Water District; Poway No. 4 to Pipeline 1; Fallbrook No. 4 connection to Pipeline 4; and Olivenhain No. 2 connection to Pipeline 4.

The annual inspection of the aqueducts by foot patrol was completed in October. No unusual or serious problems were noted.

Several safety features were added to the aqueduct system, including emergency eye wash basins and showers at the chlorination stations, ladder cages in several locations, and guards over rotating pump shafts at the chlorination stations. Electrical receptacles in 21 control stations were wired to comply with California Office of Safety and Health Administration (CAL-OSHA) standards.

A water quality monitoring unit was installed at Rainbow Chlorination Station to monitor Pipelines 1, 2, and 3.

On January 5, 1976, the Metropolitan Water District discovered a major leak in a Colorado River Aqueduct siphon which required the Aqueduct to be shut down. Partial operation was restored on January 9. Following completion of repairs, the Aqueduct was again shut down for the removal of bulkheads. This shut down was coordinated with a shut down of the First San Diego Aqueduct (Pipelines 1 and 2) to permit installation of new meters at the Riverside - San Diego County line.

A portion of the La Mesa - Sweetwater Pipeline on Jamacha Road was out of service for a day and a half, so a 148 foot section could be replaced and lowered.

Roll-over protection equipment was installed on six vehicles to meet California Office of Safety and Health Administration safety standards.

Additional steps were taken to improve protection against vandalism. Access structures were covered and in areas of high traffic, covers were secured in place with bolts.

DESIGN AND CONSTRUCTION

The Design and Construction Department is responsible for keeping the San Diego Aqueduct system adequate to meet the water demands of the member agencies. During the 1975-76 fiscal year, the major objective has been to design and construct the facilities necessary to implement the Authority's interim treated water service plan. Projects have included the service connections mentioned in the operation and maintenance section.

The single largest design project was for the Pipeline 4 Extension from Shepherd Canyon in the Tierrasanta area of the City of San Diego to the Alvarado Treatment Plant near Lake Murray. This extension is required to deliver raw water to the plant. As part of this project, extensive negotiations were conducted between the Authority, the City of San Diego, the owner of a large parcel of property, and a local planning group over the alignment and grading of the pipeline right-of-way. The objective was to proceed in such a way as to minimize future work needed to complete construction of Jackson Drive between Navajo Road and Mission Gorge Road. This goal was attained through the cooperation of the City of San Diego, the property owner and the Authority. Pipeline 4 Extension was advertised for bidding June 10, 1976 and the contract awarded in July.

A pressure control station was built on Pipeline 3 near Lower Otay Lake to provide higher pressure in the pipeline, to make possible deliveries as requested to Helix Water District at the new No. 3 Service Connection. Otay Municipal Water District will also benefit from this increased pressure at its No. 4 and No. 5 Service Connections. Notice of Completion was filed May 11.

The Tri-Agencies Pipeline is a proposed facility to convey water from Pipeline 4 to Buena Colorado and Carlsbad Municipal Water Districts and the City of Oceanside. The three agencies intend to design and construct the line as a cooperative venture. Design of the system was undertaken by the Authority with costs paid by the three member agencies. Engineering design was started during the 1973-74 fiscal year and continued into 1975-76. On July 31, 1975, the Environmental Impact Report hearing was held in Oceanside. A negative Notice of Determination was filed with the San Diego County Clerk as required by the California Environmental Quality Act guidelines.

Construction of a new alignment of Interstate Highway 15 in the Miramar area required laying pipe for Pipeline 4a, a third crossing of the highway at this location. The work was scheduled for three stages as highway work progressed. Part of the installation was done during fiscal 1975-76; part will be done during the coming year.

Design work on the interconnection of the Helix Water District Pipeline to the La Mesa - Sweetwater Extension to provide treated water service to Otay was started in November 1975.

To permit operating flexibility, the ability to exchange water between Pipelines 3 and 4 is necessary. All piping at the Crossover Water Exchange Facilities was operable by January 1976. Thus, when treated water becomes available from the Skinner Filtration Plant, it can be carried in Pipeline 3 to the crossover, where it can be re-distributed as required. Notice of Completion was filed on April 28.

To compensate for loss of head as raw water goes from Pipeline 4 through the City of San Diego's Miramar Treatment Plant into Pipeline 3, a pumping plant must be installed. This station, at ultimate size, will involve four to six pumps with a total capacity of 235 cfs. Design of this facility continued throughout the year.

A capacity test was conducted after cleaning the section of Pipeline 3 which is operated by Metropolitan Water District. Although design capacity of the Second Aqueduct (Pipelines 3 and 4) is 630 cubic feet per second, it was found that a flow of 770 cfs is possible. The increase in capacity may have a significant effect on the timing of additional facilities.

PUBLIC INFORMATION

As a public agency providing a basic and vital service to the community, the Authority has an obligation to make citizens aware of its activities. The difficulty of meeting that obligation is compounded by the fact the Authority has only rare contact with retail water customers. Recognizing the need for improved communication, the Board of Directors provided for a much more active program beginning with the 1975-76 fiscal year.

A program designed for use in the secondary schools, colleges, and universities was developed. This program combines the use of printed materials, a multi-media presentation, motion pictures, lectures, classroom discussions, and evaluation procedures to educate young adults to the importance and ramifications of water supply. The presentation is variable enough to relate water to such fields of study as government, history, geography, the environment, biology, chemistry, physics, mathematics and economics.

Water conservation provided a basic theme for many other areas of public information activity. Two 35 mm prints of a seven-minute animated cartoon, "Water Follies, A Soak Opera," were circulated through commercial motion picture theaters. It is conservatively estimated more than 40,000 people saw the film during the year. "Water Follies," which was originally produced for the Denver Water Board, is also used in the school program.

A new bi-monthly publication, Patter, was launched to provide information about water matters for community leaders. Coverage of Authority events and activities of member agencies is provided through this medium. The periodical has a present circulation of approximately 3,500.

Print and broadcast news media were used to inform the public about problems and policies of the Authority and its member agencies. Information was exchanged through regular contacts with news personnel, news releases, tours, and feature coverage suggestions.

The public information program also includes a speakers bureau and a motion picture film library. Printed materials and interviews are available to individuals or organizations wishing additional information.

LEGAL DEPARTMENT

Principal responsibility for legal advice and representation comes from the General Counsel. However, members of his firm provide assistance from time to time. Mr. Wallace R. Peck generally assists in all areas and Mr. Larry M. Marshall handles condemnation litigation matters. In addition, Mr. Harold E. Landis was employed as special counsel to assist in negotiating contracts between the Authority, Helix Water District, Rio San Diego Municipal Water District and California-American Water Company.

Implementation of the policy decisions by the Board of Directors to coordinate the availability of treated water for all member agencies has required some unique legal and eco-engineering solutions. The contract made with the City of San Diego last year developed an economic framework. Contracts were finalized this year with Helix and Poway. Basically, an analysis was made of the proportionate replenishment cost new (less depreciation) of the facilities to be made available by the member agency to the Authority. Our auditors reviewed the data and work sheets furnished by each agency to determine that a consistent practice was followed. Capacity charges by the member agency to the Authority were based on these calculations. In addition, the Authority pays the prorata

share of the operating cost of the treatment plant utilized. Each contract had distinct features designed to fit the particular circumstances and accomplish the overall goal. In order to gain experience and evaluate the soundness of this approach to provide treated water, the contracts are short term. They each expire in June 1980.

The contract with Rio was designed to employ the policy of delivering treated water to service connections installed prior to December 1, 1975 at elevations equal to those then available. The contract with Cal-Am provides for greatly reduced deliveries of treated water when needed to meet the requirements of agencies which take deliveries above Cal-Am.

The contracts are intended to make possible delivery of treated water to all member agencies which do not have treatment plants or for other reasons desire to receive treated water from the Authority. Since the Authority has no treatment plant, the availability of treated water is dependent upon deliveries from the Skinner Treatment Plant of MWD and these contracts. Utilization of treatment plant capacity in the Authority is maximized, duplicative capital costs are minimized and flexibility in delivery capabilities are enhanced.

Eminent domain litigation was commenced to secure the right of way necessary for the extension of Pipeline 4 from Shepherd Canyon to the Alvarado Treatment Plant of the City of San Diego. Successful negotiations secured the necessary right of way and the litigation was dismissed.

A draft Conflict of Interest Code was prepared for the Authority to implement the Political Reform Act of 1974 which became effective January 7, 1975. A public hearing will be held before it is submitted to the Board of Supervisors of San Diego County for approval as required by law.

At the request of the Authority, Senator John Stull introduced Senate Bill 1884. It had three purposes. One was to change the short term borrowing limit from \$1 million to one-tenth of one percent of the assessed value of property within the Authority. This power will be exercisable upon a vote of three-fourths of the voting power of the Authority board.

The second purpose was to provide the Authority with the power to borrow funds in the event of an earthquake or other disaster which destroyed or damaged its facilities. Indebtedness under this provision must be authorized by a three-fourths vote of the Authority board and is limited to an amount equal to one-half of one percent of the assessed value of taxable property within the Authority.

The third purpose of SB 1884 was to provide legal means to annex the Naval Enclave consisting of 135,000 acres in Northern San Diego County which includes Camp Pendleton, Fallbrook Naval Weapons Station, the Regional Medical Center, and the Marine Corps Landing Facility to the Authority as a separate member agency. It is expected that this legislation will become law so that annexation proceedings can be commenced after January 1977.

The litigation brought by the City of Los Angeles against MWD continued to be monitored so that the interests of the Authority would be currently evaluated.

TREASURER'S REPORT

Much of the strong financial condition of the Water Authority is the result of careful investments made by the Treasurer. The Treasurer is responsible for all funds not im-

mediately required for the conduct of business by the Authority. Appointment is by the Chairman of the Board of Directors. Service is without remuneration.

Under Board policy, the Treasurer invests funds in interest-bearing bank time deposits, direct obligations of the Federal Government, and in Federal agency obligations.

The Administrative Code requires the Treasurer to report a summary of his financial transactions monthly and for each fiscal year-end. For fiscal 1975-76, the report is as follows:

For the fiscal year ending June 30, 1976, total Water Authority income was \$28,711,970. Total disbursements during the year were \$28,499,472. At the fiscal year's end, the Treasurer had control of funds and investments totaling \$9,341,830.

Income was received as follows:

Water sales	\$21,546,188	
Taxes	5,873,780	
Interest on investments	567,453	
Tijuana water service	141,492	
Miscellaneous	583,057	
Total income		<u>\$28,711,970</u>

Disbursements were as follows:

Water purchases	\$20,675,098	
Operation and maintenance	871,446	
Debt service, principal and interest	4,895,082	
Capital outlay	46,402	
Contingencies	11,442	
Total disbursements		<u>\$26,499,472</u>

As of June 30, 1976, the Treasurer's accountability was on deposit as follows:

Demand deposits	\$ 66,830	
Time deposits	8,115,000	
Savings account	1,160,000	
Total deposits		<u>\$ 9,341,830</u>

METROPOLITAN WATER DISTRICT MEMBERSHIP

Because of the close relationship between the Metropolitan Water District of Southern California (MWD) and the San Diego County Water Authority, readers of this report may find a description of MWD's organization and operations of interest.

The Water Authority receives its entire supply of water from MWD, is one of 27 member agencies of that District, and works very closely with it.

The Metropolitan Water District Act was approved by the State Legislature in 1927. Early the following year MWD was organized. The original act provided for membership by cities. An amendment passed later by the Legislature permitted annexation of large water districts. MWD membership now includes the 13 original cities, one city added in

1971, 12 municipal water districts, and the San Diego County Water Authority.

The MWD and Authority Act are similar. Under each act, policy is established by a board of directors which represents the member agencies. Each director is appointed by the chief executive officer of the agency he represents, with approval from its legislative body. Under present MWD rules, each member agency is entitled to one director. An additional representative may be appointed for each three percent of the total MWD assessed valuation which lies within the member agency's boundaries. The district member agencies are listed in Figure D.

The Authority began and ended the fiscal year with five representatives on the Metropolitan Board of Directors. All were members of the Water Authority Board. Chairman Hans H. Doe has served on the MWD Board for 16 years and is a Vice Chairman of that Board. He is a member of the Executive, Water Problems, and Organization and Personnel Committees.

Treasurer Harry Griffen, an MWD Board member of 13 years, is Chairman of the Finance and Insurance Committee, and Chairman of its Audit Subcommittee; a member of the Water Problems Committee, and the Special Committee on Charges and Payments under the State contract.

