

**SAN DIEGO
COUNTY WATER AUTHORITY**



**FORTY-NINTH
ANNUAL REPORT
1995**

SAN DIEGO COUNTY WATER AUTHORITY

Organized June 9, 1944

**FORTY-NINTH
ANNUAL REPORT**

of Authority Operations
for Fiscal Year Ending June 30, 1995

John Lockwood
General Manager

SAN DIEGO, CALIFORNIA
1995



Aerial View of the 72-inch North County Distribution Pipeline and Encasement at the Twin Oaks Valley Road Crossing.

SAN DIEGO COUNTY WATER AUTHORITY

CONTENTS

Chapter	Page
General Manager's Letter .....	.1
List of Member Agencies .....	.2
Board of Directors .....	.4
Standing Committee Members .....	.6
Director Photographs .....	.9
Representatives to Metropolitan Water District .....	.14
Photographs of Management .....	.15
Report of Activities .....	.17
1. WATER AUTHORITY COMPOSITION	
General .....	.19
Geography .....	.19
2. WATER SUPPLIES, DELIVERIES AND USE	
Water Supplies .....	.23
Water Deliveries .....	.23
Municipal and Industrial Water Use by Member Agencies ..	.24
Agricultural Water Use by Member Agencies .....	.26
Groundwater Use .....	.26
Surface Water Storage .....	.27
Storage Agreements .....	.27
Supply Sources .....	.28
Metropolitan Facilities .....	.28
Authority Facilities .....	.29
Water Quality .....	.30
Water Treatment .....	.30
Precipitation .....	.31
Long-Term Water Supply Reliability .....	.31
3. ENGINEERING DEPARTMENT	
Capital Improvement Program .....	.35
La Mesa/Lemon Grove Pipeline and Cowles Mountain Tunnel .....	.37
San Dieguito W.D./Santa Fe I.D. 3,4,5, & 6 Flow Control Facility .....	.37
Lower Otay Pipeline .....	.37

Mission Trails Pipeline and Flow Regulatory Structure	38	Major Events	54
North County Distribution Pipeline	38	Operations	55
Valley Center Pipeline	40	Major Events	56
Rancho Penasquitos Pipeline	40	Maintenance	58
Pipeline 6	40	Major Events	59
Ramona Bypass and Pressure Reducing Facility	41	Technical Services	59
Aqueduct Control System	41	Major Events	61
National City/South Bay 4 Flow Control Facility	42	Shop	62
Aqueduct Protection Program	42	Major Events	64
Preliminary Design of Permanent Protection of the San Luis	42	San Diego Building Services	64
Key River Aqueduct Crossings	42	Major Events	65
Padre Dam and Otay Treated Water Supply Study	43		
New Projects	43	6. WATER RESOURCES PLANNING DEPARTMENT	
Other Projects	44	Planning Section	67
4. RIGHT OF WAY DEPARTMENT		Water Demand and Demand Forecasting	67
Acquisition Activities	45	Supply Planning	68
Mitigation Site (Crestridge Habitat Mitigation Area)	45	Drought Storage	69
San Marcos Pipeline (Pipeline 5 Extension, Phase I)	45	Water Transport Issues	69
Rancho Penasquitos Pipeline (Pipeline 5 Extension, Phase II)	46	Data Collection and Utilization	70
Mission Trails Pipeline and Flow Regulatory Structure (Pipeline 4B, Phase II)	46	Environmental Section	70
La Mesa/Lemon Grove Pipeline (Pipeline 4 Extension, Phase I)	46	Conservation Section	72
Lower Otay Pipeline (Pipeline 4 Extension, Phase II)	47	Emergency Storage Section	76
Pipeline 2A	47		
North County Distribution Pipeline	48	7. WATER RECLAMATION DEPARTMENT	
Pipeline 6	49	Potable Reuse Project	79
Emergency Storage Project	49	Focus on Groundwater	80
Management Activities	49	Project Development	81
Joint Uses	49	Long Term Planning	82
Right of Way Patrol	50	Expansion of Regional Training	84
Scheduled Pipeline Drainsdowns	51		
Change of Boundary Statement	51	8. FINANCE DEPARTMENT	
Transfer of First Aqueduct	51	Finance Operations	85
Document Storage System (DSS)	51	Investment Operations	85
Right of Way Information Management System (RIMS)	52	Accounting Operations	87
		Debt Service Coverage	87
		Water Rates	88
		Tax Rates/ Assessed Valuation	88
		Capacity Charges	89
		Water Standby Availability Charge	89
		Integrated Financial System Software Development	90
		Budget Operations	92
		Information Systems	93
5. OPERATIONS AND MAINTENANCE DEPARTMENT			
General	53		
Administration	54		

Purchasing and Warehouse Operations	93
Deferred Compensation	94
9. PUBLIC AFFAIRS DEPARTMENT	
Governmental Relations	95
Community Relations	96
Media Activity	97
School Education Program	97
Publications	100
Joint Public Information Council	100
10. EMERGING BUSINESS ENTERPRISE DEPARTMENT	102
11. HUMAN RESOURCES DEPARTMENT	
Employment	103
Employee Relations	104
Continuing Education	104
Employee Recognition	104
Health and Safety	105
12. GENERAL COUNSEL	
General	107
Deputy General Counsel	108
Legislation	108
Metropolitan Water District	109
Litigation	109
Document Review	110
Right-of-Way Litigation	111
13. METROPOLITAN WATER DISTRICT MEMBERSHIP	
Authority Representatives on Metropolitan Board	113
Assessed Property Value	114
Water Sales	114
Tax Rate	115
New Rate Structure	115
14. COLORADO RIVER BOARD MEMBERSHIP	118
15. APPENDICES	
Appendix A, Tables 1-16	124
Appendix B, Major Board Actions	145
Appendix C, Financial Statements	161

CONTENTS

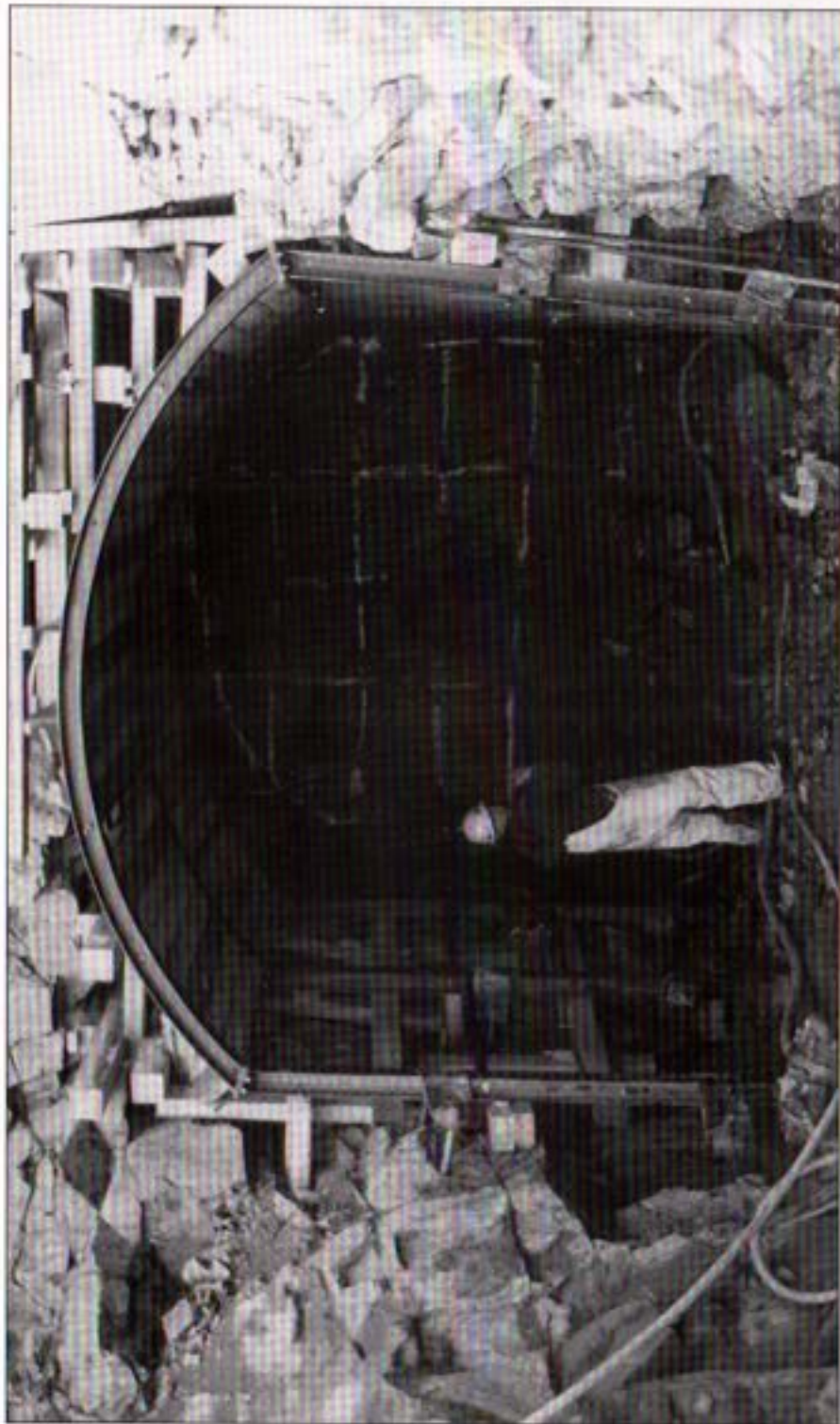
No.	LIST OF FIGURES	Page
1.	Authority Population 1994-95	19
2.	Authority Organization Chart	20
3.	Source of Water: Authority, Local, and Total 1984-95	24
4.	Authority Water Use 1945-95	25
5.	Rainfall Record	32
6.	Capital Improvement Program Construction Progress	36
7.	SDCWA Total Water Demand	67
8.	Storage Volumes of Final Four Systems	77
9.	Reclaimed Water Production	84
10.	Assessed Valuation 1994-95	88
11.	Authority Summary of Water Rates 1958-95	91
12.	Water Revenue, Tax Revenue, Tax Rate 1984-95	92
13.	Authority-Metropolitan Service Area, Water Sales, and Metropolitan Water Rates 1984-95	114
14.	Composition of the Metropolitan Water District	117

MAPS

1.	Authority Service Area	21
2.	Capital Improvement Map	33
3.	Emergency Storage Alternative Sites	75
4.	Metropolitan Water District Service Area	119

LIST OF TABLES (Located in Appendix A)

Table	No.
1. Statistical Summary - Authority 1994-95	124
2. Population Growth - Authority and County Through 1995	125
3. Area - Authority Member Agencies 1994-95	126
4. Water Use and Authority Storage 1994-95	128
5. Assessed Valuation and Tax Collections 1994-95	130
6. Water Use - Authority Member Agencies 1985-1995	132
7. Water Sales by Authority 1947-95	133
8. Sales of Imported Water 1994-95	134
9. Assessed Valuation and Tax Rates - Authority 1945-95	136
10. Revenue Dedicated to Finance Capital Improvement Program 1994-95	138
11. Chemical Characteristics and Analysis of Colorado River Water 1994-95	139
12. Chemical Characteristics and Analysis of Blended Water at Lake Skinner 1994-95	140
13. Assessed Valuation and Tax Rates of Metropolitan Water District 1947-95	141
14. Metropolitan Annexation Charges and Balances on Authority Area	142
15. Water Sales by Metropolitan Water District 1941-95	143
16. Water Deliveries and Local Supplies - Metropolitan Water District Constituent Areas 1994-95	144



Initial Support System for the tunnel crossing of the San Diego River in Mission Trails Park.

June 30, 1995
Board of Directors
San Diego County Water Authority

It is my pleasure to present this forty-ninth Annual Report, which chronicles the San Diego County Water Authority's activities during the fiscal year ending June 30, 1995.

FY 1995 saw the Authority continue its activities to maintain San Diego County's reliable and adequate water supply, essential to the region's \$65 billion annual economy, job base and quality of life. This venture includes ongoing programs in the areas of capital improvement, emergency storage and local resource development. The Authority also was active in state and federal arenas that are essential to the region's imported water supply.

Work continued on the Capital Improvement Program (CIP), which was initiated in 1989 to improve the capacity, reliability and efficiency of the pipelines and associated facilities that deliver imported water throughout the Authority service area. Four major capital projects have been completed in different areas of the county. In FY 1995, the Authority made substantial progress on several other capital projects, including the North County Distribution, Rancho Penasquitos, Mission Trails and Valley Center pipelines and Pipeline 6. When all of the CIP projects are in place, the Authority's pipeline capacity will be increased to a point that should be sufficient to meet projected needs well into the 21st century.

Another CIP project involves safeguarding the county against catastrophic economic losses during a sudden, prolonged interruption of the imported water supply. The Emergency Water Storage Project continued its thorough analysis of four storage-and-delivery systems, each of which would eliminate the county's projected emergency storage shortfall through 2030. The Authority is compiling a draft environmental impact report/environmental impact statement for the four systems; this document will provide information that Authority Directors will use when deciding whether to certify the project and proceed with construction of a system.

In addition, the Authority acted to ensure that sufficient water will be available to keep the new facilities filled. The Water Resources Plan, adopted by the Board in FY 1994 and scheduled for updating in FY 1996, provides the blueprint for this effort. The plan outlines how the Authority may work with its member agencies to more than double the county's local water resources through water reclamation, groundwater development, conservation and desalination.

In cooperation with the City of San Diego, the Authority also began research into a potential new local water source — repurification. This process involves the advanced treatment of reclaimed water so it may be safely stored in a reservoir serving all uses, including human consumption. A proposal for further study of repurification gained conceptual approval from the State Department of Health, which noted that the project builds on 15 years of local research in water repurification technology.

San Diego County's local water supply situation was greatly improved by a very wet year that saw 17 inches of rainfall recorded at Lindbergh Field, 44 inches at Lake Henshaw and 57 inches at Lake Cuyumaca. Rain and snowfall also was well above normal throughout California and the west. As such, reservoir levels in San Diego County, throughout California and along the Colorado River were above average. Nearly full reservoirs in the county allowed local supplies to account for 22.5 percent of the total water use by Authority member agencies — the highest percentage since 1985.

Even with an increased local water supply and expanded facilities, the region still relies heavily on water imported by the Authority. For this reason, the Authority actively participated in processes affecting San Diego County's imported water sources. The Authority was among the leaders of the effort that led to the interim state-federal plan for the environmentally sensitive Bay-Delta area, which provides 40 percent of California's fresh water. This plan, adopted in December 1994, established the CalFed program to draw up a plan that will establish the Bay-Delta as a reliable statewide water supply as well as a secure habitat for fish and wildlife.

It has been my pleasure to serve the San Diego County Water Authority, on an interim basis, since March 28, 1995. I replaced Lester A. Snow, who resigned to become manager of the CalFed Bay-Delta program. The Board of Directors has hired an executive search firm to identify, screen and present a group of candidates for the General Manager position. At that time, Directors will hire a new General Manager.

Sincerely,

John Lockwood
Interim General Manager

**MEMBER AGENCIES AND
REPRESENTATIVES ON BOARD OF DIRECTORS
As of June 30, 1995**

CITIES	DATE OF ENTRY
Del Mar	Nov. 23, 1962
Charles Newton	
Escondido	Oct. 9, 1950
David A. Drake	
National City	Jun. 9, 1944
Frank W. Chenelle	
Oceanside	Jun. 9, 1944
James F. Turner	
Poway	Apr. 21, 1954
Linda Brannon	
San Diego	Jun. 9, 1944
Rosalie Shanks Bregante, Christine Frahm, Marilyn Hardebeck, Francesca Krauel, John M. Leach, Joseph Parker, Bob Russell, Janice Strode, Frederick H. Thompson, Harold Throckmorton.	
 WATER DISTRICTS	
Helix	Jun. 9, 1944
H. Warren Buckner, Harry Griffen	
Otay	Oct. 26, 1956
Mark W. Watton	
San Dieguito	Dec. 13, 1948
James Bond	
Vallecitos	Feb. 25, 1980
Dale Mason	
 IRRIGATION DISTRICTS	
Santa Fe	Dec. 13, 1948
Harold K. Friedland	
South Bay	Nov. 3, 1952
Cary F. Wright	
(Includes the city of Chula Vista, an independent member agency, from June 9, 1944 to Nov. 3, 1952)	
Vista	Jun. 11, 1954
Howard Williams	

MUNICIPAL WATER DISTRICTS

Carlsbad	Jun. 16, 1954
Claude Lewis	
Olivenhain	Jul. 25, 1960
Ann Peay	
Padre Dam	Jun. 7, 1956
Douglas S. Wilson	
(Includes Lakeside I.D., an independent member agency, from June 9, 1944 to Nov. 3, 1952)	
Rainbow	Apr. 10, 1954
Ramona	Aug. 27, 1957
Robert Krysak	
Rincon del Diablo	Jun. 14, 1954
Sherwood D. Anderson	
Valley Center	May 9, 1955
Gary A. Broomell	
Yuima	Dec. 16, 1963
Susan M. Collins	

PUBLIC UTILITY DISTRICT

Fallbrook	Jun. 9, 1944
Gordon W. Tinker	
(Includes DeLuz Heights MWD, an independent member agency, from June 28, 1967 to June 30, 1990)	

FEDERAL AGENCY

Pendleton Military Reservation	Dec. 16, 1977
Edmund L. Rogers	

COUNTY OF SAN DIEGO (Ex Officio)	Feb. 13, 1986
Pam Slater	

BOARD OF DIRECTORS

The San Diego County Water Authority is comprised of 23 member agencies and the County of San Diego as an ex officio member. Each member agency is represented by at least one director. A member agency is entitled to one additional representative for each full five percent of total assessed valuation contained within its boundaries, as determined by the Assessor's Office of the County of San Diego. These representatives are appointed by the chief executive officer of the respective agencies with approval of the agencies' governing bodies. During the year, only two agencies were represented by more than one representative; the City of San Diego had 10 representatives and the Helix Water District had two.

Officers of the Board of Directors begin service in January of odd-numbered years. In January 1995, Mark W. Watton was elected Chairman; Joseph Parker, Vice Chairman; and Sherwood D. Anderson, Secretary.

To facilitate matters, most business coming before the Board is first considered by one of its committees. Each committee then reports to the full Board, which makes the necessary decisions. There are ten standing committees:

Administrative & Legal	Public Affairs
Engineering & Operations	Special Budget Committee
Executive Committee	Storage Subcommittee
Fiscal Policy	Water Policy
Long Range Planning	Water Reclamation

Temporary or ad hoc committees and special appointments that existed during this year were:

- Audit Subcommittee
- Board Communications Committee
- Colorado River Board
- Executive Search Committee
- JPIA Insurance Committee
- San Diego Area Wastewater Management District
- San Dieguito Groundwater Basin Planning Task Force

BOARD OF DIRECTORS

During the year, the following Directors were presented with service emblems:

Director	Length of Service
Linda Brannon	3 years
Susan Collins	3 years
Harold K. Friedland	3 years
Gerald L. Johnson	3 years
Frederick H. Thompson	3 years
Cary F. Wright	5 years
Francesca M. Krauel	15 years

During the year, the following Directors were seated or reseeded:

DATE	Director	Agency	Term Expires
07/14/94	Janice M. Strobe	City of San Diego	03/07/1998
09/08/94	Cary F. Wright	South Bay ID	09/08/2000
09/08/94	Robert Krysak	Ramona MWD	09/08/2000
10/13/94	Edmund L. Rogers	Pendleton MR	01/12/1996
12/08/94	Fred Thompson	City of San Diego	10/27/2000
01/12/95	Claude Lewis	Carlsbad MWD	06/17/1996
04/13/95	John M. Leach	City of San Diego	02/24/2001
06/08/95	Douglas S. Wilson	Padre Dam MWD	07/07/1998

ROSTER OF STANDING COMMITTEES

as of June 30, 1995

Administrative and Legal

Harold Throckmorton, Chair
Robert Krysak, Vice Chair
James Bond
Warren Buckner
Frank Chenelle
Ed Rogers
Bud Lewis
Fred Thompson

Engineering and Operations

Bob Russell, Chair
Frank Chenelle, Vice Chair
Linda Brannon
Susan Collins
David Drake
Marilynn Hardebeck
Dale Mason
James Turner

Fiscal Policy

James Bond, Chair
Janice Strode, Vice Chair
Sherwood D. Anderson
Rosalie Shanks Bregante
Harry Griffen
Francesca Krauel
John M. Leach
James Turner
Howard Williams
Cary Wright

Long Range Planning

Gordon Tinker, Chair
Rosalie Bregante, V. Chair
Sherwood D. Anderson
Warren Buckner
Christine Frahm
Harold Friedland
Bob Russell
Pam Slater

Public Affairs

Fred Thompson, Chair
Gary Broomell, Vice Chair
Robert Krysak
Bud Lewis
Charles Newton
Joseph Parker
Ann Peay
Pam Slater
Janice Strode

Water Policy

Linda Brannon, Chair
Ann Peay, Vice Chair
Gary A. Broomell
Christine Frahm
Harold Friedland
Harry Griffen
Francesca Krauel
John M. Leach
Dale Mason
Joseph Parker

Water Reclamation

David Drake, Chair
Marilynn Hardebeck, Vice Chair
Susan Collins
Charles Newton
Ed Rogers
Harold Throckmorton
Cary Wright

Special Budget Committee

James Bond, Chair
Janice Strode, Vice Chair
Linda Brannon
David Drake
Christine Frahm

Storage Subcommittee

Rosalie Shanks Bregante
David Drake
John M. Leach
Francesca Krauel
Dale Mason
Fred Thompson
Gordon W. Tinker
Cary F. Wrigh

Executive Committee

Mark Watton, Chair
Joseph Parker, Vice Chair
Sherwood Anderson, Secretary
James Bond
Linda Brannon
David Drake
Francesca Krauel
John M. Leach
Dale Mason
Bob Russell
Fred Thompson
Harold Throckmorton
Gordon Tinker

ROSTER OF STANDING COMMITTEES

Temporary or Ad Hoc Committees
& Special Appointments
as of June 30, 1995

Audit Subcommittee

Howard Williams, Chair
Christine Frahm
Charles Newton

Board Communications Committee

Ann Kulchin, Chair
Gary Broomell
Frank Chenelle
Francesca Krauel
Ann Peay
Frederich H. Thompson
Howard Williams

Colorado River Board

Andy Anderson
Ann Peay, *

Executive Search Committee

Mark Watton
Frank Chenelle
Francesca Krauel
Janice Strode
Gordon Tinker

JPIA Insurance Committee

Frederick H. Thompson

San Diego Area Wastewater Management District

Frank Chenelle

San Dieguito Groundwater Basin Planning Task Force

Rosalie Shanks Bregante

*=Alternate

OFFICERS OF BOARD OF DIRECTORS

1994-95



Chair
MARK W. WATTON
*Otay Water District
2-85 to present*



Vice Chair
JOSEPH PARKER
*City of San Diego
5-86 to present*



Secretary
S.D. ANDERSON
*Rincon del Diabolo MWD
8-78 to present*



Past Chair
JOHN M. LEACH
*City of San Diego
5-86 to 9-92 &
8-93 to present
SF ID 9-92 to 8-93*

BOARD OF DIRECTORS

1994-95



S.D. ANDERSON
*Rincon del Diabolo
Municipal Water District
8-78 to present*



JAMES BOND
*San Dieguito
Water District
3-93 to present*



LINDA BRANNON
*City of Peasay
1-91 to present*

SAN DIEGO COUNTY WATER AUTHORITY
1994-95



ROSALIE SHANKS BREGANTE
City of San Diego
12-91 to present



GARY BROOMELL
Valley Center
Municipal Water District
2-92 to present



H. WARREN BUCKNER
Helix Water District
11-92 to present



LAWRENCE E. CARLSON
Pendleton Military
Reservation
12-86 to 10-13-94



FRANK W. CHENELLE
City of National City
3-90 to present



SUSAN M. COLLINS
Yuima
Municipal Water District
2-91 to present



DAVID A. DRAKE
City of Escondido
9-89 to present



CHRISTINE FRAHM
City of San Diego
3-88 to present



HAROLD K. FRIEDLAND
Santa Fe
Irrigation District
Irrigation District
3-90 to 9-92 and
8-93 to present

SAN DIEGO COUNTY WATER AUTHORITY
1994-95



HARRY GRIFFEN
Helix Water District
7-56 to present



MARILYNN HARDEBECK
City of San Diego
11-91 to present



WILLIAM HUGHES
Rainbow
Municipal Water District
3-93 to 2-9-95



GERALD L. JOHNSON
Padre Dam
Municipal Water District
2-91 to 6-8-95



FRANCESCA M. KRAUEL
City of San Diego
8-78 to 6-92 also
4-93 to present



ROBERT KRYSZAK
Ranona Water District
2-93 to present



ANN KULCHIN
Carlsbad
Municipal Water District
1-93 to 1-12-95



JOHN M. LEACH
City of San Diego
5-86 to 9-92 and 8-93 to present
Santa Fe I.D. 9-92 to 8-93



CLAUDE LEWIS
Carlsbad Municipal
Water District
1-95 to present

SAN DIEGO COUNTY WATER AUTHORITY

1994-95



DALE MASON
Vallecitos
Water District
3-80 to present



CHARLES NEWTON
City of Del Mar
5-93 to present



JOSEPH PARKER
City of San Diego
3-77 to 6-83 also
5-86 to present



ANN PEAY
Oceanside Municipal
Water District
2-83 to present



EDMUND L. ROGERS
Pendleton Military
Reservation
10-94 to present



BOB RUSSELL
City of San Diego
5-92 to present



PAM SLATER
County of San Diego
2-83 to present



JANICE M. STRODE
City of San Diego
7-94 to present



FREDERICK H. THOMPSON
City of San Diego
11-80 to present

SAN DIEGO COUNTY WATER AUTHORITY

1994-95



HAROLD THROCKMORTON
City of San Diego
8-91 to present



GORDON W. TINKER
Fallbrook Public
Utility District
4-83 to present



JAMES F. TURNER
City of Oceanside
8-86 to present



MARIA VELASQUEZ
City of San Diego
6-92 to 9-94



MARK W. WATTON
Otay Water District
2-85 to present



HOWARD WILLIAMS
Vista
Irrigation District
1-94 to present



DOUGLAS S. WILSON
Padre Dam
Municipal Water District
6-95 to present



CARY F. WRIGHT
South Bay
Irrigation District
11-88 to present

DIRECTORS REPRESENTING SDCWA ON METROPOLITAN
WATER DISTRICT BOARD OF DIRECTORS

1994-95



CHRISTINE FRAHM
5-92 to present



HARRY GRIFFEN
1-63 to present



FRANCESCA M. KRAUEL
10-83 to present



DALE MASON
12-86 to present



JOSEPH PARKER
3-93 to present



MARK W. WATTON
11-93 to present

WATER AUTHORITY MANAGEMENT
ON JUNE 30, 1995



JOHN LOCKWOOD
General Manager



VINCENT F. BRONDO, JR.
General Counsel



ERGUN BAKALL
Assistant General Manager
Chief Engineer



SHIRLEY A. JACKSON
Assistant General Manager
Administration



CHARLES N. RHODES
Assistant General Manager
Water Resources



ROBERT R. CAMPBELL
Chief Financial Officer



JANET R. MALTMAN
Executive Secretary
Board of Directors



The City of San Diego's North City Water Reclamation Plant will produce 30 mgd of reclaimed water for irrigation and to supply the proposed water repurification project.

REPORT OF ACTIVITIES

The post-drought patterns which typified 1994's water use in San Diego County continued in 1995. Total water use in fiscal year 1995 was 526,053 acre-feet, about 2 percent below the previous year's total of 536,907. Water use in 1995 was 120,592 acre-feet less than in 1990, even though the Authority service area gained about 187,000 residents during that 5 year period.

Per capita water use remained at approximately 0.18 acre-feet per person in 1995, and was attributed to the above normal rainfall and conservation patterns established during the drought. The installation of water-efficient plumbing fixtures and water conservation projects completed in 1995 saved an estimated 15,400 acre-feet. Over 17,000 ultra-low-flush toilets were installed, and over 1,000 residential surveys were provided. About 70 irrigation evaluations were performed through the Agricultural Audit Program and 176 landscape irrigation audits through the Large Turf Water Management Program. These evaluations help to maintain high levels of water use efficiency.

In May of 1994 Metropolitan Water District implemented the Interim Agricultural Water Program (IAWP) which provides lower rates for agricultural water users. In exchange for the lower rate, growers voluntarily agreed to accept reductions in their water deliveries during a drought before other customers if necessary. Combined local and imported supplies brought agricultural use to 56,069 acre-feet, down 29 percent from last year's total of 78,916.

Abundant rainfall and local water supplies reduced Authority water sales to member agencies to 386,560 acre-feet. Local water carried over from the winter of 1993 supplemented by above normal rainfall in 1995 filled reservoirs throughout the county. Imported supplies accounted for 78 percent of total use. Surface water accounted for nearly 21 percent of total local water use. Groundwater and reclaimed water that was produced and used for beneficial purposes accounted for the remaining water used during the year.

The Authority's Capital Improvement Program continued during the year, with work on 10 construction projects, including pipelines, flow control structures, pump stations, and environmental mitigation. Two major projects were completed resulting in an additional 5.5 miles of new pipeline, at a cost of about \$43 million. Five new construction contracts were awarded this year valued at \$34 million.

Of the 32 system alternatives developed by the Emergency Storage Project in 1994 to provide about 90,000 acre-feet of emergency water storage, the final four were selected in April 1994. They include:

- San Vicente Expansion Stand Alone
- Moosa Construction and Lake Hodges Re-operation
- San Vicente Expansion and San Vicente Re-operation
- Olivenhain Construction, Lake Hodges Re-operation and San Vicente Expansion.

The Authority added 6 new employees during the year, increasing total staff to 169. During the year several positions were reclassified and four new classifications were created. The workforce composition met Authority affirmative action goals, increasing minority employment by 3.0 percent and female employment by 0.2 percent. The Authority's goal is to staff each occupational category in a way that reflects the availability of minorities and women in the community. The Authority's three-year agreement with its employees successfully transitioned into its second year.

WATER AUTHORITY COMPOSITION

General

The San Diego County Water Authority is a water wholesaler, providing imported water to its 23 member agencies. The Authority purchases water from the Metropolitan Water District of Southern California. Authority member agencies include six cities, four water districts, eight municipal water districts, three irrigation districts, a public utility, and a federal agency. The County of San Diego is an ex officio member of the Authority. The Authority was created by the County Water Authority Act in 1943 for the purpose of importing water to the region.

Authority member agencies are diverse in their composition and water needs. For example, some agencies are almost exclusively urban, while others are almost entirely agricultural. The city of San Diego, the Authority's largest member agency, has more population, geographical area and assessed valuation than any other member agency.

Five Authority member agencies — Fallbrook PUD, Rainbow MWD, Ramona MWD, Valley Center MWD, and Yuima MWD — located in the northern portion of the county, service primarily agricultural customers.

Geography

The Authority's service area encompasses 908,964 acres over 1,420 square miles, approximately the western third of the land area of San Diego County. The Authority's boundaries extend from the international border in the south to the Orange and Riverside county lines in the north, and from the Pacific Ocean on the west to the foothills on the east.

The largest Authority member agency, in terms of land area is the city of San Diego, with 210,626 acres. The smallest member agency is the city of Del Mar, with 1,159 acres. Table 3 shows the area for each member agency and its proportion to the Authority's total area.

Population

In 1994-95, the population within the Authority's service area reached 2,622,948 (see graph). This represents an increase of 18,465 during the year, which equates to an annual growth of 0.71 percent. Population statistics for each member agency are shown in Tables 2 and 3.

The City of San Diego also has the largest population of any Authority member agency with 1,197,676 people. Yuima MWD has the smallest population with 1,870 people. Average population density within the Authority's service area increased during the year from 2.87 people per acre to 2.89 people per acre. National City had the highest population density with 9.97 persons per acre, while Yuima MWD had the lowest population density with 0.15 persons per acre.

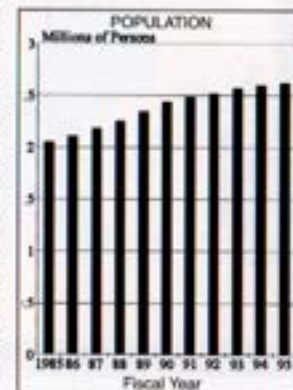
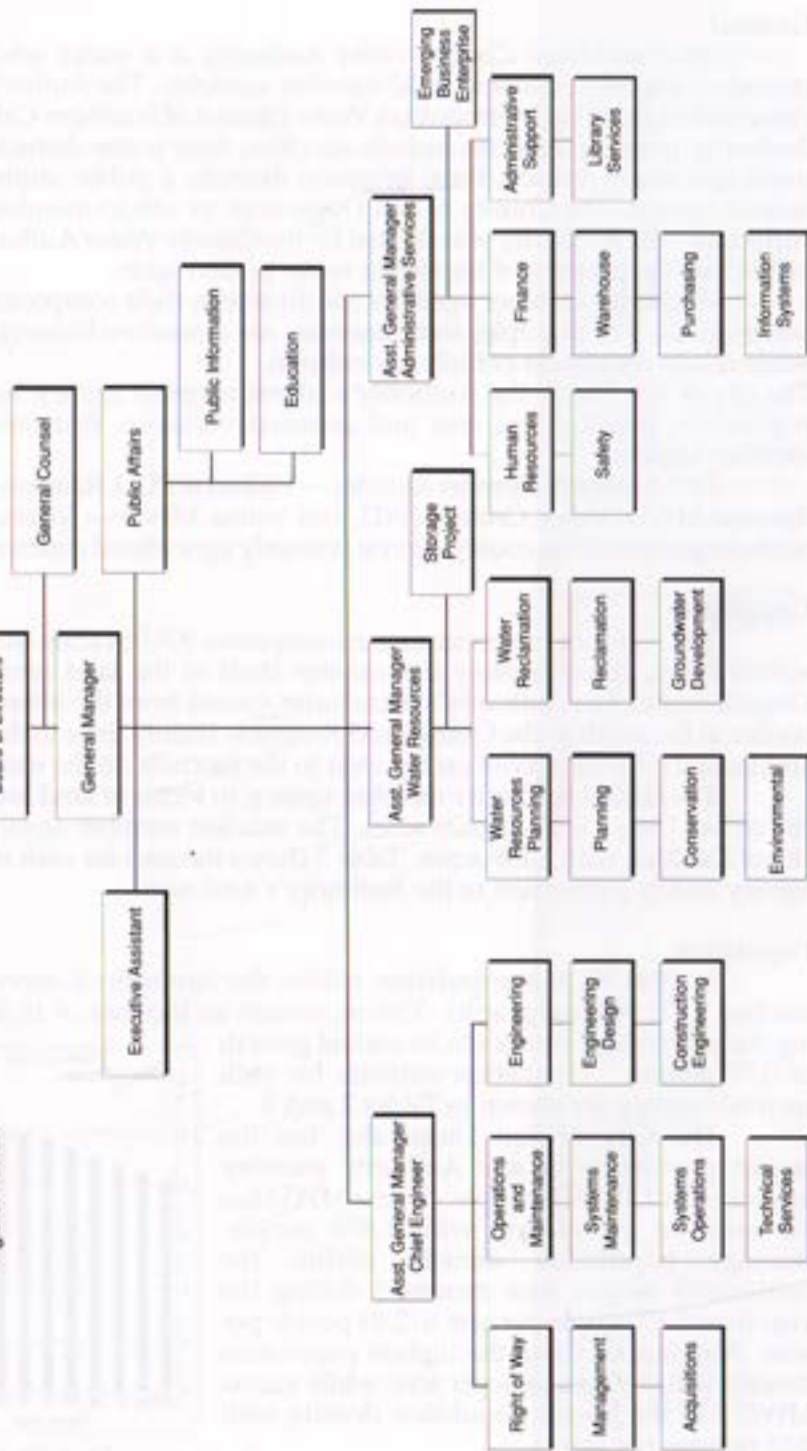


Figure No. 1

Fiscal Year 1994-95

San Diego County Water Authority
Organization Chart
Figure No. 2



Map. 1 Authority Area within San Diego County

WATER SUPPLIES, DELIVERIES, AND USE

Water Supplies

The Metropolitan Water District of Southern California (Metropolitan) supplies the Authority with all of its imported water supplies. Metropolitan obtains its imported supplies from the Colorado River Aqueduct (CRA) and the State Water Project (SWP). Carryover storage from the state's existing supplies were supplemented by record amounts of precipitation received during the rainy season of 1993-94. Current abundant statewide and local water supply conditions will significantly reduce the potential for shortages over the next three to five years.

Water Deliveries

Total water deliveries to the Authority's member agencies for the fiscal year were 393,277 acre-feet. Of this total about 6,717 acre-feet of operational water was placed into storage in Authority accounts in member agency reservoirs. Authority deliveries to member agencies were 8,220 acre-feet less than the revised 401,497 acre-feet delivered in 1993-94 and 40 percent less than the recorded deliveries for 1989-90 which totaled 646,505 acre-feet.

The relatively low demand for imported supplies was attributed to above-normal rainfall and abundant local supplies. Local water averaged 22 percent of the total use by member agencies. Seven of the Authority's twenty three member agencies participated in 1995's Seasonal Storage Program. A total of 34,083 acre-feet was placed into storage during the seasonal storage period. Treated water placed into storage totaled 7,038 and untreated was 27,045 acre-feet. The Authority placed 2,305 acre-feet of operational water into storage under the Seasonal Storage Program.

The highest monthly delivery to Authority member agencies occurred in August 1994 when the Authority delivered over 50,000 acre-feet. The lowest deliveries occurred in January, February and March 1995 when the area received a total of 13.80 inches of rainfall during the same 3-month period.

Metropolitan delivered 392,864 acre-feet to the Authority during the fiscal year. Approximately 87 percent of the total deliveries were Colorado River water, the remaining 13 percent were State Project Water. Treated water from the Robert A. Skinner Filtration Plant in Riverside County accounted for 196,981 acre-feet, and the balance, 195,883 acre-feet, was untreated. The total delivery was 8,306

acre-feet less than the previous fiscal year's delivery of 401,170, only a 2 percent decrease.

Average monthly flow rates in the Authority aqueduct system ranged from a low of 229 cubic feet per second (cfs) in March 1995, to a high of 820 cfs during August 1994. The average for the entire year was 543 cfs. Water deliveries to member agencies and others during the fiscal year are shown in Table 8. Annual water sales to individual agencies for the eight-year period 1987-88 through 1994-95 and total water sales from 1947-1995 are shown in Table 7.

Municipal and Industrial Water Use by Member Agencies

In order to determine water use, all the sources of supply that an agency utilizes to satisfy demand are totaled. In San Diego County, this includes water imported from Metropolitan, and local water produced from impounding reservoirs, groundwater basins, desalinated groundwater and beneficially used reclaimed water. Water use also includes the minor miscellaneous losses that occur in delivering supplies, such as pipeline leaks and breaks, and metering errors.

Total water use for 1994-95 was 526,053 acre-feet, which is about 2 percent less than water use the previous year. Total use for 1994-95 was about 54 percent residential use, 35 percent industrial/commercial and the remaining 11 percent, agricultural use. Rainfall and ongoing conservation efforts were responsible for this continued reduction in demand. The combined water use of Authority member agencies is shown in Figure 4. The unshaded area indicates the proportion obtained from local sources compared with that supplied by the Authority.

