

THE
METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA



ANNUAL REPORT
2010



The ozone generation building at the Robert A. Skinner Water Treatment Plant, with the chemical symbol for ozone in the foreground.

**THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA**

ANNUAL REPORT FOR THE FISCAL YEAR

July 1, 2009 to June 30, 2010



LOS ANGELES, CALIFORNIA
2010

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LIST OF ABBREVIATIONS

Abbreviation	Term
AB	Assembly Bill
AF	Acre-feet or acre-foot
BDCP	Bay Delta Conservation Plan
CEQA	California Environmental Quality Act
CalPERS	California Public Employees Retirement System
CESA	California Endangered Species Act
CFO	Chief Financial Officer
CIP	Capital Investment Plan
CPP	Community Partnering Program
CRA	Colorado River Aqueduct
CY	Calendar year
DART	Days Away, Restrictions and Transfers
D/DBP	Disinfectants/Disinfection Byproducts
DOE	U.S. Department of Energy
DOI	U.S. Department of Interior
DRIP	Desalination Research and Innovation Partnership
DTSC	California Department of Toxic Substances Control
DVL	Diamond Valley Lake
DWR	Department of Water Resources
EIR	Environmental Impact Report
EOC	Emergency Operations Center
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FY	Fiscal year
HAA5	Five haloacetic acids
IID	Imperial Irrigation District
IRP	Integrated Water Resources Plan
LEED	Leadership in Energy and Environmental Design
LRP	Local Resources Program
MAF	Million acre-feet
MIB	Methylisoborneol
MOU	Memorandum of Understanding
NWRI	National Water Research Institute

LIST OF ABBREVIATIONS

Abbreviation	Term
NDEP	Nevada Division of Environmental Protection
NDMA	N-Nitrosodimethylamine
NEPA	National Environmental Policy Act
O&M	Operations & Maintenance
ORP	Oxidation Retrofit Program
OSHA	Occupational Safety and Health Administration
PERB	Public Employment Relations Board
PCCP	Pre-stressed concrete cylinder pipe
PPCP	Pharmaceuticals and Personal Care Products
PVID	Palo Verde Irrigation District
QSA	Quantification Settlement Agreement
R&R	Replacement and Refurbishment
RAA	Running Annual Average
RO	Reverse osmosis
SCADA	Supervisory Control and Data Acquisition System
SDCWA	San Diego County Water Authority
SWC	State Water Contractors
SWP	State Water Project
T&O	Taste and odor
TDS	Total dissolved solids
TOC	Total organic carbon
TTHM	Total trihalomethane
WSAP	Water Supply Allocation Plan
WSO	Water System Operations



The new East Lake Skinner Bypass Pipeline screening structure.



Metropolitan arranges the lights of Union Station headquarters in a heart-shaped pattern as part of the American Heart Association's "Go Red" campaign during February 2010.

About Metropolitan

The Metropolitan Water District of Southern California is a regional wholesaler that delivers water to 26 member public agencies serving 19 million people living in Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura counties.

Metropolitan is governed by a 37-member board of directors representing the 26 member agencies consisting of 14 cities, 11 municipal water districts and one county water authority, which collectively serve the residents and businesses of more than 300 cities and numerous unincorporated communities.

Metropolitan directors are selected by their respective member agencies and may serve on the board of that particular member agency. It is a diverse group drawn from a variety of sectors, including business, government, academia, engineering and agriculture. The board operates under a weighted voting system, with voting share determined by assessed property valuation.

The mission of Metropolitan is to provide its 5,200-square-mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

To supply Southern California with reliable and safe water, Metropolitan owns and operates an extensive range of capital facilities including the Colorado River Aqueduct, 16 hydroelectric facilities, nine reservoirs, nearly 1,000 miles of large-scale pipes and five water treatment plants. Four of these treatment plants are among the 10 largest plants in the world. In fact, Metropolitan is the largest distributor of treated drinking water in the United States.

The district imports water from the Colorado River and Northern California to supplement local supplies, and helps its member agencies develop increased water conservation, recycling, storage and other local resource programs.

Metropolitan was established in 1928 under an act of the state Legislature to construct and operate the 242-mile Colorado River Aqueduct, which runs from an intake at Lake Havasu on the California-Arizona border, to an endpoint at Metropolitan's Lake Mathews reservoir in Riverside County.

When Metropolitan began delivering water, its service area consisted of approximately 625 square miles. Its service area has increased by 4,575 square miles since that time. The expansion is primarily the result of annexation of the service areas of member agencies.

In 1960, Metropolitan, along with 30 other public agencies, signed a long-term contract that made possible the construction of the State Water Project's 444-mile California Aqueduct, which currently serves urban and agricultural agencies from the San Francisco Bay Area to Southern California. As the largest of the now-29 contractors, Metropolitan contracts with the state Department of Water Resources, which operates the SWP, for slightly less than half of all State Water Project supplies.

Water supplies from the State Water Project travel to Southern California via the California Aqueduct. Metropolitan also has ground-water banking partnerships and water transfer arrangements that secure additional supplies, and provides financial incentives to its member agencies for local investments in water management projects and programs. An increasing percentage of Southern California's water supply comes from these local resources, including: conservation, water recycling and recovered groundwater.

Metropolitan's Board of Directors typically meets on the second Tuesday of each month. Board committee meetings usually occur on the Monday preceding the board meeting, and the second and fourth Tuesday of the month. Board and committee meetings are open to the public and are broadcast on the Internet through Metropolitan's Web site, www.mwdh2o.com. A schedule of board and committee meetings is available on the Web.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MUNICIPAL WATER DISTRICTS

Calleguas	Orange County
Central Basin	Three Valleys
Eastern	Upper San Gabriel Valley
Foothill	West Basin
Inland Empire	Western of Riverside County
Las Virgenes	

MEMBER CITIES

Anaheim	Glendale	San Marino
Beverly Hills	Long Beach	Santa Ana
Burbank	Los Angeles	Santa Monica
Compton	Pasadena	Torrance
Fullerton	San Fernando	

SAN DIEGO COUNTY WATER AUTHORITY

Calleguas MWD
 Berylwood Heights Mutual Water
 Brandeis Mutual
 Butler Ranch
 California American Water Company
 California Water Service Company
 Camarillo
 Camrosa Water District
 Crestview Mutual Water Company
 Golden State Water Company
 Lake Sherwood Community Services District
 Oak Park Water Service
 Oxnard
 Pleasant Valley Mutual Water Company
 Simi Valley
 Solano Verde Mutual Water Company
 Thousand Oaks
 Ventura Co. Water Works Dist. (Nos.1 and 19)
 Zone Mutual Water Company

Central Basin MWD
 Bell Gardens
 Bellflower-Somerset Mutual Water Co.
 California Water Service Company
 Cerritos
 Commerce
 Downey
 Golden State Water Company
 Huntington Park
 La Habra Heights County Water District
 Lakewood
 L.A. County Rancho Los Amigos
 Lynwood
 Maywood Mutual Water Co. Nos. 1, 2 and 3
 Montebello
 Norwalk
 Orchard Dale Water District
 Paramount

Park Water Company
 San Gabriel Valley Water Company
 Santa Fe Springs
 Signal Hill
 South Gate
 Suburban Water Systems
 Vernon
 Walnut Park Mutual Water Company
 Water Replenishment District of So. Cal.

Eastern MWD
 Hemet
 Lake Hemet Municipal Water District
 Nuevo Water Company
 Perris
 Rancho California Water District
 San Jacinto

Foothill MWD
 Crescenta Valley Water District
 La Canada Irrigation District
 Las Flores Water Company
 Lincoln Avenue Water Company
 Mesa Crest Water Company
 Rubio Canon Land & Water Assoc.
 Valley Water Company

Inland Empire Utilities Agency
 Chino
 Chino Hills
 Cucamonga Valley Water District
 Fontana Water Company
 Monte Vista Water District
 Ontario
 San Antonio Water Company
 Upland
 Water Facilities Authority

MWD of Orange County
 Brea
 Buena Park
 East Orange County Water District
 El Toro Water District
 Emerald Bay Service District
 Fountain Valley
 Garden Grove
 Golden State Water Company
 Huntington Beach
 Irvine Ranch Water District
 La Habra
 La Palma
 Laguna Beach County Water Dist.
 Mesa Consolidated Water District
 Moulton Niguel Water District
 Newport Beach
 Orange
 Orange County Water District
 San Clemente
 San Juan Capistrano
 Santa Margarita Water District
 Seal Beach
 Serrano Water District
 South Coast Water District
 Trabuco Canyon Water District
 Tustin
 Westminster
 Yorba Linda Water District

San Diego County Water Authority
 Carlsbad Municipal Water District
 Del Mar
 Escondido
 Fallbrook Public Utility District
 Helix Water District
 Lakeside Water District
 National City

Oceanside
 Olivenhain Municipal Water District
 Otay Water District
 Padre Dam Municipal Water District
 Camp Pendleton Marine Corps Base
 Poway
 Rainbow Municipal Water District
 Ramona Municipal Water District
 Rincon del Diablo Municipal Water District
 San Diego
 San Dieguito Water District
 Santa Fe Irrigation District
 Sweetwater Authority
 Vallecitos Water District
 Valley Center Municipal Water District
 Vista Irrigation District
 Yuima Municipal Water District

Three Valleys MWD
 Boy Scouts of America, Firestone Ranch Reserv.
 Cal Poly Pomona
 Covina
 Covina Irrigating Company
 Glendora
 Golden State Water Co. (San Dimas & Claremont)
 La Verne
 Mt. San Antonio College
 Pomona
 Rowland Water District
 Suburban Water Systems
 Valencia Heights Water Company
 Walnut Valley Water District

Upper San Gabriel Valley MWD
 Arcadia
 Azusa
 Monrovia
 Main San Gabriel Basin Watermaster/Alhambra

Golden State Water Company
 South Pasadena
 Suburban Water Systems
 Valley County Water District

West Basin MWD
 California American Water Co. (L.A. Division)
 California Water Service Company
 Golden State Water Company
 El Segundo
 Inglewood
 Lomita
 Los Angeles County Waterworks District #29
 Manhattan Beach
 Water Replenishment Dist. of Southern California

Western MWD of Riverside County
 Box Springs Mutual Water Company
 Corona
 Eagle Valley Mutual Water Company
 Elsinore Valley MWD
 Lee Lake Water District
 Norco
 Rancho California Water District
 Riverside

Contracting Agencies
 Alhambra
 Arvin Edison
 Azusa
 Chiriaco Summit Water District
 Coachella Valley Water District
 Desert Water Agency
 Monterey Park
 San Gabriel Basin Water Quality Authority
 San Gabriel Valley Municipal Water District
 Sierra Madre
 Western Water Company

Figure 1. Composition of The Metropolitan Water District of Southern California

DIRECTORS
JUNE 30, 2010



Chairman
Timothy F. Brick
Pasadena



Vice Chair
Anthony R. Fellow
*Upper San Gabriel
Valley Municipal
Water District*



Vice Chair
John W. Murray Jr.
Los Angeles



Vice Chair
Angel Santiago
*Inland Empire
Utilities Agency*



Vice Chair
Fern Steiner
*San Diego County
Water Authority*



Secretary
Judy Abdo
Santa Monica

DIRECTORS
JUNE 30, 2010



Linda Ackerman
*Municipal Water
District of
Orange County*



Yvonne Arceneaux
Compton



Sylvia Ballin
San Fernando



Brett R. Barbre
*Municipal Water
District of
Orange County*



James M. Barrett
*San Diego County
Water Authority*



James H. Blake
Fullerton



Glenn A. Brown
Burbank



David D. De Jesus
*Three Valleys
Municipal Water
District*



Larry D. Dick
*Municipal Water
District of
Orange County*



James T. Edwards
*Foothill Municipal
Water District*



Thomas P. Evans
*Western Municipal
Water District of
Riverside County*



David W. Fleming
Los Angeles

DIRECTORS
JUNE 30, 2010



John V. Foley
*Municipal Water
District of
Orange County*



Laura Friedman
Glendale



Ted Grandsen
*Calleguas Municipal
Water District*



Gloria Gray
*West Basin Municipal
Water District*



Daniel E. Griset
Santa Ana



Aaron A. Grunfeld
Los Angeles



Phillip D. Hawkins
*Central Basin
Municipal Water
District*



Keith Lewinger
*San Diego County
Water Authority*



Edward C. Little
*West Basin Municipal
Water District*



Suja Lowenthal
Long Beach



John T. Morris
San Marino



Kristine L. Murray
Anaheim

DIRECTORS
JUNE 30, 2010



Glen D. Peterson
*Las Virgenes
Municipal Water
District*



W. D. "Bud" Pocklington
*San Diego County
Water Authority*



Jesús E. Quiñonez
Los Angeles



Randy A. Record
*Eastern Municipal
Water District*



Edward C. Vasquez
*Central Basin
Municipal Water
District*



Bill D. Wright
Torrance



Robert Wunderlich
Beverly Hills

BOARD OF DIRECTORS
July 1, 2009 to June 30, 2010

OFFICERS OF THE BOARD

Chairman.....	Timothy F. Brick
Vice Chair.....	Marcie L. Edwards
Vice Chair.....	Anthony R. Fellow
Vice Chair.....	John W. Murray Jr.
Vice Chair.....	Fern Steiner
Secretary	Judy Abdo

MEMBERS OF THE BOARD

Anaheim.....	Marcie L. Edwards
Anaheim.....	Kristine L. Murray
Beverly Hills.....	Robert Wunderlich
Burbank.....	Glenn A. Brown
Calleguas Municipal Water District	Ted Grandsen
Central Basin Municipal Water District	Robert Apodaca
Central Basin Municipal Water District	Edward C. Vasquez
Central Basin Municipal Water District	Phillip D. Hawkins
Compton	Yvonne Arceneaux
Eastern Municipal Water District	Randy A. Record
Foothill Municipal Water District.....	James T. Edwards
Fullerton.....	James H. Blake
Glendale	Peter Kavounas
Glendale	Laura Friedman
Inland Empire Utilities Agency	Angel Santiago
Long Beach.....	Suja Lowenthal
Las Virgenes Municipal Water District	Glen D. Peterson
Los Angeles	David W. Fleming
Los Angeles	Aaron A. Grunfeld
Los Angeles	John W. Murray Jr.
Los Angeles	Jesús E. Quiñonez
Municipal Water District of Orange County	Linda Ackerman
Municipal Water District of Orange County	Ergun Bakall
Municipal Water District of Orange County	Brett R. Barbre

Municipal Water District of Orange County	Larry D. Dick
Municipal Water District of Orange County	John V. Foley
Pasadena	Timothy F. Brick
San Diego County Water Authority.....	James M. Barrett
San Diego County Water Authority.....	Keith Lewinger
San Diego County Water Authority.....	W.D. “Bud” Pocklington
San Diego County Water Authority.....	Fern Steiner
San Fernando	Sylvia Ballin
San Marino.....	John T. Morris
Santa Ana.....	Daniel E. Griset
Santa Monica	Judy Abdo
Three Valleys Municipal Water District.....	David D. De Jesus
Torrance	Bill D. Wright
Upper San Gabriel Valley	
Municipal Water District	Anthony R. Fellow
Upper San Gabriel Valley	
Municipal Water District	R. William "Bill" Robinson
West Basin Municipal Water District	Gloria Gray
West Basin Municipal Water District	Edward C. Little
Western Municipal Water District	
of Riverside County	S.R. “Al” Lopez
Western Municipal Water District	
of Riverside County	Thomas P. Evans

Note:

This list includes all officers and members who served on the board at any time during the fiscal year.

BOARD OF DIRECTORS
MEMBERS OF STANDING COMMITTEES
June 30, 2010

EXECUTIVE COMMITTEE

Timothy F. Brick, Chair	John V. Foley, Ex Officio
Anthony R. Fellow, Vice Chair	Daniel E. Griset
John W. Murray Jr., Vice Chair	Aaron A. Grunfeld
Angel Santiago, Vice Chair	Jesús E. Quiñonez
Fern Steiner, Vice Chair	Randy A. Record
Judy Abdo, Secretary	

BUSINESS AND FINANCE

Aaron A. Grunfeld, Chair	Ted Grandsen
Keith Lewinger, Vice Chair	Phillip D. Hawkins
Brett R. Barbre	Edward C. Little
James H. Blake	Angel Santiago
David D. De Jesus	Edward C. Vasquez
Thomas P. Evans	Robert Wunderlich

COMMUNICATIONS AND LEGISLATION

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Linda Ackerman, Vice Chair	Suja Lowenthal
Judy Abdo	Kristine Murray
Sylvia Ballin	W.D. "Bud" Pocklington
Brett R. Barbre	Randy A. Record
Anthony R. Fellow	Angel Santiago
David W. Fleming	Fern Steiner
Laura Friedman	

ENGINEERING AND OPERATIONS

Randy A. Record, Chair	Suja Lowenthal
James H. Blake	John T. Morris
Glenn A. Brown	Glen D. Peterson
Thomas P. Evans	W.D. "Bud" Pocklington
Aaron A. Grunfeld	Edward C. Vasquez
Edward C. Little	Bill D. Wright

LEGAL AND CLAIMS

Jesús E. Quiñonez, Chair	David D. De Jesus
Larry D. Dick, Vice Chair	James T. Edwards
Judy Abdo	John V. Foley
Linda Ackerman	John W. Murray Jr.
Yvonne Arceneaux	Fern Steiner
Sylvia Ballin	

ORGANIZATION AND PERSONNEL

John W. Murray Jr., Chair	Jesús E. Quiñonez
Yvonne Arceneaux	Angel Santiago
John V. Foley	Fern Steiner
Laura Friedman	Robert Wunderlich
Gloria Gray	

WATER PLANNING AND STEWARDSHIP

Fern Steiner, Chair	Phillip D. Hawkins
Glen D. Peterson, Vice Chair	Keith Lewinger
Glenn A. Brown	Suja Lowenthal
Larry D. Dick	John T. Morris
James T. Edwards	Kristine Murray
David W. Fleming	Jesús E. Quiñonez
Gloria Gray	Randy A. Record
Daniel E. Griset	Bill D. Wright

**HISTORICAL
ROLL OF DIRECTORS
June 30, 2010**

ANAHEIM

A. W. FranzenMarch 1, 1929 to April 11, 1930
O. E. Steward.....April 18, 1930 to April 12, 1935
E. P. Hapgood.....May 3, 1935 to June 14, 1960
Charles A. PearsonJuly 12, 1960 to May 8, 1972
Keith A. Murdoch.....June 13, 1972 to May 29, 1979
Joseph C. TruxawAugust 17, 1979 to November 20, 1990
Bob KazarianNovember 20, 1990 to July 12, 1994
Edward G. AlarioNovember 8, 1994 to April 14, 1998
S. Dale StantonApril 14, 1998 to July 8, 2004
Tom Tait.....July 8, 2004 to December 13, 2005
Marcie L. EdwardsDecember 13, 2005 to August 18, 2009
KRISTINE L. MURRAYAugust 18, 2009 to

BEVERLY HILLS

Paul E. Schwab.....March 1, 1929 to June 19, 1931
George R. Barker.....June 19, 1931 to August 2, 1935
Arthur Taylor.....August 2, 1935 to August 2, 1951
Floyd E. FischerAugust 17, 1951 to December 2, 1977
Ellen Stern HarrisJanuary 10, 1978 to March 10, 1981
Nicholas H. Cominos.....March 10, 1981 to September 1, 1984
Mel Odom.....January 11, 1983 to February 14, 1984
Ina S. Roth.....February 14, 1984 to February 11, 1992
Dan WebsterMarch 10, 1992 to September 8, 1999
Betty H. HarrisSeptember 8, 1999 to June 14, 2007
ROBERT WUNDERLICHJuly 6, 2007 to