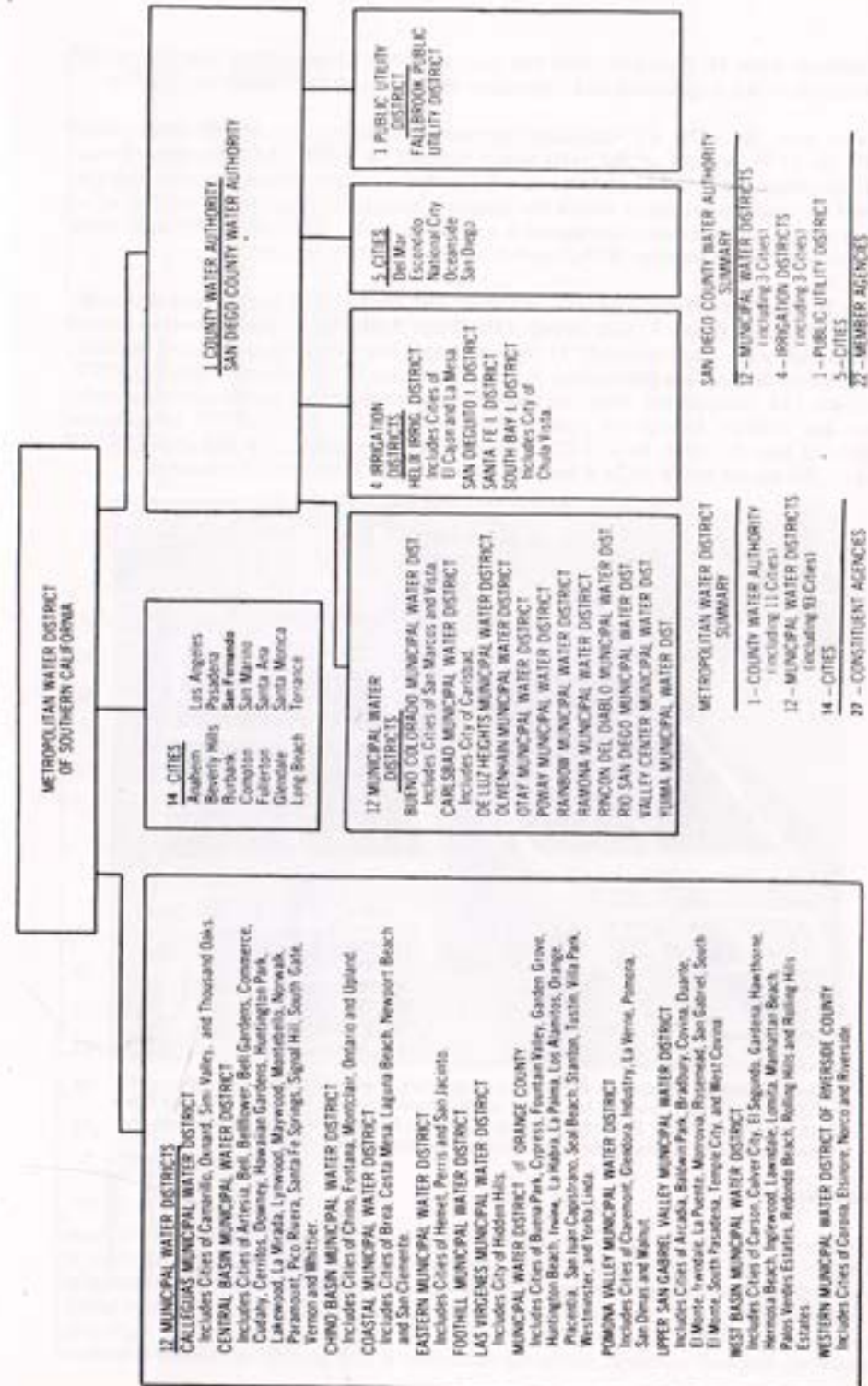
Director R. E. Badger has represented the Authority on Metropolitan's Board for three years. He serves as a member of the Engineering and Operations and the Legal and Claims committees.

Vice Chairman Lloyd L. Lee is a three-year member of the MWD Board, and is a member of the Finance and Insurance and the Land committees.



Laboratory technicians constantly check quality of water after treatment at the Robert A. Skinner Treatment Plant. (Photo courtesy MWD)

METROPOLITAN WATER DISTRICT MEMBERSHIP



COMPOSITION OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
JUNE 30, 1976
Figure D.

Secretary John M. Cranston, who has been an MWD Director for nearly two years, is a member of the Engineering and Operations and the Legal and Claims committees.

As of June 30, 1976, the Authority representatives had a total of 485 votes out of 3,489, or 13.91 percent of the total voting strength of MWD. The delegation of each member agency is entitled to cast one vote for each ten million dollars, or major fraction thereof, of assessed valuation within the Agency's boundaries. Each representative of an agency with a multi-member delegation is entitled to vote a fraction of the total votes proportionate to the number of that agency's representatives present.

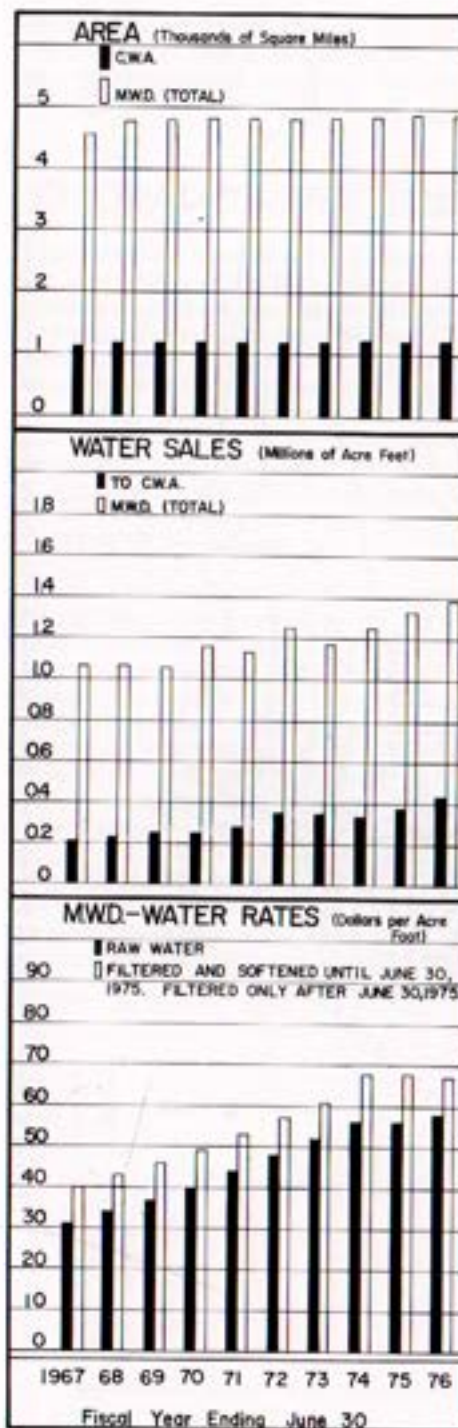
The Metropolitan Water District's aqueduct and distribution system and its service area are shown in Figure E. Also shown is the Water Authority system (shown in greater detail in Figure A). Approximately 11 million people live within the portions of Ventura, Los Angeles, Orange, San Bernardino, Riverside, and San Diego counties served by MWD. There are 124 incorporated cities and many large unincorporated communities and areas within the District. During the year, 2,348 acres were annexed to MWD, bringing the total, as of June 30, 1976, to 3,132,012 acres (4,894 square miles). Of this area, 763,445 acres (1,193 square miles) or 24.4 percent, lie within the Authority's boundaries.



Robert A. Skinner Treatment Plant nears completion. Primary features are main control building (upper right), mixing basins and settling basins (center right and left), and filters (bottom right and left). In background are shops (far left) and chemical storage tank area. Center background is plant control and electrical equipment building. (Photo courtesy MWD)

Assessed Valuation

Total assessed value of taxable property lying within the boundaries of the Metropolitan Water District was \$39,585,365,754. Assessed value is determined by the assessors of the counties served for use in levying 1975-76 taxes. These valuations were an increase of \$3,643,404,489 or 10.1 percent above the previous year's valuation of \$35,941,961,265. An amount of \$640,192,022, or 17.6 percent of this increase occurred within Authority boundaries. Assessed valuation within the Authority is 13.7 percent of the MWD total.



Water Sales

MWD delivered 1,416,412 acre feet of water during fiscal 1975-76. Of this amount, 816,013 acre feet was from the Colorado River and 600,399 acre feet was from the California Aqueduct. During the report year, the Authority could receive only untreated Colorado River water. Delivery to the Authority of 413,413 acre feet, represented 29.2 percent of MWD's total and 50.7 percent of the quantity delivered through the Colorado River Aqueduct.

Metropolitan had three filtration plants in operation during the year. A fourth, the Robert A. Skinner Filtration Plant, was under construction and scheduled for completion in early fall 1976. This plant is near Lake Skinner in southern Riverside County. It will provide a portion of the treated water needed by the Authority to serve its member agencies. Initial plant capacity will be 150 mgd. Construction of a 90 mgd expansion is scheduled to start soon after completion of the initial unit.

Three other plants, none of which can serve the Authority, are operated by MWD: F. E. Weymouth Memorial Softening and Filtration Plant at La Verne, Robert B. Diemer Filtration Plant at Yorba Linda, and Joseph Jensen Filtration Plant at Granada Hills. Each of these plants has a 400 mgd rated capacity. The Jensen plant can be supplied water only from the West Branch of the California Aqueduct.

Tax Rate

During fiscal 1975-76, MWD reduced its tax rate to 13 cents per \$100 of assessed valuation. When the Authority annexed to MWD in 1946, the tax rate was 50 cents per \$100 assessed valuation. The tax rate for each year from that time is shown in Table 19. The total MWD tax levy during the report year, including regular and special taxes was approximately \$45,297,775, of which \$6,299,380, or 13.9 percent was levied against property within the Authority.



Robert A. Skinner Treatment Plant (foreground) and Lake Skinner. Facilities are near completion and are scheduled to begin operations about mid-September. (Photo courtesy MWD)

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SAN DIEGO COUNTY WATER AUTHORITY

Table 1
AREA - AUTHORITY MEMBER AGENCIES

Member Agencies	As of 6/30/75 (acres)	Area Within Authority		As of 6/30/76 (acres)	Percent of Total Authority Area 6/30/76
		Changes During Year (acres)			
Buena Colorado M.W.D.	48,783	0	(2)	48,783	6.39
In City of San Marcos	(8,960)	(+2,560)		(11,520)	(1.51)
In City of Vista	(7,600)	(+3,280)		(10,880)	(1.43)
Carlsbad M.W.D.	20,213	0	(3)	20,213	2.65
In City of Carlsbad	(18,195)	(+165)		(18,360)	(2.40)
Del Mar, City of	1,082	0		1,082	0.14
De Luz Heights M.W.D.	11,830	0		11,830	1.55
Escondido, City of	12,367	+354		12,721	1.67
Fallbrook Public Utility District	15,769	-7		15,762	2.06
Helix Water District	31,495	+2	(4)	31,497	4.12
In City of El Cajon	(7,928)	(+12)		(7,940)	(1.04)
In City of La Mesa	(5,025)	(+37)		(5,062)	(0.66)
National City, City of	5,419	0		5,419	0.71
Oceanside, City of	25,367	+4		25,371	3.32
Olivenhain M.W.D.	27,367	0	(5)	27,367	3.58
Otay M.W.D.	63,895	+16	(6)	63,911	8.37
Poway M.W.D.	22,889	-80		22,809	2.99
Rainbow M.W.D.	47,089	+7	(10)	47,096	6.17
Ramona M.W.D.	47,578	+80		47,658	6.24
Rincon del Diablo M.W.D.	17,275	(1) -354	(7)	16,921	2.22
Rio San Diego M.W.D.	54,213	-2	(8)	54,211	7.10
San Diego, City of	(11) 204,467	0		204,467	26.78
San Dieguito Irrigation District	5,637	0		5,637	0.74
Santa Fe Irrigation District	10,200	0		10,200	1.34
South Bay Irrigation District	15,571	-16	(9)	15,555	2.04
In City of Chula Vista	(12,607)	(+16)		(12,623)	(1.65)
Valley Center M.W.D.	62,122	0		62,122	8.14
Yuima M.W.D.	12,813	0		12,813	1.68
Total Authority Area	763,441	+4		763,445	100.00
San Diego County				2,725,100	

- (1) Includes area annexed by an adjacent city member agency but still in district, being an overlapping area and considered here as being part of the city.
- (2) Does not include 2,794 acres overlapping in City of Oceanside and 289 acres overlapping in City of Escondido.
- (3) Does not include 34 acres overlapping in City of Oceanside.
- (4) Does not include 3 acres overlapping in City of San Diego.
- (5) Does not include 5 acres overlapping in City of San Diego.
- (6) Does not include 726 acres overlapping in City of San Diego.
- (7) Does not include 9,739 acres overlapping in City of Escondido and 39 acres overlapping in City of San Diego.
- (8) Does not include 12 acres overlapping in City of San Diego.
- (9) Does not include 297 acres overlapping in City of San Diego and 645 acres overlapping in City of National City.
- (10) Does not include 701 acres overlapping in City of Oceanside.
- (11) Area of City of San Diego corrected per Planning Department.