Nine of the Authority's 23 member agencies rely entirely upon imported water. The remaining 14 agencies ranged from 98.7

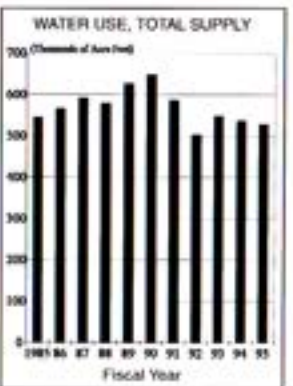
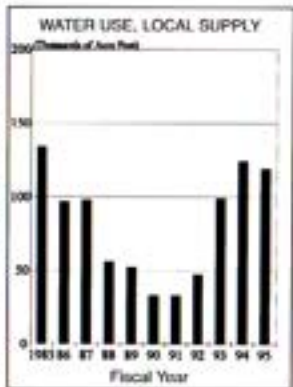
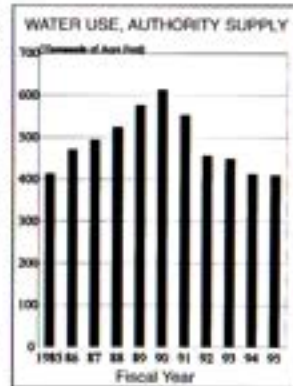


Figure No. 3

SAN DIEGO COUNTY WATER AUTHORITY WATER USE

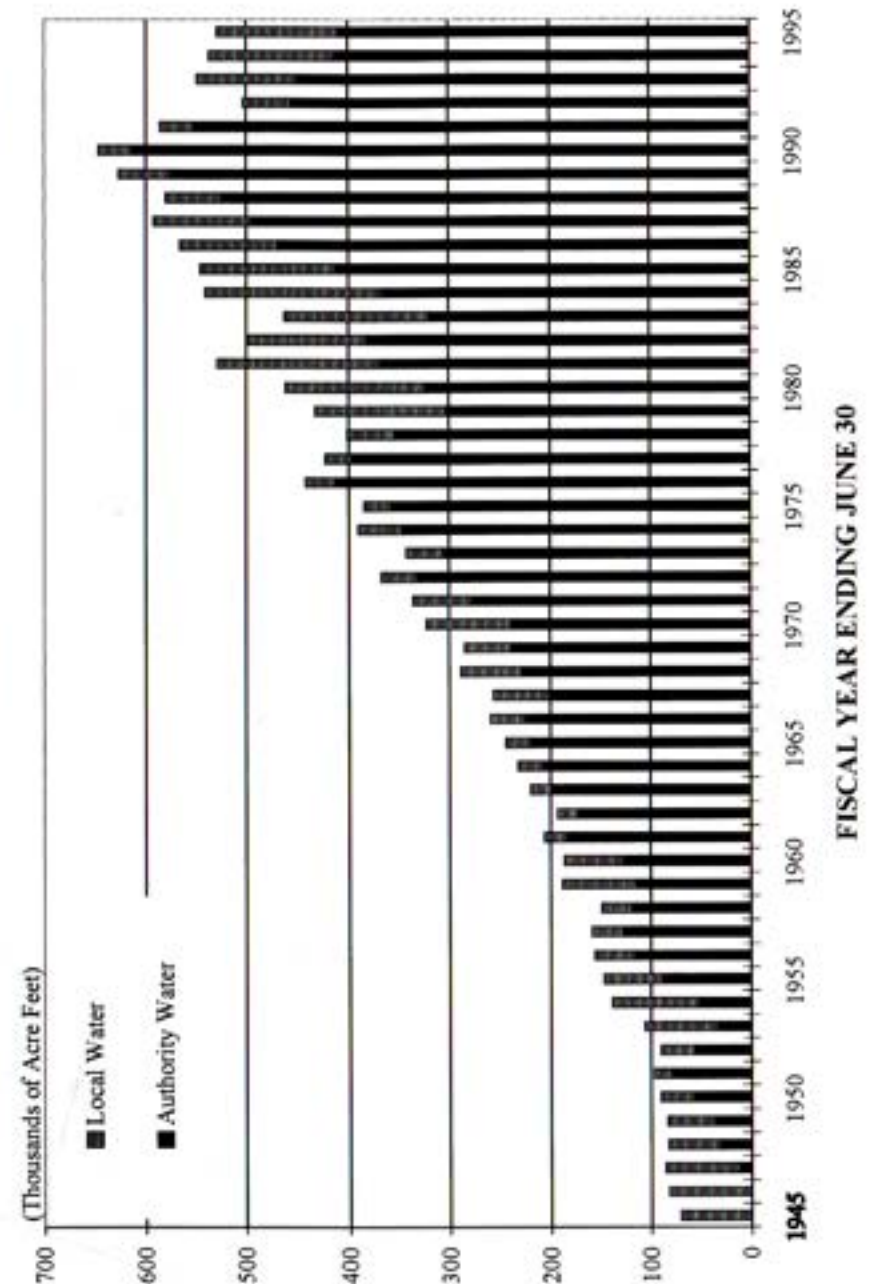


Figure No. 4

percent dependent on Authority-supplied water (Fallbrook PUD) to 11.8 percent dependent (City of National City). Table 4 gives the percentage of Authority-supplied water to each of the member agencies.

Of the Authority's 908,964-acre service area, only about 58 percent is served with water. The lowest per capita water use occurs in the urbanized portions of this area, as well as the highest use per unit area. The reverse is true for rural areas. Total average daily per capita consumption of municipal and industrial water for fiscal year 1994-95 was 160 gallons per capita per day (gpcd). This is a 17-percent decrease from 1989-90, when use was 192 gpcd.

Agricultural Water Use by Member Agencies

A total of 56,069 acre-feet of water was used for agricultural purposes by Authority member agencies during the year. This amount includes all water certified under the MWD Interim Agricultural Water Program. This is 29 percent lower than the 78,916 acre-feet of agricultural use the previous year. Almost 90 percent of water used for agricultural purposes was treated. Agricultural water use represented 11 percent of the Authority's total water use during the year, and the Authority supplied 95 percent of the total agricultural water used, compared to 78 percent of all water use. Agricultural water demand has decreased steadily in the Authority service area since 1989-90. This reduction is due to drought, rate increases and difficulty in reporting usage. A complete summary of agricultural water use is contained in Table 4.

Groundwater Use

One year after the city of Oceanside began operating its Mission Basin Desalting Plant, over 2,200 acre-feet of potable water was produced from brackish groundwater wells. In addition to Oceanside, two other Authority member agencies produced groundwater in significant quantities. These agencies and the quantities of groundwater produced during the year are shown on the table below:

Member Agency	Groundwater Produced (af)
Oceanside (city)	2,203
Sweetwater Auth.	1,391
Yuima MWD	3,056

Surface Water Storage

Local reservoir storage levels in June 1994 were above average at 72 percent of total capacity and remained above average due to record levels of rainfall around the county during 1993 and again in 1995. During the year, member agencies withdrew 109,737 acre-feet of storage from surface water supplies. Combined reservoir storage levels crested at 548,812 acre-feet, approximately 96 percent of capacity in May 1995 and remained near capacity to the end of the fiscal year.

Most of the region's local surface supply is produced by five member agencies: the city of San Diego, Helix Water District, Vista Irrigation District, city of Escondido and the Sweetwater Authority.

The city of San Diego owns and operates most of the surface water storage facilities within the Authority service area, including most of the surface impounding reservoirs. San Diego's system produced 51,909 acre-feet during the fiscal year. Of this amount, 7,116 acre-feet was delivered to the California-American Water Company for delivery to Coronado and Imperial Beach. Sweetwater Authority produced 15,852 acre-feet; Vista Irrigation District 11,470 acre-feet; Helix MWD 10,326; and the city of Escondido produced 9,273 acre-feet from local surface supplies.

Storage Agreements

The Authority does not own or operate any storage facilities. However, it does have an agreement with the city of San Diego to store up to 40,000 acre-feet in city-owned reservoirs. The agreement with San Diego also permits storage of up to 20,000 acre-feet in other city-owned reservoirs, subject to approval of the city manager. San Vicente and Lower Otay Reservoirs contain Authority-owned water stored under this agreement.

The storage agreement with San Diego provides a payment of \$2.20 per acre-foot to the city for the maximum amount of water stored at any given time during the year. The Authority also credits San Diego \$4.00 per acre-foot for any Authority-owned water that is sold to the city, pumped from storage, and placed into the city's system. Storage charges may be adjusted annually to reflect the cost of operating the reservoirs and associated facilities.

The Authority also has storage agreements with the Ramona Municipal Water District and the Sweetwater Authority. These agreements meet operational goals of providing capacity in Authority aqueducts during periods of peak demand. Under its agreement Ramona can purchase water for storage in Lake Ramona on an installment basis. The Authority can then request Ramona to draw upon this

stored water during times of peak demand.

Sweetwater's agreement allows it to purchase treated water for storage during the winter months. This water is then available for use in the summer, during peak demands. Under this agreement, payment for water purchased and placed into storage is deferred until the water is removed from storage. Payment for all water is at the untreated rate. Each year, payment on all water remaining in storage on September 30 is due, with interest, in October.

Supply Sources

The Authority receives all of its imported water supplies from the Metropolitan Water District of Southern California (Metropolitan). Metropolitan in turn obtains its supplies from the Colorado River Aqueduct (CRA) and State Water Project (SWP). Three years prior to 1995, 100 percent of the water delivered to the Authority has been from the Colorado River. State Water accounted for nearly 13 percent of 1995's imported water supply. Imported water supplied about 78 percent of the municipal and industrial demand within the Authority's service area. Surface runoff into local impounding reservoirs and local groundwater supplied the remaining 22 percent. Table 4 shows the amounts of imported and local water used by the Authority's member agencies during the year.

In 1994-95, the Authority took 23 percent of Metropolitan's total supply. Technically the Authority has a preferential right to only 12.23 percent of Metropolitan's total supply. This has never been used as a basis for allocating supplies.

Metropolitan Facilities

Colorado River supplies are transported from Lake Havasu, located on the Arizona/California border, through the Colorado River Aqueduct to Lake Mathews in Riverside County. Before reaching Lake Mathews, a portion of the water is diverted near the west portal of the San Jacinto Tunnel to Lake Skinner, via the San Diego Canal. The Casa Loma Canal can also direct Colorado River supplies to Lake Skinner via the San Diego Canal.

Lake Skinner is the major storage facility for the San Diego Canal, and has a storage capacity of 44,000 acre-feet. The Robert A. Skinner Filtration Plant, located at the reservoir, has a treatment capacity of 340 million gallons per day (mgd). These facilities are located in Riverside County, south of Winchester.

State Water Project supplies destined for the Authority are delivered to Metropolitan at Lake Perris, which is the terminus of the 444-mile

California Aqueduct. From there, SWP water normally flows through the Lakeview Pipeline to the San Diego Canal, where it is blended with Colorado River water, and then flows into Lake Skinner.

Authority Facilities

The Authority takes delivery of water from Metropolitan in five pipelines buried in two rights of way called the San Diego Aqueducts. The delivery points are located about six miles south of the Riverside-San Diego County line. From there, water is distributed through more than 245 miles of pipeline to the Authority's 23 member agencies through 88 service connections.

The San Diego Aqueduct system is managed from the Fred A. Heilbron Operations Center in Escondido. Delivery requests are received from member agencies, and aqueduct flows and deliveries are monitored and controlled through a computer and telemetering system. Operations and maintenance field staff communicate with Metropolitan's East Valley Operations Section at Lake Skinner by two-way radio.

The First Aqueduct is composed of pipelines 1 and 2. The upper reach of these pipelines receives filtered water from the Skinner Filtration Plant. From the delivery point south until Escondido, the First Aqueduct contains treated water. South of Escondido, it is refilled with untreated water from the Crossover Pipeline, which is linked to the Second Aqueduct. Off the First Aqueduct, the Fallbrook-Oceanside Branch Line originates at Rainbow and extends west to Oceanside's service area. The First Aqueduct ends at San Vicente Reservoir, which is owned and operated by the city of San Diego.

The three pipelines of the Second Aqueduct (pipelines 3, 4, and 5), although in common right of way for most of their length, do not share any facilities south of Lake Skinner and are operated independently. Pipeline 3 extends from Lake Skinner in Riverside County south to Lower Otay Reservoir. It delivers untreated water from Skinner south to a diversion structure at San Marcos, where it is refilled with treated water from Pipeline 4. Pipeline 3 delivers treated water at its terminus at Lower Otay Reservoir.

Pipeline 4 conveys treated water from Skinner until the diversion structure, and then is refilled with untreated water from Pipeline 3 until it terminates at the city of San Diego's Alvarado Treatment Plant along Lake Murray. Pipeline 5 delivers untreated water from Skinner south to the San Marcos diversion structure, where it is refilled with treated water from Pipeline 3. Pipeline 5 terminates at Paint Mountain.

To increase operational flexibility, several pipelines were constructed running east-west. The Tri-Agencies Pipeline is a branch line that extends west from San Marcos, and delivers treated water to service areas of the Vista Irrigation District, Carlsbad Municipal Water District, and the city of Oceanside. The Ramona Pipeline delivers water from the Second Aqueduct to the Olivenhain Water District, city of San Diego, and the Ramona Municipal Water District.

The design capacities of Authority pipelines at the point of delivery from the Metropolitan Water District are:

Pipelines 1 and 2 combined	180 cubic feet/second
Pipeline 3	250 cubic feet/second
Pipeline 4	380 cubic feet/second
Pipeline 5	450 cubic feet/second

(One cubic foot is equivalent to 7.48 gallons. One cubic foot per second flowing for 24 hours will produce nearly two acre-feet.)

Water Quality

Chemical constituents of Colorado River water are shown in Table 11. The analyses are based on samples taken from the West Portal of San Jacinto Tunnel. Total hardness ranged from a high of 334 milligrams per liter (mg/l) in January to a low of 318 mg/l in both April and September. Water temperatures varied from a high of 82°F (28°C) in September to a low of 54°F (12°C) reported in January.

The chemical constituents of treated water at Lake Skinner are shown in Table 12. Total hardness ranged from a high of 332 mg/l in December to a low of 255 mg/l in July. Water temperatures ranged from a high of 83°F (29°C) recorded in August to a low of 55°F (13°C) in January.

The Water Authority measures and reports aqueduct water turbidity to meet the daily monitoring requirements of the California Safe Drinking Water Act. Additional water quality sampling and measurement is done by Authority member agencies.

Water Treatment

Authority member agencies that own and operate treatment plants within the County are: The cities of San Diego, Poway, Oceanside, and Escondido, (Escondido has a joint ownership with the Vista Irrigation District), Ramona Municipal Water District, San Dieguito Water District-Santa Fe Irrigation District (joint ownership), Helix Water District, and Sweetwater Authority (operating for South

Bay Irrigation District and National City). The Authority purchases treated water from Helix and Poway to supply the Otay Water District, Padre Dam Municipal Water District, and Ramona Municipal Water District. The cost of all treated water delivered by the Authority to its member agencies is the same regardless of the treatment source.

Precipitation

Once again above normal rainfall was recorded in 1995, similar to 1993. Rainfall is measured at three stations in San Diego County: Lindbergh Field, located in downtown San Diego at an elevation just slightly higher than sea level; Lake Cuyamaca, at an elevation of about 4,600 feet; and Lake Henshaw, in the northeastern corner of the county, at an elevation of about 2,600 feet. Rainfall at these stations for 1994-95 is shown below:

Location	Rainfall	Percent of Normal
Lindbergh Field	17.12 inches	173
Lake Cuyamaca	57.14 inches	152
Lake Henshaw	43.89 inches	156

Long-Term Water Supply Reliability

The Authority continues to investigate the long-term reliability of the region's water supply. The Authority has an obligation to evaluate long-term water resource alternatives that are potentially secure and prudent. A firm, reliable water supply is critical to preserving San Diego's economic strength. The Authority currently relies on MWD as the region's sole imported water supplier. However, this supply is subject to reductions in drought years, and restrictions that MWD could impose during shortages because of the Authority's limited entitlement.

Rainfall Record at San Diego, California

Mean for 125 Years of record = 9.86
(Past 100 Years Shown)

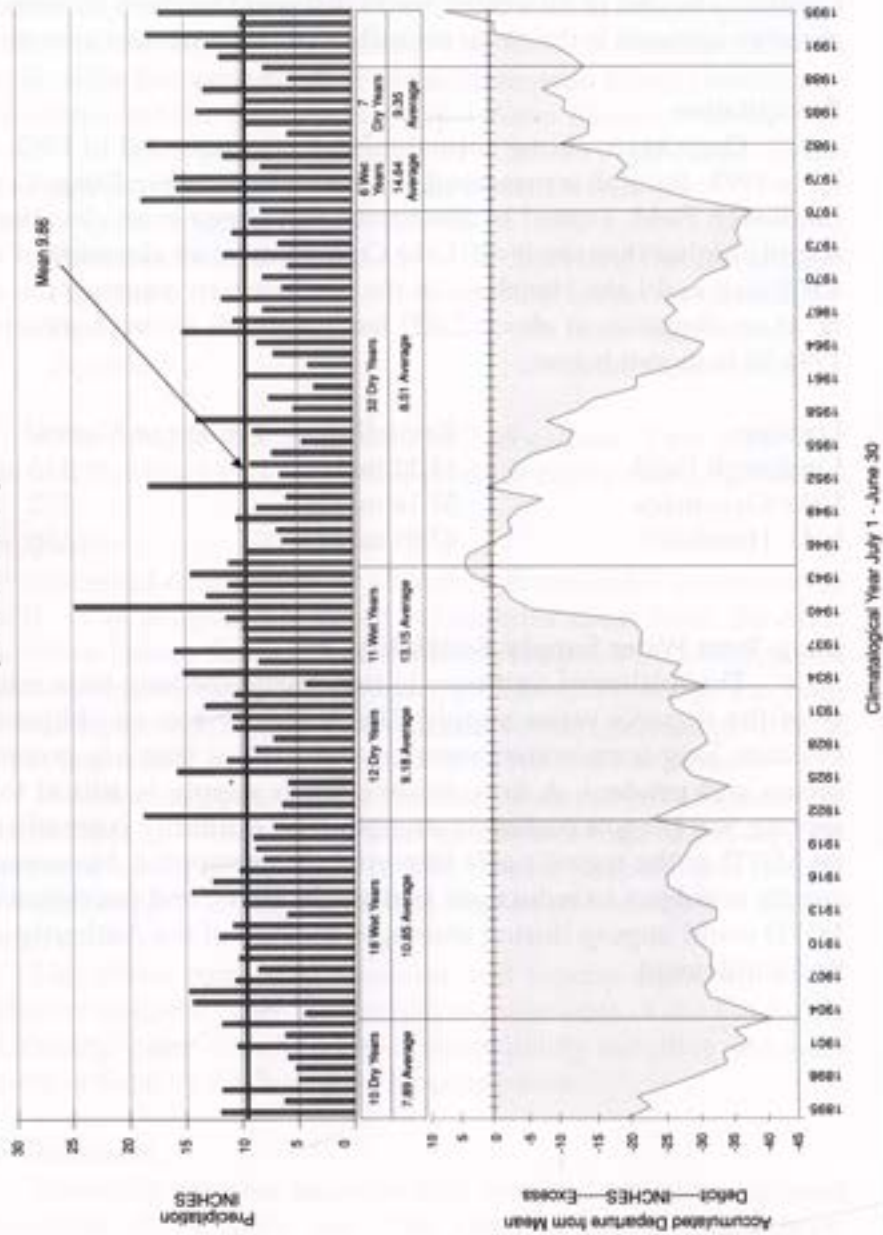


Figure No. 5

CAPITAL IMPROVEMENT PROGRAM



Map 2

ENGINEERING DEPARTMENT

The Engineering Department continued to direct the planning, design and construction of new facilities, facility rehabilitation and repair work. Engineering prepared studies and investigations, conducted contract administration and complied with new and existing regulatory requirements. New facilities and the rehabilitation and repair of existing facilities were generally conducted under the Capital Improvement Program (CIP). The department supported the Operations and Maintenance, Right of Way and Water Resources Planning departments. The department also assisted in evaluating project studies conducted for the Emergency Storage Program. The engineering staff operates from both the San Diego office and the Escondido Operations Center.

Capital Improvement Program

The CIP was developed in conjunction with the Authority's Water Distribution Plan to provide the necessary facilities for a safe, reliable, and operationally flexible water storage, treatment and delivery system. Facility needs are assessed by Engineering, and the Board annually reviews and adopts the CIP. This annual review allows the CIP to be adjusted to changing conditions, particularly with respect to demand projections, the needs of our member agencies and the economy.

The current CIP includes new pipelines, flow control facilities, flow regulatory structures, pump stations, as well as projects for mitigating environmental impacts, protecting pipelines at the San Luis Rey River crossing, evaluating emergency storage options and implementing a new aqueduct control system. Throughout the year, emphasis was placed on completing both the pipeline projects and the facilities required to bring the new pipelines into service.

The new treated water pipeline, which extends from the Mira Mesa area to Lower Otay, has been designed to increase system pressures at low flows, improve system reliability and enhance operational flexibility. The last segment of the treated water pipeline, the Mission Trails Pipeline, is currently under construction, and several new replacement Flow Control Facilities (FCFs) are in various stages of design or construction. The replacement FCFs are required because of differing hydraulic characteristics and the location of the new pipeline relative to the existing pipeline. Completion of all treated water facilities are scheduled to coincide with completion of the Mission Trails

Pipeline by the end of 1996.

At completion of the new treated water pipelines, the existing treated water pipeline between the Miramar and Lower Otay Reservoirs will be converted to untreated water conveyance. This converted pipeline will eventually be connected to a new untreated water pipeline that extends northward to the Authority's Diversion Structure in Twin Oaks Valley, and eventually up to Metropolitan's Lake Skinner facilities in Riverside County. The first segment of the new untreated water pipeline has been completed, with the remaining segments under design.

Prior to this year, construction had been completed on CIP projects with construction contracts valued at \$240.5 million. This year two construction contracts were completed with a value of \$42.9 million, and progress continued on the construction of three projects valued at \$11.2 million. Five new construction contracts were awarded this year valued at \$34.1 million. Two new FCF projects and two pipeline relocation projects were added to the CIP this year. Construction progress under the CIP is shown on Figure No. 6, and descriptions for active CIP projects follows.

Figure No. 6

SAN DIEGO COUNTY WATER AUTHORITY CAPITAL IMPROVEMENT PROGRAM CONSTRUCTION PROGRESS FOR FY 94/95

PROJECT	COMPLETION DATE	FINAL CONTRACT AMOUNT
PROJECTS PREVIOUSLY COMPLETED		\$240,545,140
PROJECTS PREVIOUSLY AWARDED		
Aqueduct Control System		\$1,675,097
Otay 4 and 9 FCFs		\$1,124,500
Mission Trails Pipeline FRS		\$8,439,000
PROJECTS COMPLETED THIS YEAR		
La Mesa/Lemon Grove Pipeline	Jul 1994	\$41,926,542
San Dieguito/Santa Fe 3, 4, 5 and 6 FCF	May 1995	\$971,151
PROJECTS AWARDED THIS YEAR		
Mission Trails Pipeline	Aug 1994	\$12,768,136
Valve Replacement	Sep 1994	\$180,342
Helix 3 FCF	Jan 1995	\$643,247
North County Distribution Pipeline	Jan 1995	\$3,264,450
NCDP Regulatory Structure, Chlorine Contact Tank and FCF	May 1995	\$7,238,640

La Mesa/Lemon Grove Pipeline and Cowles Mountain Tunnel

This project consists of an 11-mile, 96-inch and 108-inch diameter welded steel pipeline, the Cowles Mountain Tunnel, and the relocation of three flow control facilities (FCFs). The pipeline was divided into two construction projects. A construction contract awarded to PCL Civil Constructors of Tempe, Arizona, for the pipeline segment through the cities of San Diego and La Mesa was completed and accepted in July 1994, at a final contract price of \$41,926,542. The remaining pipeline contract and the tunnel portion of the project were completed in previous years.

The three new FCFs associated with the La Mesa Lemon Grove Pipeline are: Helix 3, San Diego 13, and Otay 5. In January 1995, a construction contract for the 66 cfs Helix 3 FCF was awarded to Orion Construction of San Marcos, California, for \$643,247. The design of the combined San Diego 13/Otay 5 FCF (64/58 cfs) was completed by Montgomery Watson and advertised for bids in May 1995. A pipeline to connect the new Otay 5 FCF to the La Mesa Lemon Grove Pipeline is under design by Authority staff, and will be bid as a separate construction contract. Construction management services continues to be provided by Morrison-Knudsen Corporation.

San Dieguito Water District/Santa Fe Irrigation District 3, 4, 5, & 6 Flow Control Facility

This flow control facility will provide 84 cfs of untreated water to the R. E. Badger Treatment Plant and 42 cfs of treated water to the district's distribution system. In February 1994, the Authority awarded a construction contract to J.R. Filanc Construction Company of Oceanside, California, for \$971,000. The project was accepted and completed in May 1995, at a final contract price of \$974,151.27. Contract administration and inspection services were performed by Authority staff.

Lower Otay Pipeline

This 8-mile, 200-cfs, 72-inch and 96-inch diameter welded steel pipeline is the southern-most segment of the new treated water pipeline, and includes the replacement of three FCFs and a separate smaller diameter pipeline to convert the existing San Diego 7 FCF to untreated water service. Work continued on the Otay 4 and 9 FCFs construction contract, and the Authority's design consultant, ASL Consultant Engineers, continued with the final design of the Otay 3 FCF. Authority staff is completing design work on the San Diego 7 FCF discharge pipeline and is performing construction management

and contract administration services for the Otay 4 and 9 FCFs project.

Mission Trails Pipeline and Flow Regulatory Structure

The Mission Trails Pipeline consists of a 2.3-mile, 370 cfs, 96-inch diameter welded steel pipeline and an underground 18 million gallon reinforced concrete Flow Regulatory Structure (FRS). The project is located in Mission Trails Regional Park, in the City of San Diego. The project includes a 1,210 foot long tunnel to avoid impacts to environmentally sensitive riparian habitat along the San Diego River, the historic Mission Flume, and the existing Pipeline 4.

In August 1994, a construction contract involving 1.6 miles of the Mission Trails Pipeline was awarded to PCL Civil Constructors of Tempe, Arizona, for \$12,768,136. In June 1994, a construction contract for the FRS was awarded to C.E. Wylie Construction Company of San Diego, California, for \$8,439,000. Authority staff is performing construction management and contract administration services with the assistance of outside specialty inspection consultants. Construction of the remaining 0.7 mile portion of the pipeline was previously completed as part of the Scripps Ranch Pipeline project.

North County Distribution Pipeline

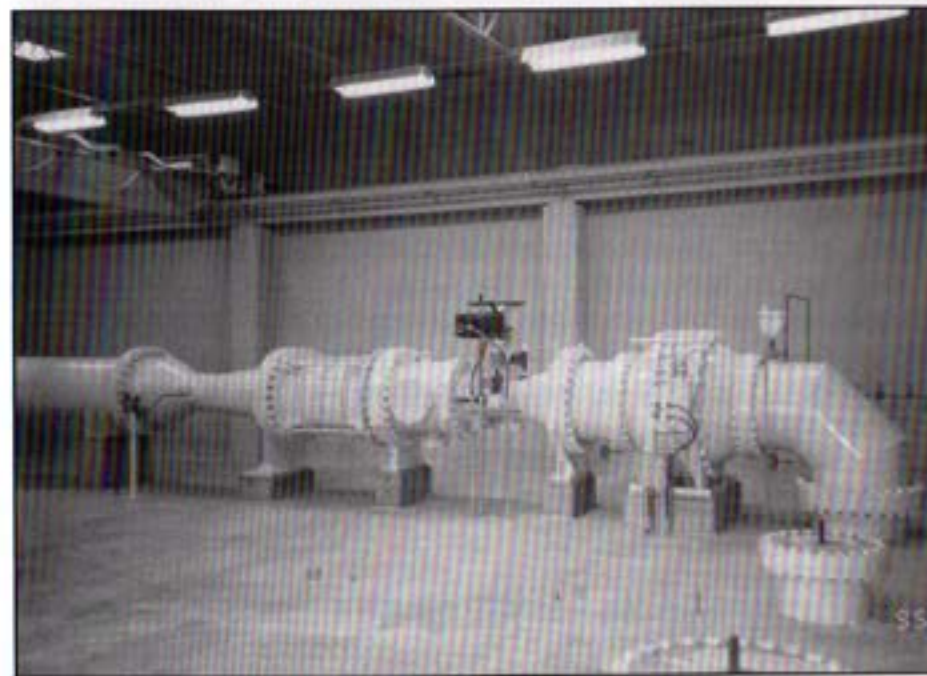
This 4-mile, 182-cfs, 72-inch diameter pipeline will provide treated water to the City of Oceanside, Rainbow Municipal Water District, Vallecitos Water District, and Vista Irrigation District. The pipeline extends from the Second San Diego Aqueduct near the City of Oceanside's Robert A. Weese Water Filtration Plant westerly to the East Vista Way/Osborne Street intersection north of the City of Vista. The project includes a one million gallon regulatory structure, a chlorine contact tank, and three flow control facilities: the joint-use NCDP1/Rainbow 11 FCF, the Vallecitos 8 FCF, and the joint-use Oceanside 6/VID 11/Rainbow 12 FCF. The Regulatory Structure has been designed to allow the pipeline to convey treated water from both the Authority's Pipeline 4 and the City's filtration plant.

In January 1995, a construction contract for the pipeline was awarded to L. H. Woods and Sons, Inc., of San Marcos, California, for \$13,264,450. Construction management for this 15 month contract is being performed by Authority staff.

In May 1995, a construction contract for the Regulatory Structure, Chlorine Contact Tank, and joint-use NCDP1/Rainbow 11 FCF was awarded to Roy E. Ladd, Inc., of Redding, California, for \$7,238,620. In June 1995, bids for construction of the joint use Oceanside 6/VID11/Rainbow 12 FCF were opened and a contract is



Placement of concrete floor slabs for flow regulatory structure.



San Dieguito/Santa Fe flow regulatory structures 3, 4, 5 and 6.

expected to be awarded by the Board next fiscal year. Construction management and contract administration for these latter two projects will be performed by Parsons Brinckerhoff Construction Services.

Authority staff and ASL Consulting Engineers continue to work on the final design of the Vallecitos 8 FCF. This project will be advertised for bids upon the Vallecitos Water District acquiring right of way for the facility.

Valley Center Pipeline

This project will connect the First San Diego Aqueduct to the Second San Diego Aqueduct, providing a means to transfer water between the two aqueducts to meet demands. The project includes 4.5-miles of 66-inch diameter pipeline, a 40-million-gallon-per-day, 800-horsepower pump station to boost water from the Second Aqueduct to the First Aqueduct, and a flow regulatory structure to dampen surge pressures in Pipeline 4 should a power failure occur at the pump station. The regulatory structure will also serve to reduce flow fluctuations in Pipeline 4 upon startup of the pumps.

The design consultant, Engineering-Science, continued work on the final design of the pipeline. Authority staff were principally involved in right of way acquisition activities for the pipeline, access roads, and temporary construction easements. A majority of the acquisitions have been acquired without the need for litigation.

Rancho Penasquitos Pipeline

This 9.7-mile, 620-cfs, 108-inch diameter pipeline will provide additional untreated water capacity from north-central to south San Diego County. The pipeline extends between two previously completed pipeline projects beginning at Paint Mountain in the Elfin Forest area to Mercy Road in the City of San Diego. The project includes a new flow regulatory structure (FRS) to be built adjacent to the existing Diversion Structure in Twin Oaks Valley. The FRS will improve hydraulic characteristics and control of the untreated water delivery system.

The design consultant for this project, Black & Veatch, continued working on the final design of the pipeline.

Pipeline 6

Pipeline 6 is a new untreated water conveyance facility extending from Lake Skinner in Riverside County to the Authority's Diversion Structure in Twin Oaks Valley. The project is a joint undertaking with the Metropolitan Water District of Southern California.

Metropolitan has initiated design work for the northerly portion of this project from Lake Skinner to the Metropolitan delivery point located just north of the San Luis Rey River. The Authority's portion of Pipeline 6 starts at the delivery point and consists of 11.7 miles of 108-inch diameter pipeline. In February, 1995, the Board awarded a 27 month contract to Black & Veatch for preliminary and final design services for Pipeline 6. Project coordination continues with Metropolitan to resolve design and right of way issues.

Ramona Bypass and Pressure Reducing Facility

The Authority and Ramona Municipal Water District executed an agreement in 1992 for water storage in Lake Ramona. The agreement allows the Authority to store up to 10,000 acre-feet of water in Lake Ramona. The Ramona Bypass and Pressure Reducing Facility will provide a means to transfer untreated water between Lake Ramona and the First San Diego Aqueduct. The construction of the facility will increase the reliability and operational flexibility of the First San Diego Aqueduct by providing an additional source of water. Authority staff continued work on design of the project.

Aqueduct Control System Project

The Aqueduct Control System project is a Supervisory Control and Data Acquisition (SCADA) system which consists of a new central computer located at the Escondido Operations Center, and new Remote Terminal Units (RTUs) located along the aqueduct at the flow control facilities. A new communications system comprised of digital telephone circuits, radios, and ultimately fiber optic cable will link the central computer to the RTUs. The new communications system will replace the current analog telephone based system. The Aqueduct Control System is being implemented to: (1) increase system operational speed and efficiency; (2) increase the number of facilities which can be monitored and controlled; (3) enhance the system capabilities in report generation, screen displays, archiving of historical data, and the ability to export data to other computers; and (4) to reduce maintenance costs.

The development and installation of the SCADA component was awarded to Systems Integrated (SI) in April 1993. SI has completed installation of the computer hardware and software, and the system is undergoing a six-month operational demonstration period. Upon the successful completion of the demonstration, full acceptance of the system will be made.

The radio communication system consists of transmitters at the

Operations Center and at several FCFs. The FCF and Operations Center radios have been linked by repeater radio stations located at Mount Palomar and Mount Woodson.

Fiber optic communication cable continues to be installed with the new pipeline projects along the Second Aqueduct. Fiber optic cable has been installed and successfully tested on the San Marcos, Scripps Ranch, La Mesa/Lemon Grove and Lower Otay pipeline projects.

National City/South Bay 4 Flow Control Facility

The National City/South Bay 4 FCF will provide up to 62 cfs of treated water from the Lower Otay Pipeline to the Sweetwater Authority. The project is located near the Sweetwater Reservoir. ASL Consulting Engineers continues with final design work.

Aqueduct Protection Program

This program was initiated to protect and ensure the structural integrity of the Authority's existing prestressed concrete cylinder and steel pipelines. The program is being conducted in three phases by PSG Corrosion Engineering and Boyle Engineering. Phase 1 consists of a corrosion survey of 82 miles of prestressed concrete cylinder pipelines and 42 miles of steel pipelines. Phase 2 includes condition assessment, repair prioritization, remediation design, and preparation of a long term corrosion protection program. Phase 3 will implement preventive maintenance repairs, such as cathodic protection, internal joint repairs and concrete coating/lining rehabilitation.

During the past year, scheduled shutdowns of the untreated and treated water steel pipelines occurred to continue the Phase 1 internal pipeline inspections and the Phase 2 pipeline condition assessments. During the treated water shutdown, internal cement mortar lining and preventive maintenance repairs at 59 pipe joints were completed on Pipeline 3 by the Operations and Maintenance Department. Internal inspections and necessary repair work will continue as pipeline shutdowns are scheduled during low flow demand periods.

Preliminary Design of Permanent Protection of the San Luis Rey River Aqueduct Crossings

Authority staff continued to pursue a multifaceted approach to protecting the San Luis Rey River Aqueduct Crossings. Due to erosion, sand cover over the pipelines has been significantly reduced and there is a concern that the pipelines could be exposed during high

storm flows. The multifaceted approach consists of three strategies: (1) monitoring new and expanded sand and gravel mining operations; (2) evaluating alternatives for providing permanent protection at the Aqueduct Crossings; and, (3) an emergency protection program. To date, the program has been successful in protecting the integrity of the pipelines at both crossings.

Staff has been involved in the Technical Advisory Committee for the San Luis Rey River Comprehensive Plan sponsored by the County of San Diego. Staff is also active in reviewing the proposed Reclamation Plan for the H.G. Fenton Pala Borrow Site. This plan was ordered by the EPA to mitigate impacts of the mining activities on surrounding property and biological resources. The rains in January 1995 resulted in minor erosion damage at both aqueduct crossings and the Board authorized emergency work to be performed by both Authority crews and Vadnais Corporation.

Padre Dam and Otay Treated Water Supply Study

Staff continued a review of the Padre Dam and Otay Treated Water Supply Study, prepared by John Powell and Associates. This study evaluates alternatives to serving Padre Dam Municipal Water District and Otay Water District with treated water that the Authority currently delivers from the Helix Water District (Helix). Helix has been supplying treated water to the Authority for delivery to Padre Dam and Otay since 1976. Staff efforts focused mainly on the alternative for expanding Helix's R.M. Levy Water Treatment Plant from 80 million gallons per day to 100 millions gallons per day. The Authority retained the engineering firm of Corrao-Brady as a consultant to assist with the evaluation for expanding the plant. A final analysis is expected to be presented to the Board next year.

New Projects

The newly approved San Diego 17 Flow Control and Pumping Facility and the San Diego 18 FCF will allow treated water from the City of San Diego Alvarado Water Filtration Plant to be pumped into the La Mesa Lemon Grove Pipeline for delivery of 93 cfs to the City and 62 cfs to other Authority member agencies. The San Diego 18 FCF will be sized to take delivery of the City's 93 cfs flow. The terms for a construction and operation agreement for these two facilities are being negotiated by staff with the City.

The construction of two new roadways will require the relocation of Authority pipelines within both the First and Second Aqueducts. The eastward extension of Scripps Poway Parkway

requires the relocation of a portion of Pipelines 1 and 2. The construction of State Route 125 in the Sweetwater area will require the relocation of a portion of Pipeline 3. Agreements establishing the terms for reimbursement amounts, design and construction parameters are being negotiated by staff with the City of Poway and Caltrans.

Other Projects

Other important engineering activities for the fiscal year included:

- Providing support to the Operations and Maintenance Department for upgrading a number of flow control facilities, including work on improving access, ventilation, safety, hydraulic operation and control, and mitigating corrosion.
- Providing design support to the Operations and Maintenance Department to improve drainage along and across the Authority's rights of way.
- Supporting the work of the Emergency Storage Project Team by providing assistance for studies involving preliminary engineering, system reoperation/optimization, review of technical reports, cost estimate reviews, environmental review, review of draft EIR/EIS, review and support for Memoranda of Understanding with member agencies, and rights of way.
- Coordinating reviews and incorporating revisions to update the Authority's Standard Specifications and Standard Drawings, including updates to the standard construction contract documents and insurance certificates.
- Assisting the Right of Way Department by conducting technical reviews of encroachment permit applications.

RIGHT OF WAY DEPARTMENT

The Right of Way Department is responsible for the acquisition and management of all land and land rights to support the Capital Improvement Program. To manage the properties, the Department goal is to patrol every segment of accessible right of way at least once a week thereby giving the highest priority to maintaining the integrity of the Aqueduct System. Patrol personnel meet with owners to discuss encroachment procedures, respond to the Underground DigAlert System, provide inspection and standby for excavators, and mark out the pipelines. The Right of Way Department also processes requests for joint uses of the right of way system, and is responsible for annexations and detachments. The Department has been actively pursuing the implementation of a Document Storage System (DSS), and a Geographical Information System known as the Right of Way Information Management System (RIMS).