BURBANK

Harvey E. BruceMarch 1, 1929 to February 11, 1933
James L. Norwood.....March 10, 1933 to April 30, 1943
May 9, 1947 to October 13, 1953
Frank C. Tillson.....May 14, 1943 to May 9, 1947
Walter H. Long.....October 13, 1953 to June 13, 1961
Earle C. Blais.....June 13, 1961 to June 11, 1985
Michael A. NolanJune 11, 1985 to July 9, 1991
Larry L. StamperJuly 9, 1991 to June 6, 1995
Thomas H. McCauley.....June 6, 1995 to December 16, 1998

Fred Lantz January 12, 1999 to March 9, 1999
George E. Battey Jr. March 9, 1999 to December 10, 2001
GLENN A. BROWN December 10, 2001 to

CALLEGUAS MUNICIPAL WATER DISTRICT

Richard Bard	January 10, 1961 to August 22, 1969
Carl E. Ward	September 16, 1969 to February 9, 1993
Vincent M. Hardy	October 14, 1980 to June 30, 1990
Patrick H. Miller	August 21, 1990 to February 1, 1999
Jeffrey A. Borenstein	April 7, 1999 to December 31, 2000
TED GRANDSEN	February 9, 1993 to

CENTRAL BASIN MUNICIPAL WATER DISTRICT

Milo Dellmann	November 23, 1954 to November 23, 1983
Claire S. Thompson	November 23, 1954 to November 30, 1959
Frank H. Wheelock	November 23, 1954 to April 10, 1973
Victor H. York	November 23, 1954 to November 30, 1963
E. Thornton Ibbetson	December 8, 1959 to January 12, 1998
William H. Kent.....	October 10, 1961 to April 7, 1977
Carl Fossette	March 13, 1973 to May 30, 1986
Douglas W. Ferguson.....	June 14, 1977 to August 11, 1993
Leonis C. Malburg	July 8, 1986 to May 8, 1995
Gary A. Morse	August 11, 1993 to February 10, 1997
	January 5, 1999 to June 6, 2003
Jorge G. Castro	February 10, 1997 to March 9, 1999
Phillip J. Pace.....	May 8, 1995 to January 8, 2008
Richard F. Mayér	January 12, 1998 to January 5, 1999
Charles M. Treviño	March 9, 1999 to December 31, 2000
Robert Apodaca	June 6, 2003 to August 18, 2009
PHILLIP D. HAWKINS	January 8, 2008 to
EDWARD C. VASQUEZ.....	August 18, 2009 to

COASTAL MUNICIPAL WATER DISTRICT
(absorbed into MWDOC in 2001)

C. C. Cravath	August 14, 1942 to January 22, 1957
Lynndon L. Aufdenkamp	January 22, 1957 to February 12, 1991
James E. O'Connor.....	December 7, 1976 to July 1, 1979

John Killefer.....January 12, 1982 to September 9, 1993
 Wayne T. McMurray.....February 12, 1991 to December 31, 2000
 Donald C. Simpson.....October 7, 1996 to December 9, 1996
 Langdon W. Owen.....December 9, 1996 to January 17, 2001

COMPTON

C. A. Dickison.....July 17, 1931 to January 20, 1933
 William H. Foster.....January 20, 1933 to June 28, 1935
 Warren W. Butler.....June 28, 1935 to January 24, 1980
 Regina Murph.....March 11, 1980 to March 25, 2003
 Kenneth M. Orduna.....April 8, 2003 to January 14, 2004
 Isadore Hall III.....February 9, 2004 to April 13, 2009
 YVONNE ARCENEAX.....April 13, 2009 to

EASTERN MUNICIPAL WATER DISTRICT

Irwin E. Farrar.....August 31, 1951 to March 1, 1982
 Doyle F. Boen.....March 9, 1982 to October 11, 1994
 Chester C. Gilbert.....October 11, 1994 to June 1, 1999
 Clayton A. Record Jr.June 1, 1999 to January 9, 2001
 Marion V. Ashley.....January 9, 2001 to January 6, 2003
 RANDY A. RECORD.....January 14, 2003 to

FOOTHILL MUNICIPAL WATER DISTRICT

Nelson Hayward.....February 8, 1955 to July 4, 1959
 Conrad R. Fanton.....November 10, 1959 to November 2, 1964
 A. B. Smedley.....April 13, 1965 to August 1, 1990
 Brooks T. Morris.....September 11, 1990 to November 27, 1991
 William T. O'Neil.....January 14, 1992 to May 10, 1999
 JAMES T. EDWARDS.....May 10, 1999 to

FULLERTON

Walter Humphreys.....April 10, 1931 to January 19, 1945
 H. H. Kohlenberger.....July 27, 1945 to March 7, 1959
 Hubert C. Ferry.....February 23, 1960 to February 8, 1983
 Norman L. De Vilbiss.....February 8, 1983 to April 12, 1988
 JAMES H. BLAKE.....August 23, 1988 to

GLENDALE

W. Turney Fox March 1, 1929 to November 27, 1931
Samuel G. McClure November 27, 1931 to January 13, 1933
Frank P. Taggart January 13, 1933 to August 31, 1934
Bernard C. Brennan August 31, 1934 to April 23, 1937
Herman Nelson June 4, 1937 to August 27, 1954
Paul L. Burkhard September 28, 1954 to June 10, 1958
Normal C. Hayhurst June 10, 1958 to June 9, 1970
Lauren W. Grayson June 9, 1970 to May 21, 1972
William H. Fell June 13, 1972 to July 13, 1976
C. E. Perkins July 13, 1976 to July 13, 1988
James M. Rez August 23, 1988 to March 9, 2009
Peter Kavounas March 9, 2009 to December 8, 2009
LAURA FRIEDMAN December 8, 2009 to

INLAND EMPIRE UTILITIES AGENCY (formerly Chino Basin MWD)

A. C. Reynolds February 12, 1952 to March 12, 1963
Ray W. Ferguson March 12, 1963 to December 31, 1980
Carl B. Masingale March 10, 1981 to August 9, 1984
John G. Gilday September 11, 1984 to February 15, 1985
Edward A. Girard March 12, 1985 to May 31, 1990
Anne W. Dunihue September 20, 1988 to February 11, 1992
Bill M. Hill August 21, 1990 to February 9, 1999
Dwight F. French February 11, 1992 to August 18, 1994
Wyatt L. Troxel August 19, 1994 to November 14, 2003
Gene Koopman February 9, 1999 to December 31, 2000
November 14, 2003 to February 10, 2009
ANGEL SANTIAGO February 10, 2009 to

LAS VIRGENES MUNICIPAL WATER DISTRICT

Earle Brookins December 13, 1960 to March 26, 1963
A. Myron McBride March 26, 1963 to May 11, 1965
A. Macneil Stelle June 8, 1965 to October 23, 1967
March 11, 1975 to February 9, 1993
Whitney P. Reeve December 19, 1967 to March 11, 1975
GLEN D. PETERSON February 9, 1993 to

LONG BEACH

Nowland M. ReidApril 10, 1931 to January 27, 1933
W. M. CookJanuary 27, 1933 to April 30, 1943
Gus A. Walker.....April 30, 1943 to December 31, 1976
Lloyd C. Leedom.....May 9, 1947 to June 30, 1979
Samuel C. Rue.....October 9, 1979 to March 12, 1985
Ida Frances LowryMarch 12, 1985 to February 9, 1993
Henry J. MeyerFebruary 9, 1993 to August 19, 1997
Helen Z. HansenAugust 19, 1997 to May 13, 2008
SUJA LOWENTHALMay 13, 2008 to

LOS ANGELES

John R. Haynes.....March 1, 1929 to February 4, 1930
John R. Richards.....March 1, 1929 to October 28, 1947
W. P. WhitsettMarch 1, 1929 to January 10, 1947
John G. Bullock.....November 1, 1929 to September 15, 1933
O. T. Johnson Jr.....November 5, 1929 to August 29, 1930
W. L. Honnold.....February 28, 1930 to July 21, 1933
J. EisnerAugust 29, 1930 to July 2, 1937
Walter A. HamJanuary 20, 1933 to January 4, 1935
D. W. PontiusJanuary 20, 1933 to September 3, 1955
Perry H. GreerJuly 21, 1933 to August 14, 1950
V. H. RossettiOctober 13, 1933 to November 19, 1960
Otto J. EmmeJanuary 11, 1935 to October 22, 1947
Louis S. NordlingerAugust 13, 1937 to June 8, 1940
Joseph JensenAugust 16, 1940 to February 3, 1944
March 8, 1946 to July 8, 1974
Ransom W. ChaseMarch 14, 1947 to February 11, 1975
Gordon B. CraryMarch 14, 1947 to November 8, 1959
Howard D. Mills.....March 14, 1947 to March 17, 1965
W. R. Fawcett.....May 13, 1952 to November 27, 1953
Luther C. AndersonJanuary 12, 1954 to February 11, 1975
Noah DietrichNovember 8, 1955 to November 23, 1970
Ferdinand Mendenhall.....July 29, 1958 to October 8, 1974
Ben P. GriffithAugust 9, 1960 to June 7, 1961
Pietro Di Carlo.....February 14, 1961 to November 7, 1967
William S. Peterson.....February 14, 1961 to August 10, 1979
Aubrey E. Austin Jr.February 28, 1961 to May 13, 1975

Albert F. Bush.....	November 14, 1961 to February 11, 1975
John W. Luhring	January 16, 1962 to August 8, 1967
Joseph M. Quinn	May 14, 1968 to September 18, 1973
B. Walter Hicks.....	May 8, 1973 to August 20, 1974
Samuel B. Nelson	September 18, 1973 to October 9, 1984
Katherine B. Dunlap	August 20, 1974 to September 11, 1984
Jerry Godell.....	October 8, 1974 to October 9, 1984
Edward L. Kussman.....	October 8, 1974 to November 8, 1993
Herman Leavitt	February 11, 1975 to August 19, 1975
Yolanda M. Nava	February 11, 1975 to September 14, 1976
S. Dell Scott	February 11, 1975 to October 12, 1993
Willie J. Stennis	May 13, 1975 to December 31, 1978
Mladin Zarubica.....	August 19, 1975 to March 16, 1981
Soledad S. Garcia.....	September 14, 1976 to September 11, 1984
Mark Lainer	November 13, 1979 to February 12, 1991
Mark Nathanson.....	April 14, 1981 to September 11, 1984
Michael Glazer.....	September 11, 1984 to April 9, 1991
Helen Romero Shaw	September 11, 1984 to November 8, 1993
Marilyn L. Garcia.....	October 9, 1984 to February 9, 1993
Rachel Levin	October 9, 1984 to April 4, 1989
Frank S. Wyle	October 9, 1984 to August 1, 1991
Robert Abernethy.....	April 4, 1989 to October 13, 1992
	February 9, 1993 to November 8, 1993
Vernon R. Watkins.....	February 12, 1991 to August 20, 1992
Alf W. Brandt	April 9, 1991 to February 13, 1996
Michael J. Gage	August 1, 1991 to September 21, 1993
Carolyn L. Green	August 20, 1992 to December 31, 1995
	April 30, 1996 to May 16, 1997
William G. Luddy	October 13, 1992 to May 10, 2005
George Wein.....	October 12, 1992 to August 20, 2002
David Y. Handelman	November 8, 1993 to November 14, 1995
Kenneth T. Lombard.....	November 8, 1993 to April 11, 1995
Katherine W. Moret	November 8, 1993 to December 31, 2000
Christopher C. Pak.....	November 8, 1993 to December 19, 1995
Bonny L. Herman.....	April 11, 1995 to April 12, 2004
Larry J. Kosmont	February 13, 1996 to December 31, 2000
Aaron E. Michaelsen.....	February 13, 1996 to January 13, 1997
L. Michael Russell	June 11, 1996 to January 12, 1998

S. David Freeman	January 12, 1998 to December 31, 2000
Ronald R. Gastelum	January 12, 1998 to November 10, 1998
Jorge G. Castro	June 7, 1999 to October 7, 2003
Deborah Dentler	August 20, 2002 to January 6, 2006
David Farrar	October 7, 2003 to January 6, 2006
Robert B. Simonds	April 12, 2004 to January 6, 2006
Ronald F. Deaton.....	May 10, 2005 to January 6, 2006
AARON A. GRUNFELD.....	January 6, 2006 to
JOHN W. MURRAY JR.	January 6, 2006 to
JESÚS E. QUIÑONEZ.....	January 6, 2006 to
Nancy Sutley	January 6, 2006 to May 12, 2009
DAVID W. FLEMING.....	May 12, 2009 to

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Glenn P. Allen	December 11, 1951 to December 17, 1986
W. B. Hellis	August 19, 1955 to February 9, 1975
William J. Teague.....	February 11, 1969 to October 10, 1972
Robert R. Dowling	September 14, 1971 to May 11, 1976
Doyle Miller	October 10, 1972 to October 31, 1987
Carl J. Kymla.....	October 9, 1973 to October 20, 1993
Philip J. Reilly	December 9, 1975 to December 8, 1978
Gerald E. Price	May 11, 1976 to December 31, 1988
M. Roy Knauft Jr.....	September 13, 1977 to January 12, 1993
Kenneth H. Witt	October 13, 1981 to December 31, 2000
William F. Davenport.....	January 13, 1987 to February 14, 1995
JOHN V. FOLEY	August 22, 1989 to
Wesley M. Bannister	January 12, 1993 to October 31, 2006
Jerry A. King	January 11, 1994 to July 21, 1999
Robert J. Huntley.....	February 14, 1995 to October 31, 1999
Peer A. Swan	August 31, 1999 to June 30, 2002
Ed Royce Sr.....	February 7, 2000 to December 31, 2000
Langdon W. Owen.....	January 17, 2001 to April 24, 2003
Ergun Bakall.....	July 1, 2002 to December 8, 2009
LARRY D. DICK.....	August 12, 2003 to
Steve Anderson.....	January 30, 2007 to January 16, 2008
LINDA ACKERMAN.....	April 8, 2008 to
BRETT R. BARBRE.....	December 8, 2009 to

PASADENA

Franklin Thomas March 1, 1929 to August 27, 1952
Morris S. Jones September 16, 1952 to October 10, 1961
Robert B. Diemer January 16, 1962 to October 27, 1966
Don C. McMillan January 10, 1967 to October 26, 1975
Karl A. Johnson December 9, 1975 to April 11, 1980
Martin Goldsmith July 8, 1980 to June 11, 1985
TIMOTHY F. BRICK June 11, 1985 to

SAN DIEGO COUNTY WATER AUTHORITY

Fred A. Heilbron January 10, 1947 to February 14, 1973
J. L. Burkholder January 24, 1947 to April 6, 1953
Richard S. Holmgren August 11, 1953 to February 19, 1963
J. William Fisher April 12, 1955 to October 11, 1955
Hans H. Doe August 20, 1959 to October 20, 1986
Paul Beermann February 19, 1963 to July 9, 1963
Harry Griffen February 19, 1963 to October 13, 1997
George R. Henderson August 13, 1963 to November 29, 1964
Ralph E. Graham September 14, 1971 to January 14, 1975
August 17, 1979 to June 28, 1982
Raymond E. Badger September 18, 1973 to May 14, 1979
Lloyd L. Lee November 20, 1973 to December 31, 1980
John M. Cranston January 14, 1975 to December 31, 1986
John P. Starkey January 13, 1981 to March 12, 1992
Michael D. Madigan August 18, 1982 to October 13, 1992
Francesca M. Krauel November 8, 1983 to August 20, 2001
John F. Hennigar November 18, 1986 to October 31, 1989
Dale Mason January 13, 1987 to February 8, 1999
Herbert H. Stickney November 14, 1989 to April 13, 1993
Christine M. Frahm April 14, 1992 to March 12, 1999
John M. Leach October 13, 1992 to October 25, 1993
Joseph Parker April 13, 1993 to January 11, 1999
June 7, 1999 to February 10, 2009
Mark W. Watton December 13, 1993 to January 12, 1998
February 8, 1999 to May 14, 2001
Gordon W. Tinker October 12, 1997 to December 31, 2000
Claude A. "Bud" Lewis January 12, 1998 to December 7, 2006

James F. TurnerJanuary 11, 1999 to December 31, 2000
February 10, 2003 to August 17, 2004
Harold W. BallMay 14, 2001 to February 10, 2003
George I. Loveland.....October 15, 2001 to November 1, 2006
W.D. “BUD” POCKLINGTON ...August 17, 2004 to
James H. “Jim” BondNovember 1, 2006 to February 10, 2009
JAMES M. BARRETT.....December 7, 2006 to
KEITH LEWINGERFebruary 10, 2009 to
FERN STEINERFebruary 10, 2009 to

SAN FERNANDO

Neville R. LewisDecember 14, 1971 to August 21, 1984
Pat J. Modugno.....August 21, 1984 to August 8, 1986
Doude WysbeekDecember 9, 1986 to June 10, 1997
Sergio Rascon.....June 10, 1997 to July 7, 2000
Hugo C. MejiaJuly 7, 2000 to November 8, 2004
Steven Veres.....November 8, 2004 to September 5, 2007
SYLVIA BALLIN.....September 5, 2007 to

SAN MARINO

Harry L. Heffner.....March 1, 1929 to September 29, 1933
John H. RambozSeptember 29, 1933 to November 18, 1960
Howard A. MillerJanuary 10, 1961 to April 26, 1975
Preston Hotchkis.....June 10, 1975 to September 10, 1986
Preston B. HotchkisMarch 10, 1987 to March 13, 1990
JOHN T. MORRISMarch 13, 1990 to

SANTA ANA

S.H. Finley.....March 1, 1929 to April 10, 1942
A. H. AllenApril 10, 1942 to December 10, 1968
Howard W. Crooke.....December 10, 1968 to September 1, 1977
John Garthe.....November 8, 1977 to July 9, 1991
Daniel H. Young.....July 9, 1991 to December 31, 1993
Lee Harry.....February 8, 1994 to April 8, 1997
Thom Coughran.....April 8, 1997 to February 3, 2005
DANIEL E. GRISET.....February 3, 2005 to

SANTA MONICA

George H. Hutton..... March 1, 1929 to January 16, 1931
Arthur A. Weber January 16, 1931 to October 12, 1934
William H. Carter February 15, 1935 to March 13, 1936
Edmond S. Gillette..... June 12, 1936 to January 8, 1937
Arthur P. Creel January 8, 1937 to March 3, 1941
Samuel G. McClure March 21, 1941 to November 14, 1947
Samuel J. Crawford..... December 5, 1947 to September 15, 1959
Mark T. Gates January 12, 1960 to July 12, 1972
Francis A. Goplen August 18, 1972 to December 9, 1980
Robert Gottlieb December 9, 1980 to December 8, 1987
Christine E. Reed March 8, 1988 to April 24, 1996
JUDY ABDO June 11, 1996 to