TABLES

Table 2
POPULATION GROWTH-COUNTY AND AUTHORITY AREA

1910 to 1976

(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	42,478	(2) 451,886		81
				50,083	
1955	(4) 769,200	52,762	(2) 702,300		91
				50,820	
1960	1,033,010	32,198	(2) 956,400		93
				38,720	
1965	(4) 1,194,000	23,360	(5) 1,150,000		96
				21,000	
1970	(4) 1,310,800	86,900	(5) 1,255,000		96
				79,700	
1971	(4) 1,397,700	77,300	(5) 1,334,700		95
				56,300	
1972	(4) 1,475,000	46,500	(5) 1,391,000		94
				68,500	
1973	(4) 1,521,500	40,600	(5) 1,459,500		96
				47,800	
1974	(4) 1,562,100	-2,062	(5) 1,507,300		96
				20,220	
1975	(4) (6) 1,560,038	30,662	(5) 1,527,520		98
				31,840	
1976	(7) 1,590,700		(5) 1,559,360		98

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

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

Member Agencies	Area 6/30/76		1970		Decade Increase 1960-70		1976 Estimate (2)	Average Annual Increase 1970-76		Density of Population 1976	
	Acres	(1)	(1)	Percent	Percent	Percent		Percent	Per Acre	Per Sq. Mile	
Buena Vista M.W.D.	48,783	31,500	39,000	24	60,450	9	60,450	1.24	793		
In City of San Marcos	(11,520)	---	(15,000)	---	(11,000)	30	(11,000)	(0.95)	(611)		
In City of Vista	(10,880)	---	(24,000)	---	(29,150)	3	(29,150)	(2.68)	(1,715)		
Carlsbad M.W.D.	20,213	10,000	15,500	55	21,550	7	21,550	1.07	682		
In City of Carlsbad	(18,360)	(9,400)	(14,850)	58	(19,200)	5	(19,200)	(1.05)	(660)		
Del Mar, City of	1,582	---	3,900	---	5,000	5	5,000	4.62	2,957		
De Luz Heights M.W.D.	11,830	---	350	---	180	3	180	0.02	10		
Escondido, City of	12,721	18,500	36,000	95	51,300	7	51,300	4.03	2,581		
Fairbrook Public Utility District	15,762	10,000	12,000	20	15,300	5	15,300	0.97	621		
Helix Water District	31,487	122,100	163,000	33	185,000	2	185,000	5.87	3,759		
In City of El Cajon	(7,940)	(37,300)	(50,900)	36	(61,700)	4	(61,700)	(7.77)	(4,973)		
In City of La Mesa	(5,062)	(29,900)	(38,800)	20	(43,000)	2	(43,000)	(8.49)	(5,437)		
National City, City of	5,419	32,200	39,000	21	41,670	1	41,670	7.69	4,921		
Oceanside, City of	25,371	24,700	40,700	65	59,000	7	59,000	2.33	1,488		
Olivenhain M.W.D.	27,267	200	2,000	900	12,500	86	12,500	0.45	288		
Ortay M.W.D.	63,911	5,400	19,400	299	38,750	17	38,750	0.61	388		
Poway M.W.D.	22,809	4,800	14,000	192	30,300	20	30,300	1.34	856		
Rainbow M.W.D.	47,098	2,800	4,200	50	6,000	7	6,000	0.13	82		
Rainbow M.W.D.	47,658	5,600	6,800	21	10,300	9	10,300	0.22	138		
Rincon del Diablo M.W.D.	16,921	14,000	18,900	35	20,840	2	20,840	1.23	788		
Rio San Diego M.W.D.	54,211	25,500	46,000	80	77,000	11	77,000	1.42	909		
San Diego, City of	204,467	557,200	675,800	21	774,100	2	774,100	3.79	2,423		
San Diegoato Irrigation District	5,637	15,000	21,400	45	30,000	6	30,000	5.32	3,406		
South Fe Irrigation District	10,200	7,300	8,600	12	12,150	7	12,150	1.19	762		
South Bay Irrigation District	15,555	64,300	80,000	24	95,600	3	95,600	6.15	3,833		
In City of Chula Vista	(12,623)	(42,400)	(64,500)	52	(75,900)	3	(75,900)	(6.01)	(3,848)		
Valley Center M.W.D.	62,122	3,600	7,000	94	11,120	10	11,120	0.18	115		
Yulema M.W.D.	12,813	---	1,250	---	1,250	0	1,250	0.10	62		
Total Authority	763,445	955,200	1,255,000	31	1,559,500	4	1,559,500	2.04	1,307		
San Diego County	2,725,100	1,033,010	1,310,800	27	1,590,700	4	1,590,700	0.58	374		

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

Table 4
ASSESSED VALUATIONS - AUTHORITY MEMBER AGENCIES AND COUNTY

Member Agencies	Area 6/30/76		1974-75		Assessed Valuation - Secured and Unsecured 1975-76		1974-75 to 1975-76 Percent Increase		1975-76		1976-77	
	Acres	Total	Total	Total	Total	Percent Increase	Total	Total	Valuation Per Acre			
Buena Vista M.W.D.	48,783	\$ 192,739,329	\$ 209,772,005	8.8%	\$ 258,043,291	8.8%	\$ 258,043,291	\$ 5,290				
Carlsbad M.W.D.	20,213	127,823,503	156,423,569	22.4	161,337,733	22.4	161,337,733	7,982				
Del Mar, City of	1,082	25,987,798	27,037,807	4.0	40,569,531	4.0	40,569,531	37,495				
De Luz Heights M.W.D.	11,830	2,437,724	3,087,525	26.7	3,073,032	26.7	3,073,032	260				
Escondido, City of	12,721	133,080,915	138,754,394	4.3	144,344,846	4.3	144,344,846	11,347				
Fairbrook Public Utility District	15,762	42,216,221	48,769,606	15.5	51,579,883	15.5	51,579,883	3,272				
Helix Water District	31,497	493,668,194	584,891,883	18.5	616,508,849	18.5	616,508,849	19,574				
National City, City of	5,419	79,478,453	101,125,672	27.2	106,604,560	27.2	106,604,560	19,672				
Oceanside, City of	25,371	144,237,539	157,547,187	9.2	166,947,569	9.2	166,947,569	6,580				
Olivenhain M.W.D.	27,267	49,595,211	61,805,628	24.6	72,734,036	24.6	72,734,036	2,658				
Ortay M.W.D.	63,911	101,964,882	118,397,426	16.1	136,131,459	16.1	136,131,459	2,131				
Poway M.W.D.	22,809	64,275,233	97,712,466	52.0	103,089,972	52.0	103,089,972	4,520				
Rainbow M.W.D.	47,096	50,936,477	55,027,042	8.0	57,101,838	8.0	57,101,838	1,212				
Ramona M.W.D.	47,658	35,059,309	42,203,631	20.4	61,081,565	20.4	61,081,565	4,994				
Rincon del Diablo M.W.D.	16,921	74,694,648	81,266,843	8.8	84,509,059	8.8	84,509,059	4,994				
Rio San Diego M.W.D.	54,211	138,427,557	151,404,212	9.4	208,050,454	9.4	208,050,454	3,838				
San Diego, City of	204,467	2,513,599,549	2,799,911,586	11.4	3,179,897,217	11.4	3,179,897,217	15,552				
San Diegoato Irrigation District	5,637	75,473,190	82,783,879	9.7	88,239,146	9.7	88,239,146	15,654				
Santa Fe Irrigation District	10,200	85,661,585	94,117,314	9.9	121,926,124	9.9	121,926,124	11,954				
South Bay Irrigation District	15,555	293,514,905	334,324,863	13.9	349,022,638	13.9	349,022,638	22,438				
Valley Center M.W.D.	62,122	41,252,639	59,631,805	44.6	62,758,217	44.6	62,758,217	1,010				
Yulema M.W.D.	12,813	9,636,421	9,956,961	3.3	14,279,196	3.3	14,279,196	1,114				
Total Authority	763,445	\$4,775,761,282	\$5,415,953,304	13.4	\$6,087,830,215	13.4	\$6,087,830,215	7,974				
San Diego County	1,250,000	\$5,031,617,712	\$5,690,643,225	13.1	\$6,430,098,152	13.1	\$6,430,098,152	5,144				

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

SAN DIEGO COUNTY WATER AUTHORITY

Table 1
SALES OF COLORADO RIVER WATER-FISCAL YEAR 1975-76
(All Figures in Acre feet)

Member Agencies	July	August	Sept.	Oct.	Nov.	Dec.	Total 6 Months	
Burno Colorado M.W.D.	1,792.9	1,825.4	1,577.9	1,524.8	1,487.8	728.0	8,936.8	
San Marcos C.W.D.	(521.7)	(663.1)	(583.0)	(544.9)	(389.6)	(215.4)	(2,917.7)	
Viota I. D.	(1,271.2)	(1,162.3)	(994.9)	(879.9)	(1,098.2)	(512.6)	(6,019.1)	
Carlsbad M.W.D.	1,203.8	1,275.5	1,238.4	1,300.2	1,027.1	560.9	6,595.9	
Del Mar, City of	122.4	154.4	154.4	90.0	78.7	0	479.7	
De Luz Heights M.W.D.	31.2	33.8	34.0	36.5	29.8	16.7	181.6	
Fayonddo, City of	1,026.3	1,748.4	1,621.4	1,616.7	1,874.2	1,028.5	9,515.5	
Fallbrook P.U.D.	1,635.6	1,354.3	1,648.5	1,332.5	1,129.4	493.0	7,792.3	
Holla I.D.	3,640.4	3,534.5	1,834.7	1,264.1	2,552.9	1,969.7	14,896.3	
National City & South Bay I.D.	1,850.8	1,858.1	1,723.0	1,404.6	1,388.4	1,393.0	9,815.9	
Oceanside, City of	2,039.6	2,077.8	1,946.2	1,713.3	1,296.6	788.8	9,892.3	
Olivewood M.W.D.	463.7	419.8	387.4	376.8	251.4	232.0	2,081.1	
Oray M.W.D.	1,636.4	1,843.9	1,794.3	1,449.8	1,011.9	559.8	8,296.1	
Poway M.W.D.	992.1	1,043.9	934.5	888.0	734.7	367.7	4,960.9	
Rainbow M.W.D.	3,064.2	3,115.4	2,920.2	2,408.6	2,039.9	861.1	14,429.4	
Ranoma M.W.D.	646.9	726.4	621.5	455.0	393.9	185.6	3,029.3	
Riveron del Duablo M.W.D.	529.2	471.8	463.9	373.9	316.1	125.7	2,280.0	
Rio San Diego M.W.D.	1,444.6	1,502.7	1,270.7	1,016.5	880.7	617.9	6,733.1	
San Diego, City of	20,436.3	20,478.3	20,597.3	19,198.0	9,601.3	7,595.3	97,910.6	
San Diego I.D.	630.6	679.7	639.1	566.7	494.6	317.3	3,328.0	
Santa Fe I.D.	1,030.5	1,063.3	952.4	850.1	616.5	372.6	4,881.3	
Valley Center M.W.D.	4,117.6	3,826.5	3,449.7	2,889.9	2,518.2	748.3	17,550.2	
Yuma M.W.D.	445.3	409.5	406.0	304.9	190.6	35.8	1,772.3	
Total Sales to Agencies	49,380.6	49,773.4	46,204.9	41,019.9	29,935.4	19,253.4	235,558.6	
Total Sales to Others	754.0	587.1	551.0	644.8	634.5	647.9	3,819.3	
Total Sales to Agencies and Others	50,134.6	50,360.5	46,755.9	41,664.7	30,569.9	19,901.3	239,377.9	
Total to Authority Storage	0	0	0	0	+1,352.0	+5,077.2	+6,429.2	
Total from Authority Storage	-7,803.3	-7,810.0	-7,780.0	-7,820.1	-280.0	-250.0	-31,743.3	
Total Flow in Authority System	42,331.4	42,550.5	38,975.9	33,844.6	31,641.9	14,728.5	214,063.8	
Total Evaporation Losses (Authority Storage in S. V. & W. & Lower Otay Reservoirs)	256.5	193.7	121.0	42.8	0	4.2	608.2	
Rate of Flow (c.f.s.)	To Agencies and Others	815.4	839.0	785.8	677.5	513.7	325.7	655.9
To Authority Storage	0	0	0	0	+22.7	+82.6	+17.6	
From Authority Storage	-126.9	-127.0	-130.8	-127.2	-4.7	-4.1	-47.0	
Flow in Authority System	688.5	692.0	655.0	550.3	531.7	402.2	586.5	

*To Authority's Contractor for Construction and to Otay for Delivery to Ejiguana, Mexico.

TABLES

Table 5
(Continued)

	Jan.	Feb.	March	April	May	June	Total 6 Months	Yearly Total	Yearly Average cfs
	988.5	762.4	1,271.3	1,084.6	1,608.6	1,814.4	7,573.8	16,510.6	22.8
	(329.8)	(270.4)	(403.0)	(303.5)	(452.2)	(596.8)	(2,355.9)	(5,273.6)	(7.3)
	(658.7)	(491.8)	(888.3)	(781.1)	(1,156.4)	(1,261.6)	(5,217.9)	(11,237.0)	(15.5)
	424.2	520.2	659.8	796.3	963.3	1,029.2	4,393.0	10,988.9	15.1
	72.7	57.4	77.7	58.6	96.7	119.0	482.1	1,161.8	1.6
	25.4	14.8	18.5	27.0	39.7	54.7	180.3	361.7	0.5
	1,535.5	565.2	882.8	1,324.3	1,746.0	1,647.6	7,501.4	17,016.9	23.4
	1,093.8	352.8	598.3	794.9	1,282.0	1,460.2	5,581.8	13,374.1	18.4
	2,424.2	2,822.7	3,178.1	1,503.9	1,376.9	3,607.1	14,912.9	29,809.2	41.1
	1,412.8	1,424.5	1,165.4	1,509.3	1,808.2	2,053.5	9,373.7	19,389.6	26.4
	1,162.4	783.0	1,012.3	1,332.1	1,536.1	1,800.3	7,444.2	17,336.5	23.9
	311.9	204.3	227.7	290.1	502.1	573.8	2,109.9	4,191.0	5.8
	729.3	426.6	533.7	656.6	939.3	1,333.4	4,631.1	12,927.2	17.8
	478.0	439.6	469.9	344.4	616.9	877.1	3,225.9	8,386.8	11.3
	1,996.7	729.8	1,125.5	1,483.2	2,604.8	2,994.6	10,934.6	25,364.0	34.9
	339.1	262.9	253.9	316.6	538.8	714.0	2,425.5	5,454.8	7.5
	327.6	145.2	216.2	205.8	412.2	493.2	1,800.2	4,680.2	6.4
	817.3	608.3	738.0	771.1	1,178.5	1,413.6	5,546.8	12,279.9	16.9
	8,067.1	7,627.9	8,538.1	14,280.6	16,970.3	20,464.6	76,912.6	173,863.2	239.5
	562.2	372.5	513.6	508.8	635.5	680.5	3,313.1	6,441.1	9.2
	494.7	343.9	400.8	469.0	386.0	989.6	3,444.0	8,325.3	11.5
	1,917.0	682.7	1,280.3	1,635.5	2,972.5	3,429.8	11,917.8	29,468.0	40.6
	173.4	26.0	21.8	44.6	202.7	317.0	785.5	2,577.8	3.5
	25,363.8	19,108.7	23,263.5	29,037.5	38,777.3	47,979.2	183,530.0	419,088.6	577.3
	617.0	705.6	626.2	788.0	815.8	813.7	4,366.3	8,185.6	11.3
	25,980.8	19,814.3	23,889.7	29,825.5	39,993.1	48,792.9	187,896.3	427,274.2	588.6
	+2,581.1	+7,450.3	+8,270.2	+6,934.0	+3,539.0	+438.0	+29,162.6	+35,291.8	48.0
	-250.0	-55.0	0	0	0	-4,966.5	-5,271.5	-17,014.8	-23.2
	28,311.9	27,209.6	32,109.9	36,759.5	43,332.1	44,264.4	211,787.4	425,851.2	583.4
	30.4	32.6	90.1	162.4	276.2	365.6	957.3	1,375.3	1.9
	422.5	344.5	388.5	501.2	644.2	820.0	3,220.9	7,886.6	10.7
	+42.0	+129.5	+133.7	-116.5	+57.6	+7.4	+90.8	+49.0	0.7
	-4.1	-1.0	0	0	0	-83.5	-88.6	-11.0	-0.1
	460.4	473.0	522.2	617.7	700.8	743.9	3,017.0	7,386.6	10.1