ACQUISITION ACTIVITIES

Mitigation Site (Crestridge Habitat Mitigation Area)

The Right of Way Department has been managing the 261 acre Crestridge mitigation site since escrow closed in 1994. Staff handled the removal of two residences, relocated the tenants, coordinated demolition of the structures and the clean up of hazardous materials. Negotiations concluded with the seller cleaning up an illegal trash dump. A management consultant has been retained to assist in the management of the property including the biological surveys required by the Biological Opinion issued by the Fish and Wildlife Service. The site was acquired to mitigate for the removal of Gnatcatcher habitat for the current Capital Improvement Program. The site is very attractive to off-roaders and campers thus requiring frequent inspection. Placement of gates and concrete barriers has decreased trespassing activity.

San Marcos Pipeline (Pipeline 5 Extension, Phase I)

An adverse judgment of over \$1,000,000 was found in a plaintiff's favor. This large amount was due, in part, to the trial judge determining the Authority's final offer was unreasonable. The Authority won a new trial on appeal. The matter was ultimately resolved, however, by a settlement agreement approved by the Board of Directors.

This completed acquisition of all pipeline parcels. We have, however, continued to work on this project in acquiring access rights. Originally we had planned to patrol and perform maintenance through access within our own right of way. Runoff, however, continues to deposit decomposed granite on the access road and we cannot get traction on the steeper slopes. We are hopeful in gaining all the access we need without further condemnation activities.

Rancho Penasquitos Pipeline (Pipeline 5 Extension, Phase II)

We have continued to meet with property owners and City of San Diego representatives to keep them informed of our schedule. Advertising for construction bids will probably occur in late summer of 1996. An offer has been made to acquire additional property for the expansion of the Diversion Structure. There are a number of land uses on the right of way, primarily nurseries, which will require relocation.

Mission Trails Pipeline and Flow Regulatory Structure (Pipeline 4B, Phase II)

Additional right of way acquisition was required to relocate a City of San Diego sewage facility. Access rights lost due to the construction of SR52 have been conceptually worked out between the Authority and CALTRANS. Temporary access to the Flow Regulatory Structure will remain. When all of the Navy property is finally transferred to the City, permanent access will be acquired. Both of these projects are well into construction now that the delays in acquiring the property have been overcome. Acquisition was delayed because of a congressional appropriation act restricting the sale of federal property having hazardous materials. Since the property was part of former Camp Elliott, there was a need to satisfy the government that all unexploded ordnance had been removed. The pipeline construction was delayed due to limitations imposed by the Fish and Wildlife Service allowing construction activities only in the Gnatcatcher non-breeding season.

La Mesa/Lemon Grove Pipeline (Pipeline 4 Extension, Phase I)

Right of Way acquisition is completed. A considerable amount of staff time, however, was spent on working with our two adjacent neighbors regarding the appearance of the Helix 3 Flow Control Facility. A number of changes in use of building and fencing materials was requested, especially by one of the owners and his attorney. The Authority has done a good job in making this facility as attractive

and compatible with the neighborhood as possible. We also learned that one neighbor's building is encroaching on our fee property a few inches. The neighbor will process a boundary adjustment and the encroachment does not present a problem for construction.

Lower Otay Pipeline (Pipeline 4 Extension, Phase II)

Some additional easement rights were acquired to accommodate construction of Flow Control Facilities for Otay and the City of San Diego. There are still some additional acquisitions necessary to complete the construction of all the necessary Flow Control Facilities. All of the pipeline right of way acquisition is completed.

Pipeline 2A

Our first imminent domain trial is in two phases. The first phase was a challenge to our right to take. The second will be over valuation. The Authority prevailed on the right to take issue and the valuation phase has yet to be scheduled. Staff spent a considerable amount of time preparing for one of our more challenging trials. An owner is seeking \$3.2 million damages due to unreasonable delays. The owner claims he based development of his subdivision to coincide with the original pipeline construction schedule and had, therefore, suffered greatly due to not selling lots. In fact, the subdivision did not record until only recently with the owner pursuing subdivision approval diligently. We are confident the results of the trial will be favorable because the delays were not unreasonable. The end of the drought enabled us to slow the project down and perfect design. We were able to "custom tailor" some of the right of way parcels thereby avoiding environmental impacts, excessive severance and the taking of houses.

At least three other trials are anticipated out of the 65 pipeline right of way parcels and over 30 access and other utility parcels. Our goal was to have no more than a 10% trial rate and we are extremely pleased with our acquisition results. This has been a very challenging acquisition because of the wide variety of land uses. Acquisitions included agricultural, residential, future residential, commercial, wet lands and rights of way for three other utilities to provide reallocations for our work. Avocado groves proved to be some of the more challenging acquisitions because of the need to provide assurances to the grove owners that we would provide adequate protection against root rot, minimize avocado thefts, determination of highest and best use, value of the trees, value of the irrigation and keeping water service available through out construction.

North County Distribution Pipeline

All but two property owners impacted by the pipeline construction have come to terms with the Authority. The two remaining owners possess three of the 27 parcels over which property rights are required. Trials are scheduled on both parcels, but we remain optimistic settlements can be reached on at least two of the parcels. The Authority prevailed on a right to take trial which was the only litigation thus far on this project.

In addition to acquiring property rights for pipeline construction, it has been necessary to provide access for construction over a network of private roads. Access easements have been acquired over 95 parcels and access agreements have been acquired over 196 additional parcels. There are about two dozen owners who have not agreed to provide access. Eminent Domain proceedings are progressing with these remaining owners.



SDCWA Right of way through Vista Valley Country Club.

Vista Valley Country Club was the most impacted parcel on the project. We were successful in negotiating a settlement with the club on both the property rights and the business loss. Strict construction schedules were part of the negotiated agreement including penalties for delays had the construction contractor not restored the golf course within agreed to time frames. The contractor has completed both construction and restoration through the golf course, meeting the time frames agreed to with the Country Club. Golfing has resumed. The

Country Club leadership have stated that they are very pleased with the results of the pipeline construction and the restoration. They were able to take advantage of the golfing shutdown to upgrade their irrigation system and excess soil from the trench was spread on fairways having a flooding problem.

Pipeline 6

We have had considerable involvement in gaining property owner approvals to enter their properties for land, biological and archeological surveys with good success. Thus far no court orders have been necessary. Requests for Proposals have been drafted and we will seek consultants for escrow, title, appraisal and land use services in late fall of 1995. Our chief concern at this time is siting and acquiring the south tunnel portal for the Mt. Olympus tunnel. The tunnel portal will be on the greater Gregory Canyon land fill property in the vicinity of Highway 76. Meetings have been held with the proponents of the land fill to discuss the tunnel portal, the Pipeline 6 alignment, and the possible relocation of the First Aqueduct.

Emergency Storage Project

The Department participated in the four screen reviews of the various screen checks of the draft EIR, and participated in the Mitigation Committee's development of the mitigation section of the EIR. As a member of the Emergency Storage Project team, we participated in committee and public meetings and responded to land acquisition questions received through the ESP hotline.

The Department continued to gain entry permission from property owners for consultants to go on site for environmental and geo-technical studies. Additional owners have been contacted by the Department through public and on-site meetings, letters, and phone conversations regarding the various issues pertaining to future acquisitions. Many owners were very reluctant to allow the consultants on their property. Through negotiation, we were able to gain access to all necessary parcels with only one court action.

MANAGEMENT ACTIVITIES

Joint Uses

A number of unauthorized encroachments occurred during this past year and all but one was satisfactorily resolved. Only one unauthorized encroachment of significance occurred and not resolved. Holes for footings for a deck were found on the Second Aqueduct

right of way in Spring Valley. The owner was contacted and advised to stop. Without our knowledge, the deck was installed. The property owner was advised the deck was in violation of Article 25 and to have the deck removed. The owner responded with an application for an Encroachment Permit which was denied. The denial was appealed to the Board of Directors and a decision has not been made as of the date of this writing. The appeal process has been delayed because of a discrepancy over the location of the easement. The pipeline is exactly where its supposed to be but the easement is further east of pipeline center line than thought. This will require a partial quit claim to the owner and a partial easement grant to the Authority to resolve the matter.

A new form of Utility License Agreement was approved by the Board of Directors. This form is much more acceptable to the various utility companies and agencies than the standard encroachment permit which was designed for use with the underlying fee owner. We are also able to process the Agreement more quickly.

An appeal over a court decision in an encroachment matter was made on behalf of the Authority. The Kerr case was over an encroachment that an employee said was permitted. That employee did not have the authority to commit the Authority and gave his permission without understanding that Article 25 had been adopted by the Board. The lower court ruled that our failure to stop the encroachment was in fact approval. Further, that the Authority had been obligated by the employee's approval. The case was lost on appeal but not over the same issue. The higher court ruled simply that the owner's reserved rights covered his encroachment. This case will not be a precedent.

Right of Way Patrol

Our Right of Way patrol personnel logged 79,794 miles of right of way inspection. This is the equivalent of covering the entire right of way system once a month. This is short of our goal of covering the system once a week which in part was hindered by one patrol position being vacant much of the year due to employee turnover. The main reason, however, is that the same patrol personnel had 383 joint meets with contractors, 168 standbys, investigated and processed 20 unauthorized encroachments, processed 130 survey and maintenance requests and answered 3,316 DigAlerts (call before your dig system). We will soon be able to access the DigAlerts from the field and we will soon be at full strength. This should enable us to meet our goal of patrolling every right of way once a week.

Scheduled Pipeline Drains

There were two planned shutdowns during the year when we drained portions of Pipelines 3 and 4. Until recently we never acquired drainage easements and the approach was to drain the lines and then repair any property damage afterward. When the First and Second Aqueducts were built, there was little or no development along the alignments. Radically changed land use patterns now dictate that we change our practices. We have now worked out a procedure where we work jointly with the Engineering and Operations and Maintenance Departments to predetermine where potential property damage may occur. We then notify and meet with impacted property owners to explain our procedures. Arrangements are then made for the removal of any live stock or improvements. Pre draindown videos are taken of the condition of the surfaces to be drained over and we again document after the drain down.

Follow up with impacted property owners is initiated after the draindowns to be sure the after condition of their property is satisfactory and repair any damages caused by the drainage. Engineering is doing a pilot drainage study and in the next few years we will probably be acquiring drainage easements for the older pipelines.

For emergency draindowns for pipeline repairs, we attempt to contact all impacted owners at the earliest possible date. Claim forms are provided and the claims procedure is explained. If damage is not significant, we work with Maintenance to schedule the work.

Change of Boundary Statement

The annual Change of Boundary Statement was prepared and filed. Each year we are responsible to prepare the statement and boundary map and file the document with the State Board of Equalization, the County Assessor and Metropolitan Water District. The Boundary Statement and Map must reflect each annexation to the Authority and all attachments and detachments between member agencies.

Transfer of First Aqueduct

The First Aqueduct has been paid for. We are working with our Deputy General Counsel to transfer all land rights to the Authority from the Bureau of Reclamation.

Document Storage System (DSS)

A vendor was retained to provide the software for the Document Storage System. The vendor was selected on the basis of

providing the software system in accordance with a very detailed scope of work. At the time the software was installed, it would not interface directly with the scanner. The vendor worked with the manufacturer to develop additional software to make the system work. When the acceptance test was run, however, the system did not perform according to specification. The vendor was given five days notice to provide an acceptable system or we would void the contract. The vendor failed to provide the system. We will retain the existing hardware and readvertise. This is a pilot program for the Right of Way Department but once we have a successful system, it will be expanded to the whole Authority. A successful system will also operate with existing and planned Geographical Information Systems.

Right of Way Information Management System (RIMS)

RIMS is a Geographical Information System which will operate layers of surveys maps, utilities, land uses, etc., at survey level accuracy. This tool will give us great efficiency to accurately manage the right of way system. Once in place, it will help in prioritizing the existing unauthorized encroachments and will be accessible to other Departments.

A pilot was completed by Black & Veatch in connection with the design of Pipeline 5EII. The pilot was a great success. Because of budget constraints and problems associated with the Document Storage System, we did not recommend proceeding with RIMS this coming budget year. We will be bringing RIMS before the Board for consideration at a later date. Because of the amount of work to resurvey the rights of way and input all the various layers, we will be developing a phased proposal.

Both the First and Second Aqueducts were surveyed years ago with antiquated survey techniques off of property corner monumentation that may have been set by even more antiquated techniques. We have found numerous locations where our right of way is not where first thought. This underscores the importance of resurveying the right of way system and providing new monumentation in the field. Fortunately, much of the right of way system has been resurveyed in connection with the various Capital Improvement Projects we have, or will be constructing.

OPERATIONS AND MAINTENANCE DEPARTMENT

GENERAL

The Operations and Maintenance (O&M) Department controls and maintains the Authority's aqueducts and related facilities from the Operations Center in Escondido. The Authority has more than 230 miles of large-diameter pipeline, with more than 1,600 appurtenant structures, that occupy approximately 1,400 acres of right of way in San Diego County.

Routine maintenance activities involve not only the water delivery systems, but also the extensive rights of way. Major work accomplished during the year included a valve rotation program to decrease maintenance downtime, storm damage repairs, various construction projects, environmental compliance, new operational procedures, and health and safety training.

The O&M Department is divided into six sections: Administration, Operations, System Maintenance, San Diego Building Services, Technical Services, and the Shop. The Operations Center site has three separate buildings, providing space for administrative offices, a motor vehicle maintenance and repair shop, and warehouse. The administrative building houses the computerized control system for the aqueducts, and also contains offices for operations, maintenance, technical services and engineering personnel.

The shop building has facilities for repairing and servicing all Authority vehicles and heavy equipment. This building contains vehicle bays, a small machine shop and an equipment maintenance office. The warehouse stores materials, supplies, tools, small equipment and vehicles. It also contains a valve service repair shop and carpentry shop.

Communications systems link department staff with member agencies and regional emergency response agencies. These systems include the Authority's agency radio system, the member agency communications system (MACS), the Metropolitan Water District's member agency radio system (MARS) networks, and a regional disaster response system that connects all water districts with local, state and federal governments.

ADMINISTRATION

The Administration section continued work on several major programs during the past year, including the Authority's Emergency Response Plan, systems modifications programs, hazardous waste disposal, confined space permit program, Escondido site security, fleet maintenance/preventative maintenance software selection, and development of an O&M Procedures manual. In addition, staff completed work on several projects including the Member Agency Communications System (MACS) manual, Water Quality Sampling Program, Confined Space Permit Program, hazard communication training, and hazardous waste regulations training.

Administration staff continued to work closely with member agencies by holding quarterly "operating heads" meetings and assisting Metropolitan with several projects including; the Metropolitan Elsinore Fault Break Study and Metropolitan Member Agency Response System manual revisions.

Major Events

- Administration staff participated in the Metropolitan and Authority member agency Cryptosporidium Working Group. Administration staff met with representatives of Metropolitan, Metropolitan member agencies, and Authority member agencies to develop emergency response plans and procedures for responding to a potential water quality emergency.
- Administration staff completed the Member Agency Communications System (MACS) manual. The manual contains procedures for using the Authority's MACS radio network to communicate between Authority member agencies, the Authority, and Metropolitan during emergency situations.
- Administration staff completed the Water Quality Sampling Program manual. The manual contains procedures for water quality sampling, inspection, disinfection, and emergency reporting required by the Department of Health Services.
- Administrative staff established quarterly meetings with Metropolitan operating heads. Several meetings were held at Metropolitan member agency facilities to discuss common operational issues.
- Administrative staff participated with the Authority Public Affairs Department in conducting a workshop with water agency officials from Mexico and the United States. The workshop provided an opportunity for members of water agencies on both sides of the bor-

der to meet and discuss regional water issues.

- Administrative staff coordinated application for March 1995 storm damage reimbursement to the California Office of Emergency Services and the Federal Emergency Management Agency. Five sites were damaged or required emergency protective measures due to the heavy rains and flooding during March of 1995.
- Administration staff served as local arrangement chair in assisting AWWA in presenting a 2 day AWWA workshop on distribution system corrosion management.

OPERATIONS

The Authority's water delivery system has five major pipelines, ranging in size from 48 to 108 inches, that serve both raw and treated water to member agencies. The present capacity of the system is 825 million gallons per day (mgd). The Operations section controls the flows in these pipelines in response to flow requests from member agencies. The Operations Center Control Room is staffed daily, including weekends and holidays, from 7:00 a.m. to 4:30 p.m. After hours calls are transferred to the home of a system operator who can respond to emergencies.

The Operations section is further divided into control room operations and field operations. Control room operators regulate water flows to member agencies through a computerized control system that employs telemetry. The computer warns operators of flow problems, using alarm displays, a synthesized voice, or a telephone call to the night-time operator. The night-time operator can also monitor and instruct the computer control system from home using a portable computer. Operations personnel are certified for water distribution by the American Water Works Association (AWWA) and for water treatment by the State of California Health Department.

Field operations personnel do routine maintenance, repairs, and calibration on a variety of meters, pump stations, pressure control stations and valves located throughout the Authority service area. They also operate two hydroelectric power plants. Typical duties include reading meters, changing charts, and calculating water flows. Each active meter is checked at least three times per year for calibration. Meter accuracy is also checked upon request by a member agency or when there is some reason for questioning accuracy.

The Metropolitan Water District controls flows into Authority aqueducts at the Robert A. Skinner Filtration Plant Operations Center. Authority Operations personnel can request flow changes twice a day,

at 8:30 a.m. and 2:30 p.m., or upon request during an emergency. The Authority then shifts flows from one member agency service connection to another, with agency approval, to keep the pipeline flows in balance.

Because the Authority has no operational storage, flow changes must be carefully coordinated to balance the system and maintain proper flows to terminal service connections. The computer and an aqueduct flow status board indicate the amount of water available to meet the member agency needs. The computer and status board display each pipeline's current flow, requested flows, meter sizes, maximum allowable capacity flows, critical pipeline flows, and meter and valve information.

The Authority stores water in several reservoirs owned by member agencies, principally in San Vicente Reservoir, owned by the city of San Diego. Except in minor amounts, these water storage facilities cannot return stored water to the aqueduct for use elsewhere. The Vista Irrigation District, Helix Water District, and the City of San Diego have service connections where treated water can be put into the aqueduct when needed.

Operations personnel are working with Engineering, Technical Services, and the Authority's Aqueduct Control System vendor for the upcoming replacement of the computerized control system. The vendor is in the process of designing software and supplying hardware for the replacement of the Aqueduct Control System. The new Aqueduct Control System will replace the old out-dated computer that has been in service since March 1983.

Major Events

- Operations staff participated with other Authority staff on the Aqueduct Computer Control System Design Committee.
- Metropolitan changed disinfection of treated water from chloramines to free chlorine disinfection for a 30 day period.
- There were several extensive data phone line outages and Aqueduct Computer Control System failures during the year.
- Staff participated in a program to replace type "M" mercury filled meters from the system.
- Pipeline 5 Extension, Phase I, was put into continual service during the year.
- Tie-ins were made into the system for the Oceanside #5 and Padre Dam #4 flow control facilities.
- A new procedure was implemented which has CWA Operators making all necessary manual flow changes.



Systems Operator, Greg Nelson takes a water sample for bacteriological testing at the Oceanside #3 Flow Control Facility.



Systems Operator, Joe Wegand makes adjustments to modulating valves in the Diversion Structure.

- Operations personnel worked closely with the City of San Diego during maintenance outages of a 66-inch pipeline and a 51-inch pipeline.
- A flow capacity test was run on Pipeline 5.
- All equipment was removed from the Rainbow Canyon Chlorine Facility.
- The main control room was relocated for the remodel and installation of the new Supervisory Control and Data Acquisition (SCADA) System.

MAINTENANCE

The Maintenance Section has four subsections: Construction, Equipment Operations, Mechanical Services and Rights of Way Maintenance. Maintenance activities are divided into two categories: preventive and corrective. Preventive maintenance is performed on a regular basis to keep equipment or structures operating effectively.

Examples of routine maintenance are the carpentry, painting, plumbing and masonry work required for buildings and grounds; the maintenance of about 200 miles of dirt and asphalt roads; erosion control; construction of new control and metering facilities; and hazard inspections for potential damage to pipelines and easements. Inspection and preventive maintenance are required for more than 1,500 structures and more than 100 flow control facilities, each of which has at least two valves that are serviced on a regular basis.

Corrective maintenance is done to repair or restore equipment or structures to standard operating conditions. These actions may result from problems discovered during preventive maintenance or as a result of failure during operation. Actions are either scheduled and carried out as part of the normal work plan or they are unscheduled and completed as emergency maintenance.

The Maintenance Section has a variety of heavy equipment with which to accomplish its work, including a motor grader, track excavator, D6 dozer, skip loader, wheel loader, 15-ton crane truck, two backhoes, tractor-flailmower, brush chipper, two forklifts, two dump trucks, two truck tractors, and two lowboy trailers, two water trucks. Vehicles and other trucks are equipped with mobile radios and cellular phones for quick and efficient responses.

Major work during the year included excavation for the Aqueduct Protection Program, which inspected pipelines and installed corrosion protection systems; installation of safety ladders and installation of positive air in flow control facilities.

Major Events

- Maintenance staff completed installation of 33 water quality test stations at flow control facilities on the treated pipelines.
- Staff completed debris removal and site restoration at the Valley Center 2, Valley Center 1, and the San Dieguito/Santa Fe 1 flow control facilities. The flow control facilities were damaged due to heavy rains during March 1995. Several flow control facility access roads were also damaged during the heavy rains, and subsequently repaired by Maintenance staff.
- Staff completed the annual visual inspection of all Authority aqueduct facilities and rights of way.
- Maintenance personnel completed installation of 21 Aqueduct Control System antennas at Authority flow control facilities.
- Construction crews completed landscape improvements at the San Diego 14 flow control facility.
- Staff replaced valves and bearings in the Miramar Hydro Electric station.
- Staff installed 15 new valves and reducing spools during a drain down and inspection of Pipeline 3.
- Staff provided assistance to the Technical Services Section during the installation of the Escondido facility security lighting.
- Staff restored the soil and rock cover to the 1st Aqueduct pipelines at the San Luis Rey River crossing. Several hundred cubic yards of soil and rock were washed from around the aqueduct pipelines during the heavy rains of March 1995.
- Staff completed the installation of positive air equipment at Authority flow control facilities.
- Staff completed the construction of a new room addition for Engineering staff at the Escondido Operations Center.

TECHNICAL SERVICES

The Technical Services Section is responsible for maintaining the Authority's electronic, electrical, and communications systems and equipment. Routine work included maintaining the computerized aqueduct control system, calibrating flow metering instruments, maintaining low- and medium-voltage power equipment, upgrading and maintaining associated office building systems, and routine daily inspections and repairs.

The Technical Services staff participated in Capital Improvement Program (CIP) projects, supporting the engineering group for project design, and serving as liaison for contractor compli-



Maintenance Specialist Mike Shafer servicing and painting a line structure.



Senior Maintenance Specialist Mark Ancheta and Senior Maintenance Worker Scott Jensen servicing a flow control facility.

ance during the installation phase. Technical Services staff performed various installations and upgrades on CIP projects that were outside of the contract scope of work.

Major activities during the fiscal year centered around the CIP modernization project of the Supervisory Control and Data Acquisition (SCADA) System. Preparation for new Remote Terminal Units (RTU) was completed at 45 flow control facilities. This work included mounting new control cabinets and rewiring instrumentation, communication and electrical circuits. Central host computer equipment was relocated from the Escondido Operations Center Control Room to a temporary location in the Escondido warehouse building. This was accomplished in order to keep the existing SCADA System operational and perform remodel work in the existing control room. The new and old SCADA equipment will operate in tandem during the testing phase of the new system.

Technical Services personnel installed ventilation fans in 30 Authority control facilities as part of the confined space safety program.

A total of 20 additional electrical valve actuators, located on valves within Authority flow control facilities, were targeted for replacement as part of an ongoing CIP project to replace 30 to 40 year old equipment that has reached the end of its useful life.

Major Events

- Installed a programmable logic controller into Rincon #1 Flow Control Facility in order to operate the Rincon #1 and #3 connections in a pressure mode.
- Staff installed the necessary control and communication equipment to connect the new Oceanside #5 Flow Control Facility into the existing Supervisory Control and Data Acquisition (SCADA) system allowing the station to be controlled from the Escondido Operations Center.
- Staff performed a path study to evaluate the feasibility of installing 950 megahertz radio communications at the flow control facility sites for data transfer.
- Staff executed the move of the Supervisory Control and Data Acquisition (SCADA) host computer equipment from the Escondido facility control room to the warehouse. This move was made to accommodate the remodel work in the control room for the new SCADA system.
- Staff installed a different telephone PBX switch into the Escondido facility. The switch, formerly located in the San Diego office allows the number of phone extensions to be expanded. The existing switch had



System Technician Gene Bencivenga installs conduit for yard security lighting at the Escondido Operations Center.

been operated at capacity with no further expansion available.

- Staff performed various stage upgrade work at 45 flow control facility sites in order to prepare them for the new Supervisory Control and Data Acquisition (SCADA) Remote Terminal Units (RTU).

SHOP

The shop is responsible for acquiring, maintaining, repairing and disposing of all motorized vehicles and equipment and insuring their safe and reliable operation. Shop personnel obtained the permits and certifications required for compliance with federal, state and local regulations. Shop personnel installed various types of safety equipment, communications systems, and work equipment on Authority vehicles. They also designed and fabricated custom equipment and performed vehicle modifications to meet the specialized needs of the Authority. Additional maintenance and repairs are administered through service contracts as needed.

The shop maintains 19 passenger vehicles, 42 light duty utility vehicles, 13 medium and heavy duty vehicles, 15 trailers, 8 earth moving tractors, 4 cranes and numerous forklifts, welders, compressors, pumps, generators, electrical and pneumatic tools. The Authority fleet travels about 775,000 miles per year and consumes about 60,000 gallons of fuel.



Equipment Mechanics Rick Burke and Mike Staley machine surface brake drums and rotors on a newly acquired brake lathe.



Maintenance Worker Ken Teter assists in loading a Caterpillar D6H dozer on to the new 40 ton low-bed equipment trailer.

The shop building received some much needed maintenance prior to the installation of several pieces of new equipment. Local high school students were hired through the Hire the Youth Program to paint the shop building inside and out. The roof was resealed and the shop office was remodeled. Lubrication oil and waste oil systems were installed and a computerized engine analyzer was purchased. A 16 year old three-axle truck tractor was replaced with a new model, and three new passenger vehicles were added to the fleet.

Major Events

- Two light duty utility vehicles and two pool cars were prepared with the required Authority equipment and placed into service.
- A new medium duty, all wheel drive truck with a utility body was fully outfitted for use by the construction crews and put into service.
- Two vehicles and 11 pieces of equipment were surplus through the County auction.
- Smog certification tests were completed on numerous Authority vehicles, in accordance with Bureau of Automotive Repair (BAR) requirements.
- Oversize load permits for hauling heavy equipment and certifications to continue operating four mobile cranes and one bridge were renewed.
- The fuel dispensing system passed all APCD tests.
- A new heavy duty 3-axle truck tractor was outfitted with required equipment and put into service.

SAN DIEGO BUILDING SERVICES

In March of 1995, the San Diego Building Services Section was transferred from the Water Resources Planning Department to the Operations & Maintenance Department. The Building Services Section, comprised of one Maintenance Services Coordinator, is responsible for maintenance and repair of the San Diego office and Annex locations. Additional responsibilities include, obtaining permits and certifications required for compliance with federal, state and local regulations, administration and management of repair and construction contracts with outside contractors, facility security, and coordinating the Authority Transportation Management Program. The Maintenance Services Coordinator supervised numerous remodeling and construction projects requested by staff and administered over 20 building maintenance and service contracts necessary to support over one hundred Authority personnel.

Major Events

- Assisted in the relocation of work stations and furniture for Right-of-Way, Engineering, Public Information, Information Systems, Water Resources, and Emergency Storage personnel.
- Coordinated upgrades to Fifth Street office air conditioning and public address system.
- Supervised installation and programming of new phones, including moves and changes of existing phones to accommodate relocated and new personnel in Fifth Street and Annex locations.
- Coordinated Authority Bike to Work Day as part of the Authority's Transportation Management Program. A total of 42 personnel bicycled to work in support of state-wide Bike to Work campaign. Staff administered the Authority's Transportation Management Program and completed updates to required route maps and program brochures. During the year approximately 60 employees participated in the Transportation Management Program.



Microfiltration unit being tested at the City of San Diego's San Pasqual Advanced Water Treatment Facility.
 Union-Tribune/Tony Doubeck

WATER RESOURCES PLANNING DEPARTMENT

The Water Resources Planning Department is responsible for providing demand and supply projections, maintaining water usage statistics and data, and performing and administering a variety of water management studies and programs. Separate sections within the Department handle water conservation programs and environmental regulatory requirements.

PLANNING SECTION

Water Demand and Demand Forecasting

Total water demand by the Authority's member agencies in 1994-95 continued to be well below the record level set in 1989-90, and the large volume of local supply that was used further reduced demand for Authority imported water. The graph below shows both how total demand has fallen, and how local supply availability affects demand for imported water.

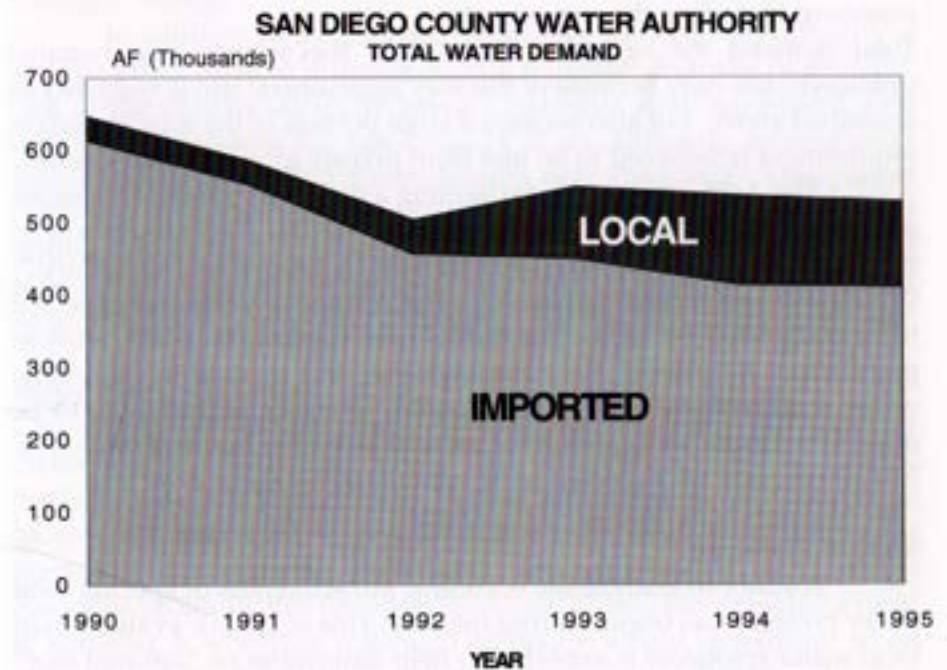


Figure No.7

In the five years between 1990 and 1995 the Authority's estimated service area population increased by 7.7 percent, with more than 187,000 people added to the region. This growth, coupled with decreased water demand, resulted in an annual per capita water demand decrease of 16 percent, going from an all-time high of 0.215 to 0.180 acre-foot per person. The causes for this reduction in per capita demand are believed to be related to "hard wired" conservation techniques (mostly water-conserving toilets and showers), "behavioral" conservation at the consumer level, the regional economic slowdown, and an increase in household size.

Agricultural demand has also declined, moving from a peak recorded use of about 122,300 acre-feet in 1990 to 56,069 acre-feet in 1995. This statistic must be qualified, however, by noting that 1994-95 agricultural water use data were obtained only from certifications of MWD's current agricultural rate discount program, the Interim Agricultural Water Program.

Current forecasting methods use per capita analysis for municipal and industrial demands, and rely upon the San Diego Association of Governments (SANDAG) to provide population forecasts. Agricultural demand forecasts rely upon historical agricultural use, coupled with factors that affect the current and projected agricultural economy, including the cost of water.

Total demand for agricultural water in the service area remains unknown, not only because of the way agricultural use is recorded as described above, but also because a large portion of the total irrigation requirement is believed to be met from private groundwater sources.

The Authority began developing a computer model to forecast municipal water demand known as CWA-MAIN. This model will be very similar to one already used by MWD, known as MWD-MAIN (Municipal and Industrial Needs). The Authority version is expected to be completed by 1996. The model uses econometric data, such as population, household size, employment, and income to determine water requirements. Using this model, forecasts will be able to be done at the member agency level, as well as for the entire service area. Initial forecasts are expected to be completed by early 1996.

Supply Planning

A study to analyze the economic attractiveness of specific local water projects was begun during the year. This economic evaluation of local water resources is expected to help determine an "optimal mix" of imported and local resources that would develop the most reliable supply at the least cost. The model will compare the costs of local

resources projects with the projected costs of imported water, and select only those local resources options that are cost effective. Total costs of local resources are reduced by such avoided costs as additional water distribution and treatment facilities, and financial contributions from the Authority and MWD.

Supply planning and analysis is done in close coordination with Authority member agencies, MWD, and other local, regional, and state agencies. The major effort during the year was to participate in MWD's Integrated Resources Plan (IRP), which is an attempt to balance regional benefits and costs of a reliable water supply throughout the Southern California region. Department staff assisted in reviewing numerous IRP proposals that could affect future water supply development and costs.

The Department administers several of MWD's water supply management programs for the San Diego region, including Seasonal Storage Service, Interim Agricultural Water Program, the Incremental Interruption and Conservation Program, and others. Most of these programs were reviewed during the IRP process, and staff spent considerable time ensuring that proposed changes made to these programs would be fair and equitable to the San Diego region.

Drought Storage

In addition to the Emergency Storage Project, the Authority is seeking other ways to improve supply reliability in times of drought. One of the options currently being considered is an agreement with the city of Pasadena for the creation of an Authority groundwater account in the Raymond Basin, located near Pasadena. This project could initially provide up to 5,000 acre-feet of water that could be used during a drought. The water would be stored in the basin until MWD reduced deliveries in a water short year. At that time, the water would be pumped and transported through MWD facilities to the Authority.

Water Transport Issues

Both MWD and the Authority are studying the issue of "wheeling," or delivering water that is not owned by an agency through that agency's facilities. To date, wheeling has only been done on an emergency basis to provide water to Tijuana. However, water marketing and transfer provisions, and agreements such as the Pasadena groundwater proposal discussed above, have created a need to consider a wheeling policy. The policy would determine when capacity is available for use, and the compensation that the wheeling party would be required to pay.

Data Collection and Utilization

Planning staff worked with the Information Services Department to create a water use database. The database's primary function is to make available information on historic and current water deliveries, sales, and storage. A link is planned to the computer system used by the Finance Department to streamline member agency billing procedures.

ENVIRONMENTAL SECTION

Legislative Review

Environmental staff expended considerable effort reviewing and evaluating numerous proposals to modify key state and federal environmental laws. Foremost among these were several bills to significantly amend the federal Endangered Species Act (ESA). While none of the proposals garnered sufficient support for passage this year, revisions to the ESA remain a top priority for many members of the legislature and the regulated community. Proposed changes to the federal Clean Water Act, and state Endangered Species and Environmental Quality Acts provided additional opportunity to monitor and participate in the legislative process.



*California Gnatcatcher, photo courtesy
P&D Environmental Services/Herbert Clark.*

CIP Mitigation and Mitigation Monitoring

The Environmental Trust, an organization with experience managing land banks, was retained to help manage the Authority's Crestridge mitigation bank. This 260 acre site provides mitigation for the threatened California gnatcatcher and other coastal sage scrub species which have been or will be affected by Authority projects and programs. Currently, about 57 acres of "credit" remain available in the bank to mitigate for future project impacts. The site will be managed as protected habitat in perpetuity.

Construction monitoring efforts this year focused on Pipeline 4B, Phase II and the North County Distribution Pipeline. Both of these water transmission projects required certain measures to be implemented during construction to reduce or compensate for environmental impacts. Mitigation efforts during the construction phase included flagging and fencing the construction limits to protect adjacent sensitive habitats, as well as topsoil salvage and stockpiling for application to finished slopes at the completion of construction.

Post construction monitoring focused on habitat restoration for the completed Pipelines 5EI, 4BI, 4EI and 4EII projects as required by various permits. Mitigation measures included invasive exotic weed control and the application of native seed mixes to areas lacking adequate natural revegetation. The duration of post-construction mitigation monitoring varies from three to five years depending upon the resources affected, permit requirements and initial success of the revegetation effort.

Biological and cultural resource surveys for the upcoming Pipeline 2A and Pipeline 5EII projects were performed in conformance with an ESA Section 7 Biological Opinion for the CIP and U.S. Army Corps of Engineers Clean Water Act Section 404 permitting requirements. California gnatcatcher and other sensitive species surveys are required to be conducted one year prior to and periodically during construction of all major projects. Archaeological investigations of a potentially significant historic site which may be affected were initiated as required by Section 106 of the National Historic Preservation Act. These pre-construction efforts will identify sensitive natural resource areas requiring specialized construction techniques to avoid or minimize future impacts.

To aid in evaluating and monitoring sensitive environmental resources along the Authority's rights of way, the department established a Geographic Information System (GIS). The basic system consists of a SunSparc Model 20 computer with 3.2 Gb of storage, digitizing table, and color ink jet printer. Numerous existing regional data

layers were obtained from SANDAG pursuant to a previously executed database sharing agreement and additional Authority specific data layers are being generated by staff. Converting Authority facility and right of way data from historical hand drawn maps to the digital computer format is underway and will probably continue through much of next year.

The Authority continued to provide support to the Multi-Species Conservation Program and Multi-Habitat Conservation Program under development in San Diego County. These programs will facilitate future Authority CIP projects by addressing endangered species protection issues on a regional scale.

Other Activities

Staff continues to participate on the California Urban Water Agencies Bay-Delta Steering Committee in support of the CalFed process, which is attempting to develop a program to protect the habitat of the Sacramento-San Joaquin bay-delta while allowing sufficient water to be diverted to meet the needs of California's increasing population. In addition, staff is participating in the development of a Lower Colorado River Multi-Species Habitat Conservation Plan. A Memorandum of Agreement which details the components for a conservation plan has been drafted for execution by California, Arizona, Nevada and several federal agencies. This three state partnership is part of a larger program to develop a consensus regional solution to meet the growing water needs within the Lower Colorado River basin.

Locally, staff monitored proposed municipal landfill siting activities in San Diego County with respect to water resource and pipeline protection. The North County Landfill Working Group, composed of the Authority, MWD and member agency representatives, individually and collectively reviewed and prepared written comments on the proposed Gregory Canyon Landfill. As this landfill proposal moves forward, additional staff efforts will be necessary.

CONSERVATION SECTION

The Authority continued to operate a number of effective long-term water conservation programs, while implementing one new program during the year. A total water savings of nearly 15,400 acre-feet was realized during the fiscal year because of these efforts.

Conservation staff strived to ensure that the role of urban water conservation remained consistent in the Bay/Delta Process. The Authority continued to meet implementation standards for the Best

Management Practices (BMPs) for water conservation that have grown out of that process. Staff also played an active role on the California Urban Water Conservation Council, which is charged with monitoring state-wide progress in implementing the BMPs.

The Ultra-Low-Flush Toilet (ULFT) Voucher/Rebate Program was the most prominent of the BMPs in operation during the year. Over 17,000 toilets were replaced during the year by participants receiving a voucher or rebate of up to \$75 per toilet. Funding was provided by Metropolitan, the Authority and participating member agencies. Demand Management Company Inc. operated the program in close cooperation with Authority staff and the member agencies. Additionally, the Authority provided funding to the City of San Diego for operation of a ULFT program that distributed more than 13,000 rebates. Approximately 290 ULFTs were also installed in a variety of high-use public facilities. The Authority's member agencies played a key role in identifying potential public facility sites for this program.