THREE VALLEYS MUNICIPAL WATER DISTRICT

Hugh W. Stiles December 8, 1950 to December 31, 1961
Arthur H. Cox January 16, 1962 to April 16, 1974
William C. Leech April 16, 1974 to February 9, 1982
William H. Koch..... February 9, 1982 to February 12, 1985
Mel Harper..... February 12, 1985 to February 18, 1986
Richard W. Hansen June 10, 1986 to August 20, 1991
Bruce R. J. Milne August 20, 1991 to February 10, 1997
Henry S. Barbosa February 10, 1997 to February 20, 2002
DAVID D. DE JESUS March 8, 2002 to

TORRANCE

John Dennis..... March 17, 1931 to April 14, 1933
J. R. Jensen..... April 14, 1933 to December 31, 1933
Charles T. Rippy January 19, 1934 to August 8, 1950
George W. Stevens..... September 22, 1950 to June 13, 1961
George A. Bradford June 13, 1961 to October 13, 1964
George Vico..... November 17, 1964 to August 13, 1968
Ben Haggott August 13, 1968 to November 14, 1982
Marvin Brewer March 8, 1983 to November 27, 1993
BILL D. WRIGHT..... March 8, 1994 to

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

J. Ercel Cleminson.....	April 9, 1963 to January 30, 1964
Howard H. Hawkins.....	April 9, 1963 to December 31, 1989
	February 9, 1993 to March 4, 1997
Frank E. Vachon.....	March 10, 1964 to March 10, 1970
Robert T. Radford.....	March 10, 1970 to December 31, 1970
Travis L. Manning.....	January 12, 1971 to December 31, 1978
Burton E. Jones.....	January 9, 1979 to February 9, 1993
John E. Maulding	January 9, 1990 to February 9, 1993
ANTHONY R. FELLOW	February 9, 1993 to February 10, 2009
	February 9, 2010 to
Frank F. Forbes.....	March 4, 1997 to December 31, 2000
R. William "Bill" Robinson.....	February 10, 2009 to February 9, 2010

WEST BASIN MUNICIPAL WATER DISTRICT

Robert E. Austin.....	August 20, 1948 to October 21, 1968
Ben Haggott.....	March 10, 1953 to October 8, 1956
W. C. Farquhar	August 19, 1955 to July 13, 1976
T. V. Tallon	August 9, 1960 to April 9, 1963
Louis J. Alexander.....	August 13, 1963 to March 30, 1972
Charles D. Barker	September 10, 1963 to December 31, 2000
Einar C. Matson.....	November 12, 1968 to February 12, 1984
Lester E. Carlson	October 8, 1974 to September 2, 1988
E. L. Balmer	August 19, 1976 to May 23, 1989
Harold E. Crozier	October 25, 1988 to April 9, 1991
Charles L. Stuart.....	July 11, 1989 to April 11, 1995
Robert Goldsworthy	April 9, 1991 to March 8, 1994
EDWARD C. LITTLE	March 8, 1994 to January 12, 1998
	January 5, 1999 to September 5, 2001
	April 9, 2007 to
Bondie O. Gambrell.....	April 11, 1995 to February 10, 1997
Mark S. Dymally	February 10, 1997 to January 5, 1999
Carol W. Kwan.....	January 12, 1998 to January 5, 1999
	September 5, 2001 to April 9, 2007
Willard H. Murray Jr.	January 5, 1999 to April 13, 2009
GLORIA GRAY.....	April 13, 2009 to

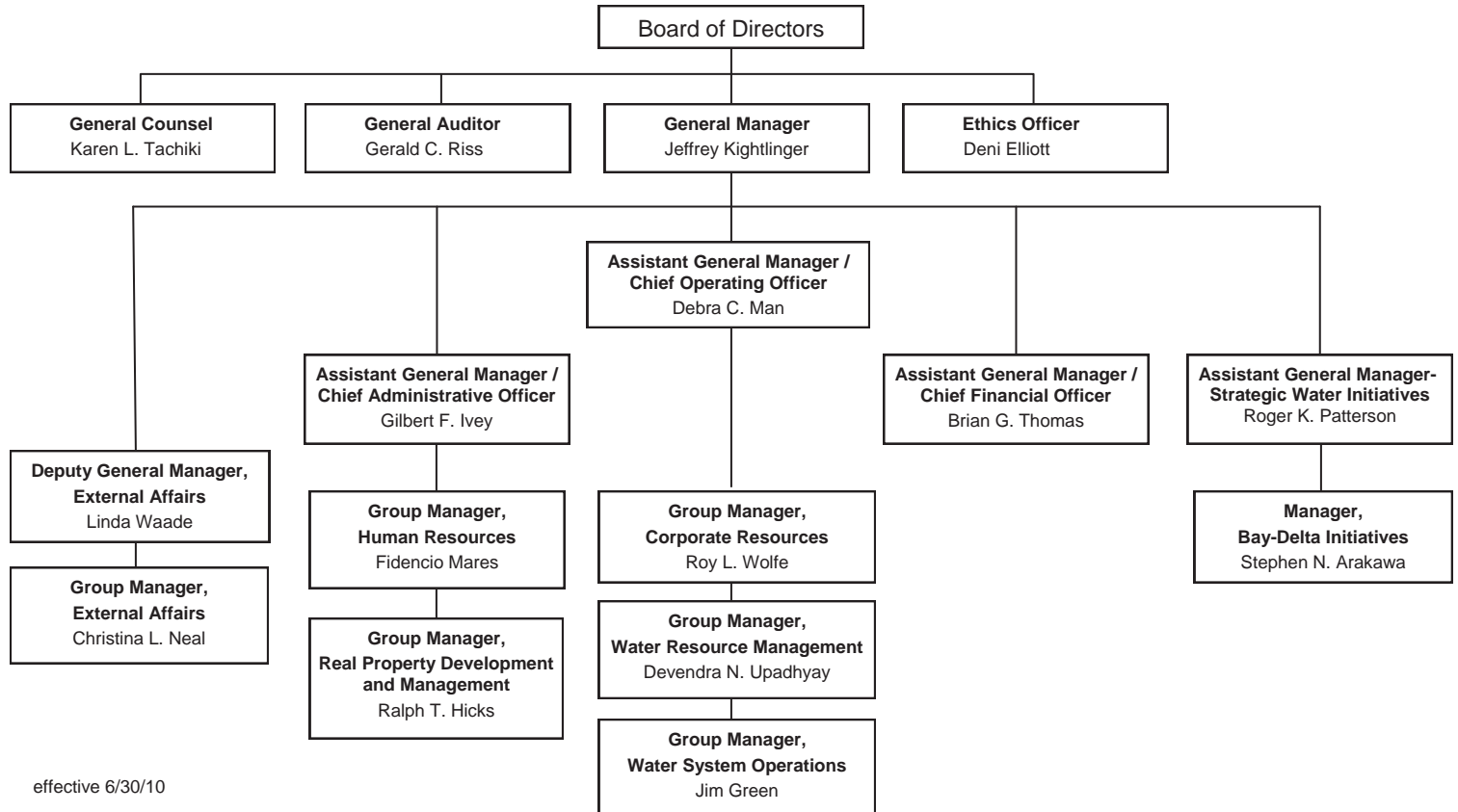
WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY

Howard Boylan	December 14, 1954 to July 13, 1976
Lois B. Krieger	August 19, 1976 to December 31, 2000
John M. Mylne III	October 12, 1993 to January 7, 2008
S.R. “Al” Lopez	January 7, 2008 to July 13, 2009
THOMAS P. EVANS	July 13, 2009 to

Notes:

Current Directors’ names are shown in capital letters.

A 2001 reorganization reduced the number of directors on the board from 51 to 37.



effective 6/30/10

For more information, please go to www.mwdh2o.com

STAFF
June 30, 2010

EXECUTIVE MANAGEMENT

General Manager..... J. Kightlinger
General Counsel..... K. L. Tachiki
General Auditor..... G.C. Riss
Ethics Officer D. Elliott
Assistant General Manager/Chief Operating Officer D. Man
Assistant General Manager/Chief Administrative Officer G.F. Ivey
Assistant General Manager/Chief Financial Officer B.G. Thomas
Assistant General Manager/Strategic Water Initiatives..... R.K. Patterson
Deputy General Manager L. Waade

AUDIT

Assistant General Auditor L.M. Gagliano

CHIEF ADMINISTRATIVE OFFICER

Executive Strategist..... M. Wheeler
Board Executive Secretary D. Chin
Manager, Business Outreach Section..... J. Arena

CHIEF FINANCIAL OFFICER

Manager, Treasury Debt Management Section K.R. Norris
Controller T. DeBacker
Manager, Budget & Financial Planning Vacant

CORPORATE RESOURCES

Group Manager R. Wolfe
Assistant Group Manager/Chief Engineer..... G. Johnson
Manager, Engineering Services Section..... W. Lieu
Manager, Information Technology Section..... D. Edwards
Manager, Business Services Section A. Kokuga
Manager, Project Coordination Office T. Tellers

EXTERNAL AFFAIRS

Group Manager C.L. Neal
State Legislative Representative K. Cole
Federal Legislative Representative B. Hiltscher
Manager, Media Services Section A. Acuña
Manager, Legislative Services Section D. Zinke
Manager, Conservation & Community Services Section..... Y.L. Martinez
Executive Strategist..... T. Philp

STAFF
June 30, 2010

HUMAN RESOURCES

Group ManagerF. Mares
Manager, Employee Relations Section S. Lem
Manager, Total Compensation SectionD. Pitman

LEGAL

Assistant General CounselS.B. Bennion
Assistant General CounselM. L. Scully

REAL PROPERTY DEVELOPMENT & MANAGEMENT

Group ManagerR.T. Hicks
Assistant Group Manager.....J.T. Wicke

STRATEGIC WATER INITIATIVES

Manager, Bay-Delta Initiatives.....S.N. Arakawa

WATER RESOURCE MANAGEMENT

Group ManagerD. Upadhyay
Manager, Resource Implementation Section..... A. Sienkiewich
Manager, Resource Planning & Development Section G.L. Chan

WATER SYSTEM OPERATIONS

Group ManagerJ.F. Green
Assistant Group Manager.....S.O. Chapman
Manager, Operations & Planning SectionM. Morel
Manager, Water Quality Section M.H. Stewart
Manager, Operations Support Services SectionL.L. Shraibati
Manager, Conveyance & Distribution Section..... W. Peksi
Manager, Water Treatment Section.....B.M. Coffey
Manager, Environmental, Health & Safety SectionB. Koch



Wildflowers bloom at Diamond Valley Lake



General Manager Jeffrey Kightlinger at the signing ceremony for the Bay-Delta legislative reform package in fall 2009.

Introduction

For the Metropolitan Water District of Southern California, a key highlight of fiscal year 2009/10 was the historic breakthrough in water policy for the state and the hub of its water system: the Sacramento-San Joaquin Delta in Northern California. A comprehensive package of five legislative bills set a clear path for dramatic and needed improvements to the struggling estuary's habitat and the state's two largest water systems, the State Water Project and the federal Central Valley Project.

Gov. Arnold Schwarzenegger had called an extraordinary legislative session on October 11 to address the water crisis. In calling for the session, the governor complimented the Legislature on its commitment to solving the water crisis and said he believed enough progress had been made to convene the special session. After numerous rounds of negotiations and hearings, the state Legislature reached agreement on the historic package in the early morning hours of November 4. On November 12, the governor signed the last of the five bills which represented the most significant legislation in nearly 30 years to address the long-recognized water supply limitations and ecosystem challenges in the Sacramento-San Joaquin Delta.

"Metropolitan commends Governor Schwarzenegger and the state Legislature for this unparalleled effort," General Manager Jeffrey Kightlinger said at the time. "This will have far-reaching impacts that will benefit everyone who lives and works in California for generations to come."

The levels at Diamond Valley Lake began to rise in late September with the first water flowing through the Inland Feeder Project. This \$1.2 billion addition to Metropolitan's distribution system connected State Water Project supplies from Northern California to the Hemet-area reservoir through a 42-mile pipeline/tunnel system. Two tunnels drilled through the San Bernardino Mountains allowed water deliveries via gravity flow into Diamond Valley, increasing water supply reliability for the Metropolitan service area.

In October, statewide attention turned to the historic comprehensive water package that had been a key focus in Sacramento. Several critical policy questions confronted the legislators. First and foremost was how to guide the Bay Delta Conservation Plan, the ongoing effort by state and federal agencies to couple Delta ecosystem and water conveyance improvements. The BDCP is viewed as being essential in helping to restore the estuary and improve water supply reliability while complying with applicable law, including the Endangered Species Act. Another challenge was how to better coordinate Delta activities among dozens of state, local and federal agencies. Improving water-use efficiency emerged as another reform to maintain realistic long-term expectations for Delta supplies. Financing the package amid the state's ongoing fiscal problems added another layer of complexity.

The five-bill package had several key provisions: The Legislature directed the BDCP to meet California's highest standard of environmental protection, a Natural Communities Conservation Plan. It created a seven-member Delta Stewardship Council to forge a new Delta Plan with the co-equal goals of ecosystem restoration and water supply reliability. It directed this new council to incorporate the BDCP into its own long-term planning document, under certain conditions. Water agencies such as Metropolitan agreed to pay for the necessary conveyance improvements in the Delta without state and federal financing. The Legislature then placed an \$11.1 billion water bond on the November 2010 ballot for funding Delta ecosystem and statewide water improvements. The Legislature later worked with Gov. Schwarzenegger to move the bond to 2012 due to the state's worsening financial condition.

Legislators also directed water diverters within the Delta to begin reporting their water use to the State Water Resources Control Board, considered a significant step given that their combined diversions are comparable to those of Metropolitan via the State Water Project in any given year.

As part of the package, the Legislature established a system of accounting and compliance for water districts to reduce their per-capita residential water use by 20 percent by the year 2020. Along the way, Metropolitan provided considerable input on the specifics of creating a fair and equitable formula. In addition, statewide ground-water monitoring was advanced by establishing a baseline of local

monitoring in areas of the state where such monitoring had been lacking. (Water basins within Metropolitan's six-county service area have been monitored and managed for decades.)

History was made in early November when the governor and Legislature reached agreement on the 2009 Comprehensive Water Package.

Through the winter, BDCP planning efforts proceeded, including an emerging concept of constructing a delivery tunnel beneath the Delta as opposed to a surface canal. Either conveyance option would separate the movement of water supplies to allow more natural flow fluctuations in the Delta's tidal estuary.

This extraordinary breakthrough came amid a backdrop of continued water challenges for Metropolitan throughout the year, which began with a reminder of the agency's dwindling reserves. Its largest surface storage reservoir and a cornerstone of its distribution system, Diamond Valley Lake, dropped below 43 percent of its 810,000-acre-foot capacity, the lowest levels the reservoir had seen since Metropolitan completed construction in 1999 and began operations in 2000. (An acre foot of water is nearly 326,000 gallons, about the amount used by two typical Southland families in and around their homes in a year.)

Although the winter of 2009-10 provided average local and statewide precipitation, the depletion of 50 percent of Metropolitan's reserves in previous years prompted the board in April to carry over a second straight year of water delivery reductions to Metropolitan's 26 member public agencies. Delta water restrictions were a primary driver of higher costs for Metropolitan, requiring a board-approved 7.5 percent water rate increase for both the 2010/11 and 2011/12 years. The rate actions positioned Metropolitan to cover the full cost of service from its revenues within the next two years.

On the Colorado River, Metropolitan's efforts to shore up this key water supply benefited from two important milestones in April. The Drop 2 Reservoir Project, located just off the All-American Canal about 30 miles west of Yuma, neared completion. The \$172 million project, funded in part by Metropolitan, was expected to provide an additional 70,000 acre-feet of water annually to the Colorado River system, providing supply benefits to Metropolitan and other project underwriters. Another new water source was on the horizon with the

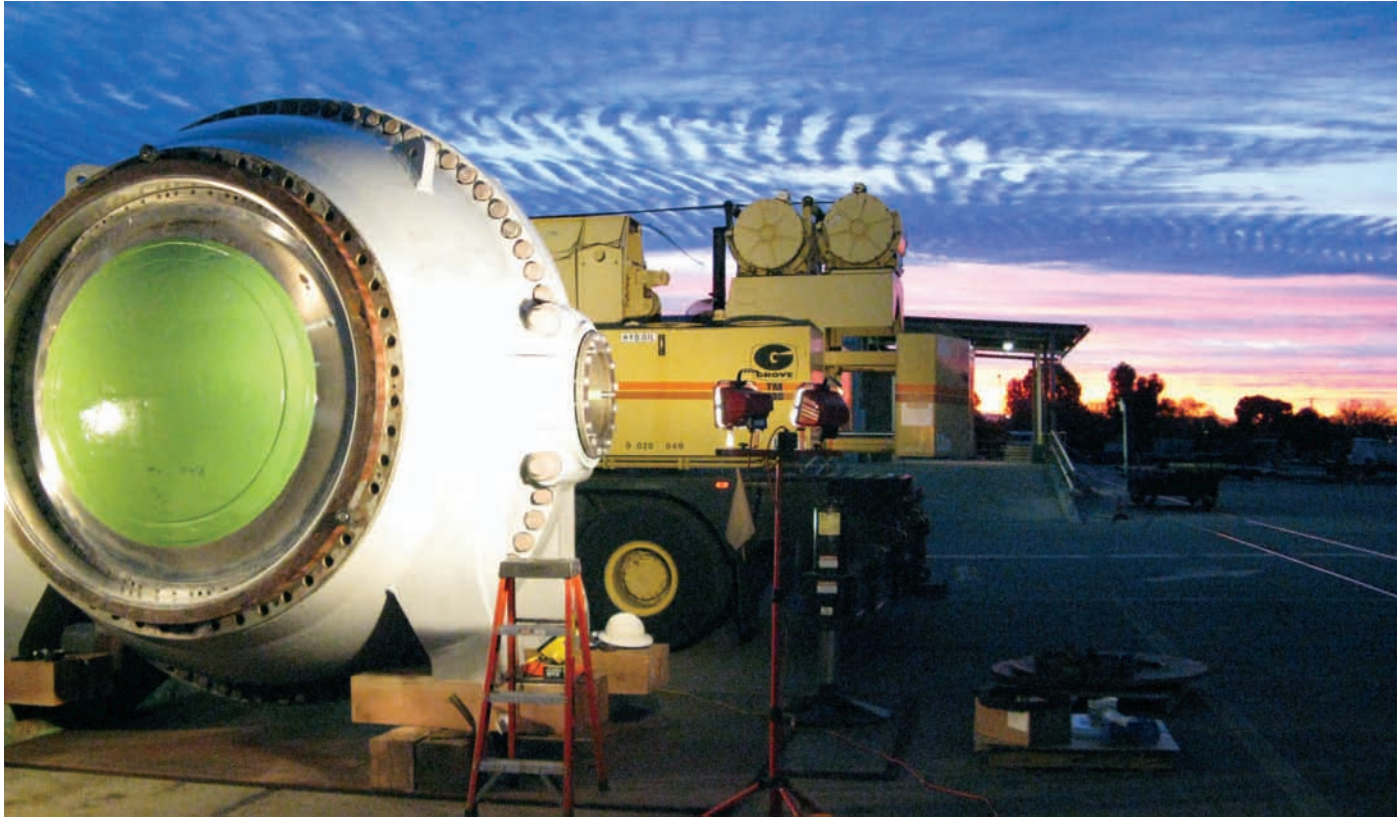
operation of the Bureau of Reclamation's Yuma Desalting Plant. Metropolitan, the Central Arizona Project and Southern Nevada Water Authority contributed \$14 million toward the \$23.2 million pilot project, which was expected to produce nearly 22,000 acre-feet in its first year.