Table 6
WATER SALES - 1947 to 1976
(All figures in acre feet)

Member agencies	(1) 1947-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	Total
Buena Colorado M.W.D.	103,456	8,147	3,235	6,248	13,000	9,854	11,737	15,300	16,511	187,688
Carlsbad M.W.D.	62,973	6,990	7,885	8,745	9,350	8,924	10,060	9,999	10,989	135,915
Del Mar, City of	1,597	722	868	855	944	850	942	894	1,162	8,334
De Luz Heights M.W.D.	0	0	0	0	0	9	99	99	178	648
Escondido, City of	35,973	4,455	4,989	6,761	15,085	12,937	12,934	10,928	17,017	121,079
Fallbrook Public Utility District	146,901	10,010	11,143	11,168	13,065	10,852	12,163	11,402	13,374	240,178
Helix Water District	319,832	22,586	25,059	30,886	31,782	30,151	27,972	32,320	29,809	549,897
National City & South Bay I.D.	197,810	10,996	15,524	17,186	20,399	17,373	16,556	18,376	19,190	327,410
Oceanside, City of	70,976	8,751	10,086	11,884	12,972	12,542	14,511	14,787	17,337	173,446
Olivenshan M.W.D.	5,141	1,189	1,923	1,606	2,248	2,257	2,857	2,697	4,191	24,109
Otay M.W.D.	44,357	8,421	9,037	9,769	10,666	9,643	12,043	10,770	12,927	127,883
Poway M.W.D.	29,476	3,882	4,379	4,648	6,493	6,257	8,060	7,859	8,187	79,237
Rainbow M.W.D.	111,236	13,936	17,659	18,019	21,987	18,186	21,858	20,697	25,364	268,942
Ranoma M.W.D.	1,280	1,280	1,677	1,785	2,470	2,639	3,755	4,155	5,455	29,732
Rincon del Diablo M.W.D.	79,161	7,917	4,645	7,874	4,426	2,396	3,345	3,327	4,080	117,171
Rio San Diego M.W.D.	38,109	5,912	6,737	7,565	8,782	8,552	10,371	10,785	12,280	109,093
San Diego, City of	1,510,104	112,138	104,353	110,407	145,243	165,212	124,699	155,139	173,859	2,601,254
San Diego's Irrigation District	31,470	2,878	14	2,243	4,911	4,215	4,817	5,438	6,641	62,627
Santa Fe Irrigation District	28,129	2,878	14	3,008	6,740	5,139	6,716	6,798	8,325	67,747
Valley Center M.W.D.	44,955	11,423	14,372	15,145	20,624	16,551	20,345	23,039	29,468	195,922
Yuma M.W.D.	6,073	2,140	2,018	2,242	2,370	2,025	2,936	2,645	2,558	25,107
Total Sales to Agencies	2,874,295	246,701	245,613	277,244	353,607	340,564	328,776	368,033	419,089	5,453,922
Total Sales to Others	1,335	5	65	208	233	6,776	8,982	8,253	8,186	34,043
Total to Authority Storage	+132,030	+20,962	+509	+14,248	+19,218	+13,500	+15,683	+30,109	+35,592	+281,951
Total from Authority Storage	-105,693	-12,371	-2,454	-8,127	-15,732	-16,781	-15,561	-17,910	-37,015	-231,644
Total to Metropolitan Storage	+62,779	+10,035	+24,220	+19,995	+3,900	0	0	0	0	+120,929
Total from Metropolitan Storage	-50,539	-13,340	-18,695	-21,030	-11,496	-1,808	0	0	0	-116,909
Total Flow in Authority System	2,914,207	251,992	249,238	282,638	349,730	342,251	337,860	388,485	425,851	5,542,292
Average Rate of Flow (c.f.s.)	192.7	340.8	339.4	383.2	487.4	479.8	466.5	519.7	588.6	
To Agencies and Others	+8.9	+28.9	+0.7	+19.8	+26.5	+18.6	+21.7	+41.6	+49.0	
From Authority Storage	-7.1	-12.1	-3.4	-8.1	-21.7	-23.2	-21.5	-24.7	-51.0	
To Metropolitan Storage	+4.2	+13.9	+33.4	+27.6	+5.4	0	0	0	0	
From Metropolitan Storage	-3.4	-18.4	-25.8	-29.0	-15.8	-2.5	0	0	0	
Flow in Authority System	195.3	348.1	344.3	390.4	481.8	472.7	466.7	536.6	586.6	

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

Table 7
WATER PRODUCTION WITHIN AUTHORITY AGENCIES - FISCAL YEARS 1966-67 to 1975-76
(All Figures in Acre Feet)

Member Agencies	From Local and Authority Supplies									
	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Buena Colorado M.W.D.	12,551	14,400	13,241	15,513	15,511	17,376	15,839	18,396	17,477	20,452
Carlsbad M.W.D.	6,350	6,944	7,002	7,960	8,700	9,373	8,907	10,029	10,022	10,965
Del Mar, City of	652	767	722	868	855	944	850	942	893	1,162
De Luz Heights M.W.D.	0	0	0	0	0	0	9	99	178	362
Escondido, City of	4,582	5,580	5,831	6,459	8,911	20,299	16,911	18,749	18,181	21,828
Fallbrook Public Utility District	9,872	11,020	10,072	11,598	11,221	13,087	10,790	12,198	11,524	13,429
Helix Water District	25,672	28,778	28,504	31,802	31,684	33,583	32,141	35,466	33,807	37,724
National City and South Bay I.D.	14,591	15,785	15,904	17,718	18,812	21,226	18,014	20,095	20,065	22,038
Oceanside, City of	7,607	8,688	8,808	10,134	11,510	13,000	12,575	14,539	14,817	17,358
Olivenshan M.W.D.	803	1,111	1,189	1,923	1,650	2,278	2,265	2,857	2,697	4,079
Otay M.W.D.	8,268	9,316	8,471	9,037	9,760	10,666	9,643	12,043	10,970	12,927
Poway M.W.D.	3,423	3,957	3,882	4,375	4,648	5,066	5,428	7,053	7,335	7,983
Rainbow M.W.D.	13,123	15,319	14,358	18,347	18,010	21,987	18,542	21,565	20,678	25,472
Ranoma M.W.D.	1,039	1,277	1,390	1,789	1,932	2,519	2,765	3,723	4,086	5,482
Rincon del Diablo M.W.D.	11,707	12,813	12,703	14,642	13,899	3,076	2,396	3,345	3,328	4,080
Rio San Diego M.W.D.	4,888	5,810	6,018	6,956	7,765	9,015	8,681	10,523	10,785	12,011
San Diego, City of:										
Inside City	103,894	112,841	113,421	122,630	130,290	141,815	138,472	153,672	153,724	167,392
Outside City (not in Authority)	5,432	5,780	5,396	6,147	6,056	6,548	6,216	6,308	6,304	7,887
San Diego's Irrigation District	4,022	4,329	3,641	4,397	4,696	5,238	5,088	5,677	5,811	7,167
Santa Fe Irrigation District	3,822	5,344	5,354	5,958	6,351	7,175	6,204	7,931	7,171	8,951
Valley Center M.W.D.	7,676	10,372	11,423	14,409	15,146	18,931	16,512	20,663	20,353	29,198
Yuma M.W.D.	6,070	7,939	7,072	9,927	8,636	4,643	3,471	4,629	4,251	4,263
Total	256,044	288,170	284,182	322,589	335,043	367,945	342,319	390,502	384,457	442,210

* Use of Colorado River water began this year. All other agencies' use began prior to 1965-66. See previous reports.

Table 8
WATER PRODUCTION OF AUTHORITY AGENCIES - FISCAL YEAR 1975-76

Member Agencies	TOTAL WATER PRODUCTION				SOURCE OF WATER			
	as	as	as	as	Local Supply	Authority Supply	Local Supply	Authority Supply
	m. g. d.	c. f. s.	ac. ft./yr.	ac. ft./yr.	Amount	Amount	Percent	Percent
Bueno Colorado M.W.D.	18.21	28.17	20,452.2	3,941.6	19.3	16,510.6	80.7	
Carlsbad M.W.D.	9.76	15.11	10,965.1	0	0	10,965.1	100.0	
Del Mar, City of	1.03	1.60	1,161.8	0	0	1,161.8	100.0	
De Luz Heights M.W.D.	0.32	0.50	361.7	0	0	361.7	100.0	
Escondido, City of	19.43	30.07	21,828.4	4,650.4	21.3	17,178.0	78.7	
Fallbrook Public Utility District	11.96	18.50	13,429.5	0	0	13,429.5	100.0	
Helix Water District	33.59	51.97	37,724.1	4,801.0	12.7	32,923.1	87.3	
National City and South Bay I.D.	19.62	30.36	22,038.0	1,886.0	8.6	20,152.0	91.4	
Oceanside, City of	15.45	23.91	17,357.6	21.1	0.1	17,336.5	99.9	
Olivenhain M.W.D.	3.63	5.62	4,079.1	0	0	4,079.1	100.0	
Oray M.W.D.	11.51	17.81	12,927.2	0	0	12,927.2	100.0	
Poway M.W.D.	7.11	11.00	7,983.0	0	0	7,983.0	100.0	
Rainbow M.W.D.	22.68	35.09	25,472.0	0	0	25,472.0	100.0	
Ramona M.W.D.	4.88	7.55	5,481.6	26.8	0.5	5,454.8	99.5	
Rincon del Diabolo M.W.D.	3.63	5.62	4,080.2	0	0	4,080.2	100.0	
Rio San Diego M.W.D.	10.69	16.54	12,010.6	0	0	12,010.6	100.0	
San Diego, City of:								
Inside City	149.03	230.58	167,392.2	4,058.4	2.4	163,333.8	97.6	
Outside City (Not In Authority)	7.02	10.86	7,887.1	7,887.1	100.0	0	0	
San Dieguito Irrigation District	6.38	9.87	7,166.6	409.4	5.7	6,757.2	94.3	
Santa Fe Irrigation District	7.97	12.33	8,950.7	541.1	6.0	8,409.6	94.0	
Valley Center M.W.D.	26.00	40.22	29,197.9	22.0	0.1	29,175.9	99.9	
Yuima M.W.D.	3.80	5.87	4,262.7	1,704.9	40.0	2,557.8	60.0	
Total	393.70	609.15	442,209.3	29,949.8	6.8	412,259.5	93.2	

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 1975-76

Member Agencies	Gross Area (2)	Total Production of Water	Estimated Area Served by Water System	Water Production Per Acre Served	Estimated Population	Water Production Per Capita
Bueno Colorado M. W. D.	48,783	20,452.2	36,235	0.56	60,450	0.34
Carlsbad M.W.D.	20,213	10,965.1	16,950	0.65	21,550	0.51
Del Mar, City of	1,082	1,161.8	980	1.19	5,000	0.23
De Luz Heights M.W.D.	11,830	361.7	600	0.60	180	2.01
Escondido, City of	12,721	21,828.4	9,915	2.20	51,300	0.43
Fallbrook Public Utility District	15,762	13,429.5	8,985	1.49	15,300	0.88
Helix Water District	31,497	37,724.1	29,390	1.28	185,000	0.20
National City, City of	5,419	5,767.0	3,900	1.48	41,670	0.14
Oceanside, City of	25,371	17,357.6	15,095	1.15	59,000	0.29
Olivenhain M.W.D.	27,367	4,079.1	3,350	1.22	12,300	0.33
Oray M.W.D.	63,911	12,927.2	28,300	0.46	38,750	0.33
Poway M.W.D.	22,809	7,983.0	9,995	0.80	30,500	0.26
Rainbow M.W.D.	47,096	25,472.0	10,900	2.34	6,000	4.25
Ramona M.W.D.	47,658	5,481.6	8,900	0.62	10,300	0.53
Rincon del Diabolo M.W.D.	16,921	4,080.2	13,650	0.30	20,840	0.20
Rio San Diego M.W.D.	54,211	12,010.6	27,300	0.44	77,000	0.16
San Diego, City of	204,467	(1) 167,392.2	107,500	1.56	774,100	0.22
San Dieguito Irrigation District	5,637	7,166.6	5,000	1.43	30,000	0.24
Santa Fe Irrigation District	10,200	8,950.7	9,200	0.97	12,150	0.74
South Bay Irrigation District	15,555	16,271.0	9,800	1.66	95,600	0.17
Valley Center M.W.D.	62,122	29,197.9	20,415	1.43	11,120	2.63
Yuima M.W.D.	12,813	4,262.7	4,000	1.07	1,250	3.41
Total and Average	763,445	434,322.2	380,360	1.14	1,559,360	0.28

(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.
(3) Corrected service area per April 1975 Albert A. Webb & Associate report.