A program to install ULFTs in cooperation with community based organizations was in operation during the year. Through the program, nearly 2,600 ULFTs were installed in low-income households. The program also provided employment opportunities for community residents.

In cooperation with San Diego Gas and Electric Company, the Authority operated a Clothes Washer Rebate Program. The program offers a rebate to customers who purchase energy/water efficient clothes washers.

In cooperation with its member agencies, the Authority launched a Commercial, Industrial and Institutional (CII) Survey Program. The purpose of this program is to offer CII customers cost-effective recommendations on how to reduce water consumption with little or no impact on production levels.

The Authority and its participating member agencies continued a Residential Survey Program, operated by Mission Resource Conservation District (RCD) in North County and VIEWtech Inc. in South County, for single family residential customers. The program provided surveys to over 1,000 customers during its first year, and was expanded to include small multi-family properties with less than two acres of landscaping.

Landscape water conservation was addressed through a variety of programs. The Authority contracted with the Mission RCD to provide daily weather information for use in setting landscape irrigation and agricultural schedules. The information is gathered by the California Irrigation Management Information System (CIMIS), then

provided to San Diegans through an Authority-sponsored toll-free phone number. Mission RCD provided landscape water management surveys for customers in the northern half of the county.

Authority funding was also used by Schmidt Design Group as it provided similar audits in the southern half of the county. The Authority assisted in sponsoring a series of irrigation training sessions conducted in Spanish and English. Because so many of those involved in irrigation maintenance use Spanish as their primary language, this effort was especially beneficial. The training was developed in cooperation with the State Department of Water Resources, California State Polytechnic University at San Luis Obispo, the Authority and its member agencies. Metropolitan provided funding for Mission RCD to stage a series of these classes during the fiscal year .

The Authority and its member agencies continued to support efforts to maintain the high level of irrigation efficiency achieved by county agricultural users. Through the Agricultural Audit Program and the CIMIS phone number, users were provided valuable crop irrigation information.

Authority staff provided support and labor to the San Diego County Xeriscape Council, Inc. In FY 94-95 the Xeriscape Council remodeled the Xeriscape garden at the San Diego Wild Animal Park with donations from member agencies, the landscape industry, charities and many volunteers. The garden received the USBR's 1995 Leadership in Water Conservation award in the category of innovative partnerships. The Authority and Xeriscape Council also built a Xeriscape garden exhibit at the 1995 Del Mar Fair which earned an "Award of Merit" and an "Outstanding Xeriscape" award.

Emergency Storage Alternative Sites



Map 3

EMERGENCY STORAGE PROJECT

The objective of the Emergency Storage Project (ESP) is to provide sufficient emergency storage capacity so that the county can endure a prolonged interruption of its imported water supply without suffering lasting economic and environmental damage. Although temporary water supply shortages may be caused by several factors, two planning scenarios are being used to determine emergency storage requirements. One scenario involves interruption of water delivery to Metropolitan for six months due to a great earthquake on the San Andreas or San Jacinto faults; this scenario assumes the Authority could still draw on Metropolitan emergency storage, including the Dominigoni Reservoir. The other scenario involves a two-month interruption of water deliveries from Metropolitan to the Authority due to a major earthquake on the Elsinore Fault. In this scenario only water stored within the County would be available.

Emergency storage is being sized to meet demands to the year 2030. The amount of required storage is based upon the most current SANDAG population forecasts. This demand was then reduced by substantial enhancement of local yield from reclaimed water, groundwater development and desalination, as outlined in the Authority's November 1993 Water Resources Plan. The demand was also reduced to account for permanent conservation measures and an additional 25 percent rationing imposed on top of conservation. Based upon these factors the current emergency storage shortfall is estimated at approximately 90,100 acre-feet for the two-month scenario and 84,000 acre-feet for the six-month scenario.

In 1993, 32 best representative emergency storage system alternatives were developed utilizing surface storage in new and/or expanded existing reservoirs, groundwater basins, and the re-operation of existing reservoirs. Last year, these alternatives were compared in a two-step alternative screening process. The goal of this process was to complete an objective, un-biased alternatives analysis to identify final alternative systems to be compared in detail in the Environmental Impact Report/Environmental Impact Statement (EIR/EIS). In April 1994 the final four alternative systems were announced. Map 3 shows the potential new storage locations that are included in the final four systems.

The final four systems are (order does not indicate preference):

- San Vicente Expansion Stand Alone

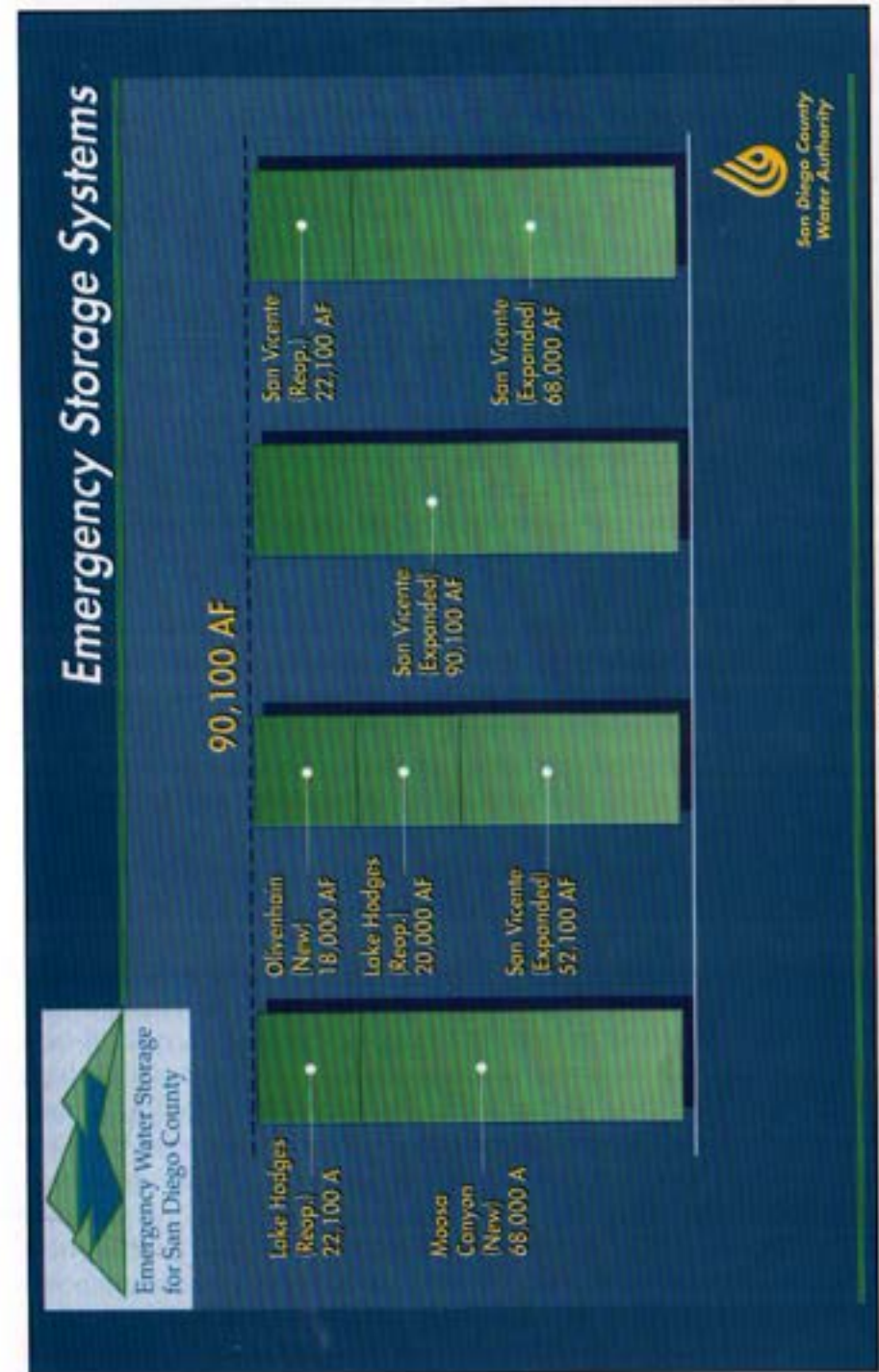


Figure 8

- Moosa construction and Lake Hodges Re-operation
- San Vicente Expansion and San Vicente Re-operation
- Olivenhain construction, Lake Hodges Re-operation and San Vicente Expansion

Figure 8 shows the storage volume supplied by each component of the final four systems.

The San Vicente expansion stand-alone alternative would require the existing San Vicente dam to be raised by 83 feet to contain the additional 90,100 acre-feet of emergency storage. A new 96-inch diameter pipeline would be built to connect San Vicente to the second aqueduct on the north side of Miramar Hill. Approximately five new pump stations would be required to supply all member agencies.

The Moosa/Lake Hodges alternative would require a new 340-foot high dam at Moosa Canyon to hold 68,000 acre-feet of emergency storage and re-operation of Lake Hodges to hold 22,100 acre-feet of emergency storage. An 84-inch pipeline would connect Moosa to Pipeline 6 and a 42-inch pipeline would connect Lake Hodges to the Second Aqueduct. Pump stations would be required at both reservoirs as well as at three other locations to serve all member agencies.

The San Vicente expansion and re-operation alternative would raise the existing dam 65 feet, adding 68,000 acre-feet of storage to San Vicente. Re-operation of the existing reservoir would provide an additional 22,100 acre-feet of emergency storage. The same facilities needed for the San Vicente expansion stand-alone alternative are required for this alternative.

The Olivenhain/Hodges re-operation and San Vicente expansion would require a new jointly funded 320-foot high dam at the Olivenhain site to create 18,000 acre-feet of emergency storage, and additional operational storage for OMWD the re-operation of Lake Hodges to hold an additional 20,000 acre-feet, and the raising of San Vicente dam by 54 feet to hold 52,100 more acre-feet. A new 48-inch pipeline and pump station would connect Lake Hodges to Olivenhain and a new 60-inch pipeline and pump station would connect Olivenhain to the Second Aqueduct. A 72-inch diameter pipeline would connect San Vicente to the Second Aqueduct on the north side of Miramar Hill.

The EIR/EIS is expected to be distributed for public review during the second quarter of the next fiscal year, and the preferred alternative should be selected sometime in the spring of 1996.

WATER RECLAMATION DEPARTMENT

Fiscal year 1995 saw the continued progress of the regional effort to expand the use of reclaimed water and brackish groundwater in the San Diego area. The year was highlighted by the dedication of a new reclamation facility by the Leucadia County Water District. In addition to the start-up of the Leucadia Plant, Fallbrook Public Utility District's expanded reclamation project became operational and the City of San Diego's San Pasqual Aquatic Treatment Facility began deliveries of reclaimed water to agricultural and municipal customers. The City of San Diego also reached the 50% completion level on construction of the 30 million gallon per day North City Water Reclamation Plant which will be the largest water reclamation facility in San Diego County. At the close of this fiscal year, the Padre Dam Municipal Water District went out for bid on construction of an expanded treatment plant at Santee Lakes and an accompanying reclaimed water distribution system.

Total production and use of reclaimed water and brackish groundwater amounted to 11,076 acre-feet in fiscal year 1995. Specific yield for each project providing service within the Authority's service area for the fiscal year is summarized in Figure 9.

Potable Reuse Project

This fiscal year also marked a turning point in the expansion of markets for reused water. Water repurification, which consists of the treatment of reclaimed water to a level that makes it suitable for introduction as a raw water supply into an upstream potable reservoir, received conceptual approval from the California Department of Health Services. The Authority has served as lead agency, working closely with the City of San Diego, on a proposal to construct a water repurification facility with a capacity of up to 20 million gallons per day to treat reclaimed water from the City's North City Water Reclamation Plant. The repurified water that will be produced in the proposed project will meet all state and federal drinking water standards. After leaving the advanced water treatment plant, the repurified water would be transported to the San Vicente Reservoir for blending with imported raw water supplies. Eventually this blended water supply would be withdrawn from the reservoir and conveyed via the existing El Monte Pipeline to the City's Alvarado Filtration Plant. The water would undergo additional filtration and disinfection before being introduced into the City's potable water delivery system.

The City has engaged in over ten years of research and development on this concept at its Aquaculture pilot facilities and a detailed health effects study conducted by the Western Consortium for Public Health clearly demonstrated that the quality of repurified water is as safe as that of imported raw water supplies.

The Authority and the City are in the process of refining the engineering and technical aspects of the project and beginning the necessary environmental studies. With preliminary regulatory approval secured and the project more fully defined, the City of San Diego will be assuming the lead agency role. A water repurification project owned and operated by the City of San Diego could be operational by 2001.

As part of the repurification effort, the Authority convened a Repurified Water Review Committee (RWRC) to seek community input and values on the development of a water repurification project. The RWRC, which was made up of representatives from 16 community based organizations, met six times between July and November 1994. In this final report, which was presented to the Authority Board of Directors, the RWRC found that repurified water was a suitable water supply for the region and recommended that planning and environmental studies continue.

Focus on Groundwater

In fiscal year 1995, the Authority increased efforts to stimulate groundwater development in the San Diego region. The Authority is the lead agency on the multi-agency San Dieguito Basin Groundwater Management Task Force, formed for the purpose of developing brackish groundwater resources, improving groundwater quality, and utilizing existing aquifer capacity for recharge and storage. Phase I of this three-phase project, the development of a groundwater computer model, was completed in the Spring of 1995.

The Authority has also taken the lead in coordinating a multi-agency effort to commence evaluating the groundwater storage potential and groundwater resources management of the San Diego Formation, an aquifer located in the southwest portion of San Diego County and in the service areas of several Authority member agencies.

In order to provide a more focused analysis of the potential of further groundwater development in the Authority's service area, the development of a Groundwater Resource Development Plan was initiated. The primary purpose of the Groundwater Resource Development Plan is to evaluate the financial and technical feasibility of implementing groundwater projects in the Authority's service area.

The Plan will also refine the Water Resources Plan groundwater objective and identify appropriate Authority activities necessary to achieve those groundwater objectives.

Project Development

To further the water recycling effort, the Board of Directors acted upon a number of policy and funding recommendations of the Water Authority Reclamation Advisory Committee (WARAC). WARAC, which advises the Authority on water reclamation matters and groundwater planning and development, is comprised of members representing water and wastewater entities, state and local regulatory agencies, and potential reclaimed water users.

Financial assistance programs play a critical role in the development of reclaimed water and groundwater supplies. These programs are available for all phases of water reclamation and groundwater recovery projects. Financial assistance programs administered by the Authority, the Metropolitan Water District of Southern California, and the U.S. Bureau of Reclamation provided \$3,699,367 to San Diego County agencies in fiscal year 1995.

The U.S. Bureau of Reclamation's Grant Program is a significant funding source for San Diego area reclamation projects. Under Title XVI of Public Law 102-575, the federal government is authorized to provide grants for up to 25% of the capital cost of water reclamation projects in the southern portions of the Authority's service area. The City of San Diego received a grant of \$1.1 million for its northern reclaimed water distribution system and \$339,000 for the water repurification feasibility study. The City of Escondido received \$1.4 million for its Hale Avenue Reclamation Facilities. The Authority and five member agencies eligible to receive federal funding under this program formed a work group to develop strategies for obtaining additional monies for San Diego area reclamation projects. Bureau of Reclamation funding will enhance the cost effectiveness of water reclamation projects by reducing the impacts on local ratepayers. Local reclamation projects will reduce demand for imported water and allow the Bureau of Reclamation to more effectively manage western water resources.

An increase in the development of groundwater projects in the Authority's service area was evidenced by the planning studies that were co-funded by the Authority under the Financial Assistance Program (FAP). Five groundwater recovery projects and two water reclamation projects, with a combined reuse potential of over 13,900 acre-feet per year, were approved to receive funding under the FAP.

The FAP provided a total of \$198,788 for reclaimed water and groundwater planning and development studies in fiscal year 1995.

The Authority entered into long-term funding agreements with the City of Escondido and Padre Dam Municipal Water District for participation in the Reclaimed Water Development Fund (RWDF). The RWDF provides \$100 per acre-foot for approved water reclamation projects. There are currently eight agencies that have agreements with the Authority for RWDF incentives. The Authority also enters into joint participation agreements with Authority member agencies for Metropolitan's Local Projects Program (LPP). The LPP provides \$154 per acre-foot for approved water reclamation projects. This program is funded by Metropolitan and administered by the Authority for eleven agencies in the Authority's service area. These programs represent 29,660 acre-feet per year in long term yield and provided local agencies nearly \$800,000 to offset operating expenditures for fiscal year 1995.

The City of Oceanside's Mission Basin Desalting Plant, the first brackish groundwater desalter facility in the San Diego area, was in its second year of operation. The Authority, Metropolitan and the City of Oceanside take part in a joint participation agreement for recovery and clean-up of contaminated groundwater that is supported by Metropolitan's Groundwater Recovery Program. In fiscal year 1995, the City of Oceanside received \$234 per acre-foot, for a total of \$468,702, to help offset the cost of operating its brackish groundwater desalination facility.

Metropolitan provides up to 25% in matching funds for the investigation of projects capable of increasing local potable water supplies through its Investigative Studies Joint Participation Program. Metropolitan provided San Diego area groundwater and reclamation agencies \$47,500 in matching funds for these studies. The Authority and City of San Diego received \$37,500 for the Water Repurification Study and the Tijuana Valley County Water District received \$10,000 for its Phase IV Groundwater Management Study.

Long Term Planning

Staff actively participated along with seven other Southern California water agencies and the California Department of Water Resources in the U.S. Bureau of Reclamation's Southern California Comprehensive Water Reclamation and Reuse Study. The focus of this federal study is to determine the most effective use of reclaimed water on a regional basis. This is a multi-year study that will chart a direction for federal and regional cooperation in the long term develop-



The City of Oceanside's 2-mgd Mission Desalter is the first brackish groundwater recovery project implemented by an Authority member agency.



Authority member agency staff attend the Reclaimed Water site supervisor training class.

ment and reuse of reclaimed water well into the next century.

The Authority, with the City of Escondido and the University of California Cooperative Extension Service, are engaged in a significant research study to investigate an avocado crop's tolerance to salinity in reclaimed water. This project is in its third year of data collection. Once completed, this information will be used by growers and member agencies to determine irrigation requirements and management practices for reclaimed water use.

Expansion of Regional Training

As reclaimed water utilization increases in the county, the need to inform site users of proper management techniques has become a key area of assistance provided by the Water Reclamation Department. Fiscal year 1995 saw the Authority's continued sponsorship and coordination of a regional training program for the education of future reclaimed water users. The Reclaimed Water Site Supervisor Training Class teaches the fundamentals of irrigation, water quality, use guidelines and health aspects as related to reclaimed water use. Classes are held throughout the year for local users and member agency staff.

**RECLAIMED WATER & BRACKISH GROUNDWATER PRODUCTION
In SDCWA Service Area • Fiscal Year 1994-1995
(Acre-Feet)**

LOCATION	TREATMENT FACILITY	M & I		GW	
		AG	REPLNSH	TOTAL	
RECLAIMED WATER USE					
Carlsbad MWD	Meadowlark	882			882
Carlsbad MWD	Gafner	134			134
Encina WW Authority	Encina WWTP	130			130
City of Escondido	Hale Ave	1	3		4
Fairbanks Ranch CSD	Fairbanks Ranch			237	237
City of Oceans/Fallbrook	Fallbrook Plant #1	102	157		259
City of Oceanside	San Luis Rey	139		8	147
Otay WD	Chapman WRP	678			678
Padre Dam MWD	Santee Lakes	525			525
Pendleton	Pendleton	423		3,313	3,736
Ramona MWD	Santa Maria	56		473	529
Ramona MWD	San Vicente		491		491
City of San Diego	Aquaculture Plant	49	24		73
City of San Diego	Wild Animal Park WRP	19			19
Santa Fe ID	Rancho Santa Fe WPCF			238	238
Valley Center MWD	Lower Moosa Canyon			265	265
Valley Center MWD	Skyline TP			24	24
City of Vista	Shadowridge	270			270
Whispering Palms CSD	Whispering Palms WRF		151	81	232
	SUBTOTAL:	3,408	1,299	4,166	8,873
BRACKISH GROUNDWATER					
City of Oceanside	Desalter Facility	2,203			2,203
	TOTAL:	5,611	1,299	4,166	11,076

Figure No. 9

FINANCE DEPARTMENT

The Finance Department is responsible for the finance, treasury, accounting, budgeting, information systems, purchasing and warehousing operations of the Authority.

Finance Operations

In November of 1993 staff received Board approval to commence a short term variable rate debt program. The program was approved for an issuance amount of up to \$250 million, however it is anticipated that a \$110 million will be issued over the next five years to fund the currently approved Capital Improvement Program. Due to delays in the Capital Improvement Program no short term debt was outstanding on June 30, 1995. It is anticipated that debt issuance will begin in the Nov. of 1995. The short term variable rate debt will benefit the Authority by providing rate smoothing, interest savings, and funding flexibility.

In January 1995, staff prepared an update to the Authority's Long Range Finance Plan. The update addressed the current "base" Capital Improvement Program (CIP), water demands and the impacts of differing assumptions on rate projections, alternative revenue sources for the emergency storage project, and optimal financing strategies for the existing CIP and emergency storage project.

Investment Operations

The Director of Finance also acts as the Authority's Treasurer and is responsible for all funds not immediately required for the conduct of business. Board Policy requires the Authority's Treasurer to submit annually a statement of investment policy for Board review. The statement describes the Treasurer's investment authority, practices, and limitations as established by the Government Code and Board policy.

During the year the Treasurer was authorized to invest in the State Local Agency Investment Fund, bankers acceptances, treasury securities, repurchase agreements, reverse repurchase agreements, collateralized certificates of deposit, medium term notes, commercial paper, certain federal agencies and treasury money market funds.

Interest earnings for the year totaled (accrual basis) \$12,765,096. At year end the portfolio yield was 6.22% with average weighted days to maturity of 213 days. This yield compares to 4.82 percent in June of 1994. The improvement in yield was due to a rise in general market rates.

As of June 30, 1995 and 1994, the Treasurer's cash accountability was as follows:

	<u>June 30</u>	
	<u>1995</u>	<u>1994</u>
Collateralized demand deposits	\$ 779,049	\$ 771,630
Certificates of deposit	2,000,000	0
U.S. Government securities	71,741,184	79,630,778
Guaranteed investment contract deposits	66,512,269	33,259,216
Local Agency Investment Fund	19,878,434	65,000,000
Bankers Acceptances	0	4,929,874
Money Market	13,362,483	2,422,830
Agency Securities	20,615,744	21,765,803
Repurchase Agreements	5,508,085	0
Reverse Repurchase Agreements	0	0
Prime Commercial Paper	<u>6,349,720</u>	<u>14,932,990</u>
	\$ 206,746,968	\$ 222,713,121

As of June 30, 1995 and 1994, restricted reserve fund cash balances were as follows:

	<u>June 30</u>	
	<u>1995</u>	<u>1994</u>
Construction	\$ 41,867,848	\$ 62,024,267
Rate Stabilization	55,453,000	61,153,000
Pay-As-You-Go	61,660,000	57,737,000
Debt Service Reserve	25,643,998	25,789,221
Interest Arbitrage Rebate	<u>198,628</u>	<u>193,710</u>
	\$ 184,823,474	\$ 206,897,198

As of June 30, 1995 and 1994, unrestricted cash balances were as follows:

	<u>June 30</u>	
	<u>1995</u>	<u>1994</u>
Operating	\$ 21,923,494	\$ 15,815,923

Accounting Operations

McGladrey & Pullen, LLP, who were selected as the Authority's new independent auditors during the year, completed their review of the Authority's financial statements for the year ended June 30, 1995. This review is included along with the Auditor's opinion in Appendix C. The auditors found no material weaknesses in internal controls and issued an unqualified audit opinion.

The following is a comparative summary of operational highlights for fiscal year ended June 30, 1995 and 1994:

SUMMARY (Dollars in Thousands)

	<u>1995</u>	<u>1994</u>
Water sales	\$ 159,287	\$ 161,968
Cost of sales	134,348	134,381
Operating expenses	13,359	13,154
Depreciation	4,711	4,929
Write down of Pamo Reservoir Project to estimated net realizable value	0	2,158
Operating income	6,869	7,346
Nonoperating income	30,607	27,765
Net income	\$ 37,476	\$ 35,111

Fiscal year 1994-95 water sales income and hydroelectric sales income decreased \$2 million when compared with June 30, 1994. This decrease is directly attributed to a decrease in water sales. Actual water sales were 387,769 acre-feet, about 4,962 acre-feet less than the prior year. The reduced water sales resulted from the continuation of conservation awareness by consumers, mild weather and second consecutive wet rainfall winter which filled local reservoirs. Several member agencies were able to draw from their reservoirs instead of purchasing water from the Authority.

Cost of sales which are water purchases from Metropolitan were approximately the same as last year. This flat cost of sales was a net result of Metropolitan water rate increases of 5 percent for raw water and 7 percent for treated water and the decrease in water purchases.

Debt Service Coverage

The outstanding bond covenants require the Authority to

maintain a minimum level of operational earnings. Net water revenues, as defined by the agreements, must equal or exceed 120 percent of all debt servicing costs (principal and interest). The Authority's actual debt service coverage for June 30, 1995 was 136 percent and the last four years' coverage are as follows:

June 30,	Debt Service Coverage
1992	212 Percent
1993	169 Percent
1994	158 Percent
1995	136 Percent

Water Rates

Water rates were increased by Metropolitan at the beginning of the year. The Metropolitan untreated rate for non-interruptible water increased from \$318 to \$335 per acre-foot on July 1, 1994. The Metropolitan treatment charge increased from \$63 to \$77 per acre-foot, resulting in a Metropolitan rate for treated, non-interruptible water of \$412 per acre foot. These increases were passed on to Authority member agencies.

The Authority's surcharge for water remained at \$70 per acre foot. Authority rates for untreated and treated non-interruptible water were \$405 and \$482 per acre foot, respectively. Some member agencies with treatment plants have contracts with the Authority to provide treated water to agencies without treatment facilities and with limited or no access to treated water pipelines. A historical summary of water rates is provided in Figure 11.

Tax Rates/Assessed Valuation

The tax rate set by the Authority's Board of Directors is based upon the assessed valuation of taxable property within the Authority, and the Authority's debt requirements. Assessed valuation is also the basis for the number of directors and the number of votes each member agency receives. Property valuations are determined by the San Diego County Assessor, and the taxes are collected by the County Tax Collector for the Authority.

The Authority's secured tax rate for 1994-95 was 0.00135 cents per 100 dollars of assessed valuation, which is a minor decrease over

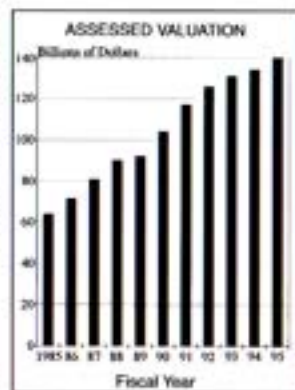


Figure No. 10

the 1993-94 secured tax rate of 0.00151 cents per 100 dollars of assessed valuation. Total tax revenue collections, including secured, unsecured, and in-lieu taxes, for 1994-95 were \$5,473,030, a reduction of \$467,131, from 1993-94 tax revenues of \$5,940,161. The reduction in the secured tax rates and tax revenues collected resulted from lower general obligation bond debt service requirements. The final payment on the 1957 General Obligation Bonds was made in February 1994 and the final payment to the U.S., Governmental Bureau of Reclamation will be made in February 1995.

The total assessed valuation of taxable property within the Authority for 1994-95, according to the County Auditor's certification, was \$135,146,958,585 which is an increase of \$1,026,368,822 (or .08 percent) from the 1993-94 certified valuation of \$134,120,589,763.

The average assessed valuation of property within the Authority service area increased from \$147,554 per acre in 1993-94 to \$148,682 per acre in 1994-95. The assessed valuations for each member agency, the Authority, and San Diego County is shown in Table 5 (see Appendix A).

Capacity Charges

The Authority imposes capacity charges that are collected on new water meter hookups. These charges are designed to collect revenue from new development to pay the capital costs associated with increased demand that new development places upon the distribution system. Capacity charge revenues are restricted to pay for the Capital Improvement Program and are deposited in the Pay-As-You-Go Fund. The current capacity charge is \$1,413 per connection under one inch. A factor based upon meter size is applied to this charge to determine the cost of larger meters. Total revenue from capacity charges for the fiscal year ended June 30, 1995 was \$7,498,972, an increase of \$340,825 over the prior year. (see Appendices Table 10 for Collections by Member Agency).

Water Standby Availability Charge

The Authority levies and collects an annual water standby availability charge, which is \$10 per acre or parcel, whichever is greater. The charge is added to the Secured Tax Roll collected via the San Diego County's property tax collection process and remitted by the County to the Authority. The collections are restricted to pay for the Capital Improvement Program and are deposited into the Pay-As-You-Go Fund. Total collections for fiscal year 1995 were \$10,933,911.

Integrated Financial System Software Development

The Finance Department formed a committee with a representative from all divisions and most departments to develop a request for proposal including the requirements and specifications for an Integrated Financial Software System. The request for proposal is to provide all computer system applications including Financial, Purchasing, Budgetary, Project accounting, Human Resources, Payroll, Fleet maintenance and Preventive maintenance. The initial proposal only generated one responsive, responsible bidder whose cost proposal greatly exceeded the proposed budget. The Board of Directors rejected the initial proposal and authorized staff to redraft requirements and to schedule new proposals.

The Finance System team has redrafted the request for proposal which includes provisions to allow the Authority greater flexibility in selecting the best qualified proposer. Staff anticipates selecting the best qualified proposer by November 1995, with an anticipated start up date for the finance system by October 1, 1996, with Payroll and Human Resources in September 1996.

SUMMARY OF WATER RATES
(Dollars per acre foot)

FROM	TO	METROPOLITAN WATER DISTRICT				COUNTY WATER AUTHORITY				AGRICULTURAL REBATE
		RATE		CWA RATE		NON-INTERRUPTIBLE		TOTAL RATE		
		NON-INTERRUPTIBLE UNTREATED	NON-INTERRUPTIBLE TREATED	UNTREATED	TREATED	UNTREATED	TREATED	UNTREATED	TREATED	
7/01/80	12/31/80	\$15.00		\$0.00	\$17.00	\$17.00		\$17.00		\$3.00
1/01/81	12/31/81	\$17.00		\$2.00	\$19.00	\$19.00		\$19.00		\$4.25
1/01/82	12/31/82	\$19.00		\$2.00	\$21.00	\$21.00		\$21.00		\$5.50
1/01/83	12/31/83	\$21.00		\$2.00	\$23.00	\$23.00		\$23.00		\$6.75
1/01/84	6/30/84	\$24.00		\$2.00	\$26.00	\$26.00		\$26.00		\$8.00
7/01/84	6/30/84	\$20.00		\$2.00	\$22.00	\$22.00		\$22.00		\$9.25
9/01/84	6/30/85	\$20.00		\$1.25	\$21.25	\$21.25		\$21.25		\$10.50
7/01/85	6/30/85	\$20.00		\$1.25	\$21.25	\$21.25		\$21.25		\$11.75
7/01/86	6/30/87	\$21.00		\$1.25	\$22.25	\$22.25		\$22.25		\$13.00
7/01/87	6/30/88	\$24.00		\$1.25	\$25.25	\$25.25		\$25.25		\$14.25
7/01/88	6/30/89	\$40.00		\$1.25	\$41.25	\$41.25		\$41.25		\$15.50
7/01/90	6/30/90	\$44.00		\$1.25	\$45.25	\$45.25		\$45.25		\$16.75
7/01/91	6/30/91	\$48.00		\$1.25	\$49.25	\$49.25		\$49.25		\$18.00
7/01/92	6/30/92	\$53.00		\$1.25	\$54.25	\$54.25		\$54.25		\$19.25
8/13/92	6/30/93	\$58.00		\$1.25	\$59.25	\$59.25		\$59.25		\$20.50
7/01/95	6/30/95	\$62.00		\$1.25	\$63.25	\$63.25		\$63.25		\$21.75
7/01/96	6/30/97	\$67.00		\$1.25	\$68.25	\$68.25		\$68.25		\$23.00
7/01/97	6/30/98	\$67.00		\$1.25	\$68.25	\$68.25		\$68.25		\$24.25
7/01/98	6/30/99	\$74.00		\$1.25	\$75.25	\$75.25		\$75.25		\$25.50
1/01/99	6/30/99	\$79.00		\$1.25	\$80.25	\$80.25		\$80.25		\$26.75
7/01/99	6/30/00	\$80.00		\$1.25	\$81.25	\$81.25		\$81.25		\$28.00
7/01/00	6/30/01	\$86.00		\$1.25	\$87.25	\$87.25		\$87.25		\$29.25
7/01/01	6/30/02	\$90.00		\$1.25	\$91.25	\$91.25		\$91.25		\$30.50
7/01/02	6/30/03	\$114.00		\$1.25	\$115.25	\$115.25		\$115.25		\$31.75
7/01/03	12/31/03	\$144.00		\$1.25	\$145.25	\$145.25		\$145.25		\$33.00
1/01/04	6/30/04	\$144.00		\$1.25	\$145.25	\$145.25		\$145.25		\$34.25
7/01/04	6/30/05	\$187.00		\$1.25	\$188.25	\$188.25		\$188.25		\$35.50
7/01/04	6/30/06	\$182.00		\$1.25	\$183.25	\$183.25		\$183.25		\$36.75
7/01/05	12/31/07	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$38.00
7/01/06	6/30/08	\$187.00		\$1.25	\$188.25	\$188.25		\$188.25		\$39.25
7/01/08	12/31/08	\$197.00		\$1.25	\$198.25	\$198.25		\$198.25		\$40.50
1/01/09	6/30/09	\$197.00		\$1.25	\$198.25	\$198.25		\$198.25		\$41.75
7/01/09	6/30/10	\$197.00		\$1.25	\$198.25	\$198.25		\$198.25		\$43.00
7/01/09	6/30/11	\$197.00		\$1.25	\$198.25	\$198.25		\$198.25		\$44.25
7/01/09	6/30/12	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$45.50
7/01/09	6/30/13	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$46.75
7/01/09	6/30/14	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$48.00
7/01/09	6/30/15	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$49.25
7/01/09	6/30/16	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$50.50
7/01/09	6/30/17	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$51.75
7/01/09	6/30/18	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$53.00
7/01/09	6/30/19	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$54.25
7/01/09	6/30/20	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$55.50
7/01/09	6/30/21	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$56.75
7/01/09	6/30/22	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$58.00
7/01/09	6/30/23	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$59.25
7/01/09	6/30/24	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$60.50
7/01/09	6/30/25	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$61.75
7/01/09	6/30/26	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$63.00
7/01/09	6/30/27	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$64.25
7/01/09	6/30/28	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$65.50
7/01/09	6/30/29	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$66.75
7/01/09	6/30/30	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$68.00
7/01/09	6/30/31	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$69.25
7/01/09	6/30/32	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$70.50
7/01/09	6/30/33	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$71.75
7/01/09	6/30/34	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$73.00
7/01/09	6/30/35	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$74.25
7/01/09	6/30/36	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$75.50
7/01/09	6/30/37	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$76.75
7/01/09	6/30/38	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$78.00
7/01/09	6/30/39	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$79.25
7/01/09	6/30/40	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$80.50
7/01/09	6/30/41	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$81.75
7/01/09	6/30/42	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$83.00
7/01/09	6/30/43	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$84.25
7/01/09	6/30/44	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$85.50
7/01/09	6/30/45	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$86.75
7/01/09	6/30/46	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$88.00
7/01/09	6/30/47	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$89.25
7/01/09	6/30/48	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$90.50
7/01/09	6/30/49	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$91.75
7/01/09	6/30/50	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$93.00
7/01/09	6/30/51	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$94.25
7/01/09	6/30/52	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$95.50
7/01/09	6/30/53	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$96.75
7/01/09	6/30/54	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$98.00
7/01/09	6/30/55	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$99.25
7/01/09	6/30/56	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$100.50
7/01/09	6/30/57	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$101.75
7/01/09	6/30/58	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$103.00
7/01/09	6/30/59	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$104.25
7/01/09	6/30/60	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$105.50
7/01/09	6/30/61	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$106.75
7/01/09	6/30/62	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$108.00
7/01/09	6/30/63	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$109.25
7/01/09	6/30/64	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$110.50
7/01/09	6/30/65	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$111.75
7/01/09	6/30/66	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$113.00
7/01/09	6/30/67	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$114.25
7/01/09	6/30/68	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$115.50
7/01/09	6/30/69	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$116.75
7/01/09	6/30/70	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$118.00
7/01/09	6/30/71	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$119.25
7/01/09	6/30/72	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$120.50
7/01/09	6/30/73	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$121.75
7/01/09	6/30/74	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$123.00
7/01/09	6/30/75	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$124.25
7/01/09	6/30/76	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$125.50
7/01/09	6/30/77	\$200.00		\$1.25	\$201.25	\$201.25		\$201.25		\$126.75
7/01/09	6/30/78	\$200.00		\$1.25						

Budget Operations

The Authority's budget is organized in a program-budget format, which provides clear statements of accomplishments, objectives, and the cost and staffing resources needed for operations, maintenance, and capital improvements. The program-budget format provides an interrelated document to evaluate performance against strategic plan goals and objectives.

Primary objectives include effectively managing existing resources, including the development of programs to manage water supplies during periods of drought; secure additional dependable water supplies to meet the increasing water needs of San Diego County; identify water storage and distribution facilities required to serve existing and increasing water demands; maintain or upgrade existing facilities to provide full system delivery capability and reliability; and automate work activities to enhance operational efficiency.

The Board approved an operating budget for fiscal 1994-95 of \$16.1 million, an increase of 7.9 percent from the prior year's operating budget. The Operating Budget increased by approximately \$1.1 million over the previous year's budget due primarily to additional operating and administrative expenses to maintain new capital facilities which have recently come on line, continuation of the water repurification studies, and purchase of a new finance computer systems software to replace the current outdated and inefficient systems now in place.

Non-operating income and expenses include property taxes, water standby availability charges, capacity charges, interest income from investments and interest expense on long-term debt, among other items. Total non-operating income increased by approxi-

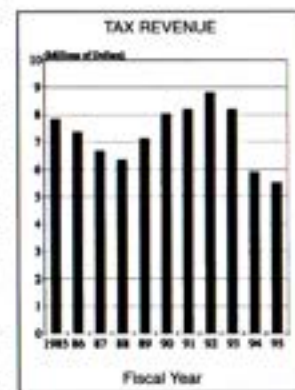
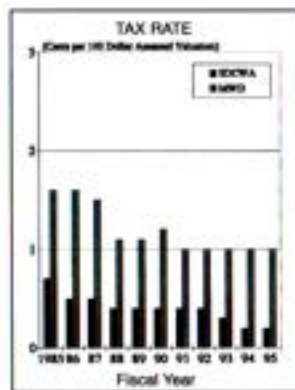
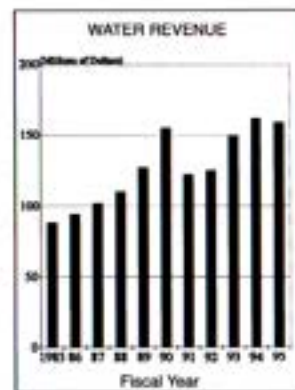


Figure No. 12

mately \$2,842,000. This increase was primarily attributed to a \$2,022,000 increase in interest income revenues.