In February, the Metropolitan board created a Blue Ribbon Committee to provide new insight into meeting the region's needs over the coming half-century, amid the mounting supply challenges of climate change, population increases and supply uncertainties in the Delta and Colorado River. Robert Simonds, a former city of Los Angeles representative on the Metropolitan board, was appointed its chairman. "This broad-based and diverse mix of leaders will give us a fresh perspective on developing approaches to reliable and sustainable imported supplies over the next 50 years," Chairman Brick said.

The many essential actions taken by Metropolitan and its accomplishments throughout the year — in the Delta, on the Colorado River and within its 5,200-square-mile service area in the Southland — helped ensure that the agency would continue to meet the region's water supply challenges in the coming years.



Historical mural at Metropolitan's Union Station headquarters building.



A Metropolitan-repaired ball valve for the state Banks Pumping Plant helped deliver approximately 900,000 acre-feet of water from the State Water Project into Metropolitan's service area in calendar year 2009.

Delivering Metropolitan's Water Supplies

Metropolitan supplies water to its 5,200-square-mile service area, extending through six counties from Ventura County in the north to San Diego County in the south, through a conveyance and distribution system consisting of the 242-mile-long Colorado River Aqueduct and its five pumping plants, 800 miles of pipeline, five water treatment plants and nine reservoirs. In addition, Metropolitan has 16 hydroelectric power recovery plants throughout its system. See Table 1-1 for the rated capacity of Metropolitan's five treatment plants.

**TABLE 1-1
METROPOLITAN'S DISTRIBUTION SYSTEM
WATER TREATMENT PLANTS**

Plant (Location)	Process/ Water Type	Rated Capacity (MGD)
Joseph Jensen Water Treatment Plant (Granada Hills)	Conventional treatment with ozone SPW	750
Robert A. Skinner Water Treatment Plants #1, #2, & #3 (Winchester)*	Conventional treatment and direct filtration with ozone, blend of CRW/SPW	630
F. E. Weymouth Water Treatment Plant (La Verne)	Conventional treatment, blend of CRW/SPW	520
Robert B. Diemer Water Treatment Plant (Yorba Linda)	Conventional treatment, blend of CRW/SPW	520
Henry J. Mills Water Treatment Plant (Riverside)	Conventional treatment with ozone SPW	220

SPW = State Project Water

CRW = Colorado River Water

MGD = Million Gallons per Day

* Consists of three separately regulated water treatment plants

In fiscal year 2009/10, Metropolitan sold more than 1.61 million acre-feet of water, with daily system deliveries as high as about 7,000 AF per day. A combination of increased conservation, due in part to the implementation of a regional Water Supply Allocation, as well as wetter than normal local weather and an economic recession, all contributed to a substantial drop in water sales from more than 2 million acre-feet in the prior fiscal year. Table 1-2 shows the monthly water sales for all member agencies in FY 2009/10 and Table 1-3 shows historical water sales by calendar and fiscal year. Figure 1-1 shows the total fiscal year water sales by category and Figure 1-2 shows the monthly water sales by category and Figure 1-3 shows a comparison of water sales by category for the past two fiscal years. Continued dry conditions, low reservoir storage, and regulatory restrictions on water exports from the Sacramento-San Joaquin Delta to protect the threatened Delta smelt, all contributed to an initial 5 percent State Water Project allocation for CY 2010, the lowest initial allocation in the history of the SWP. The 5 percent allocation represented an initial supply of only 96,000 acre-feet, which is roughly two weeks' average demand on Metropolitan. This low initial allocation increased to 15 percent in February and 20 percent in late April, with a final allocation of 50 percent, or 956,000 AF, in June. Despite the increase, this represented the fourth successive year of below-average SWP allocations.

Such low early SWP allocations were responsible for operational actions taken during the fiscal year to preserve water for areas served exclusively by SWP water, such as portions of the Jensen and Mills treatment plant service territories. SWP water for blending with Colorado River supplies was generally unavailable for the period from late 2009 through March 2010. Beginning in April 2010, as SWP allocations increased, Metropolitan initiated blending, progressively increasing the share of SWP supplies up to 30 percent blend at the Weymouth, Diemer and Skinner treatment plants.

In CY 2009, about 120,000 AF of water was returned from Metropolitan's portfolio of storage and transfer programs to supplement SWP and CRA supplies. Withdrawals from storage accounts were lower than the previous fiscal year because of the successful implementation of the Five-Year Supply Action Plan, begun in 2009. To improve regional reliability, water was extracted from groundwater storage programs throughout the state to strategically increase selected surface storage accounts. One example of this strategy was to reserve approximately 130,000 AF of surface storage in SWP carryover accounts from CY 2009

to bolster supplies in CY 2010. This provided additional supplies to help meet demands in Metropolitan's SWP-exclusive areas.

TABLE 1-2
MONTHLY WATER SALES FOR ALL MEMBER AGENCIES
 Fiscal Year 2009/10
 (Acre-Feet)

Month	Full Service	Agricultural	Storage Program*	Totals
July	182,035	4,003	18,391	204,428
August	183,146	6,022	3,241	192,409
September	167,133	5,873	10,275	183,281
October	141,774	6,556	7,642	155,971
November	123,540	4,345	7,680	135,565
December	50,894	3,087	3,865	57,846
January	98,983	216	8,780	107,979
February	51,033	1,989	1,134	54,156
March	101,053	211	1,517	102,782
April	131,335	-236	2,460	133,559
May	143,109	-820	2,836	145,125
June	137,056	2,126	2,530	141,711
Totals	1,511,090	33,370	70,352	1,614,812

* Includes sales from the Conjunctive Use Program

Negative numbers indicate adjustments in billable sales

A total of 1.7 million AF was delivered, including water sales and the San Diego County Water Authority/Imperial Irrigation District transfer.

Additional actions taken to address low supply included the continued interruption of discounted groundwater replenishment deliveries, as well as the continued phase-out of the Interim Agricultural Water Program. Finally, in response to ongoing reductions in imported supply and continued depletion of storage reserves, a regional Water Supply Allocation was implemented which limited the amount of water that could be delivered to member agencies without penalty.

To further augment supplies in response to the water supply challenges and continued use of storage reserves, Metropolitan continued implementing the Five-Year Supply Action Plan, and identified specific resource and conservation actions to counteract the effects of court-ordered restrictions on water supplies and the potential for continued

dry conditions. Efforts focused on six specific areas: conservation, Colorado River and SWP transfers/transactions, near-term Delta actions, groundwater recovery and local resources. Developing these supply actions over the course of CY 2010 is expected to provide more than 400,000 AF of additional water supply and conservation measures to supplement existing imported supplies, if needed.

The Colorado River watershed experienced its driest nine-year period in recorded history with an April 1, 2010 snowpack that was only 80 percent of normal, leading to a projected runoff of only 73 percent for the 2009/10 water year. However, due to the implementation of a number of water supply augmentation programs, such as the land fallowing program with the Palo Verde Irrigation District, Metropolitan operated the CRA to deliver 1.025 million AF in FY 2009/10, which was a delivery amount similar to the last fiscal year.

The ability to adjust operations in response to shifts in supply availability and other uncertainties highlight the inherent advantages of Metropolitan's distribution system. One example is the commissioning of the Inland Feeder in September 2009, which allowed Metropolitan to move significant quantities of SWP water into the system to meet demands, or into regional storage. Recent deliveries into Diamond Valley Lake through the Inland Feeder have exceeded 40,000 AF per month, helping reverse the effect of DVL withdrawals that totaled 460,000 AF over the past four years. Table 1-4 shows the water use by member agency for FY 2009/10. Metropolitan sold approximately 1 MAF of treated water and 614,000 AF of untreated water in FY 2009/10.

Metropolitan expects to deliver 1.27 million acre-feet of total supply through the SWP in CY 2010, which includes its 50 percent allocation, supplemental water exchanges from north and south of the Delta, and delivery of water for Desert Water Agency and Coachella Valley Water District. With an estimated 1.13 MAF of Colorado River supplies, Metropolitan's total water supply for CY 2010 is expected to be approximately 2.4 MAF. Due to a combination of the increases in SWP allocation late in the season, successful implementation of Five-Year Supply Actions and mild weather, dry-year storage reserves are expected to increase by the end of CY 2010. This would reverse the trend of storage depletion experienced over the past several consecutive years.

Major Accomplishments for Fiscal Year 2009/10

System Operations and Planning

- Adjusted system operations to reserve approximately 130,000 AF in SWP carryover to bolster supplies under a potentially low SWP allocation in 2010. This strategy provided additional supplies for early 2010 under a 5 percent initial SWP allocation, which was the lowest initial allocation in SWP history.
- Extracted 143,000 AF of supplies from groundwater banking and exchange programs in the Central Valley in CY 2009, bringing the three-year yield to more than 480,000 AF of dry-year supply.
- Extracted 72,000 AF of supplies from groundwater conjunctive use agreements between Metropolitan and participating member public agencies.

Colorado River

- Delivered 1.105 MAF of water supplies on the Colorado River Aqueduct in CY 2009, the first time since CY 2002 that Metropolitan diverted more than 1.0 MAF.
- Improved CRA eight-pump flow performance after tunnel cleaning performed during the October 2009 and April 2010 CRA shutdowns, and subsequent aqueduct maintenance activities. (See Table 1-5 for the full list of shutdowns.)

Five-Year Supply Action Plan

- Supplemented Metropolitan's SWP supplies with transfer water under the Drought Water Bank, Delta Wetlands, and the State Water Contractors Buyers Group programs. In July through September, 9,000 AF of Drought Water Bank water and 2,000 AF of Delta Wetlands water was delivered. In addition, 2,000 AF of Turnback Pool water was delivered.
- Completed a hydrologic study in July 2009 on the Hayfield project, and began final design to convert a full-scale prototype

well to a production well to recover up to 100,000 AF from the Hayfield Basin.

- Completed agreements and authorizations in January 2010 to proceed on the Semitropic Agricultural Water Recovery Project, and worked on groundwater characterization, environmental permitting, and facility design.
- Successfully implemented the Tujunga Well Field Development Project, which began extracting groundwater for regional supplies in May 2010.

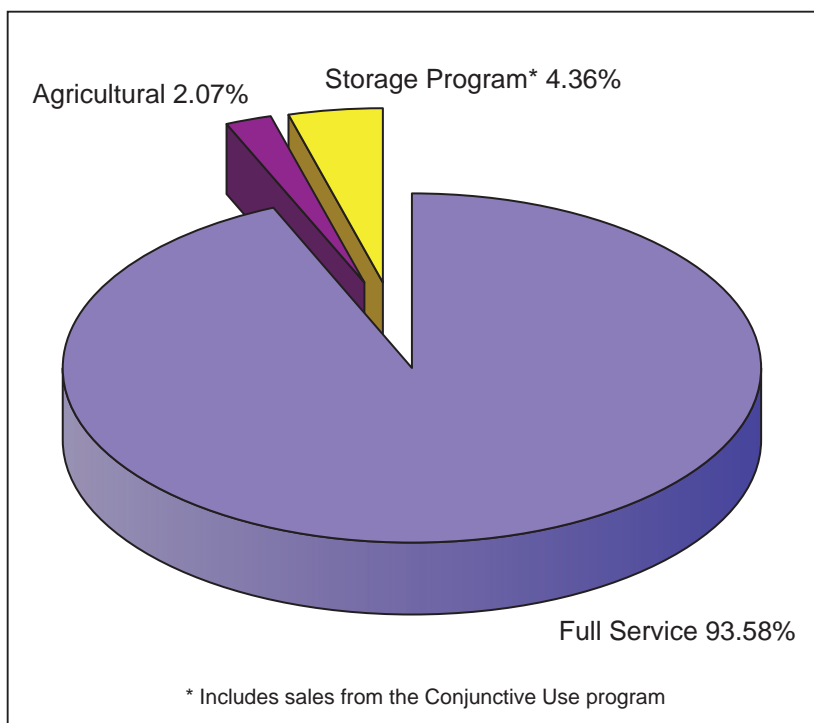


Figure 1-1. Total Water Sales for Fiscal Year 2009/10 - All Member Agencies

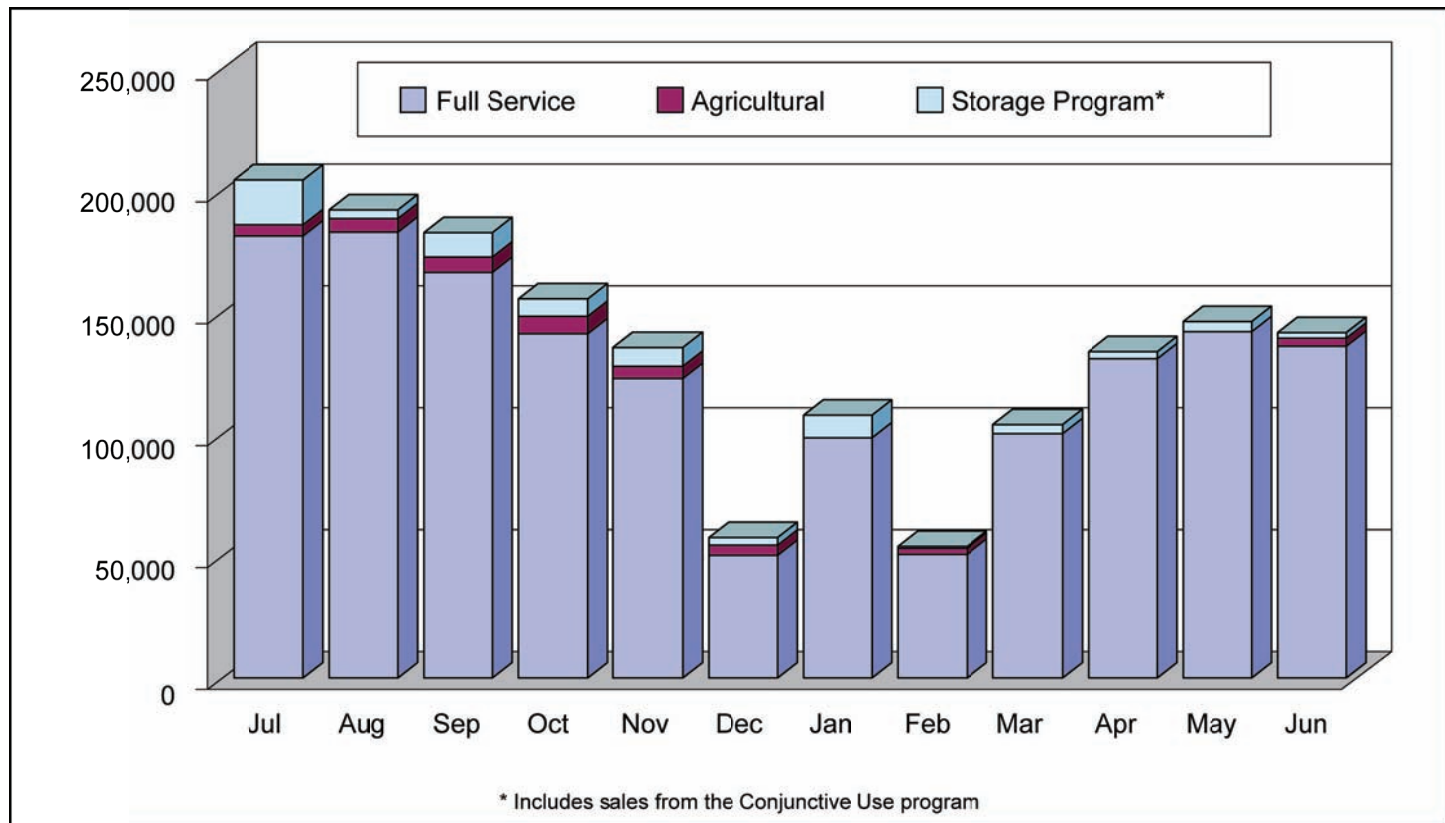
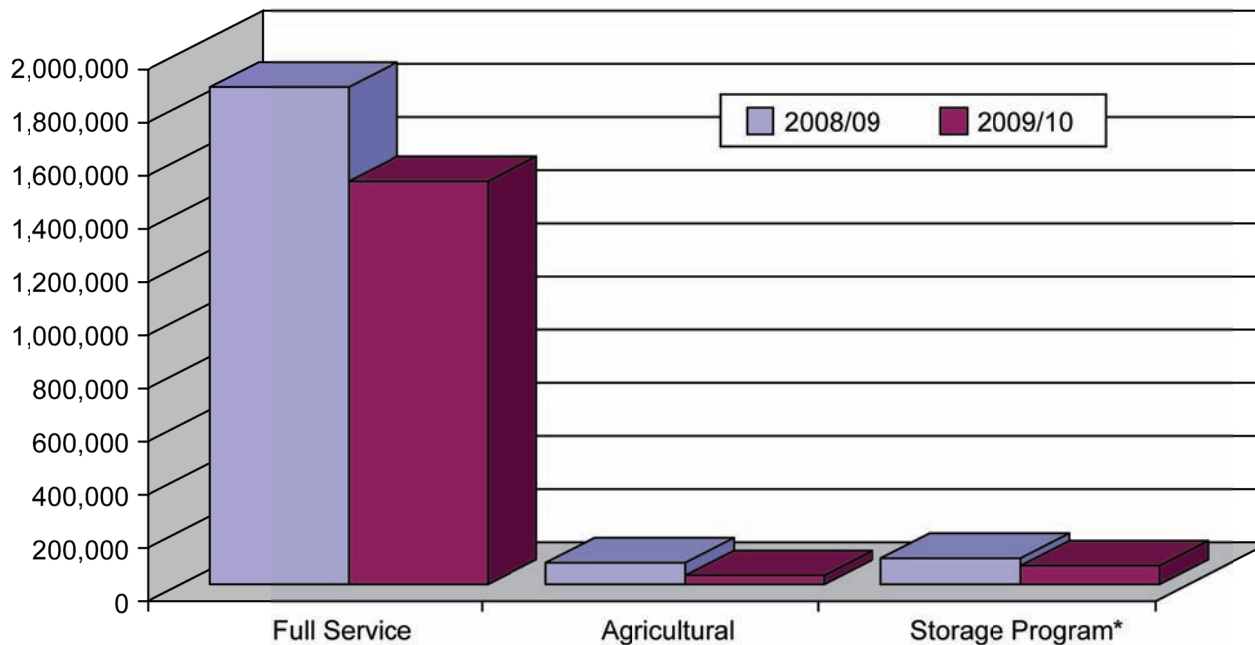


Figure 1-2. Monthly Water Sales for Fiscal Year 2009/10 - All Member Agencies



* Includes sales from the Conjunctive Use program

Figure 1-3. Comparison of Water Sales to Member Agencies For The Past Two Fiscal Years

TABLE 1-3
HISTORICAL WATER SALES
 Calendar Year & Fiscal Year Totals
 (Acre-Feet)

	Calendar Year	Fiscal Year		Calendar Year	Fiscal Year
1941	4,444		1976	1,390,822	1,389,248
1942	12,391	9,739	1977	1,312,876	1,390,466
1943	16,355	14,566	1978	1,302,312	1,198,325
1944	24,567	15,875	1979	1,230,068	1,235,193
1945	37,883	30,606	1980	1,295,903	1,282,064
1946	54,134	46,686	1981	1,597,315	1,462,825
1947	73,573	59,721	1982	1,366,664	1,502,949
1948	148,178	113,090	1983	1,180,616	1,226,783
1949*	163,817	145,008	1984	1,547,078	1,428,253
1950*	170,825	165,616	1985	1,653,414	1,574,216
1951*	192,416	165,473	1986	1,685,359	1,642,249
1952	203,068	197,210	1987	1,857,591	1,825,657
1953	221,022	219,397	1988	2,017,403	1,923,824
1954	333,968	245,875	1989	2,371,479	2,095,079
1955	386,341	385,946	1990	2,626,124	2,511,375
1956	482,909	405,962	1991	1,809,606	2,264,864
1957	518,754	543,706	1992	1,989,165	1,888,907
1958	578,384	539,734	1993	1,812,644	1,910,644
1959	660,718	601,099	1994	1,955,411	1,930,529
1960	816,722	734,919	1995	1,458,237	1,591,496
1961	977,795	935,228	1996	1,675,254	1,641,670
1962	1,033,361	931,795	1997	1,838,675	1,787,857
1963	943,745	1,020,822	1998	1,413,674	1,569,024
1964	1,122,880	1,064,381	1999	1,776,306	1,593,687
1965	1,105,809	1,148,847	2000	2,325,836	2,075,680
1966	1,115,040	1,059,631	2001	2,100,771	2,164,556
1967	1,008,946	1,059,354	2002	2,438,570	2,326,920
1968	1,208,064	1,077,178	2003	2,241,051	2,271,628
1969	997,623	1,057,335	2004	2,420,724	2,417,678
1970	1,152,914	1,165,866	2005	1,973,041	2,051,100
1971	1,184,697	1,133,968	2006	2,089,518	2,081,039
1972	1,213,417	1,248,710	2007	2,317,410	2,296,177
1973	1,218,156	1,177,860	2008	2,097,361	2,176,372
1974	1,223,256	1,139,175	2009	1,823,260	2,044,327
1975	1,294,650	1,329,636	2010		1,614,812

Note:

* Calendar years 1949, 1950 and 1951 are estimated values.