Table 10
AGRICULTURAL USE OF WATER - FISCAL YEAR 1975-76

Member Agencies	Total Water Production ac. ft.	Water Used for Agricultural Purposes				Total ac. ft.	Percent of Agricultural Water to Total Production
		From Local Supply		From Authority			
		ac. ft.	Percent	ac. ft.	Percent		
Bueno Colorado M.W.D.	20,452.2	1,527.5	22.7	5,211.9	77.3	6,739.4	33.0
San Marcos C.W.D.	5,273.6	0	0	1,055.0	100.0	1,055.0	20.0
Vista Irrigation District	15,178.6	1,527.5	26.9	4,156.9	73.1	5,684.4	37.5
Carlsbad M.W.D.	10,965.1	0	0	3,967.8	100.0	3,967.8	36.2
Del Mar, City of	1,161.8	(a)	-	(a)	-	(a)	-
De Luz Heights M.W.D.	361.7	0	0	335.6	100.0	335.6	92.8
Escondido, City of	21,828.4	1,440.4	20.8	5,469.5	79.2	6,909.9	31.7
Fallbrook Public Utility District	13,429.5	0	0	10,097.8	100.0	10,097.8	75.2
Helix Water District	37,724.1	212.9	17.9	979.3	82.1	1,192.2	3.2
National City & South Bay I.D.	22,038.0	30.1	7.7	361.3	92.3	391.4	1.8
Oceanside, City of	17,357.6	5.6	0.2	3,704.1	99.8	3,709.7	21.4
Olivethan M.W.D.	4,079.1	0	0	1,786.8	100.0	1,786.8	43.8
Otay M.W.D.	12,927.2	0	0	5,216.1	100.0	5,216.1	40.3
Poway M.W.D.	7,983.0	207.8	10.6	1,756.8	89.4	1,964.6	24.6
Rainbow M.W.D.	25,472.0	0	0	23,443.6	100.0	23,443.6	92.0
Ramona M.W.D.	5,481.6	14.6	0.5	3,030.8	99.5	3,045.4	55.6
Rincon del Diablo M.W.D.	4,080.2	0	0	1,702.5	100.0	1,702.5	41.7
Rio San Diego M.W.D.	12,010.6	0	0	213.9	100.0	213.9	1.8
San Diego, City of	167,392.2	355.6	10.4	3,068.2	89.6	3,423.8	2.0
San Diegoito Irrigation District	7,166.6	110.6	4.9	2,169.7	95.1	2,280.3	31.8
Santa Fe Irrigation District	8,950.7	115.0	6.5	1,658.4	93.5	1,773.4	19.8
Valley Center M.W.D.	29,197.9	18.8	0.1	26,249.3	99.9	26,268.1	90.0
Yuima M.W.D.	4,262.7	1,668.3	39.9	2,513.6	60.1	4,181.9	98.1
Total	434,322.2	5,707.2	5.3	102,937.0	94.7	108,644.2	25.0

(a) Included in City of San Diego.

Table 11
AUTHORITY STORAGE IN SAN VICENTE RESERVOIR
(Fiscal Year 1975-76)

Member Agencies	Total Quantity in Storage 7/1/75 ac. ft.	Placed Into Storage During Fiscal Year ac. ft.	Withdrawn During Fiscal Year		Total Quantity in Storage 6/30/76 ac. ft.
			By Delivery ac. ft.	By Evaporation ac. ft.	
			ac. ft.	ac. ft.	
Bueno Colorado M.W.D.	848.3	817.9	972.0	35.6	658.6
San Marcos C.W.D.	1,272.4	817.9	1,387.6	44.1	658.6
Vista Irrigation District	2,650.9	2,556.2	3,037.4	111.7	2,058.0
Carlsbad M.W.D.	0	0	0	0	0
Del Mar, City of	0	0	0	0	0
De Luz Heights M.W.D.	0	51.1	8.8	1.2	41.1
Escondido, City of	0	0	0	0	0
Fallbrook Public Utility District	4,453.5	3,220.6	4,918.3	162.9	2,592.9
Helix Water District	0	0	0	0	0
National City and South Bay I.D.	0	0	0	0	0
Oceanside, City of	1,060.3	766.7	1,170.9	38.7	617.4
Olivethan M.W.D.	1,060.3	1,022.4	1,214.9	44.7	823.1
Otay M.W.D.	3,181.1	5,112.1	3,997.0	180.4	4,115.8
Poway M.W.D.	0	0	0	0	0
Rainbow M.W.D.	6,680.2	4,805.6	7,373.1	243.8	3,868.9
Ramona M.W.D.	424.1	409.0	486.0	17.9	329.2
Rincon del Diablo M.W.D.	1,484.5	1,022.4	1,630.6	53.2	823.1
Rio San Diego M.W.D.	1,590.5	1,022.4	1,734.6	55.2	823.1
San Diego, City of	0	0	0	0	0
San Diegoito Irrigation District	0	0	0	0	0
Santa Fe Irrigation District	636.2	460.2	702.7	23.3	370.4
Valley Center M.W.D.	4,453.5	3,220.7	4,918.3	163.0	2,592.9
Yuima M.W.D.	848.3	613.6	936.8	31.1	494.0
Total	30,644.1	25,918.8	34,489.0	1,206.8	20,867.1

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

Year Ending June 30, 1976

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	336	215	121	1	30	8.33	NR
August	333	208	125	1	30	8.32	NR
September	329	208	121	1	30	8.30	77
October	328	207	121	1	30	8.43	74
November	324	203	121	0	29.5	8.36	65
December	330	208	122	0	31	8.29	56
January	331	206	125	2	30	8.28	50
February	335	208	127	1	31	8.31	55
March	333	206	127	1	30.5	8.38	58
April	334	205	129	2	29.5	8.58	61
May	335	205	130	4	31	8.52	69
June	331	207	124	1	30	8.53	73
Average	332	207	124	1	30.2	8.39	64
Maximum	336	215	130	4	31	8.58	77
Minimum	324	203	121	0	29.5	8.28	50

NR=Not Reported

Table 13
ANALYSIS OF COLORADO RIVER AQUEDUCT WATER
TAKEN AT WEST PORTAL OF SAN JACINTO TUNNEL
For Year Ending June 30, 1976

Constituent	Symbol	ANALYSIS	
		Average	Minimum
Silica	SiO ₂	7.1 ppm	4.1 ppm
Iron	Fe	NR	NR
Calcium	Ca	83 ppm	81 ppm
Magnesium	Mg	30.2 ppm	29.5 ppm
Sodium	Na	105 ppm	102 ppm
Potassium	K	4.8 ppm	4 ppm
Carbonate	CO ₃	1.33 ppm	0 ppm
Bicarbonate	HCO ₃	149 ppm	145 ppm
Sulfate	SO ₄	301 ppm	297 ppm
Chloride	Cl	89 ppm	88 ppm
Nitrate	NO ₃	0.4 ppm	0 ppm
Fluoride	F	0.4 ppm	0.2 ppm
Boron	B	0.12 ppm	0.08 ppm
Total Dissolved Solids		698 ppm	692 ppm
Hardness as CaCO ₃			
Total		332 ppm	324 ppm
Carbonate		124 ppm	121 ppm
Noncarbonate		207 ppm	203 ppm
Alkalinity - Phenolphthalein		1 ppm	0 ppm
Alkalinity - Total		124 ppm	121 ppm
Free Carbon Dioxide		1 ppm	1 ppm
Hydrogen Ion Concentration		8.39	8.28
Electrical Conductivity		1,092	1,070
Temperature		64	50

SAN DIEGO COUNTY WATER AUTHORITY

Table 14
ALLOCATION OF RIGHT TO PURCHASE AUTHORITY WATER
As of June 30, 1976

Member Agencies	Amount Paid by Taxes to 6/30/76	Amount Paid for Service Connections to 6/30/76	Total Amount Paid by Each Member Agency to 6/30/76	Amount Remaining to be Paid Under Terms of Amortization	Total Contributions Paid and Contracted for	Percentage of Auth. Supply	Allocation Equivalent Flow c. f. s.
Buena Colorado M.W.D.	\$ 1,764,980	56,654	1,821,634		1,821,634	3.39	28.0
Carlsbad M.W.D.	1,236,192	7,931	1,244,123		1,244,123	2.31	19.1
Del Mar, City of	336,956	-	336,956	3,120	336,956	.63	5.2
De Luz Heights M.W.D.	24,284	-	24,284		27,404	.05	0.4
Escondido, City of	1,171,963	9,253	1,181,216		1,181,216	2.20	18.2
Fallbrook P.U.D.	469,387	67,773	537,160		537,160	1.00	8.3
Helix Water District	5,714,012	28,905	5,742,917		5,742,917	10.68	88.2
National City, City of	1,113,005	-	1,113,005		1,113,005	2.07	17.1
Oceanside, City of	1,457,872	99,109	1,516,981		1,516,981	2.82	23.3
Olivinha M.W.D.	319,671	22,660	342,331	577	342,908	.64	5.3
Otay M.W.D.	811,577	96,019	907,596		907,596	1.69	14.0
Poway M.W.D.	509,541	27,307	536,848		536,848	1.00	8.3
Rainbow M.W.D.	470,457	152,685	623,142	1,503	624,645	1.16	9.6
Ranoma M.W.D.	327,306	3,378	330,684	12,566	343,250	.64	5.3
Rincon del Diablo M.W.D.	754,209	14,527	768,736		768,736	1.43	11.8
Rio San Diego M.W.D.	1,246,691	45,244	1,291,935	1,230	1,293,165	2.41	19.9
San Diego, City of	29,902,279	84,908	29,987,187		29,987,187	55.78	460.7
San Diego I.D.	729,545	5,758	735,303		735,303	1.37	11.3
Santa Fe I.D.	734,546	8,129	742,675		742,675	1.38	11.4
South Bay I.D.	3,260,363	594	3,260,957		3,260,957	6.07	50.1
Valley Center M.W.D.	418,150	128,973	547,123	580	547,703	1.02	8.4
Yuima M.W.D.	126,925	11,900	138,825	2,253	141,078	.26	2.1
Total Authority	\$52,899,720	831,714	53,731,434	21,833	53,753,247	100.00	**826.0

* Figures do not total due to omission of cents.
** Maximum capacity as of June 30, 1976.

TABLES

Table 15
SAN DIEGO COUNTY WATER AUTHORITY
Statement of Tax Assessments and Collections
Fiscal Years 1945-46 to 1975-76

Member Agencies	Tax Assessments to Date	Adj. to Tax Assessments	Tax Collections	Interest & Penalties	Tax on Options	Receipts in Lieu of Taxes	Misc. Tax Sales	Less Refunds	Net Total Collections	Uncollected 6/30/76
Fallbrook P.U.D.	\$ 466,396	(326)	464,101	1,885	-	3,420	42	62	469,387	1,967
Helix W.D.	5,708,683	2,952	5,694,870	14,161	69	4,930	693	733	5,714,012	16,764
City of National City	1,103,832	4,607	1,104,438	2,259	8	6,828	85	615	1,113,005	4,091
City of Oceanside	1,461,986	463	1,452,385	3,267	5	2,601	95	582	1,457,872	10,065
City of San Diego	29,756,595	15,262	15,281,938	28,904	42	14,633,768	2,424	44,799	29,902,279	8,483
Ranoma M.W.D.	315,278	(794)	320,271	1,590	-	5,400	58	14	327,306	4,211
Santa Fe I.D.	733,363	(1,703)	722,908	2,580	821	2,892	1,093	748	734,546	3,751
San Diego I.D.	726,249	(497)	721,580	1,720	3	5,426	127	321	729,545	3,163
City of Escondido	1,175,487	3,191	1,169,117	2,925	-	28	28	136	1,171,963	9,562
South Bay I.D.	3,274,217	(7,110)	3,251,928	5,021	-	15,296	142	13,026	3,260,363	14,179
Rainbow M.W.D.	459,229	(2,995)	444,303	2,504	-	23,679	-	31	470,457	11,929
Poway M.W.D.	518,708	(3,455)	505,606	3,945	-	15	8	34	509,541	9,666
Buena Colorado M.W.D.	1,763,024	(2,099)	1,748,664	5,675	1	10,802	121	285	1,764,980	12,260
Rincon del Diablo M.W.D.	699,907	(1,093)	693,348	2,102	-	58,800	1	43	754,209	5,465
Carlsbad M.W.D.	1,223,896	(8,241)	1,200,131	3,145	-	31,375	10	371	1,236,192	15,522
Valley Center M.W.D.	412,399	7,125	414,318	2,809	-	1,011	26	15	418,150	5,205
Rio San Diego M.W.D.	1,258,423	(4,015)	1,239,874	6,081	-	878	131	274	1,246,691	14,533
Otay M.W.D.	823,492	(4,696)	809,016	2,491	-	-	45	176	811,377	9,779
Olivinha M.W.D.	325,412	(4,392)	315,935	2,536	-	1,250	-	50	319,671	5,084
City of Del Mar	338,633	2,020	335,419	1,049	-	530	1	44	336,956	5,284
Yuima M.W.D.	126,354	(100)	125,164	308	-	1,500	-	47	126,925	1,090
De Luz M.W.D.	23,900	(299)	23,141	144	-	1,000	-	-	24,284	459
Total Member Agencies	\$52,705,473	(6,041)	38,045,475	97,210	972	14,813,337	5,141	62,416	52,899,720	172,522
Withdrawn Areas	4,169	29	4,199	11	-	186	2	5	4,394	-
Grand Total*	\$52,709,642	(6,011)	38,049,674	97,222	972	14,813,524	5,143	62,422	52,904,114	172,522

* Figures do not total due to omission of cents.