Information Systems

The Information Systems group provides hardware, software, and service support to the CWA. Information Systems at the Authority are developed with a strong focus on operational reliability and overall Authority effectiveness. Office computing activities such as word processing, spreadsheet utilization, database manipulation, electronic messaging, telecommunications, and wide-area networking (WAN) are implemented and supported by Information Systems.

In addition, Information Systems provides applications development services to the CWA to automate tasks and processes. The application development effort begins with a cost/benefit analysis and is directed to ensure maximum benefit to the Authority. All development projects are performed using a systematic development method that provides consistent, high-quality results.

During fiscal 1995 staff developed the final stages of a Water Planning database — an essential link to automate the billing process. The network was upgraded to Microsoft Windows NT. Outdated computers at the Authority were retired and all computer users were upgraded to run applications that use Microsoft Windows as the user interface.

The Ethernet WAN continues to grow and helped drive the design of the new SCADA system implemented by the Engineering Division. To stay current in knowledge and practice, extensive technical training was obtained by Information Systems staff. To exchange solutions, efficiencies and world-class practice ideas, the Authority Information Systems staff joined a technology consortium composed of Metropolitan and the member agencies.

Current computer use at the Authority consists of three primary file servers (IBM PC's running Windows NT, three secondary servers, five high-end applications servers (Sun computers running UNIX), and one-hundred and seventy-eight PC's.

Purchasing and Warehouse Operations

Purchasing continued the development of detailed procedures for the Selection of Professional Services and in conjunction with the Procurement Committee is continuing the development of a detailed Purchasing and Contracting Procedures Manual.

Purchasing conducted the solicitations of competitive bids for most major purchases and provided assistance and on-going training

to Authority departments on the development of request for proposals, other bid solicitations and the appropriate steps involved in the process.

The department reviewed scopes of work for all construction bids and requests for proposals for consultant selection and provided types of insurance, insurance limits and revisions to the contract languages to ensure compliance with the Authority's insurance standards. The department reviewed all contracts and modifications to contracts prior to approval to ensure that insurance in compliance with the bid requirements was provided. Assistance was provided to the Authority's project managers to ensure that current insurance certificates were on file for all on-going projects. The department acted as liaison to the Authority's Risk Management Consultant when additional expertise was required.

Warehouse staff provided assistance to Operations and Maintenance on the development of technical specifications for various bid solicitations including valves.

Deferred Compensation

The department administers a deferred compensation plan for Authority employees according to Section 457 of the Internal Revenue Code. This plan enables employees to defer portions of their compensation until retirement, disability, or death. At June 30, 1995, assets of the plan totaled \$4,106,860.

PUBLIC AFFAIRS

A diverse agenda — with an emphasis on outreach — highlighted the activities of the Public Affairs Department in 1994-95. Working with other Authority departments and personnel, staff maximized communications opportunities to inform, educate and build partnerships with member agencies, governmental and business officials, the news media and the general public. The Authority's programs, plans and policies were communicated effectively and efficiently. Aggressive efforts were successful in disseminating information about the Capital Improvement Program, the Emergency Water Storage Project, earthquake preparedness, water conservation, the Water Repurification Project and school education programs.

Following the communications strategies outlined in the Board-approved Public Affairs Plan, staff also continued to conduct and support briefings for policymakers, community and business leaders and the news media. Other outreach efforts included the school education program, the WaterTalk and Connections publications, several brochures, news releases, newspaper opinion articles and editorial visits to local news outlets by Directors. The staff also wrote, produced and delivered six briefing books on water-related issues which were used with business, community and political leaders.

Governmental Relations

The staff coordinated and supported successful efforts by Directors to keep elected officials informed about the Authority's critical water-related plans and projects. Special attention was devoted to emergency storage, water repurification, capital improvement projects, water supply issues and legislative matters. Outreach efforts took an international flavor in April when staff coordinated the first-ever "Water Summit" meeting of San Diego and Baja California water officials. More than 30 delegates gathered to discuss the operations of their respective agencies and contributed information for a bilingual information directory which was designed, produced and distributed by staff.

Assistance and organizational support were provided to State Senator Dave Kelley for community forums on water-related issues. The staff also arranged the appearance of the Authority's general manager before San Diego County Grand Jury members to brief them on water issues and answer questions. The presentation was well

received and resulted in jury members requesting and receiving a tour of local, regional and state water facilities. They also issued a favorable report later in the year supporting and encouraging the Authority's plans for emergency water storage.

The liaison program, initiated two years ago, continued to pay dividends with stronger working relationships between the Authority, its member agencies, other governmental agencies and community organizations. The Public Affairs staff also provided support to Directors and Authority personnel by attending and participating in numerous legislative hearings, public meetings, seminars and forums.

Community Relations

The department focused primarily on support of capital improvement projects, including the Mission Trails Pipeline and flow regulatory structure the North County Distribution Pipeline and the Pipeline 6 projects. Staff devoted considerable time to meeting with community leaders and interested citizens affected by projects in their neighborhoods. Supervised by staff, consultants assisted in various communications efforts, including news releases, direct mail, print advertising and newsletters. Aggressive efforts to communicate the need for and value of the Emergency Water Storage Project also continued. Staff wrote and produced various communications materials — including newsletters and a briefing book — which were used in a continuing effort to educate community leaders and others about the project. Staff also lent extensive support to the Water Repurification Project, coordinating, scheduling and attending meetings of the Repurified Water Review Committee. In addition, the department coordinated public presentations and assisted in the production of a brochure and slide show on the project. Work also began on a video which will be used in public presentations.

The department arranged and participated in a number of community outreach events, including a Mexican Independence Day event, Earth Day Fair and the Del Mar Fair, where the Authority's low water use garden display won a first place award. To help maintain the public's awareness of the need for water conservation, the Authority initiated a series of radio advertisements promoting water conservation as well as a water history exhibit in Balboa Park. The Authority received a positive response to its five-part series of newspaper advertisements aimed at the business community. Individual business people responded to the ads by requesting additional information about water issues, conservation and the Authority's projects and plans. The staff assisted in the planning and promotion of a water

seminar held for the business community in cooperation with the Greater San Diego Chamber of Commerce's CEO Roundtable, BIO-COM/San Diego, UCSD/CONNECT, the San Diego Economic Development Corporation, and J. P. Morgan.

Also during the year, staff offered presentations, submitted papers and represented the Authority at water industry conferences.

Media Activity

The news media requested information from and interviews with Authority staff on a wide range of subjects. Record rainfall, water supply issues, emergency water storage, repurification, new water rates, Bay-Delta issues and water pipeline projects triggered favorable and balanced news coverage. In addition to writing news releases, opinion pieces, and letters-to-the-editor, the department worked with Directors and staff prior to media interviews, briefings and editorial board visits.

The large number of contacts with the news media provided staff with the opportunity to promote the Authority's plans and goals for improving local water supplies and developing reliable sources of water. Attracting a large amount of print, radio and television news coverage were the Water Repurification Project, the Emergency Water Storage Project, water Pipeline projects and school education programs such as the water quality testing kits. The department also initiated and arranged for Directors and staff to participate in a number of local radio talk shows and TV news programs to discuss ongoing efforts to provide a safe, reliable water supply for the region. In one case, the staff worked closely with a local TV station doing a weeklong series on repurified water to ensure the information provided viewers was accurate, balanced and fair.

UCSD/CONNECT also featured repurified water and other water issues in a special hourlong television program aired on local cable stations. To assist the Authority in broadening its communications reach with its many audiences — including the news media — the staff began work with Information Services on a pilot project to develop an Authority home page on the internet's World Wide Web.

School Education Program

Several new programs were completed to enhance and strengthen the high quality and effectiveness of the Authority's educational services for students from kindergarten through grade 12. A milestone of sorts was attained in the 1994-95 school year as the Authority reached 106,264 students with a comprehensive array of 14

water-related programs and projects. Overall, requests remained strong from teachers seeking programs, materials and in-service training. Drawing particular attention at the high school level was the highly successful water quality testing kit program. More than 130 teachers were trained during four all-day workshops. Fourth grade classroom presentations also were an important part of the school program. They offered staff an opportunity to work with teachers in educating students about California's water history and the importance of water conservation. In the 1994-95 school year, the Authority reached 7,046 fourth grade students, nearly 300 more than last year.

The School Theater Program remained a cost-effective way of using drama and humor to help students learn more about water resources and conservation. This program reached 75,508 students. That translates to 59 cents per student based on the program's cost. Other highlights of the year included:

- An all-new, full-color education brochure listing programs and services available from the Authority was mailed to 11,000 local teachers.
- The kindergarten through grade 3 activity book, "Webster The Watersaurus," was translated and printed in Spanish.
- A computer software program was developed to facilitate record-keeping for the Authority's education programs.
- Staff assisted in the development and writing of a section of the "Adopt-a-Watershed" curriculum for the National Fish and Wildlife Foundation.
- Staff reviewed a draft copy of the new Federal Science Framework document which, when completed, will establish national science education standards.

In partnership with school officials, staff began planning two educational projects: a traveling science van and a mobile interactive library. Both will be used at schools in the county to provide students with a "hands-on" educational experience with water-related curriculum. Staff also completed production of a major secondary curriculum guide titled "San Diego: World in Harmony." The material focuses on the environment and water. It was developed in cooperation with the San Diego County Office of Education, the County Department of Public Works and "I Love a Clean San Diego County, Inc." Staff assisted in obtaining a \$15,000 grant from the State Department of Education to fund teacher in-service training for the program.

The department capitalized on Water Awareness Month by joining with the San Diego Union-Tribune for the "Newspapers in



Local students experience practical, hands-on scientific work with water quality testing kits developed by the Authority's school education program.



Water Authority's booth at the Mexican Independence Day festival was a popular stop for festival-goers to receive brochures, magnets, pencils and other items relating to water conservation and water issues.

Education" promotion. More than 200 teachers responded to the advertisement. They received free newspaper subscriptions and special packets from the Authority for use in teaching about water. Staff also represented the Authority at a number of educational fairs, conferences and community events including the Greater San Diego Science Fair, the San Diego Science Teachers Conference, the Del Mar and San Diego home and garden shows, Earth Day in Balboa Park and the Greater San Diego Chamber of Commerce Expo '95.

Publications

In addition to the department's two regular publications, staff produced several other publications within budget and deadline during 1994-95. WaterTalk, published on a quarterly basis, continued to update community leaders and interested citizens about the Authority's activities and other water-related issues. A special edition was published in October focusing on the Bay-Delta situation. Distribution of the publication was expanded to include medical and dental offices. The high quality of the publication was recognized during the year with an award from the San Diego Press Club.

Connections, the monthly employee newsletter, continued to provide timely information about Authority plans and policies, water industry developments and the activities of fellow employees. A reader's survey was also conducted. It confirmed that the content of Connections met the expectations of employees and provided insight to possible content enhancements in the future. The San Diego Press Club and the San Diego chapter of the Public Relations Society of America named Connections the best internal newsletter in the county for 1994.

In support of the Emergency Water Storage Project, staff continued to produce a regular newsletter featuring information and progress reports that is mailed to public officials, member agencies and citizens. In addition, the staff produced six briefing books — each with a different emphasis — for distribution to business, community and political leaders. A question-and-answer pamphlet on water rates was also written to assist Authority staff and member agencies in addressing questions from the public. Staff also wrote and distributed an updated version of the "Water for Life" and Capital Improvement Program brochures and the Authority fact sheet.

Joint Public Information Council

The Joint Public Information Council (JPIC) continued to provide a forum to strengthen and maximize communications efforts by

the staff and their counterparts at member agencies. Meeting bimonthly during the year, JPIC members exchanged information about their respective agencies and received briefings on Authority activities, actions taken by the board and water-related issues. A working committee of JPIC members was formed in conjunction with the Authority's plans to establish a home page on the Internet's World Wide Web. In the next year, committee members will work together to ensure the Authority's efforts are coordinated with current plans of member agency to develop home pages to enhance communications with the public.

Assistance was provided JPIC members in the form of the department's Cooperative Communications Programs. This year, 10 grants, totaling \$30,000, were awarded to member agencies for water-related communications programs. Projects funded in fiscal 1995 include a watershed model, water wellness programs, a water awareness celebration, a water fun run, and the North County Water Agencies calendar.

EMERGING BUSINESS ENTERPRISE DEPARTMENT

The Emerging Business Enterprise (EBE) Program is primarily responsible for ensuring that EBEs are afforded an equal opportunity to compete in the Authority's procurement process for outside contracts and subcontracts. The EBE staff works with staff members from other departments to ensure contracting information is made available to EBEs in a timely and systematic fashion providing ample opportunity for EBEs to participate.

During fiscal year 1994-95, EBEs were awarded \$5,249,392 as prime contractors and subcontractors on contracts issued by the Authority. This is related to the Authority's aggressive outreach to the EBE community. There were approximately seventy five contacts with EBE consultants, contractors, vendors, professional organizations and community groups. A partial list of professional organizations and community groups includes: Asian Business Association, Black Contractors Association, Latino Builders, Minority Supplier Development Council, and Women Construction Owners and Executives. In addition, the Authority also conducted a systematic advertising and direct mail campaign targeting EBE contractors.

A portion of the EBE Department's budget provides partial funding for the Contracting Opportunity Center (COC) which offers technical assistance to local small businesses. The COC client list currently includes 325 firms that receive assistance in bidding/contracting, estimating, pricing and cost formulas, small business finance, construction management, project documentation and tracking and, cash management. To date, COC's client list includes 52 EBEs and 273 non-EBEs. During fiscal year 1994-95, these clients were awarded contracts totaling \$917,000.

The EBE department staff participated in two trade shows, 15 pre-bid/pre-proposal conferences, and three bid openings. The overall results of this year's activities resulted in EBEs receiving 11.8% of contract dollars awarded by the Authority. This is an increase of 0.8 percent over last year.

HUMAN RESOURCES

The Human Resources Department provides a full range of human resources-related services that assists the Authority in achieving its organizational goals. During the fiscal year, the Department's staff included a director, three human resources analysts, and a human resources assistant. This staff provided support services for the Authority's eight departments and 177 budgeted positions.

Employment

At the beginning of the fiscal year, the Authority had 163 employees. By the end of the year this number increased to 169, a gain of 6 employees. During this period, Human Resources staff assisted in the recruiting and hiring of 21 new employees and 15 employee promotions. Two employees retired, and thirteen employees left the Authority.

The following is a list of positions filled during the fiscal year:

Administrative Services Division

Accountant	Information Systems Technician
Accounting Assistant	Warehouse Worker
(3) Clerical Assistants	

Water Resources Division

Water Resources Aide

Engineering, Operations, and Maintenance Division

Associate Civil Engineer	(6) Maintenance Workers
(3) Engineering Technicians	Resident Construction Inspector
Junior Engineer	

Public Affairs

Public Affairs Specialist

Human Resources staff presented the Authority's second annual Equal Employment Opportunity Report issued under the Equal Employment Opportunity program. This report summarized the Authority's efforts to achieve its Equal Employment Opportunity goals. The goals included achieving workforce parity based on the actual availability of qualified minorities and females in the San Diego county workforce for the occupational categories utilized within the

Authority. The efforts resulted in a 3.0% increase in minority employees and a 0.2% increase in female employees.

Human Resources staff also successfully coordinated the fourth year of the Authority's summer youth employment program and student intern program. Youths hired under the Authority's summer youth employment program work the summer months between June 15 and September 15. Student interns work throughout the school year. Human Resources, Administrative Support, Public Affairs, Engineering, Operations & Maintenance, Finance and Water Resources Planning departments actively participated in these programs.

Employee Relations

The Human Resources Department provides staff support for labor negotiations and ensures proper administration of labor contracts. Staff successfully coordinated the transition into the second year of the negotiated three-year agreement that will end June 30, 1997.

The department also has the responsibility to maintain the Authority's classification and compensation structure, based on public sector practices and trends. During the year staff conducted studies that resulted in the reclassification of several positions, the creation of four new classifications, and one title change effective fiscal year 1995-96. The new classifications and titles are:

NEW CLASSIFICATIONS	TITLE CHANGES
Administrative Aide	
Imported Water Manager	Maintenance Services Coordinator
Imported Water Liaison	
Imported Water Specialist	

Continuing Education

The Authority encourages employees to receive additional or continuing education. Costs for tuition and books are reimbursed in accordance with policy guidelines by the Authority after employees successfully complete work-related courses of study taken on off-duty hours, at an accredited educational institution. The Human Resources Department processed 22 reimbursements of tuition and books for 22 employees during the fiscal year.

Employee Recognition

To boost employee morale and performance, the Authority has an incentive program that provides awards for Employee of the

Quarter and Year, and awards for suggestions, attendance, and service. The recipients of these awards were honored at the annual Incentive Awards Banquet, hosted by the Authority and attended by employees, spouses, and guests. This year 13 suggestions were submitted by employees, of which 3 were judged to merit cash awards.

Health and Safety

The Human Resources Department is responsible for ensuring that the Authority's employees and property assets are protected. Actions are taken to prevent, control, reduce, or eliminate risks through the administration of safety and loss prevention programs, worker's compensation, employee benefits and employee assistance.

Human Resources staff evaluated the quality of the Authority's current health insurance programs. The results of this evaluation indicated that the quality of care and benefits of both Kaiser and Prucare medical programs were satisfactory, therefore, staff successfully negotiated contracts with both companies for calendar year 1995.

The Employee's Wellness program was enhanced by the Authority's first annual Wellness Fair, featuring health care providers and fitness consultants that assisted employees with recommendations for developing and maintaining a healthy lifestyle.

Staff satisfactorily processed several worker compensation claims and long-term disability claims, which required extensive counseling with employees and spouses.

Human Resources staff administered the Authority's injury and illness prevention program, providing a safe and healthy work environment that complies with all local, state, and federal safety and health laws and standards. Staff also assisted inspectors from various regulatory agencies and conducted a number of safety inspections of Authority facilities and equipment, making safety recommendations where necessary.

Safety training programs were conducted throughout the year, including defensive driver training, earthquake preparedness, hazardous material handling, construction safety, confined space safety, CPR, and hearing protection.

Human Resources staff also continued to develop and maintain a safety resources center that contains a variety of safety reference materials, video tapes, and training aids for use by all employees and member agencies.

HUMAN RESOURCES



VIVIEN QUIROS
*Employee of the 1st Quarter
and Employee of the Year.*



BARBARA VAN TILBORG
Employee of the 2nd Quarter



LYNN TRUE
Employee of the 4th Quarter



MARIA MARISCAL
Employee of the 3rd Quarter

GENERAL COUNSEL

The 1994-95 fiscal year report is the third produced by the General Counsel's Office. The state of the Authority's legal health remains excellent. The budget was reduced for the third consecutive year and, again, substantial savings were achieved in the budgets for outside counsel.

General

All of the day-to-day legal activities outlined in the last three annual reports continued, as did follow-up work on Endangered Species, Emerging Business Enterprise Program, Federal Energy Regulatory Commission Application for the Olivenhain-Lake Hodges Pumped Storage Project, and the Emergency Storage Project. Legal support was provided to the General Manager and the departments on many of the accomplishments reported elsewhere, including the following:

- Concluded the long-term cooperative effort with the City of San Diego on the La Mesa/Lemon Grove Pipeline by collecting the Authority's oversizing expense of \$1,479,269.
- Advised the General Manager on alleged OSHA violations and various other matters resulting from the 70th Street Pipeline trench failure. All of the tort litigation, including the wrongful death actions, were resolved without any cost to the Authority.
- Worked with the Finance Department on the Code amendments, administrative regulations, resolutions, and other documentation to implement the new Metropolitan rate structure, including the imposition by the Authority of a new demand charge and a readiness-to-serve charge.
- Advised the Board and drafted an agreement under the Intergovernmental Personnel Act with the U. S. Department of Interior to provide for the retention of the Authority's former General Manager, Lester A. Snow, as the Coordinator of Cal-Fed Bay Delta process.
- Worked with the Purchasing Department on the draft and adoption of a revised Article 14.
- Advised the General Manager in resolving two potentially difficult personnel situations, a sexual harassment claim and an employee who was convicted of off-duty conduct involving a felony.
- Advised Engineering and the General Manager on the Dispute Resolution Board process and negotiation of a \$1.6 million settlement

which was approved by the Board in July to resolve a \$2.6 million extra work hard-rock claim on the Cowles Mountain Tunnel.

- Worked with Human Resources and the Assistant General Manager for Administration on the adoption by the Board of a recodified Chapter 12 to provide for the Authority's personnel merit system.

Deputy General Counsel

Marguerite "Peggy" Strand, Deputy General Counsel, left the Authority in May after three years of good service to accept a position in the San Diego office of Best, Best & Krieger. Peggy McCarberg of Bartz & McCarberg was appointed as Interim Deputy General Counsel. Recruitment is underway for the permanent position, which should be filled early next year.

Legislation

Three bills affecting the Authority were drafted this year. Senator Killea carried SB 1173, which was approved and signed by the Governor as Chapter 73, Statutes of 1995. It adds to the Authority's powers, the ability to provide repurified water programs, which the Authority continues to develop in cooperation with the City of San Diego. It authorizes the Board of Directors to change the Authority's name to eliminate the reference to "County," which will eliminate the adverse effects on Authority bond sales from the fallout of the Orange County bankruptcy. Finally, it eliminates the prohibition against a director of a member agency voting for his or her own appointment to the Authority Board. SB 369 by Senator Kelly is pending in the Senate. It would extend the Authority's ability to issue Certificates of Participation from 20 to 40 years to more fairly spread the cost of major long-term capital projects, such as the Emergency Storage Project. SB 901 requires coordinated planning between water suppliers and general purpose government. Senator Costa, the author, has accepted the Authority's amendment to recognize the special arrangement that exists in San Diego through the implementation of Proposition C, the voter-approved growth management strategy and the cooperation between the Authority, SANDAG, and all of the general purpose governments in San Diego County.

This office assists Carpi & Clay, the Authority's legislative advocates, and the Board in taking positions on federal and state legislation throughout the year. One of the most important matters was HR 925, the so-called Private Property Protection Act of 1995. The bill would extend the "takings" protections to the right to use or receive water. That is contrary to well-established water law in the west and

could adversely affect the Authority's ability to carry out its mission, interfere with water transfers and storage on the Colorado River, effectively repeal many of the Central Valley Improvement Act reforms, which the Board supported, and undermine the Bay Delta Accords. The Board voted to seek amendments to the bill to delete the references to water, and the bill is pending in the Senate.

Metropolitan Water District

Advising the Authority's Delegation to the Metropolitan Water District (Metropolitan) requires a substantial part of the General Counsel's time. An extensive memoranda was prepared on the Authority's relationship to Metropolitan to assist the Board in determining its position on the new rate structure, and joint meetings were held with the member agency general managers and general counsels to discuss implementation. Metropolitan became involved in a settlement of the San Luis Rey Indian litigation, and materials were prepared on the law of the river and the ability of Metropolitan to secure storage on the Colorado River as an element of such a settlement. Outstanding issues, including Section 135, Preferential Rights, and Section 132, Agricultural Water as Surplus, required additional attention, are unresolved and remain a concern.

Litigation

Cost control by the active management of outside counsel and the enforcement of the Authority's contractual rights to indemnity are important office priorities. A majority of the money budgeted for litigation in the operating and capital budgets was saved.

Only three new cases were filed against the Authority this year; a trip and fall, which is being defended by the Authority's contractor, a suit from the Del Dios pipeline break, which was settled by the ACWA-JPIA, and a case seeking to recover business losses allegedly resulting from the construction of the 70th Street Pipeline Project, which is being defended by the Authority's contractor.

The Authority continues to actively support the City of Escondido in a lawsuit brought by the Water Quality Association challenging the City's ban of self-regenerating water softeners. The case has been fully briefed to the Fourth District Court of Appeal. The Authority joined with the City of Escondido's brief filed on June 22, 1995. Governor Wilson approved participation by the State Water Resources Control Board as amicus in support of the Authority and the City of Escondido. Amicus briefs have also been filed by the Leucadia Sanitation District, the San Elijo Joint Powers Authority,

ACWA, CASA, and the League of California Cities. Ninety-nine general purpose government agencies have joined the League's brief, including the County of Fresno and the cities of San Jose and San Francisco. The issue of whether or not local ordinances have been preempted is squarely before the Court. It is anticipated oral argument will be set sometime next year.

A defense verdict was won by the Authority in two of the 70th Street loss of business cases. We are pleased the judge agreed with the Authority's position that reasonable access was provided to the businesses at all times during the successful completion of this complex construction project. The remaining three cases are scheduled for early next year. All of these cases are being defended without cost to the Authority.

Two of the three personal injury cases carried over from last year have been closed, and a third, a personal injury case by Acton and Ames, employees of a subcontractor to Kiewit Pacific on the San Marcos pipeline, is on appeal. The Authority's brief was filed in June with the defense and the share of any judgment to be paid by the subcontractor's insurance company.

The Fourth District Court of Appeal found that the Kerrs' unlocked gate did not unreasonably interfere with the Authority's easement. The easement documents in use since 1962 make it unlikely this situation will reoccur, and the file has been closed.

Defense of the Utility Vault construction defects case was assumed by Boyle Engineering, the Authority's construction manager. It was resolved in binding arbitration at no cost to the Authority

Document Review

A tracking system was put in place for review of contracts, change orders and the other documents required to accomplish the Authority's business. Two-hundred forty documents were drafted, reviewed, and approved this year. More important matters included the following contracts: the City of San Diego and C. E. Wylie for construction of a flow-regulatory structure for Pipeline 4B, Phase II (\$8,439,000); Pasqual & Ludwig, for the Otay 4 and 9 Flow Control Facilities (\$1,124,500); Sweetwater Authority for a Flow Control Facility (\$1,000,000); Metropolitan for the 1995 Ultra Low-Flow Toilet Rebate Program (\$3,102,240); Ogden Environmental and Engineering Services for the Emergency Storage Project Environmental Review (\$3,838,819); L. H. Woods & Sons to construct the North County Distribution Pipeline (\$13,264,450); Orion Construction Corporation on the Helix 3 Flow Control Facility (\$643,247); Black & Veatch for

Pipeline 6 Design (\$4,950,000); Parsons-Brinckerhoff, Construction Management on the North County Distribution Pipeline (\$763,000); and Roy E. Ladd Corporation to construct the North County Distribution Pipeline (\$7,238,620).

Right-of-Way Litigation

Results in the Authority's eminent domain litigation were excellent again this year. Almost without exception, the cases were resolved without trial at amounts substantially tracking the Authority's appraisals. The Court of Appeal ruled in favor of the Authority on the Mirieter case. Prior to the new trial, a fair settlement was achieved at less than one half of the previous jury verdict. \$611,000 was recovered from the court and returned to the Capital budget, and the file was closed on the last of the Pipeline 5 cases.

North County Distribution Pipeline Questions arose on the status of construction access roads for the project, and it became necessary to condemn temporary easements. More than 200 owners were served, orders of immediate possession obtained, and settlements achieved with essentially all of the property owners. Thirteen condemnation cases were filed to acquire the right of way for this project. One challenge to the Authority's right to take was rejected. Progress was made on resolving all but two of these cases. Vista Valley Country Club was settled at the Authority's appraisal with a cooperative agreement that coordinates construction of the project with the renovation of the golf course.

Pipeline 2A The Board authorized condemnation of 24 more parcels for this project. At year-end, 55 cases had been filed, possession had been obtained for all of the right of way necessary for the project, and good progress was made on settling most of the cases.



Excavation setting to place the first 40-foot long section of 72-inch diameter pipe for the North County Distribution Pipeline.

METROPOLITAN WATER DISTRICT MEMBERSHIP

The San Diego County Water Authority purchases all of its water supplies from the Metropolitan Water District of Southern California (MWD). MWD is the primary water importer for most of coastal Southern California, delivering supplies to 142 incorporated cities in Ventura, Los Angeles, Orange, San Bernadino, Riverside, and San Diego counties. Water imported by MWD comes from two sources: the State Water Project (SWP) and the Colorado River Aqueduct (CRA). The Authority is one of the 27 MWD member agencies that are listed in Figure 12.

The MWD service area is shown in Map 4. This area encompasses 5,155 square miles, of which less than a square mile was added last fiscal year. The Authority's 1,420-square-mile service area represents 27.5 percent of the MWD total. MWD supplies water to an estimated 16 million people, of which 2.6 million, or 16 percent, live in San Diego County.

The Authority and MWD were both formed under state legislation, and both agencies operate in a similar fashion. Both agencies establish policy through a board of directors. Each director on the board is appointed by the chief executive officer of the agency represented, subject to approval from its legislative body.

Authority Representatives on MWD Board

MWD policy entitles each member agency to a minimum of one director. An additional representative may be appointed for each full three percent of the total MWD assessed valuation which lies within the member agency's boundaries. The Authority has six representatives on MWD's Board, all of whom are members of the Authority Board. During fiscal year 1995, these directors included Christine Frahm, Harry Griffen, Francesca Krauel, Dale Mason, Joseph Parker, and Mark Watton.

By the end of the fiscal year, Authority representatives had a total of 13,349 votes out of a total of 86,049, or 15.5 percent of the total voting strength of MWD. The delegation of each member agency is entitled to cast one vote for each \$10 million of assessed valuation within the agency's boundaries.

The Metropolitan Board has eight Standing Committees with the Authority having at least one representative on each Committee. Director Frahm served as vice chair of the Engineering and

Operations, and Executive Committees, and as a member of the Legal and Claims Committee. Director Griffen, who has served on the MWD Board for 32 years, served as a member of the Water Planning and Resources, and Finance and Insurance Committees, and Committee on Legislation. Director Krauel served as chair of the Legal and Claims Committee, and as a member of the Executive, and Organization and Personnel Committees. Director Mason served as chair of Finance and Insurance Committee, and as a member of the Executive, and Water Planning and Resources Committees. Director Parker served as vice chair of Land Committee and as a member of the Committee on Legislation. Director Watton served as a member of the Land, and Organizational and Personnel Committees.

Assessed Property Value

Total assessed value of taxable property within the boundaries of the Metropolitan Water District was \$860.5 billion, as of the end of June 1995. Assessed value is determined by assessors from the counties served for use in levying 1994-95 taxes. These valuations decreased \$21.1 billion, or 2.4 percent below the previous year's valuation of \$881.5 billion. Within the Authority's boundaries, the assessed valuation remained essentially constant, with a less than one percent increase.

The assessed valuation of MWD established for 1995-96 is \$860.5 billion which includes \$133.5 billion for the Authority's valuation. The assessed valuation of the Authority is 15.5 percent of the MWD total. For actual amounts, see Appendix A.

Water Sales

The MWD delivered 1,569,067 acre-feet of water during fiscal year 1994-95. The Authority received 392,864 acre-feet, or 23 per-

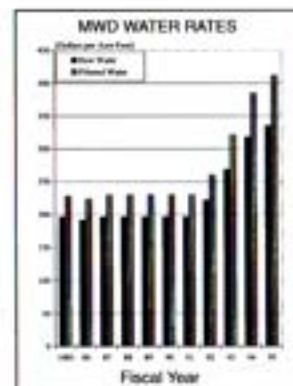
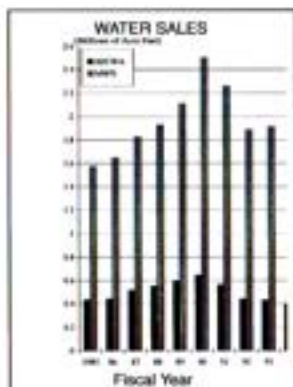
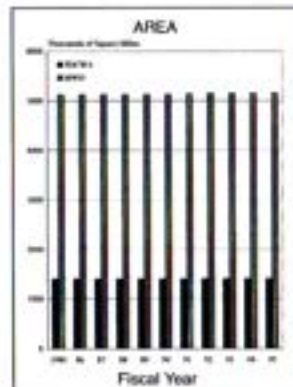


Figure No. 13

cent of MWD's total deliveries, excluding San Onofre (822 af) and LPP (2,390 af). The deliveries from Metropolitan included 53,461 acre-feet of agricultural deliveries and 34,083 acre-feet of seasonal storage deliveries, excluding San Onofre 822 and LPP 2,390 acre feet. During the fiscal year, about 87 percent of the Authority's supplies came from the CRA. The remaining 13 percent came from the SWP.

MWD has five operating filtration plants. The Lake Skinner Filtration Plant, with a capacity of 520 mgd, serves treated water to the Authority. Other plants operated by MWD (none of which can serve the Authority) are the F.E. Weymouth Memorial Filtration Plant in La Verne, Robert B. Diemer Filtration Plant near Yorba Linda, Joseph Jensen Filtration Plant at Granada Hills, and the Henry J. Mills Filtration plant near Riverside. The Jensen Plant can receive water only from the West Branch of the California Aqueduct.

Tax Rate

MWD set its tax rate at 0.0089 percent of assessed valuation for the 1994-95 fiscal year. This rate has decreased since the Authority annexed to MWD in 1946, when the tax rate was 50 cents per \$100 assessed valuation. Tax rates for each year since 1930 are shown in Table 13.

The total MWD tax levy during the 1994-95 fiscal year, including regular and special taxes, was \$90,826,770. Of this amount, 14.4 percent, or \$13,121,581 was levied against property within the Authority. The estimated MWD tax level for the 1995-96 fiscal year is \$89,749,514. The Authority's share of that amount is \$13,019,559.

New Rate Structure

A new revenue and rate structure was approved by the MWD Board in fiscal year 1995, for implementation in fiscal year 1996. The new rate structure is designed to enhance financial stability and includes a commodity rate, readiness-to-serve charge, new demand charge, treated water peaking charge, and connection maintenance charge. The new charges were designed to serve as a foundation of fixed revenue for MWD, constituting about 15 percent of MWD's total revenues. The readiness-to-serve (RTS) charge is allocated to each member agency on the basis of a rolling average of historic water purchases from MWD. The purpose of the RTS charge is to fund capital improvements associated with meeting reliability and quality needs of existing users. In FY 1995-96, the Authority will pay about 25 percent of MWD's total RTS charges. The Authority will collect this amount from its member agencies, based on their average annual deliveries

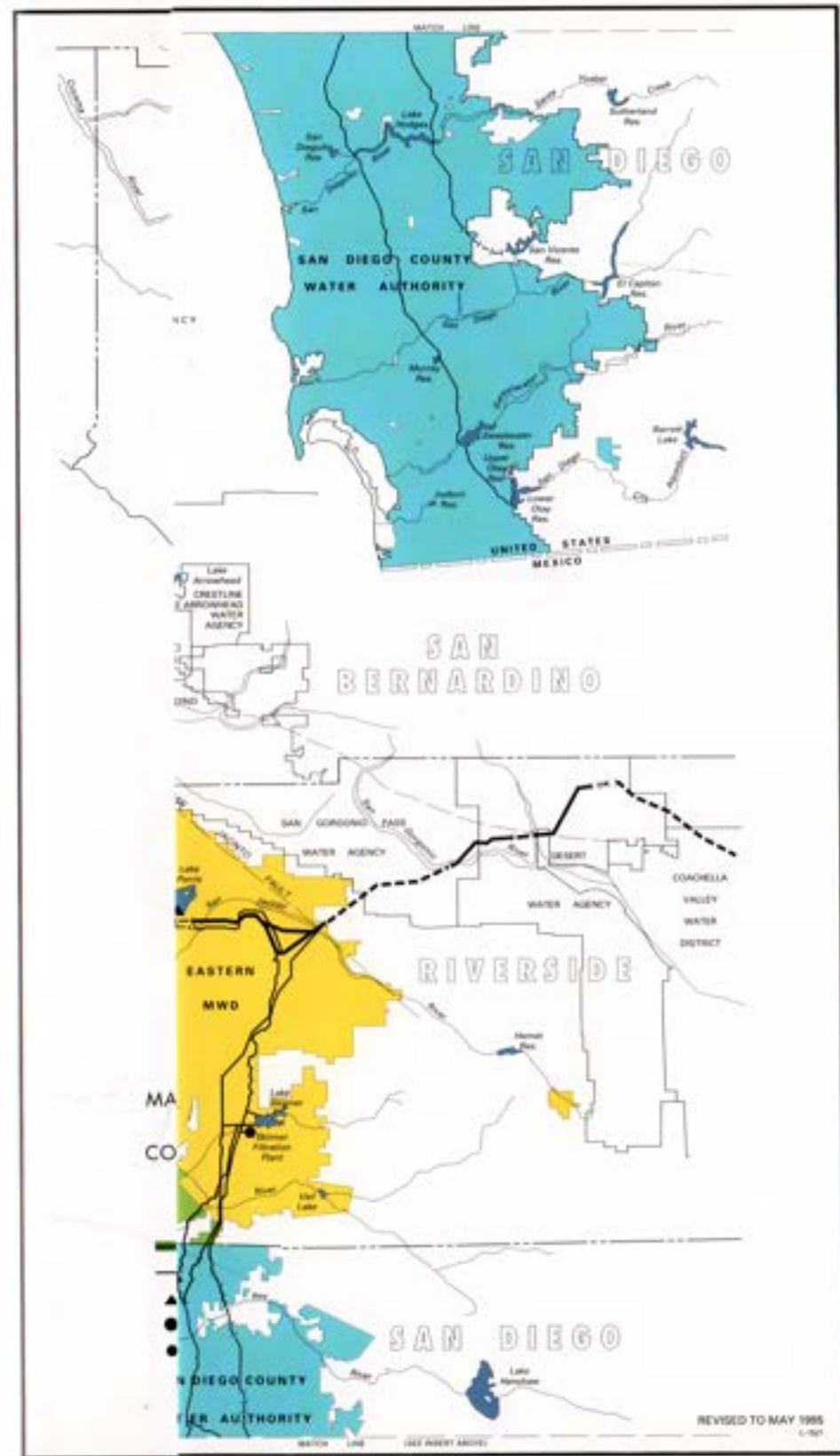
COLORADO RIVER BOARD MEMBERSHIP

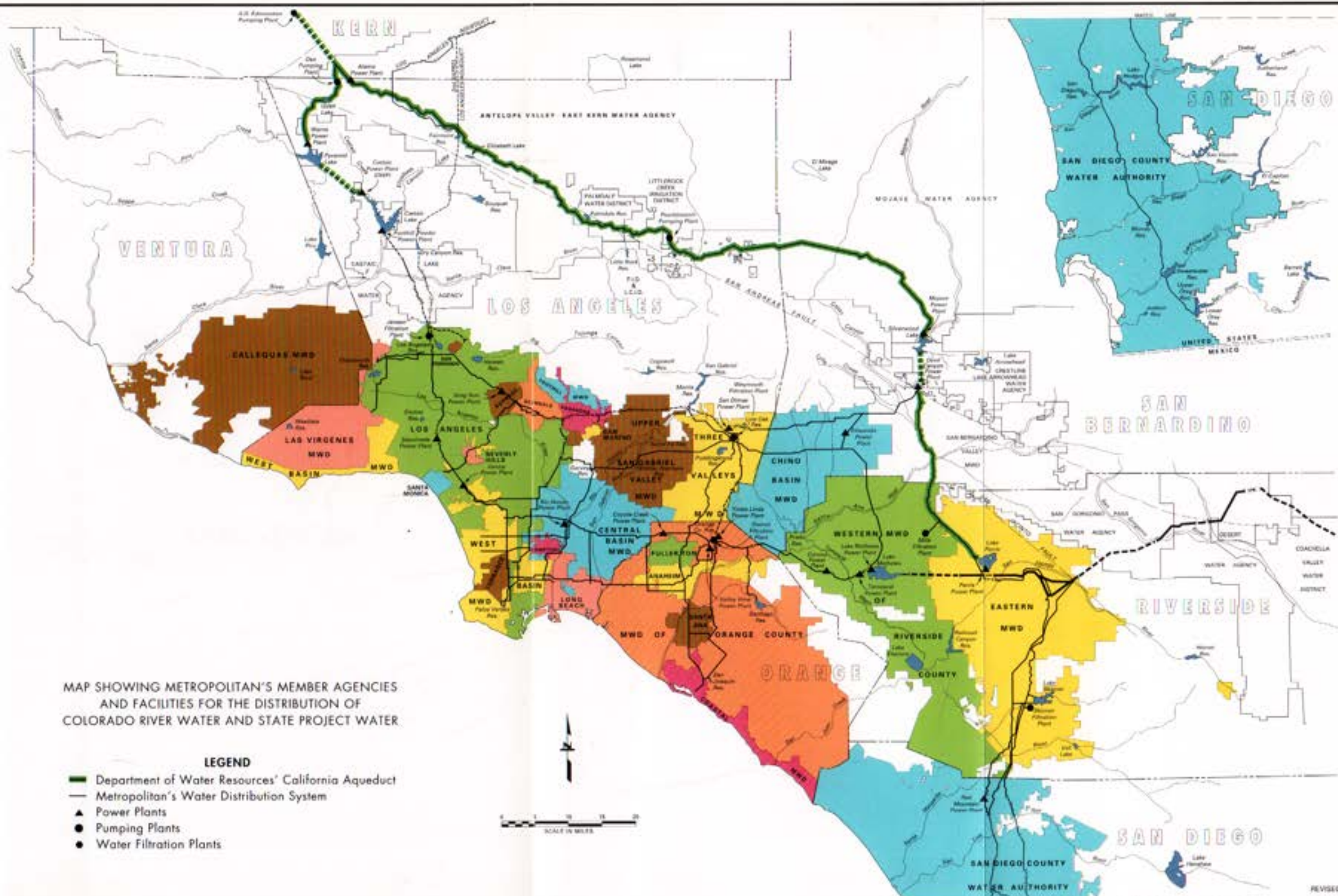
The Colorado River Board is a public agency that represents California's interests in the water and power resources of the Colorado River. Six southern California water agencies are represented on the Board: the Authority, Metropolitan Water District of Southern California, City of Los Angeles Department of Water and Power, Palo Verde Irrigation District, Coachella Valley Water District, and the Imperial Irrigation District. The Authority's interest in Colorado River issues stems from MWD's junior entitlement and continued reliance on unused allocations which are subject to future diversion by other river contractors. The Authority's representative to the Board during fiscal year 1994-95 was Mr. S.D. Anderson.