Figures from 1979 to present consist of billable sales of treated and untreated water.

TABLE 1-4
WATER USE BY METROPOLITAN'S MEMBER AGENCIES
Fiscal Year 2009/10¹
(Acre-Feet)

Member Agency	Total Local Production²	Total Local Use³	MWD Direct Deliveries⁴	MWD Indirect Deliveries⁵	MWD Total Deliveries	Total Water Use	MWD Direct Deliveries as % of Total Use
Anaheim	50,769	50,769	21,746		21,746	72,515	30%
Beverly Hills	1,248	1,248	10,473		10,473	11,722	89%
Burbank	11,291	11,291	8,834		8,834	20,125	44%
Calleguas	41,396	45,353	92,138		92,138	137,491	67%
Central Basin	214,994	237,938	43,148	20,295	63,443	301,381	14%
Compton	6,239	6,239	2,031		2,031	8,270	25%
Eastern	127,747	127,747	84,670	6,777	91,447	219,193	39%
Foothill	10,430	10,430	9,696		9,696	20,125	48%
Fullerton	17,082	17,082	10,559		10,559	27,641	38%
Glendale	10,657	10,657	16,550		16,550	27,207	61%
Inland Empire	211,660	211,660	38,016	4,974	42,991	254,651	15%
Las Virgenes	5,493	5,646	20,200		20,200	25,846	78%
Long Beach	32,143	32,143	25,608	5,990	31,599	63,742	40%
Los Angeles	348,020	348,330	262,537		262,537	610,867	43%
MWD OC	249,415	262,961	183,528	20,537	204,065	467,026	39%
Pasadena	13,620	14,034	19,721		19,721	33,755	58%
San Diego	84,551	84,551	492,457		492,457	577,009	85%
San Fernando	3,158	3,158	0		0	3,158	0%
San Marino	4,029	4,029	584		584	4,612	13%
Santa Ana	28,356	28,356	8,751		8,751	37,107	24%

TABLE 1-4 (Continued)
WATER USE BY METROPOLITAN'S MEMBER AGENCIES
 Fiscal Year 2009/10¹
 (Acre-Feet)

Member Agency	Total Local Production²	Total Local Use³	MWD Direct Deliveries⁴	MWD Indirect Deliveries⁵	MWD Total Deliveries	Total Water Use	MWD Direct Deliveries as % of Total Use
Santa Monica	1,966	1,966	10,638		10,638	12,604	84%
Three Valleys	59,642	59,642	56,369	1,017	57,385	117,028	48%
Torrance	3,982	7,142	16,471		16,471	23,613	70%
Upper San Gabriel	226,365	182,754	6,557	16,076	22,633	205,387	3%
West Basin	52,670	55,416	121,315		121,315	176,731	69%
Western	200,386	198,197	80,914		80,914	279,111	29%
	2,017,309	2,018,738	1,643,512	75,666	1,719,178	3,737,916	44%

Notes:

Total Local Production = groundwater, surface water, recycled wastewater, Los Angeles Aqueduct supplies and any use of MWD's replenishment deliveries.

Total Local Use = Total Local Production adjusted for inter-member agency water transfers and locally produced water for groundwater replenishment.

Total Water Use = Total Local Use + MWD Direct Deliveries.

Footnotes:

1 - Local production data includes three year averages for those sources unavailable at time of publication.

2 - Total Local Production is the amount of water produced but not necessarily used within a member agency boundary, not including recycled water used for wetlands and other environmental purposes.

3 - Total Local Use includes net imports from other member or non-MWD agencies, not including water used for environmental purposes.

4 - MWD Direct Deliveries includes SDCWA/IID wheeling.

5- Indirect Deliveries include full service seawater barriers and groundwater spreading deliveries.

TABLE 1-5
2009/10 MAJOR SHUTDOWNS & SERVICE INTERRUPTIONS

FACILITY	DATES	NO. OF DAYS	LIMITS OF SHUTDOWN	PURPOSE
Garvey Ascot Cross Feeder	Aug 18-19, 2009	2	From Palos Verdes Feeder to Garvey Reservoir	For replacement of the packing on the bypass valve and other maintenance.
Inland Feeder	Sep 10-18, 2009	9	From DWR's Devil Canyon Power Plant to the Metropolitan/San Bernardino Intertie	For the final bulkhead removal.
Colorado River Aqueduct	Oct 4-27, 2009	24	From Intake pumping plant to Lake Mathews	For slide gate rehabilitation, installation of a stilling well at West Portal, quagga mussel inspection and tunnel cleaning.
San Diego Pipeline No. 3	Nov 1-10, 2009	10	From the Skinner treatment plant to SDCWA's jurisdiction	For maintenance and repair work by SDCWA on their portion of the pipeline.
San Diego Pipeline No. 5	Nov 1-10, 2009	10	From the Skinner treatment plant to SDCWA's jurisdiction	For repair of the chlorine diffuser at the new east bypass screening structure and to allow repair work by SDCWA on their portion of the pipeline.
Skinner Finished Water Reservoir	Nov 30, 2009- Mar 15, 2010	106	Skinner Finished Water Reservoir	For replacement of the finished water reservoir cover.
San Diego Pipeline No. 4	Dec 7-16, 2009	10	From the Skinner treatment plant to SDCWA's jurisdiction	For repair work by SDCWA on their portion of the pipeline.
West Valley Feeder No. 2 -Calabasas Feeder	Dec 7-18, 2009	12	From the Sepulveda Feeder to the Santa Susana Tunnel	For maintenance and prestressed concrete pipe inspection.
Box Springs Feeder -Mills treatment plant	Dec 14-16, 2009	3	From the DWR's Santa Ana Valley Pipeline to the Mills treatment plant	For installation of DWR's rollout bulkhead downstream of the Box Springs Feeder turnout. This will allow the Mills plant to remain in service while DWR repairs portions of their Santa Ana Valley Pipeline.

TABLE 1-5 (Continued)
2009/10 MAJOR SHUTDOWNS & SERVICE INTERRUPTIONS

FACILITY	DATES	NO. OF DAYS	LIMITS OF SHUTDOWN	PURPOSE
Perris Bypass Pipeline	Dec 14, 2009- Jan 16, 2010	34	From DWR's Santa Ana Valley Pipeline to the Perris Facility	For replacement of the discharge butterfly valve on the electric pump manifold.
Auld Valley Pipeline -San Diego Pipeline No. 1 & No. 2	Jan 4-8, 2010	5	From the Skinner treatment plant to the pipeline terminus	For prestressed concrete pipe inspection.
Box Springs Feeder -Mills treatment plant	Jan 14-16, 2010	3	From DWR's Santa Ana Valley Pipeline to the Mills treatment plant	For removal of DWR's rollout bulkhead downstream of the Box Springs Feeder turnout.
Upper Feeder (Untr*) -Etiwanda Pipeline	Jan 20- Feb 2, 2010	14	From Lake Mathews to the Weymouth treatment plant	For leak repair on the Santa Ana River Bridge crossing and inspection for mortar loss.
Lake Mathews Reservoir -Lake Mathews Forebay	Jan 24-31, 2010	8	From the Lake Mathews Outlet Tower to the Lake Mathews Forebay	For meter maintenance in the Lake Mathews Outlet Tower and valve maintenance in the Lake Mathews Forebay.
Lower Feeder (Untr*) - Santiago Lateral - East Orange County Feeder No. 1	Jan 24-31, 2010	8	From the Lake Mathews Forebay to the Diemer treatment plant	For inspection and recoating of the slide gates in the Santiago Control Tower.
Diemer treatment plant - Lower Feeder (Tr*) - Second Lower Feeder - East Orange County Feeder No. 2 - Allen-McColloch Pipeline	Jan 25-29, 2010	5	Diemer treatment plant	For installation of sodium hypochlorite pipe and diffuser in the existing influent conduit, rerouting of the east washwater overflow to the existing plant rejection conduit, and other ozone related work.
Diamond Valley Lake Facilities	Feb 1-26, 2010	26	From the Inlet/Outlet Tower to the pressure control structure	For outlet tower inspection.

TABLE 1-5 (Continued)
2009/10 MAJOR SHUTDOWNS & SERVICE INTERRUPTIONS

FACILITY	DATES	NO. OF DAYS	LIMITS OF SHUTDOWN	PURPOSE
Orange County Feeder	Feb 7-10, 2010	4	From the sectionalizing valve at East Street and Lincoln Avenue to the Willits Street Pressure Control Structure	For tie-in of a relocated portion of pipeline.
Box Springs Feeder -Mills treatment plant	Feb 8-13, 2010	6	From DWR's Santa Ana Valley Pipeline to the Mills treatment plant	For repair of the feeder and prestressed concrete pipe inspection.
Rialto Pipeline - Etiwanda Pipeline	Feb 8-20, 2010	13	From DWR's Devil Canyon Power Plant to the sectionalizing valve at Indian Hill Boulevard.	For prestressed concrete pipe inspection and inspection for mortar loss in the steel section of pipeline.
San Diego Pipeline No. 2	Feb 22-25, 2010	4	From the Skinner treatment plant to SDCWA's jurisdiction	For a leak repair on the pipeline.
Calabasas Feeder	Apr 6-17, 2010	12	From the West Valley Feeder No. 2 to the pipeline terminus	For pipeline repairs using carbon fiber.
Colorado River Aqueduct	Apr 13- May 1, 2010	18	From Intake pumping plant to Lake Mathews	For electrical work, tunnel cleaning and other maintenance and repair work.
Lake Skinner Outlet Conduit	Apr 19- May 15, 2010	27	From the Lake Skinner Outlet Tower to the Auld Valley Control Structure	For conduit repairs using steel liner.
Yorba Linda Feeder	Jun 4-10, 2010	7	From the North portal of Tonner Tunnel #1 to the Diemer treatment plant	For prestressed concrete pipe inspection.
Allen-McColloch Pipeline	Jun 8-15, 2010	8	From the Diemer treatment plant to El Toro Reservoir	For pipeline repairs using steel liner.
Colorado River Aqueduct	Jun 14-15, 2010	1	From Intake pumping plant to Lake Mathews	For canal maintenance and to alleviate operational constraints.

*Untr = Untreated

Tr = Treated



*New piping and meter installation on Metropolitan's West Coast Feeder
in the city of El Segundo.*



Aerial view of the Sacramento-San Joaquin Delta

Strategic Water Initiatives

Metropolitan provides imported water supplies from two main sources, the Colorado River and the Sacramento-San Joaquin Bay-Delta watersheds. In response to the importance of and increasing competing demands on these two sources of supply, the General Manager created an executive-level position to oversee Metropolitan's Strategic Water Initiatives for the Colorado River and the Sacramento San Joaquin Bay-Delta. These initiatives are supported by various staff throughout Metropolitan.

Bay-Delta Initiatives

In November 2009, the California Legislature enacted a historic package of water reform legislation to improve the management and governance of the Delta. The package includes the establishment of a Delta Stewardship Council to advance the co-equal goals of ecosystem restoration and water supply reliability. Council members were selected in early 2010 and the organization is up and running. Delta governance institutions such as the Delta Conservancy, the Delta Protection Commission and the California Water Commission were created or adapted to take the lead on ecosystem restoration, a new Delta economic strategy, and decisions regarding the development of storage infrastructure.

In response to the increased activities and processes in place to restore and manage the Delta, General Manager Jeffrey Kightlinger created the Bay/Delta Program Initiative at Metropolitan in late 2009 with a team of dedicated staff and resources to fully support Metropolitan's efforts to work with the state of California on Delta-related issues. Figure 2-1 shows a map of the Delta region.

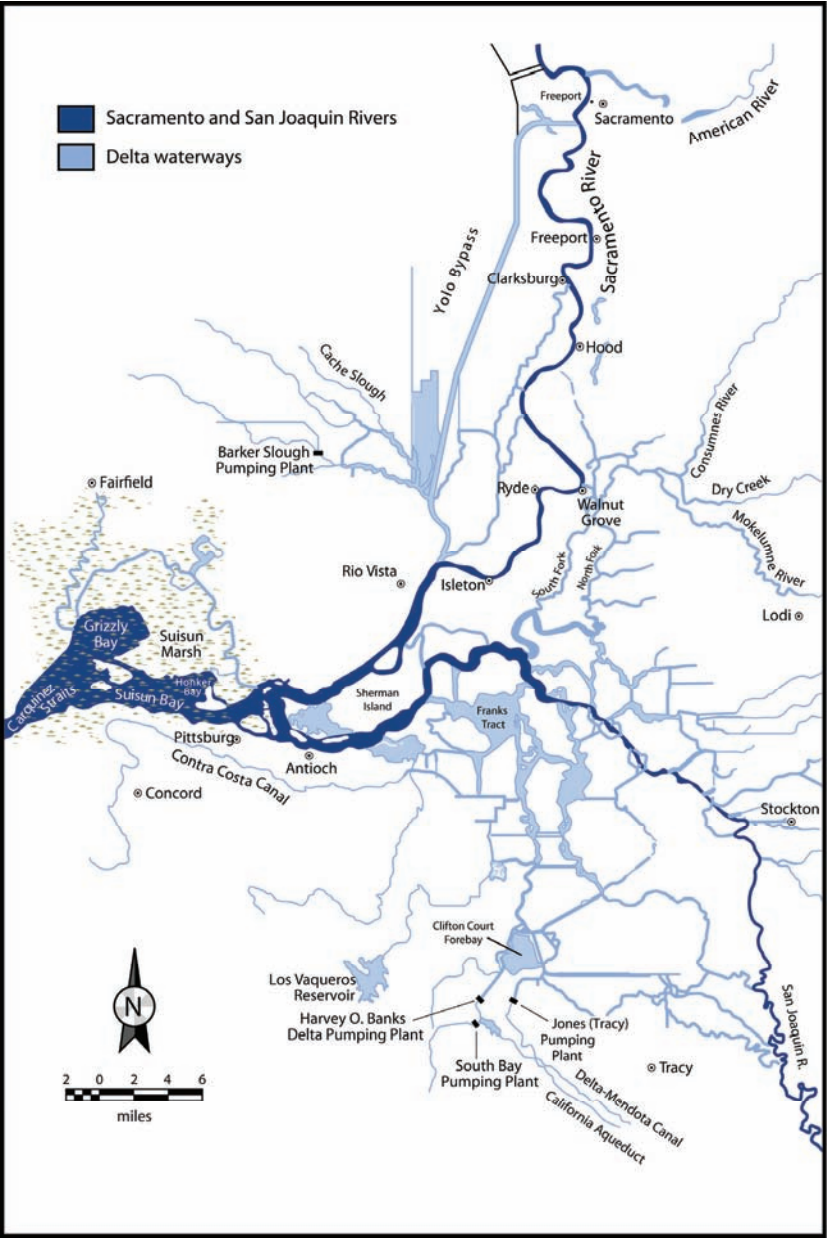


Figure 2-1. Map of the Delta Region

Near-Term Actions

Habitat Restoration

Metropolitan coordinated with other export water users, environmental interests, local entities, and state/federal agencies to develop early action habitat restoration projects consistent with the targets set forth under biological opinions from the U.S. Fish and Wildlife Service and National Marine Fisheries Service. Metropolitan continued to advance a potential 700-acre tidal marsh habitat restoration project in the southern Yolo Bypass.

Two-Gates Fish Protection Project

Metropolitan continued working with the U.S. Bureau of Reclamation, state and federal water contractors, and fisheries agencies to resolve issues related to the Two-Gates Fish Protection Project and to develop a work plan for moving the project forward. Real-time modeling capability continues to be developed in coordination with state and federal agencies, and augmented by a new network of water quality sensors in the Delta to assist in the monitoring of Delta smelt distribution and movement within the Delta, and how that distribution is affected by turbidity, conductivity and water temperature.

Long-Term Actions

Bay Delta Conservation Plan

Metropolitan staff conducted a review of the proposed framework for the Bay Delta Conservation Plan process to analyze the effects of conservation measures (effects analysis) on Delta water quality actions. The review focused on the scientific and technical justification for the proposed analytical tools and assumptions, and consistency with Metropolitan's positions in various legal and public forums. Metropolitan continues to directly participate in all BDCP work-related efforts.

Habitat, Conveyance, Water Quality

An independent review committee assembled by the California Department of Water Resources completed a technical review of the

three Delta conveyance alternatives: the East Isolated Canal, West Isolated Canal, and an all-underground tunnel option.

Water Quality Issues

The State Water Resources Control Board proceeded to develop flow criteria for the Delta ecosystem necessary to protect public trust resources in compliance with Senate Bill 1 of the 2009-2010 Seventh Extraordinary Session. The flow criteria developed through this process do not have any regulatory or adjudicative effect. Metropolitan continues to work with the state and federal water contractors to participate in this process and submit comments.

Emergency Preparedness Plan

Working in a lead role with the contractors for the State Water Project and Central Valley Project, Metropolitan continued to focus on actions that facilitate and expedite the stockpiling of emergency preparedness materials in the Delta region. Metropolitan also worked on identification and implementation plans for strategic levee improvements to help implement a freshwater emergency pathway along the Middle River. This would be the principal means of restoring export water supplies in the event of a major earthquake in the Delta region. A signed Memorandum of Agreement between DWR and the U.S. Army Corps of Engineers forms the basis for a joint Emergency Response Plan scheduled for release in 2011.