Table 16
ASSESSED VALUATIONS AND TAX RATES
Fiscal Years 1945-46 to 1975-76

Fiscal Year	Secured Property	Public Utilities	Unsecured Property	Total	Tax Rate per \$100 Secured	Tax Rate per \$100 Unsecured
1945-46	\$ 212,082,975	28,253,700	29,960,130	270,296,805	0.04	-
1946-47	208,715,140*	29,433,450	30,665,910	268,814,510	0.04	0.04
1947-48	233,579,990	32,740,680	40,977,850	307,298,520**	0.14	0.04
1948-49	254,227,570	37,482,020	47,177,300	338,886,890	0.14	0.14
1949-50	290,351,875	42,429,140	45,743,200	378,524,215	0.10	0.14
1950-51	306,104,930	43,595,730	44,717,740	394,418,400	0.10	0.10
1951-52	344,620,030	48,452,940	50,904,035	443,977,005	0.10	0.10
1952-53	382,948,860	53,208,220	63,996,330	500,153,410	0.12	0.10
1953-54	490,709,350	63,092,050	69,147,150	622,948,550	0.10	0.12
1954-55	546,272,880	69,243,550	79,629,790	695,146,220	0.10	0.10
1955-56	627,062,960	87,485,390	79,936,450	794,484,800	0.09	0.10
1956-57	680,824,400	101,224,260	97,950,800	879,999,460	0.09	0.09
1957-58	761,088,330	111,151,890	128,785,440	1,001,025,660	0.09	0.09
1958-59	865,283,080	128,479,290	128,124,720	1,121,887,090	0.10	0.09
1959-60	979,491,050	145,317,290	134,846,730	1,259,655,070	0.11	0.10
1960-61	1,116,723,830	165,666,720	159,954,740	1,442,345,290	0.11	0.11
1961-62	1,220,810,650	191,276,650	155,149,890	1,567,237,190	0.11	0.11
1962-63	1,272,506,330	201,245,370	154,989,440	1,628,741,140	0.11	0.11
1963-64	1,340,197,170	209,793,780	159,714,930	1,709,705,880	0.11	0.11
1964-65	1,423,375,590	213,352,470	151,686,520	1,788,414,580	0.11	0.11
1965-66	1,511,967,750	212,605,040	155,417,220	1,879,990,010	0.11	0.11
1966-67	1,567,290,460	212,223,550	147,740,730	1,927,254,740	0.11	0.11
1967-68	1,735,209,870	209,136,160	178,641,120	2,122,987,150	0.10	0.11
1968-69	1,876,936,060	208,018,700	197,139,600	2,282,094,360	0.09	0.10
1969-70	2,063,618,582	210,839,100	237,951,409	2,512,409,091	0.09	0.09
1970-71	2,348,151,943	216,378,300	276,932,717	2,841,462,960	0.09	0.09
1971-72	2,555,734,087	213,191,301	306,608,099	3,275,533,487	0.10	0.09
1972-73	3,061,010,163	225,224,650	347,857,938	3,634,092,751	0.11	0.10
1973-74	3,481,734,238	239,346,070	393,300,174	4,114,380,482	0.11	0.11
1974-75	4,075,823,685	249,562,970	450,374,627	4,775,761,282	0.11	0.11
1975-76	4,629,303,071	283,156,410	503,493,823	5,415,953,304	0.11	0.11

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

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

Table 17
TAX LEVIES AND TAX COLLECTIONS BY FISCAL YEAR
Fiscal Years 1945-46 to 1975-76

Fiscal Year	Tax Levy	Collection of Current Year's Taxes		Percentage Collected During Fiscal Year	Adjustments to Prior Year's Levies		Collection of Prior Year's Taxes		Total Tax Collections	Accumulated Delinquent Taxes	Ratio of Accumulated Delinquent Taxes to Tax Levy
		During Fiscal Year	Fiscal Year		Levies	Fiscal Year	During Fiscal Year	Fiscal Year			
1945-46	\$ 96,131	94,656	98.47%	-	-	-	-	-	94,656	1,474	1.53%
1946-47	107,808	105,753	98.09	-	-	1,090	1,090	1,090	106,844	2,439	2.26
1947-48	389,591	381,563	97.94	-	-	1,882	1,882	1,882	383,445	8,185	2.20
1948-49	474,520	459,504	96.84	-	-	5,916	5,916	5,916	465,420	17,685	3.73
1949-50	461,112	392,732	97.91	329	13,342	13,342	13,342	406,074	13,052	3.25	
1950-51	397,970	300,374	98.07	373	8,217	8,217	8,217	398,492	12,904	3.24	
1951-52	450,405	441,242	97.97	978	7,699	7,699	7,699	448,941	15,246	3.40	
1952-53	594,603	585,417	98.46	(1,140)	(1,140)	12,567	12,567	597,985	10,824	1.82	
1953-54	652,335	640,239	98.15	4,213	4,213	9,942	9,942	650,181	17,191	2.62	
1954-55	709,678	695,200	97.96	1,295	1,295	12,638	12,638	707,838	20,326	2.86	
1955-56	803,375	788,734	97.41	(2,099)	(2,099)	12,140	12,140	800,874	20,726	2.59	
1956-57	874,774	861,461	98.48	576	576	13,056	13,056	874,517	21,560	2.46	
1957-58	965,006	946,445	98.08	958	958	12,890	12,890	959,335	24,189	2.92	
1958-59	1,178,885	1,157,265	98.17	-	-	13,347	13,347	1,170,613	36,462	3.09	
1959-60	1,436,277	1,408,277	98.05	(5,274)	(5,274)	16,647	16,647	1,424,925	42,533	2.97	
1960-61	1,634,733	1,586,169	97.63	(8,220)	(8,220)	21,501	21,501	1,607,671	50,874	3.15	
1961-62	1,763,785	1,718,575	97.44	(2,276)	(2,276)	31,477	31,477	1,750,053	62,330	3.54	
1962-63	1,816,449	1,775,932	97.77	(3,688)	(3,688)	38,134	38,134	1,814,066	61,023	3.37	
1963-64	1,910,019	1,862,973	97.54	(268)	(268)	36,825	36,825	1,899,799	70,975	3.72	
1964-65	2,000,067	1,948,853	97.44	(6,588)	(6,588)	42,596	42,596	1,991,450	73,003	3.66	
1965-66	2,101,023	2,033,032	96.76	2,503	2,503	44,784	44,784	2,077,816	98,714	4.69	
1966-67	2,154,994	2,090,637	97.01	(7,164)	(7,164)	54,333	54,333	2,144,970	101,573	4.73	
1967-68	2,175,276	2,129,996	97.92	(301)	(301)	64,473	64,473	2,194,470	82,078	3.77	
1968-69	2,110,913	2,103,601	99.65	-	-	55,253	55,253	2,158,854	34,136	1.62	
1969-70	2,181,274	2,149,330	98.49	91,680	91,680	24,018	24,018	2,204,127	103,963	4.52	
1970-71	2,450,123	2,408,899	98.32	38,500	38,500	104,032	104,032	2,512,932	79,655	3.25	
1971-72	3,084,869	3,058,713	99.15	27,045	27,045	32,926	32,926	3,091,639	99,930	3.24	
1972-73	3,790,191	3,743,715	98.77	494	494	45,314	45,314	3,789,039	101,586	2.68	
1973-74	4,004,024	3,941,152	98.43	4,891	4,891	42,846	42,846	3,984,999	125,502	3.13	
1974-75	4,673,400	4,597,610	98.37	(4,573)	(4,573)	42,611	42,611	4,640,222	154,107	3.32	
1975-76	5,336,375	5,223,483	97.88	(17,845)	(17,845)	76,632	76,632	5,300,115	172,522	3.23	

SAN DIEGO COUNTY WATER AUTHORITY

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

Area	Date of Annexation	Amount of Annexation Charge	Period of Special Assessments		Special Assessments to 6/30/75	Fiscal Year 1975-76		Remaining Balance of Annexation Charges 6/30/76
			First Year	Last Year		Special Assessments	Tax Rate \$/\$100	
Annexation Charges Completed		\$ 926,680			\$ 926,680			
Annexation Charges Outstanding:								
De Luz Heights M.W.D.	6-28-67	7,400	1968-69	1977-78	5,148	\$ 578	2¢	\$ 1,672
No. 1 Annex of 1969	10-20-69	4,200	1970-71	1979-80	2,379	372	19¢	1,447
Olivewood M.W.D.								
No. 1 Annex of 1965	2-11-65	14,000	1966-67	1975-76	13,228	771	2¢	0
No. 4 Annex of 1967	11-15-67	3,500	1968-69	1977-78	2,619	302	10¢	577
Rainbow M.W.D.								
No. 3 Annex of 1967	12-11-67	9,100	1968-69	1977-78	6,795	801	6¢	1,503
Ramona M.W.D.								
No. 4 Annex of 1967	11-30-67	6,100	1968-69	1977-78	4,595	521	4¢	983
No. 5 Annex of 1972	5-17-72	18,300	1971-72	1982-83	4,396	2,317	2¢	11,583
Rio San Diego M.W.D.								
No. 4 Annex of 1970	8-03-70	3,100	1971-72	1980-81	1,584	285	3¢	1,230
Valley Center M.W.D.								
No. 2 Annex of 1967	12-04-67	1,650	1968-69	1977-78	1,240	135	20¢	273
No. 3 Annex of 1967	12-04-67	2,750	1968-69	1977-78	2,147	295	2¢	307
Yuima M.W.D.								
No. 1 Annex of 1967	11-27-67	6,000	1968-69	1977-78	4,131	552	5¢	1,316
No. 2 Annex of 1969	11-03-69	2,800	1970-71	1979-80	1,627	234	44¢	937
Total		\$1,005,580			\$976,578	\$7,168		\$21,833

TABLES

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

Fiscal Year	Area (acres)	Assessed Valuation Total (1)	Tax Rate	
			Per \$100 Secured	Per \$100 Unsecured
1929-30	-	\$ 2,439,836,920	0.04	0.00
1930-31	-	2,431,684,250	.03	.04
1931-32	-	2,382,184,445	.03	.03
1932-33	-	1,936,051,180	.04	.03
1933-34	-	1,654,403,890	.04	.04
1934-35	-	1,587,147,565	.10	.04
1935-36	-	1,783,531,020	.20	.10
1936-37	-	1,789,160,685	.37	.20
1937-38	-	1,827,765,725	.40	.37
1938-39	-	1,896,966,255	.40	.40
1939-40	-	1,910,152,190	.42	.40
1940-41	389,588	1,841,248,450	.49	.42
1941-42	399,875	1,900,599,934	.48	.49
1942-43	400,614	2,001,924,735	.48	.48
1943-44	401,190	2,005,496,430	.48	.48
1944-45	401,536	2,109,192,795	.48	.48
1945-46	402,779	2,159,731,425	.50	.48
1946-47	501,425	2,413,186,570	.48	.50
1947-48	546,573	3,443,212,822 (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	2,882,144	17,757,246,740	.14	.14
1965-66	2,890,266	19,143,157,788	.14	.14
1966-67	2,901,421	20,979,150,165	.14	.14
1967-68	3,061,885	22,732,157,500	.14	.14
1968-69	3,067,896	24,016,568,274	.16	.14
1969-70	3,072,058	25,572,510,561	.17	.16
1970-71	3,075,616	27,605,064,302	.17	.17
1971-72	3,093,303	29,023,413,462	.17	.17
1972-73	3,126,803	31,001,520,641	.15	.17
1973-74	3,127,680	32,838,476,378	.14	.15
1974-75	3,129,664	35,941,961,265	.14	.14
1975-76	3,132,012	39,585,365,754	.13	.14
1976-77			.12	.13

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

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

SAN DIEGO COUNTY WATER AUTHORITY

Table 20
METROPOLITAN WATER DISTRICT ANNEXATION CHARGES
AND BALANCES ON AUTHORITY AREAS

Member Agencies	Date of Annexation	Amount of Annexation Charge	Remaining Balance 6/30/76
Annexation Charges Completed	---	\$ 146,659	\$ ---
Annexation Charges Outstanding			
Chula Vista, City of			
Fallbrook Public Utility District			
Lakeside Irrigation District			
Helix Water District	12-17-46	13,045,000	158,889
National City, City of			
Oceanside, City of			
San Diego, City of			
Bueno Colorado M.W.D.	6-11-54	1,072,230	320,597
Carlsbad M.W.D.	6-16-54	548,100	162,389
Del Mar, City of	11-23-62	611,250	345,196
De Luz M.W.D.	6-28-67	2,002,000	* 2,613,149
No. 1 Annexation of 1969	10-15-69	312,000	* 386,973
Escondido, City of	10- 9-50	386,000	62,576
Fallbrook Public Utility District			
No. 1 Annexation of 1950	8- 1-50	34,600	4,529
No. 2 Annexation of 1958	11-24-58	50,400	21,574
Fallbrook Community Air Park	12-22-69	59,800	* 73,119
Helix Water District			
Crest P.U.D. Annexation	12-13-48	10,500	939
El Cajon Dry Island Annexation	12-20-54	327,450	87,332
Helix-Watson Ranch Annexation	2-20-59	8,730	4,039
Helix-Sunny Slope Hts. Annexation	9-17-59	38,250	17,814
Olivewood M.W.D.	7-25-60	83,880	40,876
No. 1 Annexation of 1965	2-11-65	512,520	341,352
No. 4 Annexation of 1967	11-13-67	74,000	* 86,008
Olney M.W.D.	10-26-56	273,000	97,548
No. 3 Annexation of 1960	10-30-60	95,100	46,859
Poway M.W.D.	4-21-54	91,800	27,292
No. 1 Annexation of 1959	9-21-59	27,150	12,444
Rainbow M.W.D.	4-10-54	167,700	47,486
No. 1 Annexation of 1959	5-12-59	24,300	11,110
No. 3 Annexation of 1967	12- 6-67	1,728,000	* 2,292,317
No. 5 Annexation of 1973	11-22-73	13,200	* 13,906
Ranona M.W.D.	8-27-57	339,000	134,946
No. 1 Annexation of 1959	5-29-59	42,330	19,511
No. 2 Annexation of 1961	9-23-61	15,480	8,126
No. 3 Annexation of 1963	9-20-63	10,560	6,268
No. 4 Annexation of 1967	11-27-67	480,000	* 600,964
No. 5 Annexation of 1972	5-17-72	732,000	1,133,250
Rincon del Diablo M.W.D.	6-14-54	757,200	224,553
No. 4 Annexation of 1972	11- 2-72	19,200	* 21,152
Rio San Diego M.W.D. (not including Lakeside I.D.)	6- 7-56	373,980	135,681
No. 2 Annexation of 1959	11- 6-59	109,110	50,115
No. 3 Annexation of 1960	10-17-60	289,890	144,855
No. 4 Annexation of 1970	8- 3-70	164,000	164,754
San Diego Irrigation District	12-13-48	187,100	18,460
No. 1 Annexation of 1959	9-15-59	71,820	33,469
No. 2 Annexation of 1972	12- 8-72	107,000	* 116,675
Santa Fe Irrigation District	12-13-48	167,000	8,866
South Bay Irrigation District (not including City of Chula Vista)	11- 3-52	449,370	94,324
Valley Center M.W.D.	5- 9-55	205,680	64,122
No. 1 Annexation of 1960	12-12-60	23,700	11,759
No. 2 Annexation of 1967	11-29-67	22,000	* 26,837
No. 3 Annexation of 1967	11-30-67	502,000	* 643,343
Yuma M.W.D.	12-16-63	749,490	449,144
No. 1 Annexation of 1967	11-21-67	72,200	96,097
No. 2 Annexation of 1969	11-24-69	14,400	* 15,758
Total		\$27,653,129	\$11,499,342

* Annual interest charge on outstanding balance is greater than tax levy based on maximum MWD tax rate of 75¢ per \$100 of assessed valuation.