Several significant issues related to management and use of Colorado River water and power resources continued to be examined by California and the other Lower Basin states. First, the Lower Basin States/Tribes Endangered Species Steering Committee investigated the feasibility of pursuing a Lower Colorado River Multi-Species Habitat Conservation Plan (HCP). In June 1995, representatives from California, Arizona, Nevada, and the Department of the Interior agreed to initiate a three year period for development of a HCP. Issues relating to a formal Memorandum of Agreement, funding, program coordination, and public outreach were still under discussion at the end of the fiscal year. The HCP, if implemented, would be designed to accommodate current water diversions and power production while working to protect habitat and endangered species.

A parallel process among the three Lower Basin states focused on developing a consensus regional solution for Colorado River water management. A Technical Committee (composed of representatives from the three states, Lower Basin Indian Tribes Coalition, and the Bureau of Reclamation) produced four progress reports on water needs and management opportunities before discussions were elevated to policy and decision makers. Issues to be resolved include: water transfers and wheeling, reservoir management, tributary development, use in excess of entitlement, water banking, and the creation of a Lower Basin States Forum to provide future coordination. The Department of the Interior hired a facilitator to help work through these issues, and meetings were scheduled. The Bureau of Reclamation agreed to delay implementation of new rules affecting Colorado River water entitlements as long as the states make progress towards a regional solution.

Other Board activities during the year focused on maintaining federal funding for salinity control programs, monitoring federal development of a new computer model for predicting river flows, and review of the proposed water release from Glen Canyon Dam to rebuild downstream beaches. A major goal of the Board is to ensure that California's future demand for Colorado supplies does not exceed the state's basic apportionment, which is currently 4.4 million acre-feet (maf), plus provide for the transport, storage, and use of excess or surplus flow when available.





MAP SHOWING METROPOLITAN'S MEMBER AGENCIES AND FACILITIES FOR THE DISTRIBUTION OF COLORADO RIVER WATER AND STATE PROJECT WATER

LEGEND

- Department of Water Resources' California Aqueduct
- Metropolitan's Water Distribution System
- ▲ Power Plants
- Pumping Plants
- Water Filtration Plants



**FORTY-NINTH
ANNUAL REPORT**

Fiscal Year Ending June 30, 1995

APPENDICES

APPENDICES

APPENDIX A

Tables

1.	Statistical Summary - Authority 1994-95.....	124
2.	Population Growth - Authority and County Through 1995....	125
3.	Area - Authority Member Agencies 1994-95.....	126
4.	Water Use and Authority Storage 1994-95	128
5.	Assessed Valuation and Tax Collections 1994-9	130
6.	Water Use - Authority Member Agencies 1985-1995	132
7.	Water Sales by Authority 1947-95.....	133
8.	Sales of Imported Water 1994-95.....	134
9.	Assessed Valuation and Tax Rates - Authority 1945-95	135
10.	Revenue Dedicated to Finance Capital Improvement Program 1994-95	138
11.	Chemical Characteristics and Analysis of Colorado River Water 1994-95	139
12.	Chemical Characteristics and Analysis of Blended Water at Lake Skinner 1994-95	140
13.	Assessed Valuation and Tax Rates of Metropolitan Water District 1929-95	141
14.	Metropolitan Annexation Charges and Balances on Authority Area	142
15.	Water Sales by Metropolitan Water District 1941-95	143
16.	Water Deliveries and Local Supplies - Metropolitan Water District Constituent Areas 1994-95.....	144

APPENDIX B

Major Board Actions

APPENDIX C

Financial Statements

TABLE 1

STATISTICAL SUMMARY

	1993-94	1994-95	Percent Change
GROWTH OF SERVICE AREA			
Number of Agencies	23	23	0.0
Total Area-Acres	908,959	908,964	0.0
Population	2,604,483	2,622,948	0.7
Assessed Valuation	\$134,120,589,763	\$135,146,958,585	0.8
OPERATIONS			
Water Imported by Authority-af	401,498	392,864	-2.2
Water Used by Member Agencies-af	536,907	526,052	-2.0
Local Water Used-af (1)	123,759	116,543	-5.8
Authority Water Used-af	413,148	409,509	-0.9
Miles of Pipeline	250	250 (2)	0.0
Miles of Patrol Roads Maintained	220	245	+11.4
Number of Service Connections	88	88	0.0
FINANCIAL			
Water and Other Sales	\$161,968,000	\$159,287,000	-1.7
Operating Expenses:			
Cost of Sales	\$134,381,000	\$134,348,000	0.0
Depreciation and Amortization	\$4,929,000	\$4,711,000	-4.4
Operations and Maintenance	\$3,290,000	\$3,842,000	+16.8
Planning and Reclamation	\$4,015,000	\$3,929,000	-2.1
General and Administrative	\$5,849,000	\$5,588,000	-4.5
Write down of Pamo Reservoir Project to estimated net realizable value	\$2,158,000	N/A	
Total Operating Expenses	\$154,622,000	\$152,418,000	-1.4
Operating Income	\$7,346,000	\$6,869,000	-6.5
Other Revenues, Expenses, and Losses:			
Property Taxes and In-lieu Charges	\$5,940,000	\$5,473,000	-7.9
Water Availability Charges	\$18,054,000	\$18,253,000	+1.1
Interest Expense	(\$6,972,000)	(\$5,884,000)	-15.6
Interest Income	\$10,743,000	\$12,765,000	+18.8
Total Other Revenues	\$27,765,000	\$30,607,000	+10.2
Income before extraordinary loss	35,111,000	37,476,000	+6.7
Unreserved Retained Earnings at			
Beginning of Year	\$193,736,000	\$228,847,000	+18.1
Transfer from reserve for rate stabilization	-	\$5,700,000	
Unreserved Retained Earnings at End of Year	\$228,847,000	\$272,023,000	+18.9

1. Not including reclaimed water used.
2. 4EII and 4EII are completed but not currently in use.

TABLE 2

POPULATION GROWTH-COUNTY AND AUTHORITY AREA
1946-1995

(Includes Resident Military Personnel)

Year (as of April 1)	COUNTY		AUTHORITY		Percent of County Population in Authority
	Total Population	Average Annual Growth	Total Population	Average Annual Growth	
1946.....(3)	502,804	26,746	(3) 440,659	2.807	88%
1950.....(1)	556,808	42,478	(2) 451,886	50,083	81%
1955.....(4)	769,200	52,762	(2) 702,300	50,820	91%
1960.....(1)	1,033,010	32,198	(2) 956,400	38,720	93%
1965.....(4)	1,194,000	23,360	(5) 1,150,000	21,000	96%
1970.....(1)	1,310,800	49,848	(5) 1,255,000	54,504	96%
1975.....(6)	1,560,038	49,632	(5) 1,527,520	54,027	98%
1980.....(1)	1,808,200	91,800	(5) 1,797,655	66,635	99%
1981.....(7)	1,900,000	44,000	(5) 1,864,290	25,075	98%
1982.....(7)	1,944,000	42,035	(5) 1,889,365	45,222	97%
1983.....(7)	1,986,035	54,853	(5) 1,934,567	71,652	97%
1984.....(7)	2,040,888	42,471	(5) 2,006,239	40,761	98%
1985.....(7)	2,083,359	82,810	(5) 2,047,000	58,500	98%
1986.....(7)	2,166,169	74,490	(5) 2,105,500	75,500	97%
1987.....(7)	2,240,659	87,025	(5) 2,181,000	72,218	97%
1988.....(7)	2,327,684	90,492	(5) 2,253,216	92,992	97%
1989.....(7)	2,418,176	102,323	(5) 2,346,208	89,695	97%
1990.....(1)	2,520,499	28,234	(5) 2,435,903	49,789	97%
1991.....(8)	2,548,733	53,511	(5) 2,485,692	35,071	98%
1992.....(8)	2,602,244	46,353	(5) 2,520,763	51,239	97%
1993.....(8)	2,648,597	39,390	(5) 2,572,002	32,481	97%
1994.....(8)	2,687,987	32,919	(5) 2,604,483	18,465	97%
1995.....(8)	2,720,906		(5) 2,622,948		96%

(1) County population from U.S. Census Bureau Reports.
(2) Authority population based on U.S. Census Bureau Reports.
(3) Based on Special 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 Department of Planning and Land Use, San Diego County.
(8) Population estimates by State Department of Finance as of January 1.
* Corrected estimate by Integrated Planning Office, San Diego County.
Note: 1995 figure based on updated population data from SANDAG.

TABLE 3

AREA - AUTHORITY MEMBER AGENCIES

Area Within Authority

	Changes		As of 6/30/95 (acres)	Percent of Total Area 6/30/95
	As of 6/30/94 (acres)	During Year (acres)		
Carlsbad M.W.D.	20,640	0	20,640	2.27
Del Mar, City Of	1,159	0	1,159	0.13
Escondido, City Of (2)	21,569	0	21,569	2.37
Fallbrook P.U.D. (3)	27,988	0	27,988	3.08
Helix Water District (4)	31,292	0	31,292	3.44
National City	5,577	0	5,577	0.61
Oceanside, City Of	26,575	0	26,575	2.92
Olivenhain M.W.D. (5) & (13)	30,530	-64	30,466	3.35
Otay W.D. (6)	63,062	5	63,067	6.94
Padre Dam M.W.D. (7)	54,539	0	54,539	6.00
Pendleton Military Res.	134,625	0	134,625	14.81
Poway, City Of	23,214	0	23,214	2.55
Rainbow M.W.D.	47,260	0	47,260	5.20
Ramona M.W.D.	46,524	0	46,524	5.12
Rincon Del Diablo M.W.D. (8)	10,596	0	10,596	1.17
San Diego, City Of	210,626	0	210,626	23.17
San Dieguito W.D.	5,647	0	5,647	0.62
Santa Fe I.D.	10,179	0	10,179	1.12
South Bay I.D.	15,566	0	15,566	1.71
Vallecitos W.D. (9)	28,571	64	28,635	3.15
Valley Center M.W.D. (10)	61,022	0	61,022	6.71
Vista I.D. (1)	19,407	0	19,407	2.14
Yuima M.W.D.	12,792	0	12,792	1.41
TOTAL AUTHORITY	908,959	5	908,964	100
SAN DIEGO COUNTY	2,725,100	0	2,727,040	

- (1) Does not include 37 acres overlapping in City of Escondido.
- (2) Includes 1,177 acres overlapping in Valley Center M.W.D., 405 acres overlapping in Vallecitos W.D., 37 acres overlapping in Vista I.D. and 16,369 acres overlapping in Rincon Del Diablo M.W.D.
- (3) De Luz included in Fallbrook's figures.
- (4) Includes 13 acres overlapping in Padre Dam M.W.D.
- (5) Does not include 30 acres overlapping in City of San Diego.
- (6) Adjusted for incorrect 1991 data.
- (7) Does not include 13 acres overlapping in Helix W.D.
- (8) Does not include 16,369 acres overlapping in City of Escondido.
- (9) Does not include 405 acres overlapping in City of Escondido.
- (10) Does not include 1,177 acres overlapping in City of Escondido.
- (11) Population in agencies other than cities was furnished by agencies.
- (12) Estimated by agencies.
- (13) Previously over-estimated population was adjusted downward.

TABLE 3 (continued)

POPULATION - AUTHORITY MEMBER AGENCIES AND COUNTY

(Includes Resident Military Personnel)

Population - U.S. Census					Density of Population 1995	
1980 (11)	1990 (11)	Decade Increase 1980-90 Percent	1995 Estimate (12)	Annual Increase 1994-95 percent	Per Acre	Per Sq. Mile
31,500	54,400	73	58,000	0.51	2.81	1,798
5,040	5,215	3	5,057	4.05	4.36	2,792
64,100	105,515	65	120,034	2.30	5.57	3,562
18,925	23,966	27	26,630	0.50	0.95	609
203,500	226,928	12	231,720	0.15	7.41	4,739
47,200	51,488	9	55,625	5.09	9.97	6,384
77,800	128,500	65	148,718	2.28	5.60	3,582
23,000	43,480	89	40,255	-0.47	1.32	846
51,600	95,000	84	102,929	3.00	1.63	1,045
89,000	112,000	26	132,038	8.32	2.42	1,549
33,150	50,000	--	50,000	0.00	0.37	238
33,620	44,368	32	46,132	-1.19	1.99	1,272
7,800	13,442	72	14,693	0.00	0.31	199
16,000	32,000	100	33,500	0.00	0.72	461
13,800	25,000	81	26,000	-1.14	2.45	1,570
849,600	1,118,282	32	1,197,676	0.23	5.69	3,639
30,900	34,657	12	35,590	-0.64	6.30	4,033
14,700	19,335	32	19,887	0.44	1.95	1,250
99,200	106,243	7	109,735	-0.69	7.05	4,512
24,200	47,235	--	56,080	0.17	1.96	1,253
10,200	16,900	66	20,324	1.55	0.33	213
51,000	76,729	50	90,455	0.51	4.66	2,983
1,820	1,820	0	1,870	0.65	0.15	94
1,797,655	2,432,503	35	2,622,948	0.94	2.89	1,847
1,808,200	2,509,914	39	2,720,906	1.22	1.00	639

TABLE 4
WATER USE AND AUTHORITY STORAGE
FISCAL YEAR 1994-1995
Compilation of data furnished by member agencies

	SOURCE OF WATER (3)				TOTAL WATER USE AC. FT.	GROSS AREA (2) ACRES	ESTIMATED AREA SERVED BY WATER SYSTEM ACRES	GROSS AREA SERVED BY WATER SYSTEM PERCENT
	LOCAL SUPPLY		AUTHORITY SUPPLY					
	AMOUNT AC. FT.	PERCENT	AMOUNT AC. FT.	PERCENT				
Carlsbad M.W.D.	0.0	0.0	14,133.1	100.0	14,133.1	20,640	19,770	95.8
Del Mar, City Of	0.0	0.0	1,289.9	100.0	1,289.9	1,159	1,082	93.4
Econdido, City Of	9,272.5	36.2	16,358.2	63.8	25,630.7	21,569	19,070	88.4
Fallbrook P.U.D.	155.5	1.3	12,016.4	98.7	12,173.9	27,988	14,250	50.9
Helix W.D.	10,325.9	29.0	25,342.0	71.0	35,667.9	31,292	30,261	96.7
National City, City Of	4,858.3	88.2	650.7	11.8	5,509.0	5,577	5,103	91.5
Oceanside, City Of	2,203.3	8.1	25,027.1	91.9	27,230.4	26,575	26,514	99.8
Olivenhain M.W.D. (5)	0.0	0.0	12,230.1	100.0	12,230.1	30,462	15,856	52.1
Otay W.D.	0.0	0.0	21,400.6	100.0	21,400.6	63,067	41,894	66.4
Padre Dam M.W.D.	0.0	0.0	17,252.0	100.0	17,252.0	54,539	21,805	40.0
Pendleton Military Res. (5)	0.0	--	124.2	--	124.2	134,625	NA	--
Poway, City Of	577.4	5.2	10,494.9	94.8	11,072.3	23,214	12,832	55.3
Rainbow M.W.D.	0.0	0.0	20,999.7	100.0	20,999.7	47,290	17,631	37.3
Ramona M.W.D. (7)	2,122.6	26.3	5,946.5	73.7	8,069.1	46,524	46,524	100.0
Rincon Del Diablo M.W.D.	0.0	0.0	5,847.1	100.0	5,847.1	10,596	8,656	81.7
San Diego, City Of (1)	51,908.5	24.9	156,518.9	75.1	208,427.4	210,626	137,902	65.5
San Diego W.D.	3,352.5	49.1	3,477.1	50.9	6,829.6	5,652	5,492	97.2
Santa Fe I.D.	4,856.4	47.7	5,323.2	52.3	10,179.6	10,179	10,179	100.0
South Bay I.D.	12,384.8	73.8	4,392.0	26.2	16,776.8	15,566	12,690	81.5
Vallecitos W.D.	0.0	0.0	11,820.9	100.0	11,820.9	28,635	14,449	50.5
Valley Center M.W.D.	0.0	0.0	30,785.2	100.0	30,785.2	61,022	42,162	69.1
Vista I.D.	11,470.0	61.0	7,322.1	39.0	18,792.1	19,407	16,513	85.1
Yuima M.W.D.	3,056.2	80.2	755.5	19.8	3,811.7	12,792	4,140	32.4
Total and Average	116,543.9	22.2	409,509.4	77.8	526,053.3	908,964	524,775	57.7

(1) Includes production by City of San Diego for areas outside City (not in Authority).
 (2) Does not include overlapping areas as shown in Table 1.
 (3) Figures include losses from transmission and distribution system but not from reservoirs.
 (4) Per capita use excludes agricultural water use.
 (5) Does not include local water use.
 (6) Previously over-estimated population was adjusted downward.
 (7) Local water use includes Lake Sutherland water purchased from City of San Diego.
 N.A. - Not Applicable

TABLE 4-continued
WATER USE AND AUTHORITY STORAGE
FISCAL YEAR 1994-1995
Compilation of data furnished by member agencies

WATER USE PER ACRE SERVED AC.FT./ACRE/YR	ESTIMATED POPULATION	WATER USE (4) PER CAPITA AC.FT./CAP./YR	WATER USED FOR AGRICULTURAL PURPOSES				TOTAL AC.FT.	PERCENT OF AGRICULTURAL WATER TO TOTAL USE
			FROM LOCAL SUPPLY		FROM AUTHORITY			
			AMOUNT AC. FT.	PERCENT	AMOUNT AC. FT.	PERCENT		
0.71	58,000	0.22	0.0	0.0	1,468.8	100.0	1,468.8	10.4
1.19	5,057	0.26	0.0	0.0	0.0	0.0	0.0	0.0
1.34	120,034	0.18	1,082.3	29.7	2,563.3	70.3	3,645.6	14.2
0.85	26,630	0.25	61.8	1.1	5,417.1	98.9	5,478.9	45.0
1.18	231,720	0.15	0.0	0.0	0.0	0.0	0.0	0.0
1.08	55,625	0.10	0.0	0.0	0.0	0.0	0.0	0.0
1.03	148,718	0.17	0.0	0.0	2,060.3	100.0	2,060.3	7.6
0.77	49,255	0.29	0.0	0.0	756.6	100.0	756.6	6.2
0.51	102,929	0.21	0.0	0.0	0.0	0.0	0.0	0.0
0.79	132,038	0.12	0.0	0.0	844.9	100.0	844.9	4.9
--	50,000	--	--	--	--	--	--	--
0.86	46,132	0.23	0.0	0.0	438.3	100.0	438.3	4.0
1.19	14,693	0.69	0.0	0.0	10,886.3	100.0	10,886.3	51.8
0.17	33,500	0.18	0.0	0.0	1,929.2	100.0	1,929.2	23.9
0.68	26,000	0.20	0.0	0.0	542.7	100.0	542.7	9.3
1.51	1,197,676	0.17	0.0	0.0	3.3	100.0	3.3	0.0
1.24	35,590	0.16	1,180.9	100.0	0.0	0.0	1,180.9	17.3
1.00	19,887	0.51	0.0	0.0	31.8	100.0	31.8	0.3
1.32	109,735	0.15	29.3	100.0	0.0	0.0	29.3	0.2
0.82	56,080	0.18	0.0	0.0	1,960.6	100.0	1,960.6	16.6
0.73	20,324	0.36	0.0	0.0	23,388.4	100.0	23,388.4	76.0
1.14	90,455	0.20	253.7	60.6	164.7	39.4	418.4	2.2
0.92	1,870	1.50	0.0	0.0	1,004.5	100.0	1,004.5	26.4
1.00	2,622,948	0.18	2,608.0	4.7	53,460.8	95.3	56,068.8	10.7

**TABLE 5
ASSESSED VALUATION, TAX AND
WATER AVAILABILITY COLLECTIONS
FISCAL YEAR 1994-1995**

MEMBER AGENCIES	Assessed Valuation-Secured and Unsecured				Area 6/30/95 Acres	1994-95 Valuation Per Acre
	1993-94	1994-95	1994-95	1995-96		
	Total	Total	Change	Total		
Carlsbad M.W.D.	\$5,144,189,981	\$4,993,777,718	-2.9%	\$5,052,524,525	20,640	241,945
Coronado, City of (2)	-	-	0.0%	-	-	-
Del Mar, City of	781,668,486	762,130,816	-2.5%	796,709,661	1,159	657,576
Escondido, City of	2,995,045,740	2,968,354,693	-0.9%	3,077,734,767	21,569	137,622
Fallbrook	1,365,788,785	1,357,592,537	-0.6%	1,372,184,206	27,988	48,506
Helix W.D.	8,992,689,002	9,205,704,210	2.4%	9,592,072,830	31,292	294,186
National City, City of	1,318,518,707	1,394,163,818	5.7%	1,465,824,844	5,577	249,996
Oceanside, City of	5,325,309,131	6,594,264,208	23.8%	6,606,893,683	26,575	248,142
Oliverain M.W.D.	4,445,763,801	4,426,847,248	-0.4%	4,494,654,986	30,462	145,326
Otay W.D.	6,196,663,805	6,312,178,524	1.9%	6,556,630,831	63,067	100,087
Padre Dam M.W.D.	4,388,417,453	4,526,572,769	3.1%	4,689,431,929	54,539	82,997
Pendleton Military Res.	136,916,430	138,584,438	1.2%	142,002,527	134,625	1,029
Poway, City of	3,026,118,551	3,083,581,901	1.9%	3,180,274,369	23,214	132,833
Rainbow M.W.D.	1,494,183,862	1,454,508,898	-2.7%	1,404,575,266	47,260	30,776
Ramona M.W.D.	1,433,112,131	1,486,845,523	3.7%	1,539,862,918	46,524	31,959
Rincon del Diablo M.W.D.	3,035,051,965	3,015,732,245	-0.6%	3,084,303,968	10,596	284,607
San Diego, City of	63,544,933,587	64,039,222,113	0.8%	67,158,514,403	210,626	304,043
San Diegoito W.D.	2,280,386,395	2,285,983,335	0.2%	2,401,540,635	5,652	404,471
Santa Fe I.D.	3,295,936,521	3,312,087,828	0.5%	3,420,626,720	10,179	325,397
South Bay I.D.	4,179,555,555	4,254,886,309	1.8%	4,646,628,481	15,566	273,349
Vallejos M.W.D.	3,039,717,041	3,102,538,723	2.1%	3,109,034,911	28,635	108,347
Valley Center M.W.D.	1,575,688,346	1,560,583,748	-1.0%	1,575,997,271	61,022	25,574
Vista I.D. (3)	5,953,287,732	4,696,173,697	-21.1%	4,751,354,006	19,407	241,983
Yuima M.W.D.	171,646,756	174,643,886	1.7%	171,771,233	12,792	13,653
Total Authority	\$134,120,589,763	\$135,146,958,585	0.8%	\$140,291,148,970	908,964	148,682
San Diego County (1)	\$146,021,435,927	\$147,186,431,004	0.8%	\$148,764,295,593		

(1) Excluding 1,460,286 acres of non-taxable land in San Diego County
 (2) Excluded from CWA
 (3) Buena Coronado M.W.D. was dissolved and was assessed primarily to Vista Ingotian District

**TABLE 5-continued
ASSESSED VALUATION, TAX AND
WATER AVAILABILITY COLLECTIONS
FISCAL YEAR 1994-1995**

Tax Assessments To date	Tax Uncollected 6/30/95	Tax Collected	Interest & Penalties	Receipts in Lieu of Taxes	Misc. Tax	Amount Paid Total Amount		
						Total Collections To date	for service Connections to 6/30/95	Total Paid by Each Member Agency to 6/30/95
\$6,206,567	\$23,757	\$6,182,809	\$79,565	\$33,275	\$11	\$6,295,661	\$7,931	\$6,303,592
(13,331)	-	(13,331)	-	187	-	(13,145)	-	(13,145)
556,649	4,495	552,154	11,773	531	1	564,459	-	564,459
4,268,706	10,878	4,257,828	39,493	29	29	4,297,379	9,254	4,306,633
1,905,465	7,895	1,897,570	34,822	4,420	43	1,936,855	67,773	2,004,628
17,087,787	37,924	17,049,862	123,426	4,931	784	17,179,003	28,906	17,207,909
2,453,382	4,721	2,448,661	15,428	6,828	96	2,471,013	-	2,471,013
6,189,531	24,091	6,165,441	75,289	2,601	100	6,243,430	126,369	6,369,799
3,619,333	19,910	3,599,423	62,850	1,250	-	3,663,523	89,024	3,752,547
5,441,333	40,981	5,400,352	115,714	4,455	45	5,520,566	208,574	5,729,140
5,580,885	18,163	5,562,721	142,953	3,003	132	5,708,810	45,244	5,754,054
2,226,763	49	2,226,714	90	-	-	2,226,804	-	2,226,804
2,789,524	9,360	2,780,164	44,173	15	9	2,824,361	103,875	2,928,236
1,979,042	8,283	1,970,759	64,149	23,680	1	2,058,590	193,484	2,252,074
1,841,371	7,204	1,834,167	53,449	5,400	59	1,893,075	3,379	1,896,454
3,277,396	13,566	3,263,831	42,226	58,801	1	3,364,858	14,527	3,379,385
34,105,368	152,135	33,953,233	324,351	54,308,970	2,467	88,589,021	610,595	89,199,616
3,159,374	11,078	3,148,296	30,096	5,426	131	3,183,949	47,206	3,231,155
4,262,628	16,512	4,246,115	38,264	2,893	1,914	4,289,186	58,787	4,347,973
8,573,279	18,748	8,554,531	52,846	629,977	143	9,237,497	-	9,237,497
3,028,338	11,923	3,016,415	46,632	-	-	3,063,047	14,769	3,077,816
2,037,546	8,676	2,028,870	75,358	1,011	26	2,105,265	162,555	2,267,820
6,335,271	23,591	6,311,680	83,975	10,803	124	6,406,582	207,439	6,614,021
330,324	984	329,340	8,608	1,500	-	339,448	28,424	367,872
\$127,242,530	\$474,924	\$126,767,606	\$1,565,529	\$55,109,986	\$6,116	\$183,449,237	\$2,028,115	\$185,477,352

SAN DIEGO COUNTY WATER AUTHORITY

TABLE 8
SALES OF IMPORTED WATER - FISCAL YEAR 1994-1995
(All Figures in Acre-Feet Except As Noted)

MEMBER AGENCIES	JUL.	AUG.	SEPT.	OCT.	NOV.	DEC.	6 MONTH TOTAL 1994
Carlsbad M.W.D.	1,688.2	1,748.7	1,610.0	1,489.0	1,063.7	1,043.3	8,642.9
Del Mar, City Of	155.3	218.5	130.9	107.8	98.1	73.9	784.5
Escondido, City Of	2,212.1	2,260.7	1,916.6	1,525.3	1,581.3	1,556.6	11,052.6
Fallbrook P.U.D.	1,308.4	1,818.5	2,243.5	1,255.5	797.2	782.3	8,205.4
Helix W.D.	2,368.4	2,464.6	2,690.8	3,076.5	3,649.7	3,702.5	17,952.5
National City and South Bay I.D.	7.3	8.1	8.2	7.7	54.5	472.9	558.7
Oceanside, City Of	2,955.1	3,136.2	2,837.0	2,479.7	1,758.1	1,734.6	14,900.7
Olivenhain M.W.D.	1,574.6	1,646.6	1,419.4	1,362.6	862.7	799.1	7,665.0
Otay W.D.	2,497.1	2,635.9	2,433.2	2,163.2	1,516.8	1,445.5	12,691.7
Padre Dam M.W.D.	2,123.4	2,222.1	1,984.1	1,685.6	1,199.4	1,073.8	10,288.4
Pendleton Military Reservation	7.5	10.2	13.8	6.6	8.1	14.9	61.1
Poway, City Of	1,380.3	1,330.5	1,003.2	1,849.4	772.4	882.1	7,217.9
Rainbow M.W.D.	2,937.7	3,422.0	2,307.1	2,540.5	1,707.3	1,758.0	14,672.6
Ramona M.W.D.	494.0	615.6	541.6	818.4	970.9	853.4	4,293.9
Rincon Del Diablo M.W.D.	747.2	798.2	694.5	628.4	427.6	398.3	3,694.2
San Diego, City Of	18,589.2	16,237.7	13,153.7	14,424.7	10,091.2	8,980.9	81,477.4
San Dieguito W.D.	524.7	487.1	427.1	403.6	280.4	126.1	2,249.0
Santa Fe I.D.	843.3	854.9	746.4	593.9	401.8	214.4	3,654.7
Vallecitos W.D.	1,504.3	1,616.8	1,446.4	1,218.0	870.2	824.0	7,479.7
Valley Center M.W.D.	4,829.2	5,447.0	4,745.3	3,869.4	2,104.8	1,921.0	22,916.7
Vista I.D.	773.5	861.7	578.8	369.3	1,321.5	1,296.4	5,201.2
Yuima M.W.D.	162.1	205.1	169.5	121.4	69.0	26.4	753.5
Total Sales To Agencies	49,682.9	50,046.7	43,101.1	41,996.5	31,606.7	29,980.4	246,414.3
Total Sales To Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Purchased From Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Sales To Agencies and Others	49,682.9	50,046.7	43,101.1	41,996.5	31,606.7	29,980.4	246,414.3
Total To Authority Storage	275.4	400.7	349.8	624.4	942.6	704.0	3,296.9
Total From Authority Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Flow In Authority System	49,958.3	50,447.4	43,450.9	42,620.9	32,549.3	30,684.4	249,711.2
Total Evaporation From Seasonal Storage Program In Otay, Ramona, San Vicente, and Sweetwater Reservoirs	278.4	286.0	241.9	177.1	108.1	72.0	1,163.5
Total Spill Losses From CWA in Sweetwater	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Spill Losses From CWA in SV	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Spill Losses From CWA in Otay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RATE OF FLOW							
To Agencies and Others	806.0	813.9	724.3	683.0	531.2	487.6	675.2
To Authority Storage	4.5	6.5	5.9	10.2	15.8	11.4	9.0
From Authority Storage	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In Authority System	812.5	820.4	730.2	693.2	547.0	499.0	684.2

TABLE 8
Continued

JAN.	FEB.	MAR.	APR.	MAY	JUN.	6 MONTH TOTAL 1995	FISCAL YEAR TOTAL	FISCAL YEAR C.F.S.
689.0	474.4	651.5	1,046.2	1,181.2	1,322.6	5,364.9	14,007.8	19.35
72.6	72.1	40.3	64.8	115.1	140.5	505.4	1,289.9	1.78
699.6	484.2	150.3	480.7	232.7	1,106.4	3,153.9	14,206.5	19.62
352.6	971.3	178.0	1,122.4	750.5	1,082.2	4,457.0	12,662.4	17.49
2,327.6	1,666.6	866.2	767.6	1,030.1	875.0	7,533.1	25,485.6	35.20
6.3	5.7	6.5	6.0	6.6	5.6	36.7	595.4	0.82
1,060.4	1,171.1	1,132.4	1,913.8	2,337.8	2,510.9	10,126.4	25,027.1	34.57
422.7	471.8	470.6	842.0	1,051.5	1,237.0	4,495.6	12,180.6	16.80
943.0	1,078.9	1,092.3	1,661.6	1,814.3	2,118.8	8,708.9	21,400.6	29.56
731.2	893.2	841.8	1,342.9	1,294.1	1,713.0	6,816.2	17,104.6	23.63
30.2	9.2	2.4	4.3	9.1	7.9	63.1	124.2	0.17
337.7	452.0	69.7	749.5	705.5	1,001.8	3,316.2	10,534.1	14.55
488.2	558.6	301.0	1,186.6	1,533.9	2,004.8	6,073.1	20,745.7	28.66
508.9	194.9	406.5	561.5	308.1	432.4	2,412.3	6,706.2	9.26
204.3	207.2	233.7	405.9	462.7	639.1	2,152.9	5,847.1	8.08
8,450.2	7,217.2	5,617.1	10,168.7	12,883.0	13,376.1	57,712.3	139,189.7	192.26
209.6	37.3	113.2	372.9	219.2	314.4	1,266.6	3,515.6	4.86
155.2	113.8	91.7	480.2	310.3	515.5	1,666.7	5,321.4	7.35
503.8	468.2	489.6	802.1	961.2	1,127.4	4,352.3	11,832.0	16.34
181.1	737.6	393.0	1,522.1	1,915.2	3,058.0	7,807.0	30,723.7	42.44
673.5	365.6	405.0	74.6	260.2	342.0	2,120.9	7,322.1	10.11
0.0	0.0	0.0	4.1	0.0	0.0	4.1	757.6	1.05
19,047.7	17,650.9	13,552.8	25,580.5	29,382.3	34,931.4	140,145.6	386,559.9	533.95
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
19,047.7	17,650.9	13,552.8	25,580.5	29,382.3	34,931.4	140,145.6	386,559.9	533.95
249.7	736.5	501.5	589.7	756.0	587.0	3,420.4	6,717.3	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19,297.4	18,387.4	14,054.3	26,170.2	30,138.3	35,518.4	143,566.0	393,277.2	
69.0	110.4	99.2	163.0	158.2	216.7	816.5	1,980.0	
0.0	0.0	115.5	0.0	0.0	0.0	115.5	115.5	
0.0	0.0	447.2	1,119.9	1,054.1	0.0	2,621.2	2,621.2	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
309.8	306.9	220.4	429.9	477.9	587.0	390.4	533.9	
4.1	12.8	8.2	9.9	12.3	9.9	9.5	9.3	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
313.8	319.7	228.6	439.8	490.2	596.9	399.9	543.2	

TABLE 9
ASSESSED VALUATIONS AND TAX RATES
Fiscal Years 1945-46 to 1994-95

Fiscal Year	Secured Property	Public Utilities	Unsecured Property	Total	Tax Rate per \$100	
					Secured	Unsecured
1945-46	\$212,082,975	\$28,252,700	\$29,960,130	\$270,296,805	0.04	-
1946-47	208,715,150 (1)	29,433,450	30,665,910	268,814,510	0.04	0.04
1947-48	233,579,990	32,740,680	30,977,850	307,298,520	(2) 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	0.10
1950-51	306,104,930	43,595,730	44,717,740	394,418,400	0.10	0.10
1951-52	344,620,030	48,452,940	50,904,035	443,977,005	0.10	0.10
1952-53	382,948,860	53,208,220	63,996,300	500,153,410	0.12	0.10
1953-54	490,709,350	63,092,050	69,147,150	622,948,550	0.10	0.12
1954-55	546,272,880	69,243,550	79,629,790	695,146,220	0.10	0.10
1955-56	627,082,960	87,485,390	79,936,450	794,484,800	0.09	0.10
1956-57	680,824,400	101,224,260	97,950,800	879,999,460	0.09	0.09
1957-58	761,088,330	111,151,890	128,785,440	1,001,025,660	0.09	0.09
1958-59	865,283,080	128,479,290	128,124,790	1,121,887,160	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	155,140,890	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	158,714,930	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	257,951,409	2,512,409,091	0.09	0.09
1970-71	2,348,151,943	216,378,300	276,932,717	2,841,462,960	0.09	0.09
1971-72	2,755,734,087	231,191,301	306,608,099	3,293,533,487	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	503,493,623	5,415,953,104	0.11	0.11
1976-77	5,290,851,497	311,553,680	545,425,038	6,087,830,215	0.11	0.11
1977-78	6,121,884,014	376,899,840	607,393,849	7,105,157,703	0.11	0.11
1978-79	6,272,490,327	554,099,470	707,294,537	7,533,884,334	0.06	0.11
1979-80	7,624,459,863	660,454,810	837,758,367	9,122,673,040	0.04	0.06
1980-81 (4)	9,163,752,692	731,889,180	438,834,623	10,334,456,495	0.05	0.04
1981-82	41,759,646,912	3,457,486,860	1,692,548,096	46,909,681,868	0.01	0.0125
1982-83	46,670,563,147	4,136,598,170	1,971,803,569	52,778,964,886	0.00817	0.01
1983-84	50,057,533,413	5,275,693,400	2,190,834,774	57,524,061,587	0.004605	0.00817
1984-85	55,587,979,549	5,666,443,560	2,577,402,391	63,831,825,500	0.00709	0.004605
1985-86	62,444,546,244	6,086,772,100	2,856,824,972	71,388,143,316	0.00531	0.00709
1986-87	70,584,788,216	7,095,945,340	2,952,629,417	80,633,362,973	0.00461	0.00531
1987-88	78,866,134,523	7,466,884,810	3,660,711,360	89,993,730,693	0.004	0.00461
1988-89 (5)	87,712,729,304	91,081,209	4,189,167,191	91,992,977,704	0.00403	0.004
1989-90	98,726,472,817	98,688,505	4,861,091,518	103,686,252,840	0.00432	0.00403
1990-91	111,400,613,016	94,328,288	5,633,160,953	117,128,102,257	0.00395	0.00432
1991-92	120,622,046,693	144,065,193	5,289,623,758	126,057,735,644	0.00320	0.00395
1992-93	125,954,623,975	66,258,740	5,403,856,209	131,424,738,924	0.00332	0.00320
1993-94	127,958,013,175	128,934,024	5,476,380,101	133,563,327,300	0.00151	0.00332
1994-95	128,691,255,799	109,630,405	5,727,549,758	134,528,445,962	0.00135	0.00151

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

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

(3) Gross Tax Levy: Includes State Grant for Business Inventory, Homeowners Exemption, and allocation of the 1% assessment from the County of San Diego.