Science Development

Metropolitan was closely involved in the development and funding of the science program for the State and Federal Water Contractors Agency, a joint powers authority of state and federal water contractors. This program sponsored the work of Dr. Patricia Glibert, a food web ecology scientist. The Glibert study concluded that concentrations of ammonia and other key nutrients impact phytoplankton in the Delta, which potentially reduces the food supply and population for numerous fish species, including Delta smelt. The study suggests that better treatment of urban wastewater discharges could be the key to Delta restoration.

In March 2010, the National Research Council, a wing of the National Academy of Sciences, released its preliminary report on the fish protection measures contained within the Delta smelt and salmon biological opinions that currently restrict the operations of the State Water Project and Central Valley Project. Metropolitan provided expert testimony and written comments during the review process related to the report. While the NRC overall found that the biological opinions were “scientifically justified,” their review panel expressed considerable uncertainty regarding the amount of flow that should trigger a reduction in exports, as well as a requirement to increase fall flows in wet and above-average years.

Colorado River Issues

Metropolitan has contracts for Colorado River water with the federal Bureau of Reclamation for a basic apportionment of 550,000 acre-feet, and up to an additional 842,000 AF when available from water unused by Arizona, Nevada, higher priority users in California, or surplus water.

Figure 2-2 shows a map of the Colorado River Basin and the states that rely on the Colorado River system for water. The map also shows California’s water agencies that fall within the state’s 4.4 MAF basic apportionment, which includes Metropolitan and the higher-priority agricultural users (Palo Verde Irrigation District, Yuma Project Reservation Division, Imperial Irrigation District, and Coachella Valley Water District).

The Colorado River Basin continues to experience prolonged drought conditions, and during 2010, Lake Mead fell to its lowest level in 45 years. As a result surplus supplies have not been available for the eighth consecutive year, and Metropolitan has relied on water supply programs to augment the reduced supply. For the first time since surplus deliveries ended in 2002, in 2009 Metropolitan diverted 1.1 million acre-feet of Colorado River Water because of unused higher-priority water. In 2010, Metropolitan anticipates that it will have a full Colorado River Aqueduct supply available to it, or 1.25 million acre-feet under normal operating conditions as defined by the guidelines governing surplus Colorado River water.



Figure 2-2. Colorado River Basin

During fiscal year 2009/10, Metropolitan implemented several new programs to increase its Colorado River water supply. In addition to its long-term fallowing program with Palo Verde Irrigation District (PVID), which produced about 120,000 acre-feet during the year, in response to drought conditions in Southern California, Metropolitan negotiated a one-year supplemental fallowing program with PVID to produce another 65,000 acre-feet of water. With the supplemental program in place, 44 percent of land in PVID was fallowed during the year, compared with 29 percent under the long-term program. As Metropolitan's water demands were reduced during the fiscal year, under an agreement reached with the Lower Basin States in 2007, Metropolitan was able to store the supplemental water in Lake Mead for future use.

In May 2010, after a long-term dormancy, the Yuma Desalting Plant began operation, thanks to funding provided by Metropolitan, the Southern Nevada Water Authority, and the Central Arizona Project. The desalting plant was built in the 1980s to desalt agricultural drainage water from the Yuma area, but was not operated because there was surplus water available from the Colorado River during the 1980s and 1990s. In recent years, as drought conditions persisted, and the Bureau of Reclamation did not have funding to operate the plant, the water agencies provided funds to operate the plant in return for receiving storage credits in Lake Mead equal to the amount of water conserved. Slated to run for one year, the plant is expected to desalt agricultural drainage, resulting in 30,000 acre-feet of conserved water, of which 24,000 acre-feet would be credited to Metropolitan's Lake Mead storage account.

In summer 2009, the Colorado River Basin States joined Reclamation in submitting a proposal to address the long-term supply and demand imbalance of the Colorado River. The proposal was submitted under the Department of Interior's Basin Studies program, which provides a federal cost share for any accepted proposal. In late 2009, the Department of the Interior selected the Basin States' proposal, and work began on the two-year, \$2 million study. The study will evaluate the current and future water demand in the Colorado Basin, the impacts of climate change to the water resources, and identify options to help meet the future supply-demand imbalance. Options that will be considered include: increased conservation, water recycling, agricultural-to-urban transfers, brackish water desalination,

recycling, weather modification, and exchanges involving seawater desalination projects. The study should be completed by the end of 2011; Metropolitan will use the study recommendations and work with other agencies to evaluate implementation of new water supply programs.

During fiscal year 2009/10, the Colorado River Basin States and the United States' agencies began negotiating a binational water management agreement with Mexico. The negotiations included shortage criteria for Mexico during droughts, and the ability for Mexico to store water in Lake Mead. In April 2010, catastrophe hit Baja California when an 8.2 magnitude earthquake struck the area, causing major damage to the Mexicali Valley irrigation system. Because of the earthquake, Mexico had additional water and requested to store the water in Lake Mead. At the end of the fiscal year, both Mexico and the United States had proposals for a long-term water management agreement, and it is hoped that a mutually beneficial agreement can be reached before the end of 2010. If completed, the agreement would likely include opportunities for Metropolitan and other agencies to partner with Mexico to develop and implement agricultural conservation and seawater desalination projects.



The Colorado River Upper Basin saw some improvement of drought conditions in 2009/10, as Flaming Gorge Reservoir nearly filled to capacity.



*California Friendly sustainable landscape at the
F.E. Weymouth Water Treatment Plant*

Water Resource Management

Low runoff from Metropolitan's sources of imported water and sustained pumping restrictions on the State Water Project created continued supply challenges during fiscal year 2009/10. These constraints were mitigated through imported water management programs and demand management efforts by local agencies and water consumers. Metropolitan also implemented its Water Supply Allocation Plan for the first time in FY 2009/10 in an effort to suppress water demands and preserve storage resources. In April 2010, Metropolitan's board voted to continue the allocation into FY 2010/11.

State Water Project Resources

Metropolitan currently has a water supply contract for 1,911,500 AF of water annually with the California Department of Water Resources, subject to availability. For FY 2009/10, Metropolitan took delivery of 953,352 AF, including exchange deliveries with Desert Water Agency and Coachella Valley Water District (Fig. 3-1). Fiscal year deliveries were approximately 60 percent of the annual average delivery for the preceding eight years. Metropolitan exercised its State Water Project water management programs to ensure delivery capability under the low supply conditions. Metropolitan's net SWP payments were \$438.22 million (Table 3-1) during FY 2009/10.

Water Transfers and Exchanges

Metropolitan continued to administer five existing SWP storage programs located outside of its service area. A large portion of the water withdrawn from the storage programs was temporarily placed in State Water Project carryover to provide increased operational flexibility and reduce costs. Adding the water to the State Water

Project carryover allows for the return of the water at a much faster rate and on Metropolitan's schedule than if the water were stored in the groundwater storage program. The carryover account does not have any evaporation losses and optimizing the carryover storage improves Metropolitan's water supply reliability should additional water be needed in FY 2010/11.

Semitropic/Metropolitan Water Banking and Exchange Program

Under the 1994 agreement with the Semitropic Water Storage District, the program entitles Metropolitan to store up to 350,000 AF in the groundwater basin underlying Semitropic in Kern County and to retrieve between 31,500 AF and 223,000 AF, annually. During FY 2009/10, Metropolitan stored no water in the Semitropic program, and recovered 38,428 AF. During the year there was an adjustment of 8,713 AF of water delivered in the previous fiscal year to account for additional water reclassified as Metropolitan's supply. The total water in storage on June 30, 2010 was 43,914 AF.

Arvin-Edison/Metropolitan Water Management Program

Under a December 1997 agreement with the Arvin-Edison Water Storage District, Metropolitan can store up to 350,000 AF and retrieve up to 75,000 AF per year. During FY 2009/10, Metropolitan stored no water in the Arvin-Edison program, and recovered 89,622 AF.

In FY 2009/10, Arvin-Edison and Metropolitan exercised a water quality provision of the agreement allowing for the exchange of up to 28,850 AF of high-quality water. Arvin-Edison delivered high-quality Friant supplies and, in exchange, Metropolitan will return the entire balance by August 2010, using its SWP supplies. The one-to-one exchange improved the water quality of the California Aqueduct and did not require any additional payments to Arvin-Edison. The total water in storage on June 30, 2010 was 39,695 AF.

San Bernardino/Metropolitan Coordinated Operating Agreement

A July 2000 coordinated operating agreement between Metropolitan and San Bernardino Valley Municipal Water District provides for the annual purchase of 20,000 AF and a carryover storage account of 50,000 AF. The agreement also provides Metropolitan with the option to purchase additional water when available. During

TABLE 3-1
CHARGES, PAYMENTS AND CREDITS UNDER THE STATE WATER
AND DEVIL CANYON CASTAIC CONTRACTS
(Millions of Dollars)

Fiscal Year	Conservation (Delta)		Transportation			Extra * Capacity Costs	Devil Canyon/ Castaic	Subtotals	Credits	Totals	Accumulated Totals		
	Capital	Minimum OMP&R (1)	Capital	Minimum OMP&R (1)	Variable								
1963-73	2.50	0.66	197.31	19.33	1.02	39.16	3.56	263.54	(15.62)	247.91	247.91		
1973-83	80.68	29.43	484.57	181.61	59.06		70.74	906.09	(49.53)	856.56	1,104.47		
1983/84	11.77	6.15	73.10	75.17	12.50		7.36	186.05	(31.54)	154.51	1,258.99		
1984/85	12.11	8.01	68.31	119.08	6.32		8.16	221.99	(41.14)	180.85	1,439.84		
1985/86	12.74	10.70	57.40	140.38	1.88		8.26	231.35	(23.64)	207.72	1,647.56		
1986/87	14.05	11.56	57.30	141.06	7.50		8.35	239.81	(17.90)	221.91	1,869.47		
1987/88	15.22	12.09	59.83	138.86	7.53	4.85	8.99	247.37	(29.43)	217.94	2,087.41		
1988/89	16.50	13.95	63.97	148.19	0.10	10.93	9.29	262.92	(31.24)	231.68	2,319.08		
1989/90	18.02	15.09	66.82	149.96	4.20	11.23	9.01	274.32	(26.22)	248.10	2,567.19		
1990/91	19.40	15.17	68.66	152.77	26.15	11.27	9.05	302.48	(33.77)	268.71	2,835.89		
1991/92	20.98	16.99	72.63	161.00	15.89	19.75	9.86	317.10	(60.89)	256.22	3,092.11		
1992/93	23.07	17.91	74.41	165.25	6.24	27.59	10.18	324.64	(77.42)	247.22	3,339.33		
1993/94	23.50	16.92	74.35	147.75	(5.86)	25.24	9.89	291.79	(101.81)	189.98	3,529.31		
1994/95	22.58	17.29	77.05	150.63	8.96	24.01	10.24	310.76	(94.13)	216.63	3,745.94		
1995/96	21.85	19.68	81.31	111.87	3.11	26.08	10.60	274.49	(65.33)	209.16	3,955.10		
1996/97	21.51	21.19	85.23	109.56	10.00	29.18	10.44	287.11	(38.30)	248.81	4,203.91		
1997/98	21.79	22.87	90.07	138.35	6.67	27.58	9.56	316.87	(64.74)	252.14	4,456.05		
1998/99	20.56	23.07	90.58	139.60	6.50	29.48	9.40	319.19	(74.96)	244.23	4,700.28		
1999/00	19.16	24.11	89.26	164.26	12.05	29.99	10.32	349.15	(70.06)	279.09	4,979.37		
2000/01	26.91	(2)	24.60	115.99	(2)	156.53	35.73	32.99	10.81	403.57	(27.19)	376.38	5,355.75
2001/02	8.46	25.20	60.24	147.23	111.75	38.99	10.53	402.40	(68.44)	333.97	5,689.72		
2002/03	16.32	25.90	88.45	161.36	64.83	32.95	10.26	400.07	(57.10)	342.97	6,032.68		
2003/04	18.39	27.86	94.86	169.12	110.22	31.49	10.23	462.18	(69.47)	392.71	6,425.39		
2004/05	20.60	29.65	98.51	149.53	102.39	28.28	10.99	439.94	(66.68)	373.26	6,798.65		
2005/06	17.36	28.37	88.80	140.92	130.82	23.60	11.10	440.97	(41.33)	399.64	7,198.30		
2006/07	21.34	25.40	87.95	172.78	88.82	28.64	11.90	436.83	(74.20)	362.63	7,560.92		
2007/08	23.95	15.33	80.98	188.78	165.49	36.24	12.12	522.90	(58.60)	464.30	8,025.22		
2008/09	23.18	30.50	73.30	224.90	56.72	31.30	13.40	453.30	(58.59)	394.71	8,419.93		
2009/10	34.69	39.06	91.87	205.72	71.27	35.93	13.97	492.50	(54.28)	438.22	8,858.15		
TOTALS	609.20	-	574.72	2,813.10	-	4,271.55	1,127.84	636.72	348.55	10,381.68	(1,523.53)	8,858.15	

* Includes costs for excess capacity constructed for Metropolitan on the System and East Branch Enlargement

(1) Minimum Operations, Maintenance, Power, and Replacement charge

(2) DWR requested early payment of \$36M to manage cash shortages due to 2001 California's energy crisis

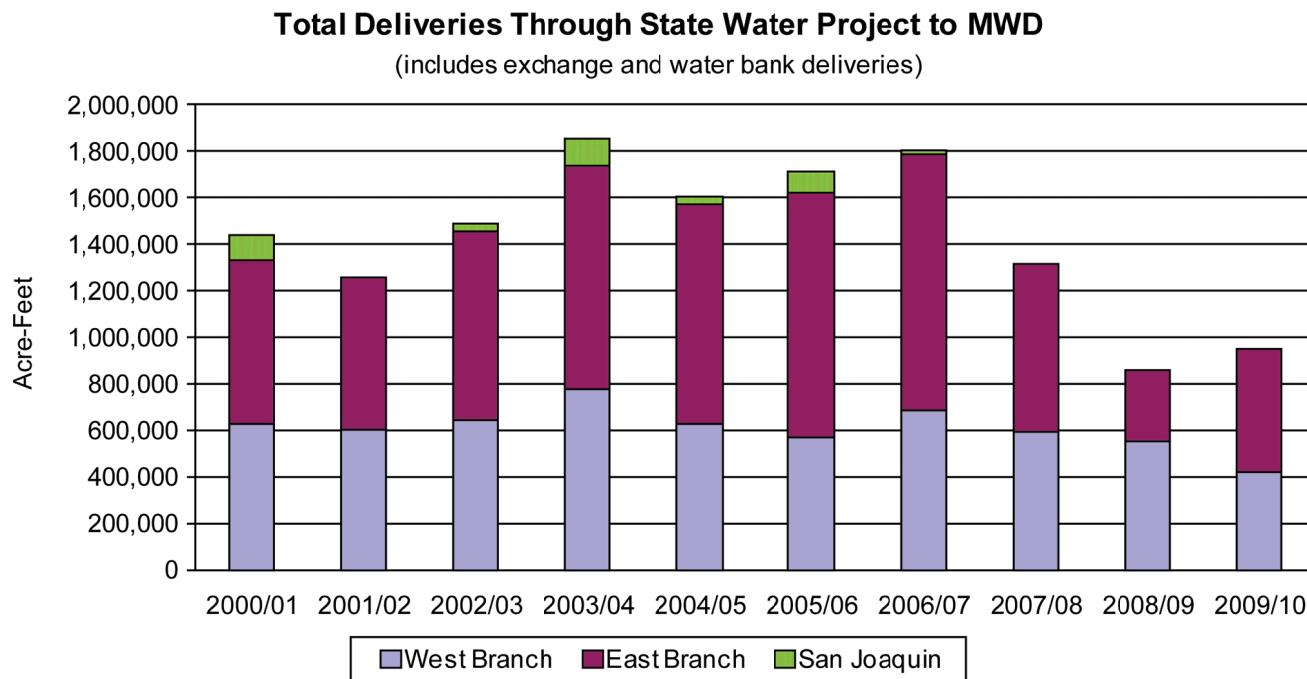


Figure 3-1. Total Deliveries through State Water Project to MWD

FY 2009/10, due to the low SWP allocation, San Bernardino Valley Municipal Water District was unable to deliver the 20,000 AF to Metropolitan. The remaining 50,000 AF stored in the carryover account had previously been recovered, leaving a balance of zero on June 30, 2010.

Kern Delta/Metropolitan Water Management Program

In May 2003, Metropolitan entered into an agreement with the Kern Delta Water District. This program allows Metropolitan to store up to 250,000 AF and retrieve up to 50,000 AF per year. During FY 2009/10, Metropolitan stored no water in the Kern Delta program and recovered 4,953 AF. The total water in storage on June 30, 2010 was 9,872 AF.

Mojave/Metropolitan Demonstration Water Exchange Program

In October 2003, Metropolitan entered into a demonstration agreement with Mojave Water Agency. The agreement allows for the exchange of SWP water on the basis of one acre-foot of return water for each acre-foot of water previously delivered to Mojave. During FY 2009/10, Metropolitan recovered 7,488 AF from the exchange account. The total water remaining in the exchange account on June 30, 2010 was 2,891 AF.

Delta Wetlands One-Year Transfer

A one-year water transfer agreement with Delta Wetlands Properties allowed for the transfer of water that was conserved on the Delta Wetlands Webb Tract by fallowing crops. During FY 2009/10, Metropolitan received 1,568 AF from the water transfer after conveyance and carriage losses.

2009 Drought Water Bank Transfers

Metropolitan received 28,635 AF in FY 2009/10 (after 20 percent Delta carriage and 3 percent California Aqueduct conveyance losses) under an agreement with the California Department of Water Resources to purchase 36,899 AF of water transfer supplies from the 2009 Governor's Drought Water Bank.

Yuba Accord Water Transfers

In summer 2009, Metropolitan purchased 42,915 AF of supplies made available by the Yuba County Water Agency under a 2007 long-term agreement with the California Department of Water Resources. After carriage and conveyance losses, Metropolitan received 33,302 AF.

Colorado River Resources

Acquisitions and exchanges made possible by the 2003 Quantification Settlement Agreement continued in FY 2009/10. The Quantification Settlement Agreement established water use limits for Imperial Irrigation District and Coachella Valley Water District, and provides the means for Metropolitan to acquire water to augment its basic annual apportionment of Colorado River water. Metropolitan conveyed 1,023,547 AF in its Colorado River Aqueduct during this fiscal year, including the exchange of 144,626 AF of conserved water acquired by San Diego County Water Authority (SDCWA). Of the water resulting from the All-American and Coachella Canal lining projects, 15,824 AF was used by Metropolitan during the fiscal year with the remaining amount exchanged with SDCWA. In addition to acquisitions and exchanges, during calendar year 2009, Metropolitan's diversion included 242,323 AF of water not needed by the higher-priority agricultural users. The aqueduct has the capacity to divert 1.3 MAF annually. Figure 3-2 illustrates water conveyed annually in the aqueduct since calendar year 2000, including supplies above the basic apportionment.

With below-average runoff in 2010, Lake Mead storage dropped during the fiscal year, reaching its lowest level since March 1965. Under such conditions, the Bureau of Reclamation does not make surplus water available. In response, Metropolitan continued to pursue additional supplies from storage and acquisition programs to help meet demand. Figure 3-3 shows the storage levels of lakes Mead and Powell, and highlights impacts of conditions over the last 11 years in which runoff averaged less than normal. As runoff in the Upper Colorado River Basin is snowpack driven, each spring Lake Powell has increased in storage before dropping again following the snowmelt period, causing the normal annual fluctuation that can be expected with most Western water supply reservoirs. Interim guidelines

adopted in December 2007 by the Secretary of the Interior for the coordinated operations of lakes Powell and Mead have governed releases from Lake Powell since 2008, resulting in reduced storage levels in Lake Mead.