TABLES

Table 21
WATER SALES BY METROPOLITAN WATER DISTRICT

Year	Fiscal Years 1941-42 to 1975-76						
	To Member Municipalities						Total
	Natural Water	Per Acre	Treated Water	Per Acre	Total to Agencies	To Others	
Acres	feet	cent	feet	cent	Acres	Acres	feet
1941-42	0	0	9,372.6	100	9,372.6	70.7	9,443.3
1942-43	0	0	14,457.8	100	14,457.8	2,626.4	17,084.2
1943-44	0	0	15,874.9	100	15,874.9	3,301.8	19,176.7
1944-45	0	0	30,591.3	100	30,591.3	1,715.7	32,307.0
1945-46	0	0	46,685.8	100	46,685.8	1,264.2	47,950.0
1946-47	0	0	59,861.8	100	59,861.8	524.0	60,385.8
1947-48	41,093.5	36	71,995.4	64	113,088.9	116.8	113,255.7
1948-49	71,642.6	49	73,237.1	51	144,879.7	128.4	145,008.1
1949-50	69,308.0	49	72,936.0	51	142,244.0	23,371.6	165,615.6
1950-51	75,000.9	54	63,493.1	46	138,494.0	26,978.6	165,472.6
1951-52	66,674.3	44	84,616.1	56	151,290.4	42,464.2	193,754.6
1952-53	30,845.3	24	99,589.6	76	130,434.9	31,682.4	162,117.3
1953-54	120,773.0	51	115,550.6	49	236,323.6	7,820.7	244,144.3
1954-55	192,544.7	59	134,923.3	41	327,468.0	58,184.5	385,652.5
1955-56	190,337.2	53	169,506.4	47	359,843.6	45,562.9	405,406.5
1956-57	286,059.1	60	191,110.7	40	477,169.8	66,074.1	543,243.9
1957-58	266,024.1	57	197,900.0	43	463,924.1	75,612.8	539,536.9
1958-59	244,354.2	46	282,248.1	54	526,602.3	74,107.1	600,709.4
1959-60	425,019.0	58	304,874.8	42	729,893.8	3,523.2	733,417.0
1960-61	594,521.1	64	335,207.2	36	929,728.3	4,099.4	933,827.7
1961-62	608,811.0	66	312,975.9	34	921,786.9	3,676.9	925,463.8
1962-63	668,881.8	66	348,092.6	34	1,016,974.4	3,677.0	1,020,651.4
1963-64	671,853.4	63	388,553.9	37	1,060,407.3	3,776.7	1,064,184.0
1964-65	645,577.3	58	471,042.0	42	1,116,619.3	5,035.3	1,121,654.6
1965-66	550,630.8	52	503,424.9	48	1,054,055.7	4,821.8	1,058,877.5
1966-67	523,141.2	50	531,659.7	50	1,054,800.9	4,513.0	1,059,313.9
1967-68	514,248.1	48	557,730.9	52	1,071,979.0	4,934.9	1,076,913.9
1968-69	455,174.3	43	599,237.7	57	1,054,412.0	2,232.4	1,056,644.4
1969-70	482,256.9	41	682,846.4	59	1,165,103.3	650.0	1,165,753.3
1970-71	520,983.9	46	612,511.6	54	1,133,495.5	150.3	1,133,645.8
1971-72	590,356.9	47	656,635.9	53	1,246,992.8	549.6	1,247,542.4
1972-73	569,290.7	48	606,120.4	52	1,175,411.1	4.3	1,175,415.4
1973-74	655,057.2	52	593,177.8	48	1,248,235.0	954.2	1,249,189.2
1974-75	721,969.9	54	607,014.7	46	1,328,984.6	147.7	1,329,132.3
1975-76	735,103.0	53	653,516.0	47	1,388,619.0	629.0	1,389,248.0

SAN DIEGO COUNTY WATER AUTHORITY

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

Constituent Areas	Total Water Production			Sources of Water Produced - 1975-76			
	1974-75 Amount ac. ft.	1975-76 Amount ac. ft.	Percent Increase or Decrease	M. W. D. Amount ac. ft.	Percent of Total	Other Amount ac. ft.	Percent of Total
Anaheim	42,715	55,619	30	19,013	34	36,606	66
Beverly Hills	14,019	14,655	5	12,659	86	1,996	14
Burbank	23,394	24,219	4	14,895	62	9,324	38
Caliguas M. W. D.	66,380	77,369	17	52,890	68	24,479	32
Central Basin M. W. D.	208,629	219,157	5	58,533 (c)	27	160,624	73
Chino Basin M. W. D.	171,366	173,989	2	8,535 (c)	5	165,454	95
Coastal M. W. D.	43,073	32,448	-25	30,506	94	1,942	6
Corsopion	8,658	9,093	5	3,270	36	5,823	64
Eastern M. W. D.	131,876	155,859	18	52,942	34	102,917 (a)	66
FootHill M. W. D.	14,939	16,374	10	8,808	54	7,566	46
Fullerton	28,267	30,615	8	16,155	53	14,460	47
Glendale	23,242	27,837	20	18,771	67	9,066	33
Las Virgenes M. W. D.	14,118	9,915	-30	6,494	65	3,421	35
Long Beach	69,606	69,569	0	37,915	54	31,654	46
Los Angeles	560,297	602,360	8	16,861 (c)	3	585,499	97
Orange County M. W. D.	269,224	325,110	21	148,210 (c)	46	176,900	54
Pasadena	33,252	36,790	11	19,302	52	17,488	48
Pomona Valley M. W. D.	79,673	88,057	11	27,426	31	60,631	69
San Diego C. W. A.	405,884	443,363	9	413,413 (b) (c)	93	29,950	7
San Fernando	3,138	3,517	12	0	0	3,517	100
San Marino	4,765	5,089	7	0	0	5,089	100
Santa Ana	33,492	36,125	8	9,782	27	26,343	73
Santa Monica	17,119	12,045	-30	9,563	79	2,482	21
Torrance	22,101	22,191	0	16,453	83	3,738	17
Upper San Gabriel Valley M. W. D.	175,487	192,397	10	224 (c)	1	192,173	99
West Basin M. W. D.	167,681	178,856	7	132,862 (c)	74	45,994	26
Western M. W. D.	203,426	227,375	12	41,018	18	186,357	82
Totals	2,835,821	3,089,993	9	1,178,500	38	1,911,493	62

NOTES: (a) Includes seepage into San Jacinto Tunnel.
(b) Includes water placed in storage from MWD deliveries.
(c) Does not include water delivered for replenishment purposes.

San Diego County Water Authority
ANNUAL FINANCIAL REPORT
YEAR ENDED JUNE 30, 1976

PEAT, MARWICK, MITCHELL & CO.

CERTIFIED PUBLIC ACCOUNTANTS

8550 FIFTH AVENUE

SAN DIEGO, CALIFORNIA 92101

The Board of Directors
San Diego County Water Authority:

We have examined the balance sheets of San Diego County Water Authority as of June 30, 1976 and 1975, and the related statements of operations, changes in financial position and changes in equity and fund balances for the years then ended. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of San Diego County Water Authority at June 30, 1976 and 1975, and the results of its operations and changes in financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis. Supplementary data included in Schedules 1 and 2 have been subjected to the same auditing procedures and, in our opinion, are stated fairly in all material respects when considered in conjunction with the basic financial statements taken as a whole.

Peat, Marwick, Mitchell & Co.

August 24, 1976

SAN DIEGO COUNTY WATER AUTHORITY

SAN DIEGO COUNTY WATER AUTHORITY

Balance Sheets

June 30, 1976 and 1975

Assets	1976	1975
General fund:		
Current assets:		
Cash, including certificates of deposit	\$ 8,110,745	6,125,062
Accounts receivable, net	3,018,470	2,262,284
Current installments of long-term receivables (note 2)	7,141	7,500
Inventory of water in storage	1,748,851	1,846,343
Prepaid expenses	-	1,668
Total current assets - general fund	12,885,207	10,243,057
Long-term receivables, excluding current installments (note 2)	14,693	21,502
Deposits	23,145	-
Total general fund	12,925,045	10,264,559
Special funds:		
Debt service reserve funds:		
Cash, including certificates of deposit	900,000	900,000
Waterworks bonds, debt service funds:		
Cash, including certificates of deposit	26,370	10,279
Deposit with fiscal agent	31,198	24,898
Taxes and interest receivable, net	19,131	31,679
U.S. Government contract fund:		
Cash, including certificates of deposit	16,596	5,012
Taxes and interest receivable, net	3,497	4,336
Due from Metropolitan Water District (note 4)	4,238,596	4,695,399
Waterworks bonds, improvement funds:		
Cash, including certificates of deposit	288,419	878,833
Accounts receivable	18,295	10,731
Trust and agency fund:		
Investment in annuity contract	12,518	3,396
Total special funds	5,556,620	6,564,561
Property, plant, equipment and participation rights, net (note 3)	196,630,370	188,688,677
	\$ 215,110,035	205,517,797

See accompanying notes to financial statements.

FINANCIAL REPORT

Liabilities, Equity and Fund Balances	1976	1975
General fund:		
Current liabilities:		
Accounts payable	\$ 4,749,866	3,844,189
Advances and deposits by agencies	32,762	56,944
Total current liabilities - general fund	4,782,628	3,901,133
Special funds:		
Current liabilities:		
Current installments of long-term debt (note 4)	2,449,030	2,329,029
Matured bond principal and interest payable	31,198	24,898
Accounts payable	1,616	3,041
Trust and agency fund - deferred compensation payable	12,518	3,396
Total current liabilities - special funds	2,496,362	2,360,362
Total current liabilities	7,276,990	6,261,495
Long-term debt, excluding current installments (note 4):		
General obligation bonds payable	53,140,000	54,710,000
U.S. Government contracts	6,969,879	7,828,910
Annexation charges - Metropolitan Water District	11,499,341	11,797,258
Total long-term debt	71,589,220	74,336,168
Equity and fund balances:		
Equity in property, plant, equipment and participation rights (note 3)	122,897,217	112,910,004
Restricted balances:		
Waterworks bonds, debt service fund	45,502	41,957
U.S. Government contract fund	4,258,689	4,704,747
Appropriated funds:		
Debt service reserve funds	900,000	900,000
General fund	597,736	79,412
Unappropriated general fund balance	7,544,681	6,286,014
Total equity and fund balances	136,243,825	124,920,134
Commitments (notes 5 and 6)		
	\$ 215,110,035	205,517,797

SAN DIEGO COUNTY WATER AUTHORITY

SAN DIEGO COUNTY WATER AUTHORITY

Statements of Operations

Years ended June 30, 1976 and 1975

	1976	1975
Operating income:		
Water sales	\$ 21,546,188	18,320,053
Cost of sales:		
Water in storage at beginning of year	1,846,543	1,188,825
Water purchased	20,677,590	18,399,771
	22,524,133	19,588,596
Water in storage at end of year	1,748,851	1,846,543
Cost of sales	20,775,282	17,742,053
Gross margin from sale of water	770,906	578,000
Water delivery fees	141,492	129,638
Total operating income	912,398	707,638
Operating expense	877,536	727,090
Net operating income (loss) before depreciation	34,862	(19,452)
Depreciation expense	998,147	843,771
Net loss from operations	(963,285)	(863,223)
Nonoperating income:		
Property taxes	5,893,073	5,228,332
Interest	692,923	790,295
Other	695	65,938
Total nonoperating income	6,586,691	6,084,565
	5,623,406	5,221,342
Nonoperating expense - interest	2,566,052	2,636,554
Net income	3,057,354	2,584,788
Add back provision for depreciation, an expense which did not require a current cash outlay	998,147	843,771
Net income before depreciation	\$ 4,055,501	3,428,559

See accompanying notes to financial statements.