(4) Assessed valuation changed to full market value as determined by County Assessor.

(5) Public utilities assessed valuation and procedures revised by State Board of Equalization.

TABLE 9
TAX LEVIES AND TAX COLLECTIONS BY FISCAL YEAR
(Includes In Lieu of Taxes)
Fiscal Years 1945-46 to 1994-95

Tax Levy (\$)	Collection of Current Year's Taxes During Fiscal Year	Percentage of Levy Collected During Fiscal Year	Adjustments of Prior Year's Levies	Collection of Prior Year's Taxes During Fiscal Year	Total Tax Collections	Accumulated Delinquent Taxes	Ratio
							Accumulated Delinquent Taxes to Tax Levy
\$96,131	\$94,056	98.47	-	-	\$94,656	\$1,474	1.53
107,808	105,750	98.09	-	1,090	106,843	2,439	2.26
389,591	381,563	97.94	-	1,882	383,445	8,585	2.20
474,520	459,504	96.84	-	5,916	465,420	17,685	3.73
401,112	392,730	97.91	329	13,342	406,074	13,052	3.25
397,970	390,274	98.07	373	8,217	398,491	12,904	3.24
450,405	441,242	97.97	978	7,699	448,941	15,348	3.41
594,603	585,417	98.46	(1,140)	12,567	597,984	10,824	1.82
652,305	640,239	98.15	4,213	9,942	650,181	17,191	2.64
709,678	695,200	97.96	1,295	12,638	707,838	20,326	2.86
803,375	788,734	98.18	(2,099)	12,140	800,874	20,726	2.58
874,774	861,461	98.48	576	13,056	874,517	21,560	2.46
965,096	946,445	98.08	958	12,890	959,335	28,189	2.92
1,178,885	1,152,265	97.78	-	13,347	1,281,12	36,462	3.09
1,436,270	1,408,277	98.05	(5,274)	16,647	1,424,904	42,533	2.96
1,624,720	1,586,169	97.63	(8,720)	21,501	1,607,670	30,874	1.90
1,763,785	1,718,575	97.44	(2,276)	31,477	1,750,052	62,330	3.53
1,816,449	1,775,932	97.77	(3,688)	38,134	1,814,066	61,023	3.36
1,910,019	1,862,973	97.54	(268)	36,825	1,899,798	70,975	3.72
2,000,067	1,948,853	97.44	(6,588)	42,596	1,991,449	73,003	3.65
2,101,023	2,033,032	96.76	2,503	44,784	2,077,816	98,714	4.70
2,154,994	2,080,637	97.01	(7,164)	54,333	2,144,970	101,573	4.71
2,175,276	2,129,996	97.92	(301)	64,473	2,194,469	82,078	3.77
2,110,913	2,103,601	99.65	-	55,253	2,158,854	34,136	1.62
2,182,274	2,149,330	98.49	91,680	34,018	2,173,348	103,963	4.76
2,450,123	2,408,899	98.32	38,500	104,032	2,512,932	79,655	3.25
3,084,869	3,058,713	99.15	27,045	32,926	3,091,639	99,930	3.24
3,790,191	3,743,715	98.77	494	45,314	3,789,029	101,586	2.68
4,004,024	3,941,152	98.43	4,891	43,846	3,984,998	125,502	3.13
4,673,400	4,597,610	98.38	(4,750)	42,611	4,640,221	154,107	3.30
5,336,375	5,223,483	97.88	(17,845)	76,632	5,300,115	172,522	3.23
6,012,954	5,928,085	98.59	34,543	109,718	6,037,803	182,216	3.03
7,111,999	7,083,080	99.59	(6,021)	87,193	7,170,273	117,921	1.66
5,956,033	5,802,438	97.42	-	134,444	5,936,882	137,927	2.30
5,549,222	5,420,190	97.67	(105,757)	137,072	5,557,262	23,275	0.42
7,164,201	7,076,598	98.78	181,346	137,782	7,214,380	154,472	2.16
7,150,025	6,886,178	96.31	73,743	228,215	7,114,393	213,847	2.99
6,690,619	6,634,619	99.16	197,022	164,354	6,798,973	302,515	4.52
6,588,403	6,460,324	98.06	(47,042)	178,479	6,638,803	205,073	3.11
7,239,670	7,039,608	97.24	176,805	283,045	7,322,653	298,895	4.13
7,181,483	7,092,760	98.76	40,938	158,696	7,251,456	269,860	3.76
6,269,310	6,053,170	96.55	53,304	166,944	6,220,114	372,360	5.94
6,309,666	6,057,897	96.01	95,635	462,995	6,520,892	251,769	3.99
6,044,731	6,106,942	101.03	380,264	180,037	6,286,979	389,785	6.45
5,153,457	4,720,332	91.60	(149,325)	239,860	4,960,192	433,125	8.40
4,207,830	4,319,988	102.67	177,808	207,775	4,527,763	265,961	6.32
3,880,365	3,821,541	101.06	64,817	146,204	4,067,745	441,873	11.39
4,131,288	4,038,336	97.77	6,973	244,431	4,283,767	465,716	11.07
2,181,318	2,019,402	92.58	(1,061)	221,610	2,241,012	350,232	16.26
1,851,410	1,437,849	77.66	(4,758)	108,605	1,546,454	168,461	9.10

TABLE 10
Revenue Dedicated To Finance
Capital Improvement Program
 Fiscal Year 1994-1995

MEMBER AGENCIES	Water Availability	Accumulated	Capacity	Accumulated	Total
	Charges Collections FY 1994-95	Amount Paid By Member Agency to 6-30-95	Charges Collections FY 1994-95	Capacity Charges Collections to 6-30-95	Dedicated Revenue to 6-30-95
Calebed M.W.D.	\$333,203	\$1,798,355	\$360,602	\$1,258,793	\$3,025,148
Del Mar, City of	22,167	142,962	-	23,878	166,940
Escondido, City of	191,347	1,129,804	285,701	1,042,574	2,172,378
Fallbrook	260,570	1,535,299	50,394	286,828	1,822,127
Helix W.D.	639,607	3,731,344	126,325	800,395	4,531,739
National City, City of	93,317	497,311	-	0	497,311
Oceanside, City of	528,493	2,695,385	572,794	3,195,493	5,690,678
Oliverham M.W.D.	374,014	2,085,857	490,319	755,169	2,641,026
Otay W.D.	708,194	4,172,939	1,431,294	4,216,973	8,389,912
Padre Dam M.W.D.	850,824	3,964,259	254,760	973,155	4,937,414
Pandleton Military Res.	2,615	15,944	-	0	15,944
Poway, City of	251,790	1,553,678	4,239	258,790	1,812,458
Rainbow M.W.D.	489,662	2,869,219	75,307	447,462	3,216,661
Ramona M.W.D.	435,644	2,600,903	163,637	424,597	3,025,500
Rincon del Diablo M.W.D.	263,373	1,655,433	133	119,928	1,775,371
San Diego, City of	3,502,785	20,208,435	2,958,926	12,114,045	32,322,460
San Diego W.D.	129,194	749,405	19,464	136,285	885,690
Santa Fe I.D.	135,043	861,306	66,658	162,789	1,024,097
South Bay I.D.	281,381	1,690,004	96,306	479,028	2,169,932
Vallecitos M.W.D.	338,563	1,830,539	254,341	1,602,331	3,432,670
Valley Center M.W.D.	638,846	3,749,038	81,953	500,559	4,249,597
Vieta I.D. (1)	365,439	2,448,724	206,019	1,448,689	3,897,413
Yuma M.W.D.	77,418	529,232	-	9,832	539,064
Total Authority	\$10,933,911	\$62,483,379	\$7,498,972	\$30,258,493	\$92,741,872

(1) Buena Colorado M.W.D. was re-organized into Vieta Irrigation District in November 1993.

TABLE 11
CHEMICAL CHARACTERISTICS OF UNTREATED COLORADO RIVER WATER
Year Ending June 30, 1995
 Samples Taken From San Jacinto Tunnel West Portal
 Analysis by District Laboratory

Month	Total Hardness as mg/L CaCO ₃	Alkalinity as mg/l Total	Magnesium as mg/L	(pH)	Temperature	
				Hydrogen Ion Concen- tration	°C	°F
July	330	132	30.5	8.31	26	79
August	328	131	30.0	8.31	27	81
September	318	128	30.0	8.41	28	82
October	320	129	30.5	8.40	26	79
November	331	131	30.0	8.34	21	70
December	330	132	31.0	8.31	13	55
January	334	133	31.5	8.36	12	54
February	328	131	30.5	8.34	14	57
March	320	130	30.5	8.18	17	63
April	318	133	30.5	8.46	17	63
May	332	134	31.0	8.39	19	66
June	327	132	31.5	8.48	24	75

ANALYSIS - YEAR ENDING JUNE 30, 1995
 (mg/l Except PH, Conductivity, and Temperature)

Constituents	Symbol	Units	ANALYSIS		
			Average	Maximum	Minimum
Silica	(SiO ₂)	mg/L	9.0	11.2	7.2
Calcium	(Ca)	mg/L	80	83	77
Magnesium	(Mg)	mg/L	30.6	31.5	30.0
Sodium	(Na)	mg/L	108	112	106
Potassium	(K)	mg/L	5.0	5.1	4.8
Carbonate	(CO ₃)	mg/L	1	2	0
Bicarbonate	(HCO ₃)	mg/L	160	161	154
Sulfate	(SO ₄)	mg/L	291	308	279
Chloride	(Cl)	mg/L	95	99	92
Nitrate	(NO ₃)	mg/L	1.00	74.00	0.63
Fluoride	(F)	mg/L	0.29	0.34	0.25
Boron	(B)	mg/L	0.14	0.15	0.00
Total Dissolved Solids	(TDS)	mg/L	700	726	684
Hardness as CaCO ₃ -Total		mg/L	326	334	318
Alkalinity-Total		mg/L	131	134	128
Free Carbon Dioxide	(CO ₂)	mg/L	1.2	1.7	0.9
Hydrogen Ion Concentration	(pH)		8.36	8.48	8.18
Specific Conductance		(µohms/cm)	1094	1127	1072
Temperature (Celsius)	°C		20	28	12
Bromide	(Br)	mg/L	0.10	0.12	0.07
Total Organic Carbon	(TOC)		3.27	4.01	2.48

TABLE 12
CHEMICAL CHARACTERISTICS OF BLENDED TREATED WATER
Year Ending June 30, 1995
 Samples Taken From Skinner Filtration Plants 1&2 Effluent
 Analysis by M.W.D. Laboratory

Month	Total Hardness as mg/L CaCO ₃	Alkalinity as mg/L Total	Magnesium as mg/L	(pH)	Temperature When Sampled	
				Hydrogen Ion Concentration	°C	°F
July	255	117	24.3	8.15	27	81
August	295	122	28.5	8.11	29	83
September	292	121	28.5	8.04	27	80
October	313	120	29.0	7.84	23	73
November	327	125	31.3	7.80	17	63
December	332	126	31.5	7.86	14	56
January	326	125	31.8	7.82	13	55
February	322	121	32.0	7.87	14	57
March	319	123	31.5	7.91	16	61
April	306	122	29.5	7.87	18	64
May	267	112	26.0	7.86	20	67
June	273	110	27.0	7.70	22	72

ANALYSIS - YEAR ENDING JUNE 30, 1995
 (mg/l Except PH, Conductivity, and Temperature)

Constituents	Symbol	Unit	ANALYSIS		
			Average	Maximum	Minimum
Silica	(SiO ₂)	mg/L	9.1	11.1	7.3
Calcium	(Ca)	mg/L	72.5	81.0	62.0
Magnesium	(Mg)	mg/L	29.0	32.0	24.0
Sodium	(Na)	mg/L	103.5	112.0	91.0
Potassium	(K)	mg/L	4.7	5.0	4.3
Carbonate	(CO ₃)	mg/L	0.0	0.0	0.0
Bicarbonate	(HCO ₃)	mg/L	146.5	154.0	134.0
Sulfate	(SO ₄)	mg/L	266.1	304.0	202.0
Chloride	(Cl)	mg/L	96.8	104.0	86.0
Nitrate	(NO ₃)	mg/L	0.6	1.0	0.3
Fluoride	(F)	mg/L	0.2	0.3	0.2
Boron	(B)	mg/L	0.0	0.2	0.0
Total Dissolved Solids	(TDS)	mg/L	655.7	720.0	557.0
Hardness as CaCO ₃ -Total		mg/L	300.5	332.0	254.0
Alkalinity-Total		mg/L	120.0	126.0	110.0
Free Carbon Dioxide	(CO ₂)	mg/L	3.2	4.7	1.4
Hydrogen Ion Concentration	(pH)		7.9	8.3	7.7
Specific Conductance		µmhos/cm	1037.4	1123.0	916.0
Temperature (Celsius)		°C	20.1	29.0	12.0
Bromide	(Br)	mg/L	0.0	0.0	0.0
Total Organic Carbon	(TOC)	mg/L	2.6	3.1	0.0
Total Trihalomethanes	(THMs)	ug/L	44.2	71.0	20.0
% State Project Water	(%SPW)	%	11.2	36.0	0.0

TABLE 13
ASSESSED VALUATION 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
1947-48	546,573	3,443,212,802 (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	2,048,189	11,235,906,510	.18	.19
1958-59	2,128,333	12,070,898,070	.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	2,797,948	15,899,681,030	.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	3,061,855	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	3,132,800	45,695,542,697	.12	.13
1977-78	3,267,533	51,268,796,300	.12	.12
1978-79	3,268,337	53,573,470,118	.10	.12
1979-80	3,270,880	64,119,380,253	.09	.10
1980-81	3,272,679	69,390,300,019	.079	.09
1981-82	3,273,339	314,726,854,882 (3)	.0198% (3)	.0198% (3)
1982-83	3,277,011	353,326,259,307	.0166%	.0166%
1983-84	3,280,294	379,788,761,242	.0237%	.0166%
1984-85	3,280,954	419,859,047,899	.0150%	.0237%
1985-86	3,282,745	458,782,059,816	.0164%	.0156%
1986-87	3,286,430	505,419,663,679	.0148%	.0164%
1987-88	3,287,309	564,692,806,207	.0112%	.0148%
1988-89	3,288,247	596,900,358,958	.0110%	.0112%
1989-90	3,288,754	671,699,558,661	.0121%	.0110%
1990-91	3,291,520	750,992,673,309	.0097%	.0121%
1991-92	3,295,385	820,543,619,722	.0089%	.0097%
1992-93	3,297,760	864,768,971,806	.0089%	.0089%
1993-94	3,298,291	881,487,865,664	.0089%	.0089%
1994-95	3,297,449	887,411,880,840	.0089%	.0089%
1995-96		876,403,876,560	.0089%	.0089%

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

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

(3) Effective FY 1981-82 assessed valuation reported at 100% of full value, and tax rates levied in percentage of full assessed value.

TABLE 14
METROPOLITAN WATER DISTRICT ANNEXATION CHARGES
AND BALANCES ON AUTHORITY AREAS

Member Agencies	Date of Annexation	Remaining Balance at 6/30/95
Annexation Charges Outstanding		
Del Luz M.W.D.	6-28-67	\$3,466,540.85 *
No. 1 Annexation of 1969	10-15-69	739,134.02 *
Fallbrook P.U.D.		
Fallbrook Community Air Park	12-22-69	102,218.40 *
Olivenhain M.W.D.		
No. 1 Annexation of 1965	2-11-65	16,476.84
No. 4 Annexation of 1967	11-13-67	19,409.27
Padre Dam M.W.D.		
No. 4 Annexation of 1970	8-3-70	57,012.77
Rainbow M.W.D.		
No. 3 Annexation of 1967	12-6-67	4,058,772.75 *
No. 5 Annexation of 1973	11-22-73	6,590.94
Ramona M.W.D.		
No. 4 Annexation of 1967	11-12-67	223,921.00
No. 5 Annexation of 1972	5-17-72	305,138.11
Rincon del Diablo M.W.D.		
No. 4 Annexation of 1972	11-2-72	31,040.81 *
San Dieguito W.D.		
No. 2 Annexation of 1972	12-8-72	160,007.44 *
Valley Center M.W.D.		
No. 2 Annexation of 1967	11-26-67	19,393.62
No. 3 Annexation of 1967	11-30-67	228,452.22
Yulma M.W.D.		
No. 1 Annexation of 1967	11-21-67	13,098.59
No. 2 Annexation of 1969	11-24-69	5,798.65
Pendleton Military Res.-Nuclear Generating Plant	12-16-77	1,462,431.25
Total		\$10,915,437.53
Annexation charges received from other annexed areas		
not listed above, have no remaining balance		\$24,981,899.00

* Annual interest charge on outstanding balance is greater than tax levy based on maximum MWD tax rate of .1875% of assessed valuation (formerly .75/\$100 of A.V.).

TABLE 15
WATER SALES BY METROPOLITAN WATER DISTRICT
Fiscal Years 1941-42 to 1994-95

Year	To Member Agencies						
	Natural Water		Treated Water		Total to Agencies	To Others	Total
	Acre Feet	Percent	Acre Feet	Percent	Acre Feet	Acre Feet	Acre Feet
1941-42	0	0	9,372.6	100	9,372.6	70.7	9,443.3
1942-43	0	0	14,457.8	100	14,457.8	2,626.4	17,084.2
1943-44	0	0	15,874.9	100	15,874.9	3,301.8	19,176.7
1944-45	0	0	30,591.3	100	30,591.3	1,715.7	32,307.0
1945-46	0	0	46,685.8	100	46,685.8	1,264.2	47,950.0
1946-47	0	0	59,861.8	100	59,861.8	524.0	60,385.8
1947-48	41,093.5	36	71,995.4	64	113,088.9	116.8	113,205.7
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	96,589.6	76	130,434.9	31,582.4	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	134,823.3	41	327,368.0	58,184.5	385,552.5
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	75,812.8	539,736.9
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	6,523.2	736,417.0
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	3,577.0	1,020,551.4
1963-64	671,853.4	63	388,533.9	37	1,060,387.3	3,776.7	1,064,164.0
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	531,658.7	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	1,175,103.3	650.0	1,175,753.3
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*	655,058.0	52	593,180.0	48	1,248,238.0	955.0	1,249,193.0
1974-75*	721,970.0	54	607,013.0	46	1,328,983.0	653.0	1,329,636.0
1975-76*	735,100.0	53	653,154.0	47	1,388,254.0	994.0	1,389,248.0
1976-77*	580,124.0	40	829,773.0	60	1,389,897.0	569.0	1,390,466.0
1977-78*	508,036.0	40	757,270.0	60	1,265,306.0	22,019.0	1,287,325.0
1978-79*	434,455.0	36	777,173.0	64	1,211,628.0	24,256.0	1,235,884.0
1979-80	438,414.0	34	843,800.0	66	1,282,214.0	2,620.0	1,284,834.0
1980-81	487,833.0	33	975,177.0	67	1,463,010.0	588.0	1,463,598.0
1981-82	562,650.0	37	940,660.0	63	1,503,310.0	989.0	1,504,299.0
1982-83	314,190.0	26	912,172.0	74	1,226,362.0	207.0	1,226,569.0
1983-84	364,608.5	26	1,062,123.5	74	1,426,732.0	1,210.0	1,427,942.0
1984-85	455,061.0	29	1,119,443.0	71	1,574,504.0 **	934.0	1,575,438.0
1985-86	500,955.0	30	1,145,896.0	70	1,646,851.0 **	346.0	1,647,197.0
1986-87	568,812.9	31	1,252,783.6	69	1,821,596.5 **	1,508.0	1,823,104.5
1987-88	598,722.0	31	1,322,484.0	69	1,921,206.0 **	675.0	1,921,881.0
1988-89	745,767.3 **	35	1,362,428.6	65	2,108,195.9 **	694.0	2,108,889.9
1989-90	1,035,681.0 **	41	1,464,980.0	59	2,500,661.0 **	783.0	2,501,444.0
1990-91	889,972.0 **	39	1,373,777.0	61	2,263,749.0 **	0.0	2,263,749.0
1991-92	805,111.9 **	43	1,080,795.5	57	1,885,907.4 **	0.0	1,885,907.4
1992-93	626,133.0 **	34	1,254,896.0	66	1,911,129.0 **	0.0	1,911,129.0
1993-94	642,218.0 **	33	1,287,103.0	67	1,929,322.0 **	0.0	1,929,322.0
1994-95	469,465.7 **	29	1,123,431.9	71	1,592,897.6 **	0.0	1,592,897.6

*Revised

**Includes deliveries of reclaimed water to Las Virgenes, Coastal MWD, Long Beach and MWD of Orange Co.

**WATER DELIVERIES AND LOCAL SUPPLIES
METROPOLITAN WATER DISTRICT CONSTITUENT AREAS**
Figures furnished by Metropolitan Water District
(Acres Feet)

(1) M.W.D. Member Agencies	(2) Local Water Supply	(3) Local Water Supply	(4) Total Water Use	(5) Local Water Supply	(6) Local Water Supply	(7) Total Water Use	(8) Total Water Use	(9) Percent Difference of Totals	(10) Difference of M.W.D. Supply	(11) Percent Difference of M.W.D. Supply
	(01-03)	(04-06)	(07-09)	(10-12)	(13-15)	(16-18)	(19-21)	(22-24)	(25-27)	(28-30)
	Fiscal Year 1993-94		Fiscal Year 1994-95		Fiscal Year 1994-95		Fiscal Year 1994-95		Fiscal Year 1994-95	
Anthem	43,420	23,533	66,953	48,366	21,586	69,952	1,273	1.60%	-1,873	-7.96%
Beverly Hills	0	13,014	13,014	0	12,443	12,443	-571	-4.39%	-571	-4.39%
Bozbank	5,359	19,075	24,434	5,305	19,663	24,968	-534	-2.14%	-534	-2.14%
Calleguas M.W.D.	21,268	83,737	105,005	29,365	90,927	120,302	14,627	13.83%	7,260	8.67%
Central Basin M.W.D.	137,987	95,198	233,185	215,010	122,226	337,236	104,051	45.88%	29,043	31.18%
Chino Basin M.W.D.	135,405	48,085	183,490	155,341	29,858	185,199	11,459	6.25%	-8,477	-17.83%
Coastal M.W.D.	8,854	38,874	47,728	8,181	37,871	46,052	-1,429	-3.00%	-403	-2.32%
Compton	3,956	5,195	9,151	3,516	3,541	7,057	-48	-0.67%	-1,642	-31.77%
Eastern M.W.D. *	90,848	46,475	137,323	101,858	46,521	148,379	11,054	8.05%	46	0.10%
Foothill M.W.D.	5,758	9,028	14,786	6,329	9,698	16,027	1,241	8.43%	862	5.36%
Fulerton	19,893	10,648	30,541	23,329	8,805	32,134	-847	-2.63%	-3,793	-11.82%
Glenridge	2,156	27,275	29,431	2,368	26,477	28,845	-536	-1.82%	-798	-2.73%
Lee Virginia	1,254	18,387	19,641	1,644	17,696	19,340	-81	-0.41%	-471	-2.42%
Long Beach	13,023	58,552	71,575	19,691	50,855	70,546	-1,119	-1.59%	-6,047	-8.57%
Los Angeles	243,865	309,529	553,394	268,515	210,440	478,955	15,561	3.26%	-60,589	-12.65%
M.W.D. of Orange County	212,745	206,287	419,032	208,186	224,248	432,434	13,372	3.19%	17,351	8.70%
Pasadena	4,129	18,772	22,901	16,280	16,081	32,361	9,483	29.24%	-2,881	-8.91%
San Diego C.W.A.	128,874	404,163	533,037	118,818	366,076	514,894	-16,243	-3.06%	-8,817	-1.72%
San Fernando	2,642	799	3,441	3,393	9	3,402	-39	-1.13%	-790	-23.21%
San Marino	5,354	1,637	6,991	5,872	1,097	6,969	-22	-0.31%	360	5.16%
Santa Ana	26,262	20,501	46,763	34,830	12,338	47,168	405	0.87%	-8,163	-17.30%
Santa Monica	9,355	4,736	14,091	9,587	4,813	14,380	290	2.06%	78	0.55%
Three Valleys M.W.D. *	60,798	54,404	115,202	60,708	56,294	117,002	-1,130	-0.96%	-1,130	-0.96%
Torrance	318	20,754	21,072	318	20,754	21,072	314	1.47%	-48	-2.24%
Upper San Gabriel Valley M.W.D.	150,823	7,645	158,468	158,723	7,413	166,136	7,668	4.77%	-252	-1.55%
West Basin M.W.D.	9,952	152,608	162,560	40,956	185,544	206,500	63,960	39.35%	32,806	21.50%
Western M.W.D. of Riverside Co. *	228,536	50,858	279,394	180,176	56,073	236,249	-43,146	-14.77%	7,712	3.26%
Totals	1,871,340	1,753,689	3,625,029	1,822,111	1,792,189	3,614,300	208,271	6.02%	-81,660	-2.24%

(a.) Figures include Authority's local ground and surface water production (116,544 af) and recycled water delivered by facilities not under Metropolitan's LPP (2,274 af).
 (b.) Figures include 196,981 af treated deliveries, 196,863 af untreated deliveries and deliveries to San Onofre Power Plant (832 af) and Metropolitan's LPP (2,260 af).
 * FY 85 local production information for these agencies was not available, therefore FY 84 local production was used as a proxy.

MAJOR BOARD ACTIONS

July 14, 1994

Motion: Approved the grant of easements and authorized the General Manager to execute the documents in favor of Vallecitos Water District, subject to the receipt of quit-claims from the Vallecitos Water District.

Motion: Authorized the General Manager to execute Change Order No. 6 for \$1,311,575 for the Cowles Mountain Tunnel, Spec. 421.

Motion: Accepted Change Order Nos. 1 through 9 for \$476,711 and authorized the General Manager to execute Change Order No. 10 for \$951,230.93 and final acceptance, recording of Notice of completion and release of retainage for P4EI, (La Mesa/Lemon Grove Pipeline), Spec. 422.

Resolution: Amended Article 5 of the Administrative Code by the amendment of Section 5.2 and the addition of Article 5A to provide for the Right of Way Department.

Motion: Opposed the use of water utility fees for open space preservation for the reasons outlined and authorized staff to submit to SANDAG their revisions to SANDAG's Draft Open Space Strategy, Section 2c, "Utility User Charges."

Motion: Authorized the General Manager to execute agreements with MWD to provide funding, and with Planning and Management Consultants, Ltd. in an amount not-to-exceed \$133,440 for development and application of the CWA-MAIN Water Use Forecasting Model.

August 11, 1994

Resolution: Revised Mitigated Negative Declaration for the North County Distribution Pipeline (NCDP), approved the project and adopted the Mitigation Monitoring Plan.

- Resolution: Held a Public Hearing and approved Resolution of Necessity to condemn 20 parcels for the NCDP project.
- Motion: Authorized the General Manager to execute an amendment to the existing agreement for services with Ogden Environmental and Energy Services, Inc. for a revised total contract amount not-to-exceed \$3,838,819.
- Motion: Authorized the General Manager to enter into joint participation agreements with the following agencies: City of San Diego's Mission Bay Park Retrofit - \$35,000; City of San Diego's South Bay Influent Study - \$17,171; and the Tia Juana Valley CWD's Phase IV Groundwater Study (sponsored by the City of San Diego) - \$50,000 for a total of \$102,171.
- Resolution: Amended Article 18 of the Administrative Code, Reserve Policy and Funding Levels.
- Resolution: Established amount due for the in lieu charge as a condition of providing water service for FY 1994-95.
- Resolution: Established the vote of representatives of member agencies, as determined by the assessed valuations for fiscal 1994-95.
- Resolution: Fixed voter approved debt service tax rate levy for fiscal 1994-95.
- Motion: Authorized the General Manager to accept \$131,800 for the sale of the Bradley house in "as-is" condition with the stipulation that if the escrow fell through, he be authorized to accept the next highest bidder at \$130,678.90.
- Motion: Accepted \$69,898 offer from Rancho North County Investments (Merle Watson) for Parcel 10 of the Valley Center Pipeline project.
- Motion: Authorized the General Manager to negotiate a settlement up to \$59,210 for restoration and modification to a private drainage channel damaged during the Del

- Motion: Dios Pipeline break.
Awarded P4BII (Mission Trails Pipeline) Spec. 445 to PCL Civil Constructors, Inc. for \$12,768,136.

September 8, 1994

- Resolution: Honored Maria Velasquez upon her retirement from the Board.
- Motion: Authorized Michael Stift to attend the 17th Annual Canadian Tunnel Conference in Vancouver, British Columbia.
- Motion: Awarded bid to Marden Susco for \$125,139.71 and to Industries Supply for \$55,201.95 for purchase of various ball, plug and butterfly valves for system modifications and valve replacement program.
- Motion: Accepted Authority's offer of \$82,530 by Cecil and Nadine Eshelman for the leased fee estate on Parcel 15 and accepted Authority's offer of \$63,700 by Russell Brooks for leasehold estate on Parcel 15 for the North

County Distribution Pipeline.

- Motion: Approved contract Amendment No. 2 with Boyle Engineering, Corp. on Scripps Ranch Pipeline (Pipeline 4B, Phase I) Construction Management Services for \$227,939.64.
- Motion: Awarded Professional Services Agreement to Brown & Root, Inc. to provide in-plant pipe fabrication inspection services for the Flow Regulatory Structure and Mission Trails Pipeline (Pipeline 4B, Phase II) for \$180,000.
- Motion: Approved Amendment No. 3 to Professional Services Agreement between San Diego County Water Authority and Montgomery Watson for Construction Support Services for Mission Trails Pipeline (Pipeline 4B, Phase II) for \$100,000.
- Motion: Supported the Water Repurification Feasibility Study.

Resolution: Revised the Authority's Conflict of Interest Code.
 Resolution: Approved the Authority's Annual Statement of Investment Policy.

Motion: Authorized the General Manager to enter into an agreement with Helix Water District re use of the Authority's Gnatcatcher Mitigation Land.

October 13, 1994

Resolution: Held a Public Hearing and adopted a Resolution of Necessity condemning three parcels of land for the North County Distribution Pipeline Project.

Resolution: Honored Lawrence Carlson upon his Retirement from the Board.

Motion: Settled San Diego Superior Court Case No. N47861; Appellate Court Case No. DO16677, SDCWA v. Mireiter for \$500,000 including all costs.

Motion: Awarded Professional Services Agreements to Law/Crandall, Inc. to provide Tunnel Inspection Services and Concrete Testing Services for \$550,000, and to Ninyo & Moore to provide Geotechnical Engineering, Soils Testing and Inspection Services for \$250,000, for Construction of the Flow Regulatory Structure and Mission Trails Pipeline.

Motion: Accepted Audited Financial Statements for Fiscal Year 1993-94.

Motion: Approved the annual report on progress in implementing the Best Management Practices (BMP's) for submission to the California Urban Water Conservation Council.

Motion: Took a neutral position on Ballot Proposition re Gregory Canyon Landfill site.

Motion: Authorized the General Manager to execute the Joint Agencies Contracting Opportunities Task Force Memorandum of Understanding, effective through

February 29, 1996.

November 10, 1994

Motion: Accepted a \$65,200 counter offer from Maalouli and Suidan for Parcel NCDP-08 for the North County Distribution Pipeline.

Motion: Approved the sale of the Hughes property by sealed bid for Pipeline 4 Extension, Phase II (Lower Otay Pipeline).

Motion: Rejected all bids for Helix 3 Flow Control Facility, Pipeline 4 Extension, Phase I (La Mesa/Lemon Grove Pipeline), Specification 441.

Motion: Deleted item 5 under Program Noncompliance and approved the EBE Program Revisions as amended.

Motion: Reaffirmed the Board's position that Metropolitan's new revenue structure must include a continuing standby or parcel charge option and that outstanding issues regarding the new demand charge and the nexus study must be resolved in a manner which satisfies the conditions of the revenue structure adopted in December of 1993. Further that the proposal for consideration in December of 1994 be set forth in a written report available for full review and discussion by all affected agencies prior to final MWD Board action on the revenue structure.

Motion: Implemented the Ad Hoc Board Communications Committee recommendations, as amended.

December 8, 1994

Motion: Elected Mark Watton as Chair, Joseph Parker as Vice Chair and Sherwood Anderson as Secretary of the Board for a term of two years.

Ordinance: Established contingency plans, rules, regulations, and restrictions so that available water supplies are allocated among member agencies for the greatest public interest and benefit.

- Motion: Authorized the General Manager to execute a contract to perform a cultural resource recovery program for the Pipeline 5 Extension, Phase II Project with KEA Environmental in an amount not-to-exceed \$62,500.
- Motion: Authorized the General Manager to negotiate a final scope of work and execute a contract amendment with Katz & Associates for an amount not-to-exceed \$250,000.
- Motion: Approved contract extensions for appraisal update for Pipeline 2A Project, Valley Center Pipeline, for \$80,000.
- Motion: Accepted a negotiated amount of \$257,000 for an agreement and right of way with the Vista Valley Country Club for the NCDP.
- Motion: Authorized the General Manager to execute Utilities Agreement No. 29106 with CALTRANS for \$985,977.27 for the realignment of Pipeline 4B, Phase I at State Route 52.
- Motion: Authorized the General Manager to sign a Memorandum of Understanding with the County of San Diego for coordinated planning and management of the San Luis Rey River.
- Motion: Authorized the General Manager to fund ULFT rebates from the Authority's short term commercial paper program and to add the ULFT program to the Capital Improvement Program.
- Motion: Authorized the General Manager to enter into a Joint Participation Agreement with the City of San Diego for Phase II of the Water Repurification Study for an amount not-to-exceed \$475,000.
- Motion: Approved the staff recommendation to place a series of advertisements directed at the San Diego business community in the San Diego Business Journal and San Diego Daily Transcript at a cost of \$17,400.

- Resolution: Indicated concerns with and sought changes to the Metropolitan Water District Revenue Structure adopted by the Metropolitan Board in December of 1993.

January 12, 1995

- Resolution: Held a Public Hearing and adopted Resolution of Necessity to condemn temporary road access property to provide construction access over existing roads relating to 94 parcels for the North County Distribution Pipeline project.
- Resolution: Held a Public Hearing and adopted Resolution of Necessity to condemn temporary road access property to provide construction access over existing roads relating to 258 parcels for the North County Distribution Pipeline project.
- Resolution: Honored Ann Kulchin upon her retirement from the Board.
- Motion: Authorized the General Manager to Award a Five Year Lease Purchase Agreement with Hawthorne Equipment for one Crawler Type Tractor for \$45,243.88 per year.
- Motion: Approved an Extension to Existing Professional Services Agreement in the amount of \$60,000 with Pountney & Associates.
- Motion: Awarded Specification 456, North County Distribution Pipeline contract to L. H. Woods and Sons for \$13,264,450.
- Motion: Awarded contract for Pipeline 4 Extension, Phase I (La Mesa/Lemon Grove Pipeline), Specification 441, Helix 3 Flow Control Facility to Orion Construction Corporation for \$643,247.
- Motion: Approved Amendment No. 2 to Professional Engineering Services Agreement between SDCWA and ASL Consulting Engineers for Construction Support

Services for the North County Distribution Pipeline, Specifications 456, 457, 459 and 460 for \$100,000.

Resolution: Revised Article 13, Work Hours, Leaves of Absence, Holidays; and Article 21, Employee Relations, of the Water Authority's Administrative Code.

Motion: Authorized the General Manager to amend agreements with Center for Employment Training for a not-to-exceed amount of \$150,000 and with Triple Crown in an amount not-to-exceed \$150,000 for operations of the FY 1995 Community Based ULFT Distribution Program.

Motion: Authorized staff to evaluate the City of San Diego's SWAP (San Diego Water Assurance Plan) Proposal as described in the memo.

Motion: Adjourned the meeting to Tuesday, January 24 at 9:00 a.m. to deal with implementing MWD's revised rate structure.

January 24, 1995

Motion: Directed staff to prepare a final resolution and necessary Administrative Code modifications for implementing the new MWD rates and charges according to staff recommendation.

February 9, 1995

Resolution: Held a Public Hearing and adopted a Resolution of Necessity condemning 15 parcels for the Valley Center Pipeline (Pipeline 2A) Project.

Resolution: Honored William Hughes upon his retirement from the Board.

Motion: Authorized the General Manager to enter into joint participation agreements for Financial Assistance Programs with the 6 agencies for a total amount of \$210,400.

Motion: Authorized the General Manager to enter into an agree-

ment to provide Reclaimed Water Development Fund incentives to the City of Escondido for up to 2,800 acre-feet per year of beneficial reuse.

Motion: Authorized the General Manager to enter into a joint participation agreement with MWD and the City of Escondido for the development and utilization of reclaimed water.

Motion: Authorized staff to direct the legislative advocate to seek legislation to modify Section 8 (a) of the Act to permit the Authority to issue Certificates of Participation debt with maturities in excess of twenty years.

Motion: Approved the Authority's Strategic Plan for 1995, as reformatted.

Motion: Approved the Authority's Legislative Guidelines as amended.

Resolution: Revised Article 3, Section 3.1.2 and Article 14, Section 14.7 of the Authority's Administrative Code re emergencies and emergency contracting procedures and delegation of authority to the General Manager for emergency contracts and emergency contracting procedures.

Motion: Authorized the General Manager and General Counsel to approve final offers and to complete acquisition of right of way for Pipeline 2A and North County Distribution Pipeline at the approved appraisal or additional amount not to exceed \$50,000.

Motion: Authorized offer of \$86,800 to Ronald F. Wild and Kay Stuard Wild, as trustees of the Wild Family Trust for parcels 19A and B for the North County Distribution Pipeline.

Motion: Accepted the negotiated amount of \$299,333 for the acquisition of parcels 26, 27, 28 and 29 for Pipeline 2A and authorized the General Manager to complete an agreement with Rancho Mercados, a California General

- Motion: Partnership.
Rejected bids for 35 existing electric valve actuators.
- Motion: Authorized the General Manager to execute an agreement with Black & Veatch for preliminary and design services for Pipeline 6 for \$4,950,000.
- Resolution: Established meeting dates for the Emergency Storage Committee for 1995-96.
- Resolution: Gave notice of intention to impose MWD's new Demand Charge.
- Resolution: Gave notice of intention to impose MWD's Readiness to Serve Charge.