During this fiscal year, Metropolitan also took advantage of water management agreements negotiated in 2007 that allow agencies to develop and store new water supplies in Lake Mead. As of June 30, 2010, Metropolitan had 145,790 AF of storage in Lake Mead due to its funding participation in the Drop 2 Reservoir Project, which will help conserve water currently lost from the system and from water saved from fallowing in the Palo Verde Valley.

Metropolitan diverted 1,261 AF of Mexican Treaty Water from Lake Havasu for delivery to Tijuana during the fiscal year. An amended agreement among the United States, Metropolitan, SDCWA and Otay Water District has extended the period for temporary emergency deliveries through November 9, 2013.

Water Supply Acquisitions, Storage, and Exchanges

Metropolitan obtained 89,000 AF from its agricultural conservation program with IID, while an additional 129,003 AF of water was made available from Metropolitan's land-fallowing agreements with farmers in the Palo Verde Valley. In response to the limited water supplies available statewide, Metropolitan and Palo Verde Irrigation District solicited Palo Verde Valley farmers' participation in a supplemental one-year fallowing program to provide some relief to drought-stricken Southern California. This short-term fallowing program will terminate at the end of July 2010 and is estimated to provide an additional 56,359 AF.

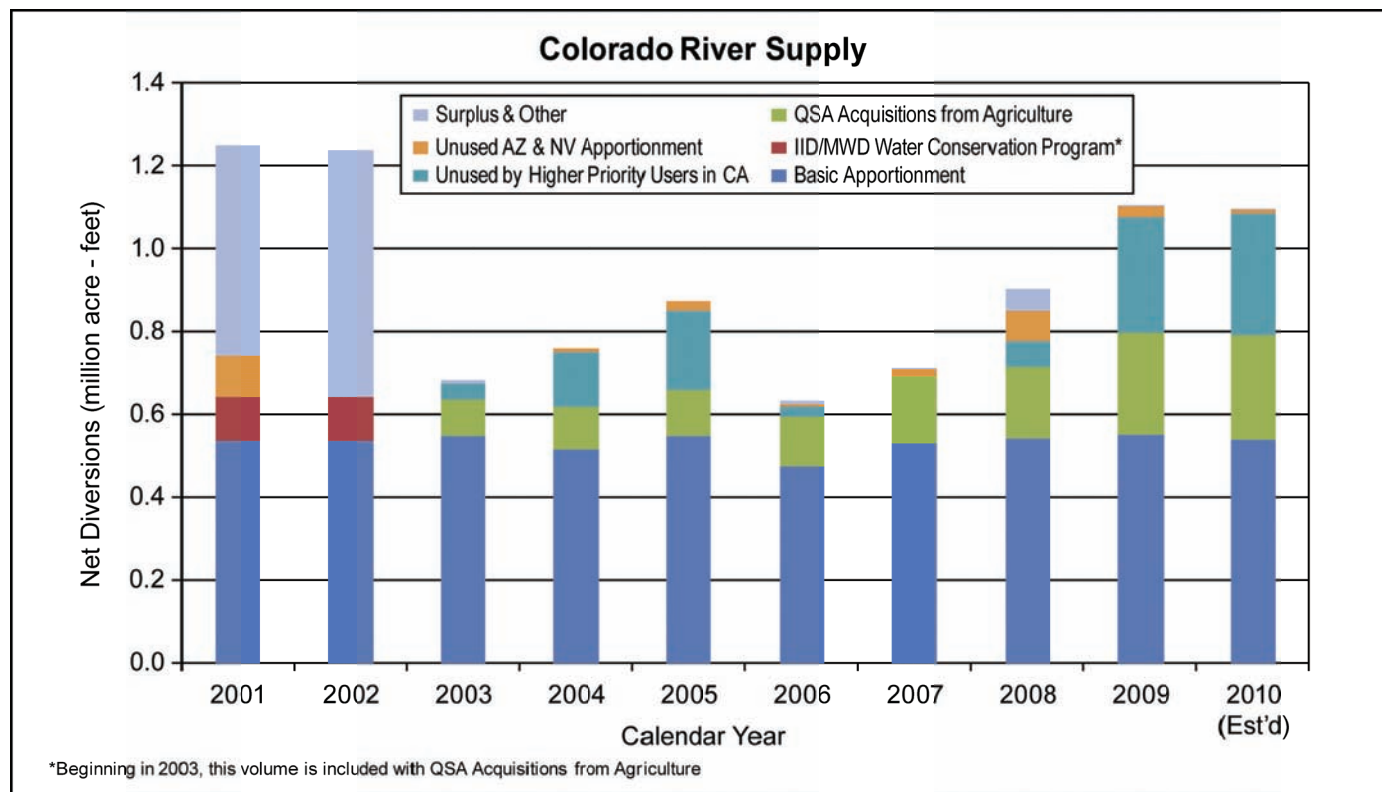


Figure 3-2. Colorado River Supply

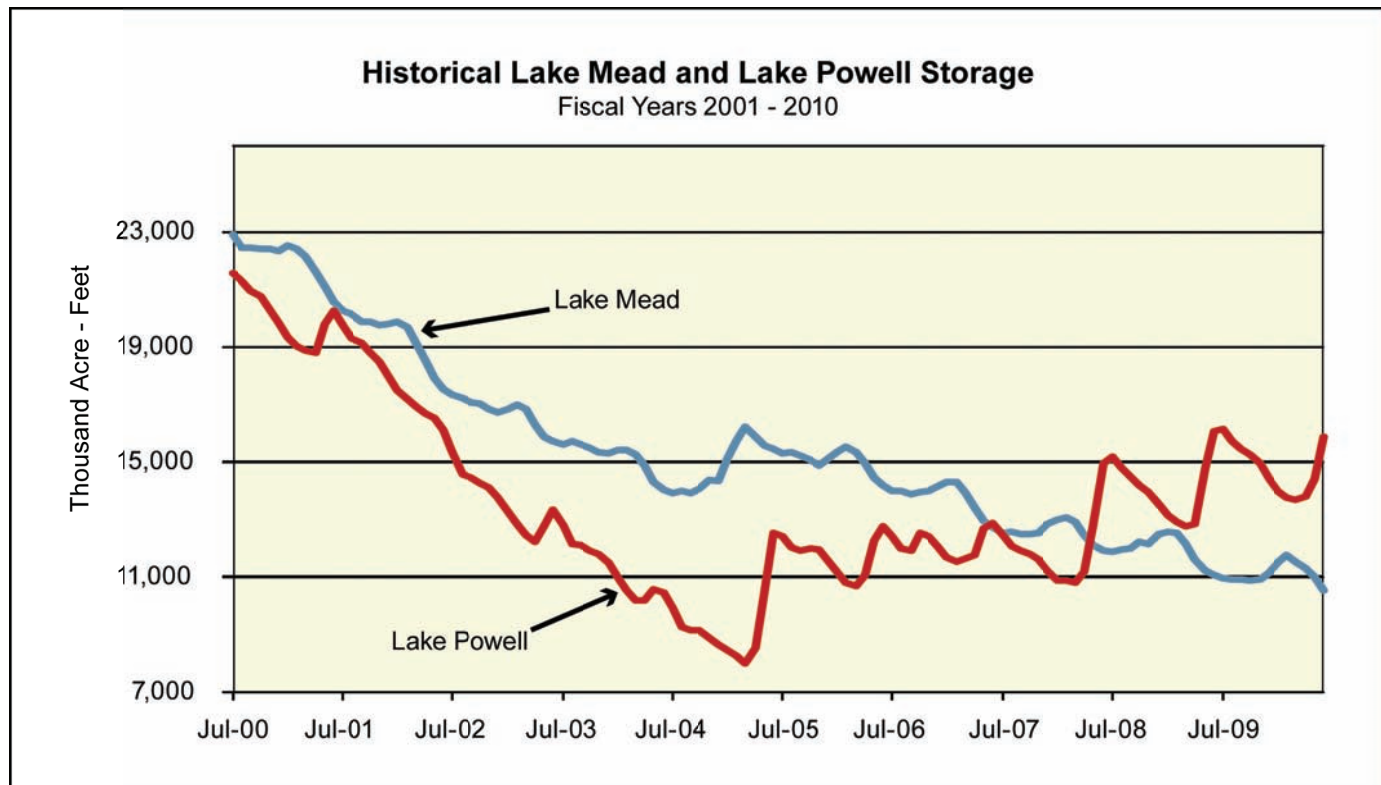


Figure 3-3. Historical Lake Mead & Lake Powell Storage

Local Resources

Water Recycling, Groundwater Recovery, and Seawater Desalination

Water recycling and groundwater recovery constitute important elements of the region's diverse local resource portfolio and help improve water supply reliability. Metropolitan provides financial incentives under its Local Resources Program (LRP) for development and use of recycled water and recovered groundwater.

The LRP provides up to \$250 per acre-foot of water produced from new projects that expand regional water recycling and groundwater recovery. Eighty-four participating water recycling and groundwater recovery projects are expected to collectively produce about 420,000 AF per year once fully implemented. Since inception of the LRP in 1982, Metropolitan has provided about \$346 million for production of about 1.9 MAF of recycled water and recovered groundwater.

During FY 2009/10, Metropolitan provided \$37.5 million for the development of 227,000 AF of recycled water and recovered groundwater in its service area. Combined with Metropolitan-funded projects, the region as a whole produced about 316,000 AF of recycled water (Fig. 3-4), and about 100,000 AF of recovered groundwater (Fig. 3-5). Metropolitan also authorized three new LRP incentive agreements for projects expected to collectively produce up to 3,600 AF per year, once fully implemented.

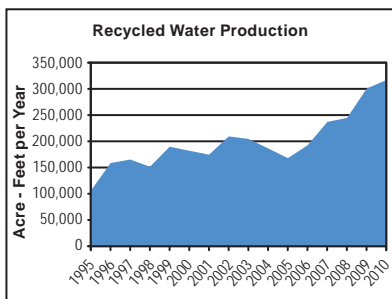


Figure 3-4

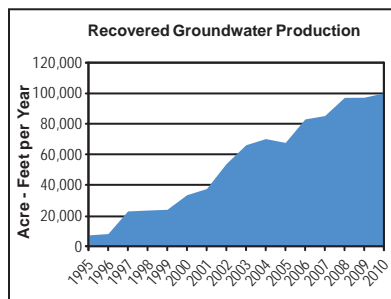


Figure 3-5

Metropolitan concluded its partnerships with member agencies to retrofit potable urban irrigation systems to recycled water. It provided \$1.12 million toward retrofitting 85 public sector sites that would use approximately 83,000 AF of recycled water over 25 years.

Under the Seawater Desalination Program, Metropolitan supported member agency seawater desalination projects at permit hearings and coordinated responses to regulatory and legislative developments. Metropolitan has signed agreements with Long Beach, Municipal Water District of Orange County, and West Basin Municipal Water District for local seawater desalination projects currently in the pilot-study phase. A fourth agreement for the Carlsbad Seawater Desalination Project in San Diego is pending. These four proposed projects have the potential to produce up to 102,000 AF per year. In addition, Metropolitan member agencies are also considering three projects outside of the Seawater Desalination Program, at sites in Huntington Beach, Camp Pendleton, and Rosarito Beach, Mexico. Metropolitan has partnered with SDCWA, Southern Nevada Water Authority and Central Arizona Water Conservation District to study the bi-national project. These additional efforts would have the potential to produce up to 280,000 AF per year of new supply.

Groundwater Storage

Metropolitan's dry-year conjunctive use programs store wet-year imported supplies to enhance reliability during dry, drought and emergency conditions. Metropolitan has executed 10 agreements with member and retail agencies for groundwater storage within its service area. During the period FY 2007/2008 through FY 2009/10, approximately 133,000 AF were produced from these storage accounts. Of this amount, 45,000 AF were produced in FY 2009/10, replacing imported water deliveries to member agencies. These agreements provide Metropolitan with more than 421,000 AF of additional storage within its service area with a contractual yield of more than 117,000 AF per year during dry, drought, and emergency conditions (Table 3-2). To date, \$45 million of Proposition 13 funds and \$54.7 million of Metropolitan capital funds have been allocated to these programs.

**TABLE 3-2
METROPOLITAN'S CONJUNCTIVE-USE PROGRAMS**

Conjunctive Use Program	Total Storage (AF)	Dry-Year Yield (AF Per Year)	2009/10 Beginning Balance (AF)	2009/10 Withdrawals (AF)	2009/10 Ending Balance (AF)
Ventura County					
North Las Posas Phase 1 & 2	210,000	47,000	49,609	10,293	39,316
Los Angeles County					
Claremont	3,000	1,000	0	0	0
Compton	2,295	765	572	572	0
Foothill	9,000	3,000	711	183	528
Live Oak	3,000	1,000	687	0	687
Long Beach Phase 1	13,000	4,333	6,402	0	6,402
Long Beach – Lakewood	3,600	1,200	1,800	900	900
Orange County					
Orange County	66,000+	22,000	23,817	20,930	2,887
San Bernardino County					
Chino Basin	100,000	33,000	32,825	19,391	13,434
Riverside County					
Elsinore Basin	12,000	4,000	0	0	0
TOTAL	421,895	117,298	116,423	52,269	64,154

2009/10 data is based on certifications submitted to Metropolitan as of July 2010

Metropolitan continued participation in the Emerging Constituents Workgroup convened by the Santa Ana Watershed Project Authority to undertake discussions and monitoring for the presence of these unregulated chemicals in local and imported water used for groundwater recharge. Metropolitan submitted its water quality data for inclusion in the group's annual report to the Santa Ana Regional Water Quality Control Board.

Conservation and Water-Use Efficiency

Metropolitan's two regional incentive programs – SoCal Water-Smart (residential customers) and Save Water, Save-A-Buck (commercial, industrial, institutional and multi-family customers), provided rebates that motivated installation of a wide array of water efficient devices. In FY 2009/10, Metropolitan's water conservation programs resulted in more than 10,700 AF of new water savings, or about 3.5 billion gallons. Metropolitan has invested a total of approximately \$295 million since 1990 in water conservation incentives.

Water Resource and System Planning

Integrated Water Resources Planning

The framework for regional water resource planning for Metropolitan's service area is the Integrated Water Resources Plan (IRP), adopted by Metropolitan's board in 1996. The IRP provided a diversified 20-year plan to balance locally-developed resources with imported supplies. It called for investments in water conservation, recycling, groundwater treatment, storage and transfers, and in return brought supply diversity and stability. During 2009/10, staff continued the IRP Update process that began in late 2008. In addition to the technical work needed for the plan update, staff also garnered input from resource experts through technical workgroups and direction from the board through board workshops.

Technical workgroups made up of member and local agency staff, as well as area experts, completed technical issue papers for the following water resources areas:

- Conservation
- Desalination
- Graywater
- Groundwater
- Recycled Water
- Stormwater

The issue papers identify future resource potential and implementation issues that may impede full development in the various resource areas. All the issue papers were reviewed by Metropolitan member agency managers and the Board of Directors. The issue papers developed by the workgroups will be included in the new IRP.

A total of four IRP board workshops were held during the fiscal year. Board workshop presentations and discussion topics included a Strategic Policy Review, current and future resource targets, program implementation, and cost of various resource scenarios. Feedback received through the board workshops has been incorporated in the development of the new IRP goals. The IRP is scheduled to be finalized and adopted by the board in October 2010. Staff also continued implementation of Metropolitan's Water Surplus and Drought Management Plan to provide short-term strategies for managing Metropolitan's portfolio of diverse water resource programs.

Water Supply Allocation Plan

FY 2009/10 was the first year in which Metropolitan implemented the Water Supply Allocation Plan. A Level 2 allocation was in effect for the full year, helping to reduce water demands throughout the region. Under the plan, member agencies could purchase up to a cumulative total for municipal and industrial use without paying penalties. As of publication time, FY 2009/10 local supply data from the member agencies were undergoing formal certification. The

region successfully reduced its water demands, and combined total regional deliveries for the year were at least 15 percent less than anticipated, and it appeared that no individual agency would be assessed penalties for FY 2009/10.

Water Resource Data

Figure 3-6 displays precipitation for FY 2009/10, compared to average annual precipitation figures for three weather stations within Metropolitan's service area. Due to a wet January, precipitation increased significantly over the previous year, and slightly exceeded historical averages. Precipitation levels are indicators of overall supply and demand conditions. Typically, demands for water tend to increase as precipitation decreases, and locally supplied water tends to decrease as precipitation decreases.

Figure 3-7 displays population served by Metropolitan since 1990, with historical population based on state Department of Finance estimates and projections based on regional transportation planning agencies. In 1990, the population served was approximately 15 million people. Since 1990, the population served increased to about 19 million people. Although population forecasts sometimes shift due to economic conditions and other factors, demographic projections provided to Metropolitan by regional planning agencies forecast additional increases, with an estimated 22 million people by the year 2030.

Figure 3-8 displays historical and estimated water sales within Metropolitan's service area since 1990. In 1990, water sales reached record-high levels of more than 2.5 MAF. Since 1990, water sales have ranged between 1.5 MAF and 2.5 MAF. Projections of water sales through the year 2030 range from 1.43 MAF to more than 2.6 MAF. The wide range in historical water sales is attributed to various factors, including temperature, precipitation, conservation activity/advertising, water use ordinances and water shortage allocations. The range in sales forecast is based on observed hydrological conditions.