FINANCIAL REPORT

SAN DIEGO COUNTY WATER AUTHORITY

Statements of Changes in Financial Position

Years ended June 30, 1976 and 1975

	1976	1975
Sources of working capital:		
Operations:		
Water sales, operating and other income except property taxes, including earnings on investments of \$692,923 in 1976 and \$790,295 in 1975	\$ 22,381,298	19,305,924
Property tax revenue	5,893,073	5,228,332
	28,274,371	24,534,256
Less cost of water, operating and other expenses, including interest on bonded debt of \$2,566,052 in 1976 and \$2,636,554 in 1975	25,217,017	21,949,468
Net income	3,057,354	2,584,788
Add back depreciation charged as expense but not requiring a cash outlay	998,147	843,771
Working capital provided by operations:	4,055,501	3,428,559
Taxes and direct payments by member agencies to Metropolitan Water District for participation rights	8,039,831	7,386,236
Contributions by member agencies for property, plant and equipment	226,506	52,679
Decrease in net assets of waterworks bonds, improvement funds, applied to new construction	581,425	102,176
Special fund balances applied to debt service:		
Waterworks bonds, debt service funds	-	268,790
U.S. Government contract fund	446,058	486,980
	\$ 13,349,321	11,725,420
Uses of working capital:		
Long-term debt maturities	2,626,947	2,680,672
Capital expenditures, net	8,939,838	7,341,435
Increase in waterworks bonds, debt service funds equities, in excess of amounts applied to debt service	3,545	-
Other	18,336	59,401
Increase in general fund working capital	1,760,655	1,643,912
	\$ 13,349,321	11,725,420
Changes in components of general fund working capital:		
Increase (decrease) in current assets:		
Cash, including certificates of deposit	1,985,683	1,276,266
Accounts receivable, net	756,186	(11,212)
Current installments of long-term receivables	(359)	(66,798)
Inventory of water in storage	(97,692)	657,718
Prepaid expenses	(1,668)	(8,344)
	2,642,150	1,847,630
Increase (decrease) in current liabilities:		
Accounts payable	905,677	184,408
Deposits and advances by agencies	(24,182)	19,310
	881,495	203,718
Increase in general fund working capital	\$ 1,760,655	1,643,912

See accompanying notes to financial statements.

SAN DIEGO COUNTY WATER AUTHORITY

FINANCIAL REPORT

SAN DIEGO COUNTY WATER AUTHORITY

Statements of Changes in Equity and Fund Balances

Years ended June 30, 1976 and 1975

Balances, July 1, 1974

Additions (deductions):

Net income before depreciation

Provision for depreciation

Taxes and direct payments by member agencies to Metropolitan Water District for participation rights

Expenditures for property, plant and equipment and participation rights:

From general fund

From contributions by member agencies

Waterworks bonds redeemed

Payments on U.S. Government contracts

Interfund transfers

Balances, June 30, 1975

Additions (deductions):

Net income before depreciation

Provision for depreciation

Taxes and direct payments by member agencies to Metropolitan Water District for participation rights

Expenditures for property, plant and equipment and participation rights:

From general fund

From contributions by member agencies

Waterworks bonds redeemed

Payments on U.S. Government contracts

Interfund transfers

Balances, June 30, 1976

	Total	General fund	Debt service reserve fund	Waterworks bonds, debt service fund	U.S. Government contract fund	Equity in property plant, equipment, and participation rights
Balances, July 1, 1974	\$ 114,896,431	4,660,113	900,000	310,747	5,191,727	103,833,844
Additions (deductions):						
Net income before depreciation	3,428,559	1,814,196	61,487	1,081,210	392,050	79,616
Provision for depreciation	(843,771)	-	-	-	-	(843,771)
Taxes and direct payments by member agencies to Metropolitan Water District for participation rights	7,386,236	-	-	-	-	7,386,236
Expenditures for property, plant and equipment and participation rights:						
From general fund	-	(172,370)	-	-	-	172,370
From contributions by member agencies	-	-	-	-	-	-
Waterworks bonds redeemed	-	-	-	(1,350,000)	-	1,350,000
Payments on U.S. Government contracts	-	-	-	-	(879,030)	879,030
Interfund transfers	-	-	(61,487)	-	-	-
Balances, June 30, 1975	52,679	-	-	-	-	52,679
Additions (deductions):						
Net income before depreciation	-	61,487	(61,487)	-	-	-
Provision for depreciation	-	-	-	-	-	-
Taxes and direct payments by member agencies to Metropolitan Water District for participation rights	124,920,134	6,363,426	900,000	41,957	4,704,747	112,910,004
Expenditures for property, plant and equipment and participation rights:						
From general fund	4,055,501	2,139,867	46,335	1,453,545	386,637	29,117
From contributions by member agencies	(998,147)	-	-	-	-	(998,147)
Waterworks bonds redeemed	8,039,831	-	-	-	-	8,039,831
Payments on U.S. Government contracts	-	(360,876)	-	-	-	360,876
Interfund transfers	-	-	-	-	-	226,506
Balances, June 30, 1976	226,506	-	-	(1,450,000)	-	1,450,000
Additions (deductions):						
Net income before depreciation	-	-	(46,335)	-	(879,030)	879,030
Provision for depreciation	-	-	-	-	46,335	-
Taxes and direct payments by member agencies to Metropolitan Water District for participation rights	-	-	-	-	-	-
Expenditures for property, plant and equipment and participation rights:						
From general fund	-	-	-	-	-	-
From contributions by member agencies	-	-	-	-	-	-
Waterworks bonds redeemed	-	-	-	-	-	-
Payments on U.S. Government contracts	-	-	-	-	-	-
Interfund transfers	-	-	-	-	-	-
Balances, June 30, 1976	\$ 136,243,825	8,142,517	900,000	45,502	4,258,689	122,897,217

See accompanying notes to financial statements.

SAN DIEGO COUNTY WATER AUTHORITY

SAN DIEGO COUNTY WATER AUTHORITY

Notes to Financial Statements

June 30, 1976 and 1975

(1) Summary of Accounting Policies

The accounting policies of San Diego County Water Authority conform to generally accepted accounting principles as applicable to governmental units. The following is a summary of the more significant of such policies:

Basis of Accounting:

The Authority follows the modified accrual basis of accounting, under which expenditures, other than interest on long-term debt, are recorded when the liability is incurred and revenues are recorded when received in cash unless susceptible to accrual, i.e. measurable and available to finance the Authority's operations, or of a material amount and not received at the normal time of receipt.

Inventory of Water in Storage:

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

Property, Plant, Equipment and Participation Rights:

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

The Authority's liability, \$11,499,341 and \$11,797,258 at June 30, 1976 and 1975, respectively, for annexation charges due Metropolitan Water District (MWD) and interest thereon are paid by means of a special tax levied on the properties within the annexed areas. Since the collections of these taxes are remitted directly to MWD by the County of San Diego, the Authority records the net collections as a reduction in its liability to MWD and an increase in its equity in participation rights. The Authority also receives credit for participation rights payments received by MWD, both in the form of additional taxes levied and collected on properties within the Authority and direct payments made by member agencies. The Authority records such credits when received by MWD as increases in participation rights and its equity therein.

(2) Long-Term Receivables

	<u>1976</u>	<u>1975</u>
Annexation charges due from special districts	\$ 21,834	29,002
Less current installments of long-term receivables	<u>7,141</u>	<u>7,500</u>
Long-term receivables, excluding current installments	\$ <u>14,693</u>	<u>21,502</u>

(Continued)

FINANCIAL REPORT

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SAN DIEGO COUNTY WATER AUTHORITY

Notes to Financial Statements, Continued

(3) Property, Plant, Equipment and Participation Rights and Equity Therein

	<u>1976</u>	<u>1975</u>
Property, plant, equipment and participation rights:		
Property, plant and equipment	\$ 93,561,610	93,500,107
Less accumulated depreciation	<u>11,814,677</u>	<u>10,831,416</u>
Net property, plant and equipment	81,746,933	82,668,691
Construction work in progress	1,523,191	401,656
Participation rights in Metropolitan Water District	<u>113,360,246</u>	<u>105,618,330</u>
Net property, plant, equipment and participation rights	196,630,370	188,688,677
Less total long-term debt	<u>74,038,250</u>	<u>76,665,197</u>
	122,592,120	112,023,480
Add:		
Construction capital projects - waterworks bonds, improvement funds, net of construction accounts payable	<u>305,097</u>	<u>886,524</u>
Equity in property, plant, equipment and participation rights	\$ <u>122,897,217</u>	<u>112,910,004</u>
The property, plant and equipment was financed by:		
General obligation bonds	66,741,538	66,741,538
U.S. Government contract	14,873,408	14,873,408
Current revenues	10,846,669	10,790,390
Agencies contributions	<u>1,099,995</u>	<u>1,094,771</u>
	\$ <u>93,561,610</u>	<u>93,500,107</u>

(Continued)

SAN DIEGO COUNTY WATER AUTHORITY

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SAN DIEGO COUNTY WATER AUTHORITY
Notes to Financial Statements, Continued

(4) Long-Term Debt

	Interest Rate	1976	1975
General obligation bonds:			
Waterworks bonds, 1957, maturing February 1, 1977-1994	12-6%	\$ 27,665,000	28,635,000
Waterworks bonds, 1966, maturing October 1, 1976-2004	4-1/2%-5-1/2%	27,045,000	27,525,000
Total bonds		54,710,000	56,160,000
U.S. Government contract: Authority's share:			
First pipeline	-	361,049	611,049
Second pipeline	2.599%	3,229,264	3,401,491
		3,590,313	4,012,540
Metropolitan Water District's share:			
First pipeline	-	361,049	611,049
Second pipeline	2.599%	3,877,547	4,084,350
		4,238,596	4,695,399
Total U.S. Government contract		7,828,909	8,707,939
Annexation charges - Metropolitan Water District		11,499,341	11,797,258
Total long-term debt		74,038,250	76,665,197
Less current installments of long-term debt		2,449,030	2,329,029
Long-term debt, excluding current installments		\$ 71,589,220	74,336,168

The Metropolitan Water District's share of the above U.S. Government contract, \$4,238,596, is also recorded as due from Metropolitan Water District.

(Continued)

FINANCIAL REPORT

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SAN DIEGO COUNTY WATER AUTHORITY
Notes to Financial Statements, Continued

(5) Pension Plan

The Authority is a member of the California Public Employee's Retirement System which provides retirement benefits for all of its permanent employees. The total pension expense was \$46,359 in 1976 and \$44,401 in 1975, which included amortization of prior service costs to 1983. The Authority's policy is to fund accrued pension costs. There are no unfunded vested benefits.

(6) Commitments

In connection with the introduction of Northern California water into the Authority's system anticipated in early 1977, the Authority has committed to provide filtered water service to member agencies which lack filtration facilities. The Authority intends to accomplish this by obtaining treated water from the Metropolitan Water District and by contracting for filtered water deliveries from member agencies with filtration facilities and delivering the filtered water to those agencies which do not have such facilities. In connection with this commitment to deliver filtered water, the Authority has entered into an agreement with Rio San Diego Municipal Water District to pay a maximum of \$1,900,000 for construction of pipelines, pumps and related facilities to permit the delivery of filtered water. Such assets will be the property of Rio San Diego Municipal Water District. The City of San Diego has an existing pipeline which could be used for a portion of the total needed pipeline. The Authority and Rio San Diego Municipal Water District expect to lease this pipeline from the City of San Diego for approximately \$16,500 per year for 25 years and thereby anticipates reducing the cash outlay during the next year to approximately \$1,300,000. The Authority anticipates financing this additional cost from unappropriated general fund balances during the year ending June 30, 1977. At June 30, 1976, the Authority had appropriated \$290,000 for this construction.

SAN DIEGO COUNTY WATER AUTHORITY

Schedule 1

SAN DIEGO COUNTY WATER AUTHORITY
 Operating Expense
 Years ended June 30, 1976 and 1975

	1976	1975
Water treatment	\$ 181,717	142,541
Systems operations	85,821	81,327
Maintenance of structures and plant	101,227	129,268
Administrative and general salaries	148,881	139,395
General expense and supplies	337,659	239,037
Automotive operation, maintenance and shop expense	<u>65,804</u>	<u>56,965</u>
Grand total	921,109	788,513
Less portion charged to property, equipment and other	<u>43,573</u>	<u>61,423</u>
Total operating expense	\$ <u>877,536</u>	<u>727,090</u>

FINANCIAL REPORT

Schedule 2

SAN DIEGO COUNTY WATER AUTHORITY
 Bonded Debt Maturities
 June 30, 1976

Year ended June 30,	Waterworks Bonds		Total principal	Total Interest	Total
	1957 Principal	1966 Principal			
1977	\$ 1,070,000	500,000	1,570,000	2,310,215	3,880,215
1978	1,140,000	525,000	1,665,000	2,239,952	3,904,952
1979	1,195,000	545,000	1,740,000	2,165,437	3,905,437
1980	1,260,000	570,000	1,830,000	2,087,250	3,917,250
1981	1,330,000	595,000	1,925,000	2,009,917	3,934,917
1982	1,400,000	625,000	2,025,000	1,931,967	3,956,967
1983	1,470,000	650,000	2,120,000	1,852,260	3,972,260
1984	1,540,000	680,000	2,220,000	1,767,890	3,987,890
1985	1,620,000	710,000	2,330,000	1,678,707	4,008,707
1986	1,680,000	745,000	2,425,000	1,584,486	4,009,486
1987	1,740,000	775,000	2,515,000	1,486,521	4,001,521
1988	1,815,000	815,000	2,630,000	1,384,475	4,014,475
1989	1,880,000	850,000	2,730,000	1,277,868	4,007,868
1990	1,960,000	890,000	2,850,000	1,166,815	4,016,815
1991	2,040,000	925,000	2,965,000	1,051,020	4,016,020
1992	2,100,000	970,000	3,070,000	930,117	4,000,117
1993	2,165,000	1,015,000	3,180,000	804,537	3,984,537
1994	260,000	1,060,000	1,320,000	694,630	2,014,630
1995	-	1,105,000	1,105,000	632,747	1,737,747
1996	-	1,155,000	1,155,000	577,377	1,732,377
1997	-	1,210,000	1,210,000	519,435	1,729,435
1998	-	1,265,000	1,265,000	458,797	1,723,797
1999	-	1,320,000	1,320,000	395,465	1,715,465
2000	-	1,380,000	1,380,000	329,315	1,709,315
2001	-	1,440,000	1,440,000	260,225	1,700,225
2002	-	1,505,000	1,505,000	188,072	1,693,072
2003	-	1,575,000	1,575,000	112,612	1,687,612
2004	-	1,645,000	1,645,000	37,012	1,682,012
	\$ 27,665,000	27,045,000	54,710,000	31,935,121	86,645,121