March 9, 1995

- Resolution: Held a public hearing and adopted water rate increases for 1995-96 by \$10, to \$80 per acre foot.
- Resolution: Held a public hearing and implemented MWD's new demand charge and their readiness to serve charge.
- Resolution: Imposed a readiness to serve charge and a new demand charge for fiscal year 1995-96.
- Resolution: Held a public hearing and declared the public interest and necessity for the acquisition of property for the P2A project generally located between the first and second aqueducts in the Valley Center area, and authorized and directed proceedings in eminent domain for the purpose of acquiring real property to be used in connection therewith on the following properties identified by the following SDCWA numbers: 7A, 47, 48, 49, 52, 52A, 58, 58A and 58B.
- Motion: Established the goals and objectives for the Water Reclamation Committee for 1995-96.
- Motion: Authorized the General Manager to request MWD conservation funds of \$4,477,000 to match proposed fiscal

- Motion: year 1996 Authority funding levels.
Accepted Action Plan for MWD issues.
- Motion: Adopted Legislative Policy Guidelines re local investments.
- Motion: Approved a license with SDG&E for the crossing of the second aqueduct right of way with transmission gas facilities.
- Motion: Added to the responsibilities and approved a change in grade for the position of Executive Assistant to the General Manager from grade 50 to grade 57.
- Motion: Authorized a 1% salary increase for the General Counsel.
- Motion: Approved an Intergovernmental Personnel Act Agreement between the Bureau of Reclamation and the San Diego County Water Authority to assign Lester A. Snow as Program Manager, Joint State-Federal Program Team, CAL FED and revised employment agreement for Lester A. Snow.
- Motion: Authorized the Chair to appoint an Ad Hoc Search Committee with authority to select an executive recruitment consultant, conduct a search and return to the Board, through the Executive Committee, with recommendations for the Authority's next General Manager.
- Motion: Authorized the expenditure of \$150,000 for emergency work to protect the first and second aqueduct crossings of the San Luis Rey River and approved the General Manager's award of a construction contract to Vadnais Corporation for an amount not to exceed \$100,000.
- Motion: Received and filed the update on the Capital Improvement Plan.
- April 13, 1995**
- Motion: Authorized additional funding for the North County

- Wildlife Forum Multi-Habitat Conservation Program in the amount of \$75,000.
- Resolution: Established the need for standby charges for fiscal year 1995-96 and set a hearing date for adoption of standby charges for fiscal year 1995-96.
- Resolution: Fixed the time and place for a public hearing regarding capacity charges.
- Motion: Rejected proposals for an integrated financial software system.
- Motion: Approved a Standard Form License for public and private utility encroachments on the right of way system and authorized the General Manager to execute the license for future utility encroachments.
- Motion: Approved the Office of Emergency Services Resolution designating the General Manager and Chief Engineer to act as the Authority's agent for the purpose of State and **Federal Disaster Assistance Applications.**
- Motion: Awarded a professional services agreement to Walls Inspection Company to provide in-plant pipe fabrication inspection services for the North County Distribution Pipeline Project, Specifications 456, 457, 459 and 460 for \$260,000.
- Motion: Awarded a professional services agreement to Agra Earth Environmental to provide geotechnical engineering, materials testing, inspection and miscellaneous specialty services for the North County Distribution Pipeline Project, Specifications 456, 457, 459 and 460 for \$396,000.
- Resolution: Requested Metropolitan Water District for informal terms and conditions for the Pampas/Pankey Annexation to the Rainbow Municipal Water District.
- Motion: Took a neutral position on AB 374 (Murray) and SB 1212 (Hughes) regarding a water board member's abil-

- ity to vote for him/herself.
- Motion: Requested SB 1173 be amended to enable the Authority to change its name as well as delete provision prohibiting member agency directors from voting for him/herself as an agency representative on the Authority.
- Motion: Directed staff to continue the current strategy of ensuring that the position of organizations to which the Authority belong reflected the current policy principles, or (2) broaden principles under the Endangered Species Act for the Board's future consideration, and (3) that staff prepare written input to be presented at the 4/26/95 Congressional hearings.
- Motion: Approved a second installment contribution of \$50,000 toward implementation of the California Urban Water Agencies Joint Bay Delta Work Program.
- May 18, 1995**
- Resolution: Held a public hearing and adopted a negative declaration establishing capacity charges for FY 1995-96.
- Ordinance: Held a public hearing and adopted a negative declaration establishing capacity charges for FY 1995-96.
- Motion: Opposed SB 771 (Lockyer) and SB 894 (Leslie) re eminent domain and right of way relocation.
- Motion: Approved expanded policy principles regarding proposed amendments to the Federal Endangered Species Act and directed staff to communicate the Board's position to those organizations of which the Authority is a member.
- Motion: Opposed SB 901 (Costa) and requested San Diego be exempted in the future, should this bill go forward, since the issue was taken care of with Prop C. and took no position on AB 1332 (Sweeney).
- Resolution: Revised the Administrative Code, Article 27, California Environmental Quality Act Implementation Guidelines.

- Resolution: Amended the Administrative Code to add Sections 3.1.3 and 3.1.4 to make the Code consistent on the General Manager's authority to appoint employees and delegate authority.
- Motion: Directed the General Counsel to return with documents amending the Administrative Code to add the Assistant General Manager Positions to the list of unclassified employees.
- Motion: Compromised a claim from Otay Water District in the amount of \$1,414,499.30.
- Motion: Authorized the General Manager to renew an agreement with the State Water Resources Control Board for staffing assistance.
- Motion: Approved final acceptance, recording of Notice of Completion and the release of retainage for San Dieguito/Santa Fe 3, 4, 5 and 6 Flow Control Facilities, Phase I, Specification 452.
- Motion: Awarded a construction contract for the North County Distribution Pipeline (NCDP), Specification 457, Regulatory Structure and NCDP 1/Rainbow 11 Flow Control Facility to Roy E. Ladd for \$7,238,640.
- June 8, 1995**
- Resolution: Honored Gerald Johnson upon his retirement from the Board.
- Resolution: Approved the Final Operating Budget and Capital Budget for Fiscal Year 1995-96 appropriating funds and establishing expenditure controls.
- Motion: Authorized the Executive Search Committee to enter into an agreement with an Executive Search Consultant to seek a new General Manager for the Water Authority.
- Motion: Approved a settlement of \$57,000 in the SDCWA v. Kurt Kuennecke, Sr., et al, San Diego Superior Court Case No. N64452.

- Motion: Approved a settlement of \$60,000 in the SDCWA v. Jeffrey C. Abel, et al, San Diego Superior Court Case No. N62983.
- Motion: Approved Joint Participation Agreement between the Metropolitan Water District, the Water Authority, and Padre Dam Municipal Water District for Local Projects Program Incentives of \$154 per acre-foot for up to 850 acre-feet of beneficial reuse per year.
- Motion: Approved Joint Participation Agreement between the Water Authority and Padre Dam Municipal Water District for Reclaimed Water Development Fund incentives of \$100 per acre-foot for up to 850 acre-feet of beneficial reuse per year.
- Motion: Authorized the General Manager to enter into an agreement with the San Diego Formation Groundwater Task Force member agencies.
- Motion: Authorized the General Manager to negotiate and execute a Professional Services Contract with the San Diego State University Foundation (SDSUF) for an amount not-to-exceed \$92,000 on behalf of the San Diego Formation Task Force member agencies for phase I investigation.
- Motion: Authorized the General Manager to execute a contract with Regional Economic Research, Inc. to perform an economic evaluation of local water resources in an amount not-to-exceed \$110,000.
- Motion: Authorized the General Manager to execute a contract with the Environmental Trust to perform Crestridge Mitigation property management services in an amount not-to-exceed \$150,000.
- Motion: Authorized the General Manager to sign agreements with MWD for receipt of up to \$135,730 in United States Bureau of Reclamation Conservation Program Funding.
- Motion: Approved the Legislative Advocate Contract with Carpi and Clay Governmental Relations be rewritten

SAN DIEGO COUNTY WATER AUTHORITY

on a month to month basis.

- Resolution: Amended Article 15 (Water Rates) and Article 16 (Service Connections and Delivery of Water) of the Administrative Code to provide for the collection of new fixed charges from MWD.
- Resolution: Amended Article 12 of the Administrative Code to add the Assistant General Manager positions to the list of unclassified employees.
- Resolution: Approved the Classification and Salary Plan, established a list of classified positions and a salary range for each position.
- Motion: Rejected bids for the purchase of a 4-wheel drive bi-directional tractor with flail boom mower.
- Motion: Awarded Parsons Brinckerhoff Construction Services a contract for \$763,000 for construction management services for the North County Distribution Pipeline, Specs 457, 459 and 460.
- Motion: Approved amendments for \$170,000 to the Brown & Root Professional Services Agreement for in-plant pipe fabrication inspection for Mission Trails and North County Distribution pipelines.
- Resolution: Approved the Negative Declaration for the Water Standby Availability Charge.
- Ordinance: Fixed a Water Standby Availability Charge on land within the boundaries of the Water Authority for FY 95-96.
- Motion: Authorized the General Manager to execute a Professional Services Agreement with McGladrey & Pullen for auditing services in an amount not-to-exceed \$40,000 for the first year, for a term of five years.
- Motion: Approved an ex-officio membership on the Authority's Board for Director Griffen through July 1996. Chair Watton appointed Directors Anderson and Krauel to arrange an affair to recognize Director Griffen's 38

SAN DIEGO COUNTY WATER AUTHORITY

FINANCIAL REPORT

JUNE 30, 1995

SAN DIEGO COUNTY WATER AUTHORITY

Financial Statements

Years ended June 30, 1995 and 1994

Contents

Independent Auditor's Report.....163

Financial Statements

Balance Sheets164

Statements of Revenues, Expenses and
Changes in Unreserved Retained Earnings166

Statements of Cash Flows167

Notes to Financial Statements169



McGLADREY & PULLEN, LLP
Certified Public Accountants and Consultants

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
San Diego County Water Authority
San Diego, California

We have audited the accompanying balance sheet of San Diego County Water Authority as of June 30, 1995, and the related statements of revenues, expenses and changes in unreserved retained earnings, and cash flows for the year then ended. These financial statements are the responsibility of the Authority's management. Our responsibility is to express an opinion on these financial statements based on our audit. The financial statements of San Diego County Water Authority for the year ended June 30, 1994 were audited by other auditors whose report, dated September 2, 1994, expressed an unqualified opinion on those statements.

We conducted our audit in accordance with generally accepted auditing standards and Government Auditing Standards issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the 1995 financial statements referred to above present fairly, in all material respects, the financial position of San Diego County Water Authority as of June 30, 1995, and the results of its operations and its cash flows for the year then ended in conformity with generally accepted accounting principles.

In accordance with Government Auditing Standards, we have also issued a report dated September 13, 1995 on our consideration of San Diego County Water Authority's internal control structure and a report dated September 13, 1995 on its compliance with laws and regulations.

San Diego, California
September 13, 1995

SAN DIEGO COUNTY WATER AUTHORITY

BALANCE SHEETS
June 30, 1995 and 1994

ASSETS	1995	1994
Current Assets		
Cash and cash equivalents (Note 3)	\$ 21,924,000	\$ 15,810,000
Accounts and taxes receivable	28,898,000	37,606,000
Inventories	7,746,000	6,653,000
Other current assets	224,000	185,000
Total current assets	58,792,000	60,254,000
Restricted cash, cash equivalents and investments (Notes 3 and 4)		
Cash and cash equivalents	11,651,000	66,379,000
Investments	173,172,000	140,518,000
	184,823,000	206,897,000
Property, plant and equipment, net (Notes 2 and 7)	565,439,000	518,726,000
Deferred compensation deposit (Note 6)	4,107,000	3,186,000
Other assets (Note 4)	7,550,000	8,112,000
	\$ 820,711,000	\$ 797,175,000

See Notes to Financial Statements.

APPENDIX C - FINANCIAL STATEMENTS

LIABILITIES AND EQUITY	1995	1994
Current Liabilities		
Accounts payable and accrued liabilities	\$ 42,662,000	\$ 45,157,000
Current maturities of long-term debt (Note 4)	14,521,000	14,101,000
Total current liabilities	57,183,000	59,258,000
Long-term debt (Note 4)	417,018,000	431,170,000
Deferred compensation (Note 6)	4,107,000	3,186,000
	421,125,000	434,356,000
Commitments (Notes 5 and 7)		
Equity		
Contributions in aid of construction	14,927,000	13,561,000
Retained earnings (Note 4):		
Reserve for rate stabilization	55,453,000	61,153,000
Unreserved	272,023,000	228,847,000
Total equity	342,403,000	303,561,000
	\$ 820,711,000	\$ 797,175,000

SAN DIEGO COUNTY WATER AUTHORITY

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN UNRESERVED
RETAINED EARNINGS

Years Ended June 30, 1995 and 1994

	1995	1994
Water sales	\$ 159,287,000	\$161,968,000
Operating expenses:		
Cost of sales	134,348,000	134,381,000
Depreciation and amortization	4,711,000	4,929,000
Operations and maintenance	3,842,000	3,290,000
Planning and reclamation	3,929,000	4,015,000
General and administrative	5,588,000	5,849,000
Write down of Pamo Reservoir Project to estimated net realizable value (Note 2)	-	2,158,000
Total operating expenses	152,418,000	154,622,000
Operating income	6,869,000	7,346,000
Other revenues (expenses):		
Property taxes and in-lieu charges (Note 1)	5,473,000	5,940,000
Water availability and capacity charges	18,253,000	18,054,000
Interest expense	(5,884,000)	(6,972,000)
Interest income	12,765,000	10,743,000
Total other revenues, net	30,607,000	27,765,000
Net income	37,476,000	35,111,000
Unreserved retained earnings at beginning of year	228,847,000	193,736,000
Transfer from reserve for rate stabilization	5,700,000	-
Unreserved retained earnings at end of year	\$ 272,023,000	\$ 228,847,000

See Notes to Financial Statements.

APPENDIX C - FINANCIAL STATEMENTS

STATEMENTS OF CASH FLOWS

Years Ended June 30, 1995 and 1994

	1995	1994
Cash Flows from Operating Activities		
Operating income	\$ 6,869,000	\$ 7,346,000
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization	4,711,000	4,929,000
Water availability and capacity charges	18,253,000	18,054,000
Loss on disposal of property and equipment	108,000	-
Write down of Pamo Reservoir Project	-	2,158,000
(Increase) decrease in:		
Accounts and taxes receivable	8,708,000	(11,732,000)
Inventories	(1,093,000)	(1,821,000)
Other current assets	(39,000)	(10,000)
Other assets	133,000	255,000
(Decrease) in accounts payable and accrued liabilities	(2,495,000)	(10,631,000)
Net cash provided by operating activities	35,155,000	8,548,000
Cash Flows from Noncapital Financing Activities		
Property taxes and in-lieu charges	5,473,000	5,940,000
Net cash provided by noncapital financing activities	5,473,000	5,940,000
Cash Flows from Capital and Related Financing Activities		Purchase of
property, plant and equipment	(51,103,000)	(54,962,000)
Contributions in aid of construction	1,366,000	4,426,000
Principal repayment of debt	(13,732,000)	(8,481,000)
Interest paid	(5,884,000)	(6,972,000)
Net cash (used in) capital and related financing activities	(69,353,000)	(65,989,000)
Cash Flows from Investing Activities		
Interest income	12,765,000	10,743,000
Proceeds from sales of investment securities	410,936,000	332,131,000
Purchases of investments	(443,590,000)	(281,817,000)
Net cash (used in) provided by investing activities	(19,889,000)	61,057,000
See Notes to Financial Statements.		

STATEMENTS OF CASH FLOWS (CONTINUED)

Years Ended June 30, 1995 and 1994

	1995	1994
Increase (decrease) in cash and cash equivalents	\$ (48,614,000)	\$ 9,556,000
Cash and cash equivalents:		
Beginning	<u>82,189,000</u>	<u>72,633,000</u>
Ending	<u>\$ 33,575,000</u>	<u>\$ 82,189,000</u>
Supplemental Disclosures of Cash Flow Information:		
Cash paid during the year for interest	<u>\$ 26,508,000</u>	<u>\$ 26,432,000</u>

See Notes to Financial Statements.

NOTES TO FINANCIAL STATEMENTS

Note 1: Nature of Business and Significant Accounting Policies

Nature of business

The San Diego County Water Authority (the Authority) was organized on June 9, 1944 under the County Water Authority Act (the Act) for the primary purpose of providing a supplemental supply of imported water to its member agencies for domestic, municipal and agricultural uses. The Authority consists of 24 member agencies which are each represented by at least one person on the Authority's Board of Directors. The Authority is a member of The Metropolitan Water District of Southern California (MWD) and historically, the Authority has purchased from MWD all the water it requires to meet the demands of the member agencies.

The Metropolitan Water District Act provides a preferential right for the purchase of water by each of the MWD constituent agencies. This preferential right is calculated using a formula and based upon such formula, the Authority has a statutory preferential right to approximately 12% of MWD's total supply. MWD, however, has never applied such criteria to limit the Authority's purchases and has a written policy to meet all the supplemental needs of each of its member agencies, including the Authority. In November of 1990, the MWD Board implemented the Incremental Interruption and Conservation Plan to allocate limited water supplies during drought years.

Basis of accounting

The Authority is accounted for as an enterprise fund (proprietary fund type). A fund is an accounting entity with a self-balancing set of accounts established to record the financial position and results of operations of a specific governmental activity. The activities of enterprise funds closely resemble those of ongoing businesses in which the purpose is to conserve and add to basic resources while meeting operating expenses from current revenues. Enterprise funds account for operations that provide services on a continuous basis and are substantially financed by revenues derived from user charges. As an enterprise fund, the Authority uses the accrual basis of accounting, revenues are recognized when earned and expenses are recognized as they are incurred. The Authority has elected not to apply Financial Accounting Standards Board Statements or Interpretations issued after November 30, 1989, as permitted by Governmental Accounting Standards.

Property taxes and in-lieu charges

The Authority is authorized under the Act to levy taxes on all taxable property within its boundaries for the purposes of carrying on its operations and paying its obligations, subject to certain limitations in the Act, the Revenue and Taxation Code and The California Constitution. The Authority levies taxes to meet its debt service requirements on its general obligation bonds.

Property taxes are levied annually by the Authority's Board of Directors as of July 1, using a lien date of March 1, and are payable by property owners in two equal installments which are due by December 10th and April 10th, respectively. The taxes levied are billed and collected by the County of San Diego and are remitted to the Authority throughout the year. Member agencies of the Authority may elect to pay in-lieu charges instead of the tax levy. Included in the accompanying statements of revenues, expenses and changes in unreserved retained earnings for the years ended June 30, 1995 and 1994, are in-lieu charges of \$614,000 and \$619,000, respectively.

Inventories

Inventories consist primarily of water in storage and are stated at the lower of cost (first-in, first-out) or market (market value - \$12,579,000 and \$11,275,000 at June 30, 1995 and 1994, respectively).

Property, plant and equipment

Depreciation is computed utilizing the straight-line method over the following estimated useful lives:

Water systems	10 to 75 years
Buildings	40 years
Other equipment	5 to 15 years
Automobiles	4 years

Compensated Absences

It is the Authority's policy to permit employees to accumulate earned but unused vacation benefits. Earned vacation pay to a maximum of 36 days (50 days for management) and 25% of accumulated sick leave may be paid upon termination of employment. Sick leave hours accrue at one day per month and employees may cash in sick leave hours (two for one) after accumulating 480 hours.

All accumulated vacation and vested sick leave pay is recorded as an expense and a liability at the time the benefit is earned.

Contributions in aid of construction

Amounts received from member agencies and other entities for construction of service connections or other facilities are included in the accompanying balance sheets as contributions in aid of construction.

Capitalized interest

The Authority capitalizes interest on self-constructed assets based on a weighted average interest rate on obligations outstanding during the period of construction. Interest earned on interest-bearing investments acquired with proceeds of related tax-exempt borrowings is offset against the interest cost in determining the maximum interest to be capitalized. Interest capitalized during the years ended June 30, 1995 and 1994 was \$20,654,000 and \$18,912,000, respectively.

Revenue policies

The principal portion of the Authority's revenues is provided by sales of water. Water is delivered to member agencies on demand and revenue is recognized at the time of delivery. The Authority also has two other separate revenue sources as part of its Capital Finance Plan to fund the Capital Improvement Program. A water availability standby charge was put into effect in fiscal 1990 and generated revenue of \$10,754,000 and \$10,896,000 for the years ended June 30, 1995 and 1994, respectively. Commencing October 1, 1990, the Authority also implemented a capacity charge on all new water meters purchased within the boundaries of the Authority, generating revenue of \$7,499,000 and \$7,158,000 in fiscal 1995 and 1994, respectively.

Included in restricted cash, cash equivalents and investments at June 30, 1995 and 1994, is approximately \$61,660,000 and \$57,737,000, respectively, identified in pay as-you-go account. This account is used for future cash expenditures for capital improvement projects and consists of water availability standby and capacity charges.

Cash and cash equivalents

Cash and cash equivalents consist of short-term highly liquid investments with maturities of 90 days or less at the date of purchase.

Investments

The market value of investments is based on quoted market prices. The carrying amounts approximate fair value.

Budgets and budgetary accounting

Annual budgets adopted by the Board of Directors provide for operations, debt service and capital expenditures of the Authority. Budgetary controls are set by the Board of Directors. The Board of Directors adopts an operating budget at the beginning of the Authority's fiscal year. The legally adopted budget requires that expenditures not exceed appropriations in total for the Authority. The Board of Directors may make appropriation adjustments to the budget during the year as deemed necessary. The Authority adhered to the prescribed budget as discussed above for the years ended June 30, 1995 and 1994.

Note 2: Property, Plant and Equipment

Property, plant and equipment is stated at cost and consists of the following:

	1995	1994
Water systems	\$ 179,750,000	\$ 177,639,000
Buildings	5,965,000	6,133,000
Automobiles and equipment	8,434,000	6,016,000
Construction in progress	423,360,000	376,784,000
	<u>617,509,000</u>	<u>566,572,000</u>
Less accumulated depreciation	52,070,000	47,846,000
	<u>\$ 565,439,000</u>	<u>\$ 518,726,000</u>

The Authority originally capitalized, in construction in progress, \$4,158,000 related to the construction of the Pamo Reservoir Project. In 1993 the Authority down graded the status of the site from a primary alternative future reservoir site to a secondary alternative site pending completion of a countywide water storage study and plan. Since Pamo was no longer a probable reservoir site, management provided an additional \$2,158,000 in 1994 to fully reserve for the estimated costs which may not be recovered in the selection of the final site.

Note 3: Cash, Cash Equivalents and Investments

The California Government code requires California banks and savings and loan associations to secure public fund deposits by pledging government securities or mortgages as collateral. The market value of pledged securities or mortgages must equal at least 110% or 150%, respectively, of public fund deposits. The carrying amounts approximate fair value because of the short maturity of these items. The Authority currently requires government securities as collateral on all its investments with such institutions.

The Authority may waive collateral requirements for deposits which are fully insured up to \$100,000 by the Federal Deposit Insurance Corporation (FDIC).

The surplus funds of the Authority may be invested in any of the following approved investments; treasury bills and/or notes; collateralized commercial bank certificates of deposit; collateralized savings and loan certificates of deposit; guaranteed investment contract deposits collateralized by direct U.S. Government obligations; State of California Local Agency Investment Fund; domestic bankers acceptances; agency securities; commercial paper; repurchase agreements; reverse repurchase agreements; and government money market funds.

Note 3: Cash, Cash Equivalents and Investments (Continued)

The Authority's investments are categorized to give an indication of the level of custodial credit risk assumed by the Authority at year-end. Category 1 includes cash deposits and investments that are insured, collateralized or registered or for which the securities are held by the Authority or its agent in the Authority's name. Category 2 includes uninsured and unregistered investments for which the securities are held by the broker's or dealer's trust department or agent in the Authority's name. Category 3 includes uninsured and unregistered investments for which the securities are held by the broker or dealer, or by its trust department or agent but not in the Authority's name and uncollateralized investments and cash deposits.

	June 30, 1995				
	Category			Total	Market
	1	2	3	Cost	Value
U.S. Treasury Securities	\$ 71,741,000	\$ -	\$ -	\$ 71,741,000	\$ 72,347,000
Agency Securities	20,616,000	-	-	20,616,000	20,634,000
Prime Commercial Paper	6,350,000	-	-	6,350,000	6,350,000
Corporate notes	5,508,000	-	-	5,508,000	5,563,000
Demand deposits, certificates of deposit, and other	2,110,000	-	179,000	2,289,000	2,289,000
	<u>\$ 106,325,000</u>	<u>\$ -</u>	<u>\$ 179,000</u>	<u>\$ 106,504,000</u>	<u>\$ 107,183,000</u>
Investments in State Treasurer's Investment Pool				19,879,000	19,879,000
Guaranteed Investment Contract Deposits				66,957,000	66,957,000
Money Market Funds				13,407,000	13,407,000
Total cash, cash equivalents and investments				206,747,000	\$ 207,426,000
Less:					
Restricted cash, cash equivalents and investments				184,823,000	
Current unrestricted cash and cash equivalents				<u>\$ 21,924,000</u>	

Note 4: Long-Term Debt

Long-term debt consists of the following:

	1995	1994
Water revenue certificates of participation and general obligation bonds, including an arbitrage rebate liability of \$194,000	\$ 431,364,000	\$ 444,994,000
Other	175,000	277,000
Total long-term debt	431,539,000	445,271,000
Less amounts due within one year	14,521,000	14,101,000
	<u>\$ 417,018,000</u>	<u>\$ 431,170,000</u>

1993 Water Revenue Refunding Certificates of Participation

To provide funds for the refunding of the 1989A Water Revenue Certificates of Participation, the Authority issued the 1993A Certificates in February, 1993 in the aggregate principal amount of \$135,650,000. The Series 1993A Current Interest Certificates, with an aggregate principal amount of \$85,050,000, carry interest rates ranging from 3.50 to 5.50% payable semi-annually on May 1 and November 1. These certificates mature serially between May 1, 1994 and May 1, 2005 and are not subject to prepayment. The series 1993A Floating Auction Tax Exempts (the Floats), with an aggregate principal amount of \$25,300,000 carry an initial interest rate of 2.83% payable every 28 days. The Floats are due April 22, 2009 and are subject to mandatory sinking fund payment prior to maturity at an amount equal to the principal amount plus accrued interest without premium. The 1993A Residual Interest Tax Exempt Securities (the Rites) with an aggregate principal amount of \$25,300,000 carry interest rates ranging from 8.25% to 8.50% payable every 28 days. The Rites mature serially between April 26, 2006 and April 22, 2009 and are not subject to mandatory prepayment.

Included in Certificates of Participation at June 30, 1995 and 1994 is \$126,600,000 and \$131,200,000, respectively.

The Certificates require that a reserve be maintained in an amount equal to the lesser of \$13,565,000, 100% of the maximum annual installment payments or 125% of average annual installment payments. A surety bond has been obtained by the Authority and issued in satisfaction of this requirement.

The 1993 Certificates were issued to defease the 1989A Certificates and the liability for those bonds has been removed from the balance sheet. The net proceeds of \$132,601,000 plus an additional amount of \$19,915,000 of the 1989A Certificates reserve funds and other monies were used to purchase U.S. Government securities. Those securities were deposited in an irrevocable trust with an escrow agent to provide for all future debt service payments on the 1989A Certificates.

Note 4. Long-Term Debt (Continued)**1991 Water Revenue Certificates of Participation**

To provide funds for the acquisition and construction of water system improvements, the Authority issued Series 1991A and 1991B Water Revenue Certificates of Participation in November, 1991 in the aggregate principal amount of \$300,000,000. The Series 1991A Certificates, with an aggregate principal amount of \$163,300,000 carry interest rates ranging from 5.20% to 6.40% payable semi-annually on May 1 and November 1. These Certificates mature serially between May 1, 1995 and May 1, 2008 and may be redeemed, at the option of the Authority, at premiums decreasing from 2% in 2001 to 1% in 2003 (hereafter at par). Included in Certificates of Participation at June 30, 1995 and 1994 is \$155,375,000 and \$163,300,000, respectively. The Series 1991B Certificates consist of Short-Term Auction Rate and Complementary Auction Rate Certificates in the aggregate principal amount of \$136,700,000 with interest at 6.30% payable on Thursday, December 12, 1991 and each successive fifth Thursday thereafter. These Certificates mature as follows: 2011 - \$56,700,000 and 2021 - \$80,000,000.

The Certificates require that a reserve be maintained in an amount equal to the lesser of \$25,644,000, 100% of the maximum annual payments, or 125% of the average annual payments. Included in restricted cash, cash equivalents and investments is \$25,644,000 at June 30, 1995 and 1994, which represents the required reserve, and \$41,313,000 and \$69,168,000, respectively, which represents unexpended proceeds of the Certificates.

1966 Waterworks General Obligation Bonds

During 1968 the Authority issued General Obligation Bonds in the aggregate principal amount of \$30,000,000 with interest rates ranging from 4.50% to 5.50% payable semi-annually on April 1, and October 1, for the construction of a second pipeline to the second aqueduct. The bonds mature serially through October 1, 2003 and may be redeemed on or after October 1, 1980 at premiums decreasing from 3.50% in 1980 to 0.50% in 2002. Included in Certificates of Participation and General Obligation Bonds at June 30, 1995 and 1994 is \$12,495,000 and \$13,600,000, respectively.

Note 4. Long-Term Debt (Continued)

Certain outstanding debt agreements require the Authority to maintain a minimum level of operational earnings. Exclusive of the tax revenue and debt servicing costs associated with voter-approved general obligation bonds and other voter-approved debt, net water revenues, as defined by the agreements, must equal or exceed 120% of all other debt servicing costs (principal and interest). The Authority was in compliance with all of its covenants, including meeting its debt service ratio requirement.

In fiscal 1990, the Authority established a water rate stabilization fund for the purpose of identifying amounts available to mitigate future water rate increases. The Authority will transfer portions of its net water revenues (as defined) which exceed its debt service ratio requirement, into the rate stabilization fund and from time to time transfer amounts from its rate stabilization fund into net water revenues to meet its debt service ratio requirements. During the year ended June 30, 1995, the Authority transferred \$5,700,000 from the rate stabilization fund. As of June 30, 1995 and 1994, the balance in this fund, which is included in restricted cash, cash equivalents and investments, totaled \$55,453,000 and \$61,153,000, respectively, and is also reflected as reserved retained earnings in the accompanying balance sheets.

For the years ended June 30, 1995 and 1994, the Authority's actual debt service ratio is calculated as follows:

	1995	1994
Net water revenues (as defined)	\$ 46,431,000	\$ 47,162,000
Transfer from rate stabilization fund	5,700,000	
	<u>\$ 52,131,000</u>	<u>\$ 47,162,000</u>
Debt service requirements (principal and interest)	<u>\$ 38,397,000</u>	<u>\$ 29,805,000</u>
Debt service ratio (as defined)	<u>136%</u>	<u>158%</u>

Included in other assets are deferred financing costs of \$6,999,000 and \$7,423,000, net of accumulated amortization, at June 30, 1995 and 1994, respectively. The deferred financing costs are being amortized over the life of the related obligations.

Note 4. Long-Term Debt (Continued)

The aggregate principal and interest payments on long-term debt at June 30, 1995 are as follows:

	Principal Payment	Interest Payment	Total Debt Service
1996	\$ 14,520,000	\$ 25,023,000	\$ 39,543,000
1997	15,035,000	24,312,000	39,347,000
1998	15,801,000	24,370,000	40,171,000
1999	16,618,000	22,713,000	39,331,000
2000	17,465,000	22,861,000	40,326,000
Thereafter	352,100,000	183,207,000	535,307,000
	<u>\$ 431,539,000</u>	<u>\$ 302,486,000</u>	<u>\$ 734,025,000</u>

Note 5. Retirement Plan**Public Employees Retirement System Plan Description**

The Authority is a member of the California Public Employees' Retirement System (PERS), an agent multiple-employer pension system that acts as a common investment and administrative agent for participating public entities within the State. The Authority's total covered payroll for employees participating in PERS for the fiscal years ended June 30, 1995 and 1994 is \$7,638,000 and \$7,720,000, respectively. The Authority's total payroll is \$8,578,000 and \$8,042,000 for the years ended June 30, 1995 and 1994, respectively.

All permanent employees of the Authority are eligible to participate in PERS upon entry into employment. Retirement benefits vest after five years of service and PERS also provides death and disability benefits. Retirement benefits are based on the highest annual salary and years of credited service.

Employee and employer contributions

Both the Authority and the employees are required to contribute to PERS. The Authority pays its share and the entire portion of the employees' share. The employee rate of 7% is set by statute and therefore, generally remains unchanged from year to year. The Authority is required to contribute the remaining amounts necessary to fund the benefits for its members, using the actuarial basis recommended by PERS actuarial consultants and adopted by the PERS Board of Administration.

Note 5. Retirement Plan (Continued)**Funding status and progress**

The amount shown below as the "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases and step-rate benefits, estimated to be payable in the future as a result of employee service to date. The measure is intended to help users assess the funding status of PERS on a going concern basis, assess the progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among employers. The measure is the actuarial present value of credited projected benefits and is independent of the funding method used to determine contributions to PERS.

The 1995 PERS information relating to funding status, progress, actuarially determined contribution requirements and trend information is not available as of the issuance of the Authority's audited financial statements. The most recently available information has been provided.

The pension benefit obligation was computed as part of an actuarial valuation performed as of June 30, 1993, but reflects all Plan amendments adopted through June 30, 1995. Significant actuarial assumptions used in the valuation include the following: (a) a rate or return on the investment of present and future assets of 8.75% a year, compounded annually; (b) projected salary increases attributable to inflation of 4.5% per year compound annually; (c) additional projected salary increases of 2.5% per year, attributable to seniority/merit; and (d) no post retirement benefit increases. The change in benefit obligation due to changes in actuarial assumptions is due primarily to a change in the mortality rate used in actuarial calculations.

The total unfunded pension benefit obligation applicable to the Authority's employees was \$468,000 at June 30, 1993 and is computed as follows:

Pension benefit obligations:

Pension benefit obligations:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 5,937,000
---	--------------

Current employees:

Accumulated employee contributions, including allocated investment earnings	2,628,000
Employer-financed vested	2,772,000
Employer-financed nonvested	588,000
Total pension benefit obligation	<u>11,925,000</u>

Net assets available for benefits at cost (market value is \$13,664,000)	11,457,000
Unfunded pension obligation	<u>\$ 468,000</u>

Changes in the pension benefit obligation due to:

Changes in actuarial assumptions	<u>\$ (133,000)</u>
----------------------------------	---------------------

Note 5. Retirement Plan (Continued)**Actuarially determined contribution requirements and contributions made**

PERS uses the Entry-Age Normal actuarial cost method. As a projected benefit cost method, it takes into account those benefits that are expected to be earned in the future as well as those already accrued. The normal cost for an employee is the level amount which would fund the projected benefit if it were paid annually from the date of employment until retirement. PERS uses a modification of the Entry-Age method in which the Authority's total normal cost is expressed as a level percentage of payroll. PERS uses this same method to amortize any unfunded actuarial liabilities. The amortization period of the unfunded liability ends in the year 2000.

The significant actuarial assumptions used to compute the actuarially determined contribution requirements are the same as those used to compute the pension benefit obligation, as previously described.

The contributions to PERS for 1995 were \$1,272,000. The contributions to PERS for 1994 and 1993 of \$1,251,000 and \$1,160,000, respectively, were made in accordance with actuarially determined requirements computed through an actuarial valuation performed as of June 30, 1993 and 1992, respectively. The contributions consisted of \$1,081,000 and \$953,000 normal costs (14.00% and 13.87% of current covered payroll) and \$170,000 and \$207,000 amortization of the unfunded actuarial accrued liability (2.28% and 3.01% of current covered payroll), respectively.

Note 5. Retirement Plan (Continued)**Trend information**

Trend information gives an indication of the progress made in accumulating assets to pay benefits when due. Systemwide, ten year trend information is not yet available.

Fiscal year ending	(1)	(2)	(3)	(4)	(5)	(6)
	Net assets available for benefits (at cost) (thousands)	Pension Benefit Obligation (thousands)	Percentage Funded (1)/(2)	Unfunded Pension Benefit Obligation (2) - (1) (thousands)	Annual Covered Payroll (thousands)	Unfunded Pension Benefit Obligation as a Percentage of Covered Payroll (4)/(5)
June 30						
1987	\$4,812	\$5,996	80.30%	\$1,184	\$2,067	57.3%
1988	5,527	6,483	85.30	956	2,448	39.1
1989	6,565	7,499	87.50	934	2,647	35.3
1990	7,684	8,719	88.10	1,035	3,501	29.6
1991	8,628	9,781	88.20	1,153	4,342	26.6
1992	9,862	10,699	92.20	837	5,599	14.9
1993	11,457	11,925	96.10	468	6,871	6.8
1994	Not available					

Analysis of dollar amounts of net assets available for benefits, pension benefit obligation, and unfunded pension benefit obligation in isolation can be misleading. Expressing the net assets available for benefits as a percentage of the pension benefit obligation provides one indication of the funding status on a going-concern basis. Analysis of this percentage over time indicates whether the Fund is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the fund. Trends in the unfunded pension benefit obligation and annual covered payroll are both affected by inflation. Expressing the unfunded pension benefit obligation as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids in the analysis of progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the Fund.

For fiscal 1995, 1994 and 1993, the Authority's contributions to the System, all made in accordance with actuarially determined requirements, were 16.7 percent, 16.2 percent, and 16.9 percent, respectively, of annual covered payroll.

Note 6: Deferred Compensation Plan

The Authority has adopted and administers a deferred compensation plan in accordance with Section 457 of the Internal Revenue Code. Generally, all eligible employees may defer receipt of a portion of their salary until future years. Once deferred, the compensation is not available to the employees until termination, retirement, death or unforeseeable emergency. The employees are not liable for income taxes on amounts deferred until the funds are withdrawn. At June 30, 1995 and 1994, assets of the plan totaled \$4,107,000 and \$3,186,000, respectively.

All compensation deferred under the plan, all assets purchased with the deferred amounts and all income attributable to these amounts or assets (until paid or made available to the employee or other beneficiary) are the sole property of the Authority, subject to the claims of the Authority's general creditors. Participants' rights to deferred amounts under the plan are equal to those of the general creditors of the Authority.

Note 7: Commitments

The Authority is a participant in the Association of California Water Agencies Joint Powers Insurance Authority (JPIA) for the purpose of providing general liability insurance for the member agencies. In addition, the Authority maintains excess insurance coverage. The Authority has a self-insured retention level of \$25,000 per claim and the total coverage limit is \$20,000,000. The Authority participates in the liability program. The losses are estimated based on outstanding claims and the estimated liability to the Authority.

The Authority is also a participant in the JPIA and maintains excess insurance coverage for workers' compensation. Liabilities under this program are accrued and charged to expense when the claims are reasonably determinable and when the existence of the Authority's liability is probable. The Authority's self insurance retention is \$15,000 per accident/per employee and the total coverage limit is \$5,000,000.

The amount of settlements did not exceed insurance coverage for the past three years for either JPIA coverage.

The Authority is committed to a long-range effort to increase the present aqueduct capacity, obtain additional water from MWD, provide additional storage within the county and maximize the use of existing storage reservoirs. The Authority estimates that the cost of the Capital Improvement Program (the Program) will range from approximately \$838 to \$988 million and will be expended over the next ten

years. Included in the Program estimate is \$450 to \$600 million for new storage facilities. Based upon the nature of the storage facilities actually selected and the sites thereof, however, the costs of such new storage facilities could substantially increase. A combination of debt and funding from operations will be used to fund these requirements. The ratio used will be that which provides the overall lowest cost of financing and lowest water rates.

The Authority has outstanding signed construction contract commitments in excess of \$40,000,000 as of June 30, 1995.

Note 8: Pronouncement Issued But Not Yet Adopted

In November 1994, the Governmental Accounting Standards Board issued Statement of Governmental Accounting Standards No. 27, "Accounting for Pensions by State and Local Governmental Employers." This Statement establishes standards for measurement, recognition, and display of pension expense and related liabilities, assets and disclosures in the financial statements of state and local government employers. Statement No. 27 is required to be adopted for years beginning after June 15, 1997, with early implementation encouraged. The Authority has not completed its assessment of the effect that the adoption of Statement No. 27 will have on its financial statements.