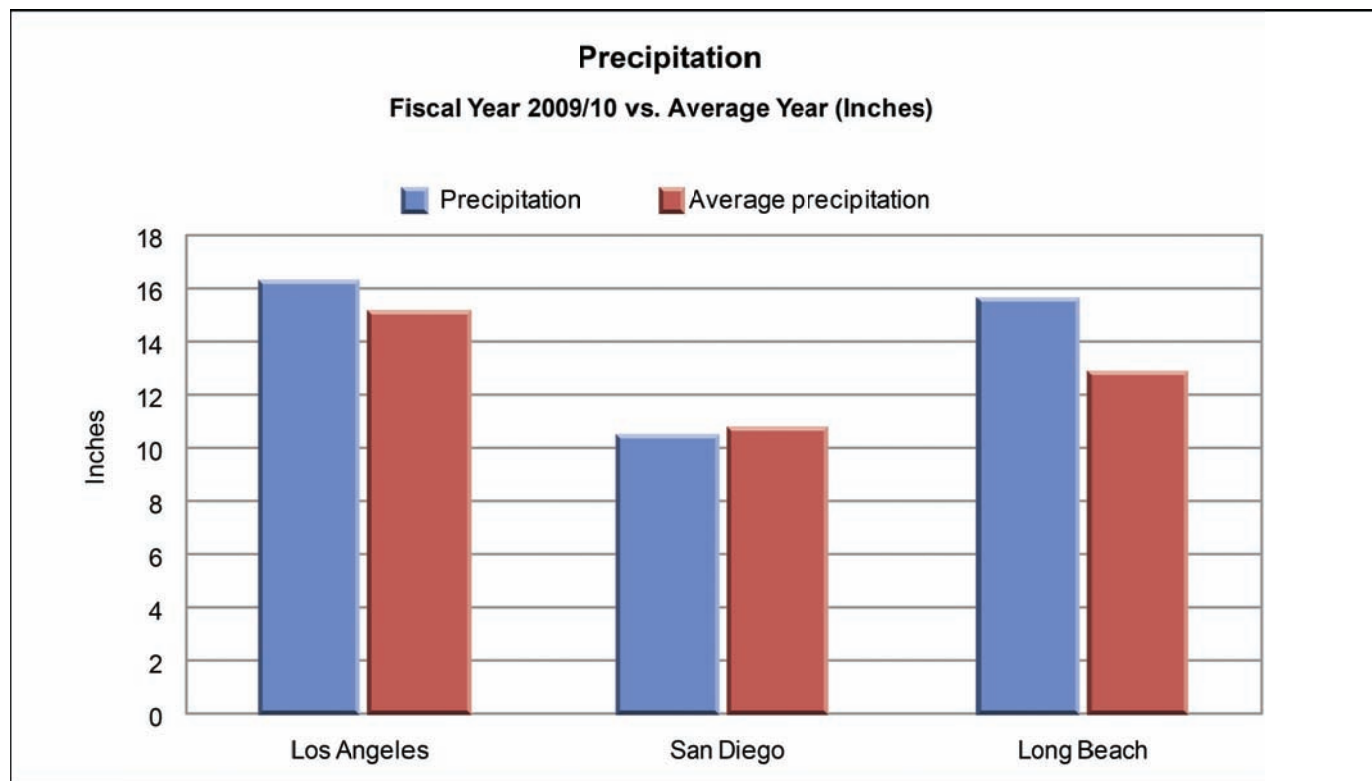


Figure 3-6. Precipitation

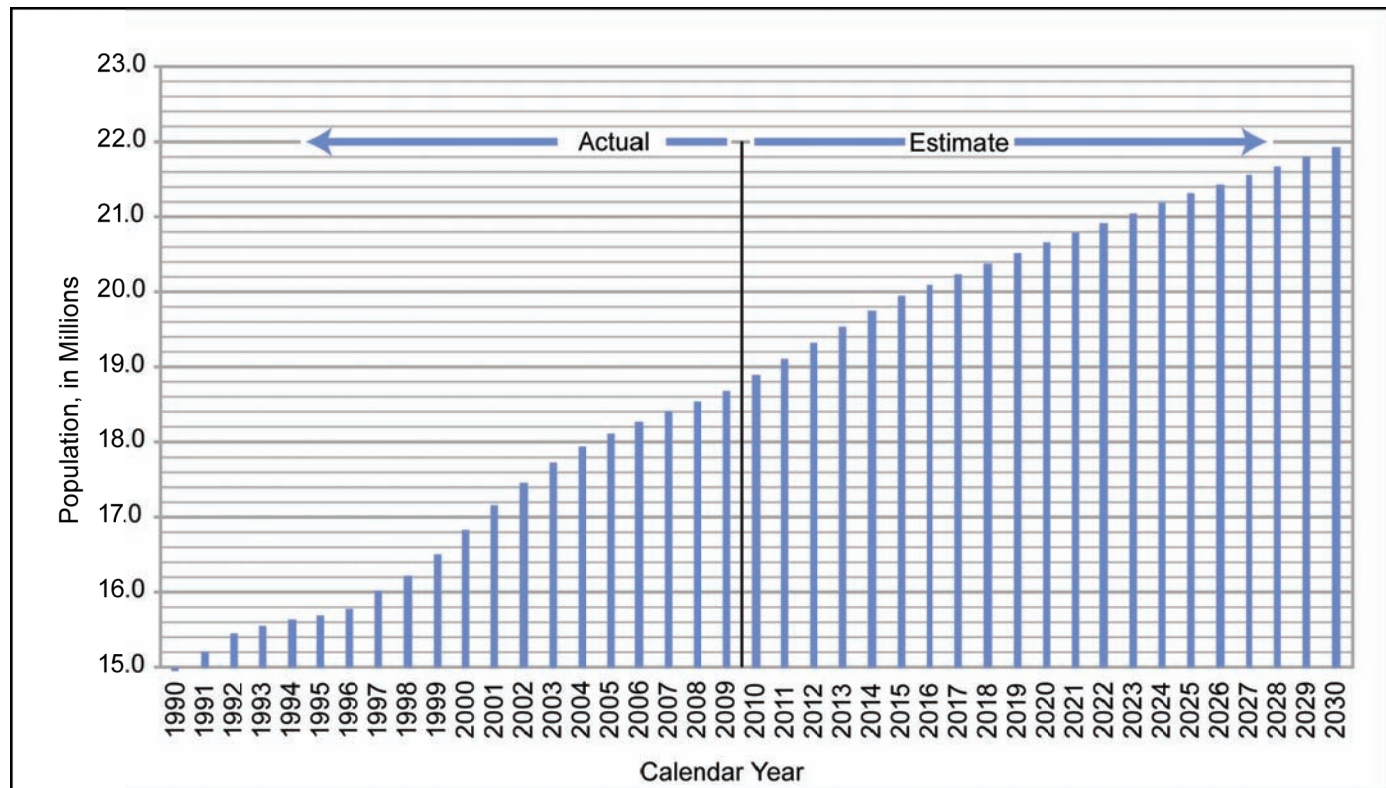


Figure 3-7. Population Growth

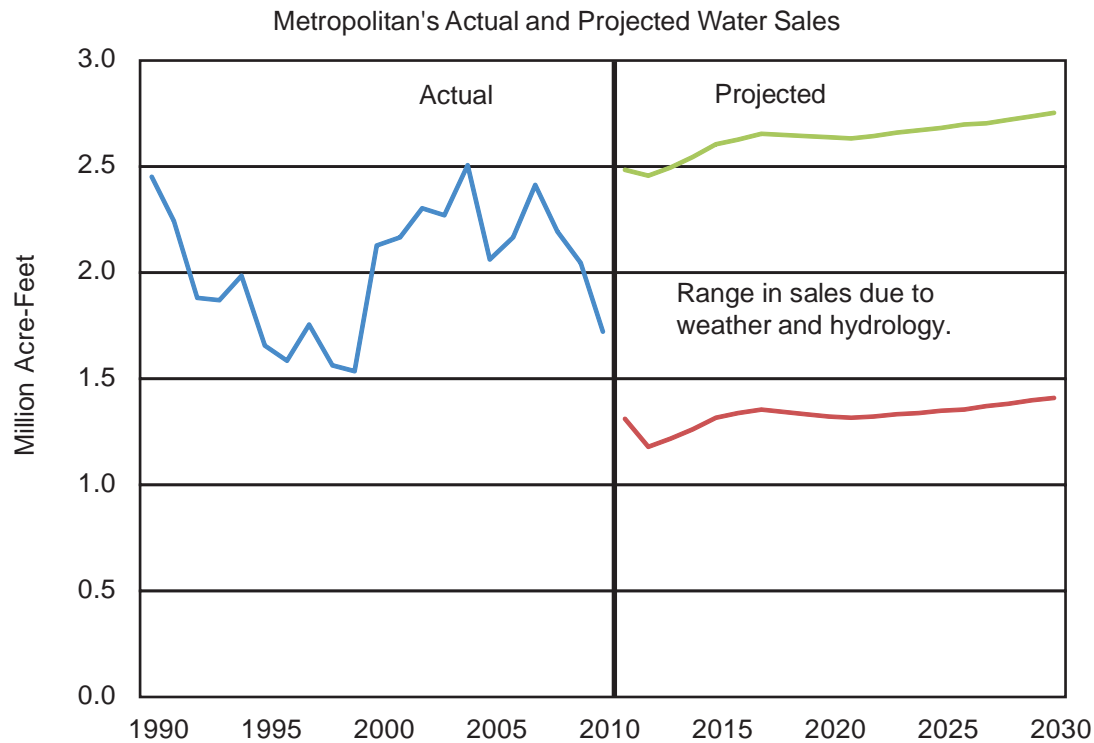


Figure 3-8. Metropolitan's Actual and Projected Water Sales



Metropolitan provided incentives to Calleguas Municipal Water District for the Tapo Canyon Groundwater Treatment Project.



Pipes divert water from the West Portal of the San Jacinto Tunnel to accommodate rehabilitation work.

Water System Operations

The Water System Operations Group conveys, treats and distributes water for nearly 19 million Southern Californians. WSO ensures excellent water quality for Metropolitan's six-county service area that meets all federal and state drinking water standards, and it operates and maintains Metropolitan's five treatment plants with a combined operational capacity of more than 2.6 billion gallons of water per day. WSO balances demand and supply as it operates, manages and maintains Metropolitan's water and power systems. It also oversees security; provides machine and fabrication services to support Metropolitan infrastructure; offers technical advice and support to member agencies, customers and other entities; provides technical training to ensure an effective, efficient and safe work environment; runs Metropolitan's Apprenticeship Program; assists in planning, design and construction of new facilities; and responds to emergencies to restore service in the shortest time possible.

Water Treatment

Metropolitan's five water treatment plants treat and disinfect water from the Colorado River and Northern California. The Robert B. Diemer Water Treatment Plant provides treated water to areas of Orange County and coastal Los Angeles, while the Joseph Jensen Water Treatment Plant supplements local water supplies in the San Fernando Valley, Ventura County and Central Los Angeles. The Henry J. Mills Water Treatment Plant serves western Riverside County and Moreno Valley. The Robert A. Skinner Water Treatment Plant and Lake Skinner supply approximately 85 to 90 percent of San Diego's treated and raw water needs, while also serving western Riverside County and Moreno Valley. The F.E. Weymouth Water Treatment Plant generally serves parts of Los Angeles County, the

San Gabriel Valley and areas of Orange County. The Weymouth, Diemer and Skinner plants continued treating relatively larger amounts of Colorado River supplies, which lowered disinfection byproduct levels and reduced treatment chemical dosages and their associated costs, but increased the total dissolved solids concentration in the finished water. The ozone processes at Jensen and Mills proved effective in minimizing disinfection byproducts while controlling taste and odors from the source water reservoirs. New thickeners for handling solids were completed at the Jensen plant, as part of a larger program to handle large solids loadings associated with high plant flows, high influent turbidity or elevated coagulant dosages.

From November 2009 to March 2010, the finished water reservoir at the Skinner treatment plant was taken out of service to replace the reservoir cover. To avoid any operational problems for the member agencies caused by the reservoir outage, staff worked closely with Eastern Municipal Water District, San Diego County Water Authority and Western Municipal Water District to plan and schedule flow changes from the Skinner plant into the distribution system.

Finally, Metropolitan completed the testing of the Skinner Ozone Retrofit Project and began operating the third water treatment plant with ozone. Construction of ozone facilities continued throughout the year at the Diemer plant which has an on-line date of 2012. As a result of these and numerous other capital projects during this fiscal year, more than \$167 million was invested in refurbishing, upgrading and expanding the five water treatment plants.

Water Quality

Regulations

Staff completed the one-year monitoring of the desert pumping plant domestic systems under the U.S. Environmental Protection Agency's (EPA) Long Term 2 Enhanced Surface Water Treatment Rule (LT2 Rule) in September 2009. Each system met the requirements for this phase of LT2 Rule monitoring and did not need additional treatment or *Cryptosporidium* monitoring.

Metropolitan assisted the EPA in its regulatory determination process for consideration of a federal drinking water standard for perchlorate. In September 2009, staff submitted comments in response to EPA's Drinking Water Perchlorate Supplemental Request for Comments.

Water Quality Monitoring

Water quality staff conducted more than 256,000 analytical tests using 175 methods on nearly 43,000 samples collected from Metropolitan's distribution system and source waters during FY 2009/10. These numbers vary from year to year depending on the different requirements of the monitoring programs and water quality research projects.

Compliance

Chemical/Physical

Staff analyzed for inorganic and organic compounds, physical parameters, and other constituents in Metropolitan's source waters and treatment plant effluents. Table 4-1 shows the sample locations for organic compounds while Tables 4-2 through 4-4 show results of trace metal, radiological and general mineral and physical analyses. Staff did not detect herbicides, pesticides, semi-volatile organics, or volatile organics in the samples.

Total Dissolved Solids

Figure 4-1 shows the salinity levels or total dissolved solids (TDS) levels in Metropolitan's three source waters. TDS is higher in the Colorado River Aqueduct than in the State Water Project due to the geology and size of the watershed. Precipitation also influences salinity levels, as shown by two steep declines in CRA salinity during high rainfall events. Figure 4-2 presents TDS levels (as flow-weighted averages) in water leaving Metropolitan's five treatment plants. Weymouth, Diemer and Skinner continued to treat higher blends of Colorado River water, resulting in higher levels of TDS. All three plants exceeded the TDS water quality goal of 500 mg/L (milligrams per liter) due to the limited availability of State Water Project supplies.

TABLE 4-1
SAMPLE LOCATIONS FOR ORGANIC COMPOUNDS

Fiscal Year 2009/10

Source Waters	Treated Waters
Devil Canyon Afterbay	Diemer Plant Effluent
Diamond Valley Lake	Jensen Plant Effluent
(West Basin Center/12-meter depth)	Mills Plant Effluent
Jensen Plant Influent	Skinner Reservoir Effluent*
Lake Havasu Intake (12-meter depth)	Weymouth Plant Effluent
Lake Mathews Headworks	
Lake Perris	
(near outlet tower at 9-meter depth)	
Lake Skinner Outlet Conduit	
San Jacinto Tunnel	

*Skinner Reservoir Effluent is a combined effluent from three Skinner plants.

TABLE 4-2
TRACE METALS IN METROPOLITAN WATER SUPPLIES
 Fiscal Year 2009/10 Averages (µg/L)

Metal	Maximum Contaminant Level (MCL)	Minimum Reporting Level	SOURCE WATERS											TREATMENT PLANT EFFLUENT				
			Colorado River Water			State Project Water				Blended Water				Weymouth	Diemer	Jensen	Skinner (Reservoir Effluent)*	Mills
			Lake Havasu	San Jacinto Tunnel West Portal	Lake Mathews	Castaic Lake at Jensen Inflow	Silverwood Lake at Devil Canyon	Silverwood Lake at Mills Inflow	Lake Perris	Weymouth Inflow	Diemer Inflow	Diamond Valley Lake	Lake Skinner					
Aluminum	1000(200**)	10	18	35	25	31	41	35	46	28	28	15	24	153	155	82	ND	110
Antimony	6	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	10	1	3	3	3	4	3	4	3	3	3	2	3	2	2	3	1	3
Barium	1000	5	137	136	137	34	31	32	68	123	121	56	124	119	121	34	86	31
Beryllium	4	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron	1000†	20	125	125	125	205	125	125	190	125	120	155	120	125	125	210	130	125
Cadmium	5	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	50	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium 6	NA	0	ND	ND	ND	0	0	0	ND	0	0	0	0	0	0	1	0	0
Copper	1300** (1000**)	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	300**	50	ND	ND	ND	ND	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	15**	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	NA	10	45	47	47	ND	ND	ND	ND	42	40	19	40	41	41	ND	31	ND
Manganese	50**	5	ND	ND	ND	ND	22	27	22	ND	ND	31	9	ND	ND	ND	ND	18
Mercury	2	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum	NA	2	6	6	6	4	3	3	4	6	6	4	6	6	6	4	5	3
Nickel	100	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	ND	ND	ND	ND	ND	ND
Selenium	50	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	100**	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Strontium	NA	20	1200	1170	1200	324	202	213	327	1070	1040	592	1070	1050	1050	319	804	209
Thallium	2	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	50†	1	2	2	3	6	6	6	5	3	3	2	3	3	3	6	ND	6
Zinc	5000**	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

* Skinner Reservoir Effluent is a combined effluent from three Skinner plants.

** Secondary standard based on consumer acceptance rather than health considerations.

† Notification levels for boron and vanadium are health-based advisory levels.

Action level. The MCL for lead has been replaced with a treatment technique focused on samples collected at the consumers tap. Copper has a similar treatment technique and a secondary MCL.

NA = Not Applicable. Standards have not been established for these constituents.

NC = Not Collected. Samples are not taken from these sites.

ND = Not Detected

TABLE 4-3
RADIOLOGICAL COMPLIANCE MONITORING¹
Average Values (in picoCuries per liter or pCi/L) of Four Consecutive Quarters in 2009

LOCATION	GROSS ALPHA	GROSS BETA	RADIUM 226	RADIUM 228	COMBINED RADIUM	STRONTIUM 90	TRITIUM	URANIUM	RADON 222
MCL	15	50*	NA	NA	5**	8	20,000	20	NA***
DLR	3	4	1	1	1	2	1,000	1	100
Lake Havasu Intake	6.2	7.1	ND	ND	ND	ND	ND	3.1	ND
San Jacinto Tunnel West Portal	5.9	4.3	ND	ND	ND	ND	ND	3.3	ND
Lake Mathews	5.7	5.4	ND	ND	ND	ND	ND	3.5	ND
Silverwood Lake	3.5	4.2	ND	ND	ND	ND	ND	2.7	ND
Lake Perris	ND	4.2	ND	ND	ND	ND	ND	1.8	ND
Diamond Valley Lake	ND	4.9	ND	ND	ND	ND	ND	2.1	ND
Lake Skinner	4.5	4.3	ND	ND	ND	ND	ND	2.8	ND
Weymouth Plant Effluent	5.2	4.2	ND	ND	ND	ND	ND	2.9	ND
Diemer Plant Effluent	5.6	4.3	ND	ND	ND	ND	ND	3.3	ND
Jensen Plant Influent	ND	ND	ND	ND	ND	ND	ND	2.1	ND
Jensen Plant Effluent	3.4	ND	ND	ND	ND	ND	ND	1.8	ND
Mills Plant Effluent	ND	ND	ND	ND	ND	ND	ND	2.1	ND
Skinner Reservoir Effluent ²	3.6	ND	ND	ND	ND	ND	ND	2.5	ND

Notes:

¹ Results obtained during Calendar Year 2008 triennial sampling.

² This is a combined effluent from three Skinner plants.

NA = Not Applicable. Standards have not been established for these constituents.

ND = Not Detected. All results less than Detection Limit for Purposes of Reporting (DLR) were reported as ND.

MCL = Maximum Contaminant Level

DLR = Detection Limits for Purposes of Reporting.

* The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L

** Standard is for radium 226 and radium 228 combined.

***To date, there has been no significant regulatory action on the proposed federal standards.

TABLE 4-4
GENERAL MINERAL AND PHYSICAL ANALYSIS OF METROPOLITAN'S WATER SUPPLIES
 Fiscal Year 2009/10 Averages

CONSTITUENTS	SYMBOLS AND UNITS		SOURCE WATERS								TREATMENT PLANT EFFLUENT				
			San Jacinto		Castaic Lake		Silverwood Lake		Diamond Valley Lake	Lake Skinner	Weymouth	Diemer	Jensen	Skinner	Mills
			Lake Havasu	Tunnel West Portal	Lake Mathews	at Jensen Influent	Lake at Devil Canyon	Lake Perris							
Asbestos*	ASB	MFL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bicarbonate	HCO ₃	mg/L	161	157	156	104	87	118	125	147	138	136	106	134	86
Boron	B	mg/L	0.12	0.12	0.12	0.22	0.11	0.19	0.15	0.12	0.12	0.12	0.22	0.13	0.11
Bromide**	Br	mg/L	0.08	0.04	0.06	0.26	0.22	0.33	0.20	0.09	0.07	0.04	0.26	0.09	0.23
Calcium	Ca	mg/L	74	72	73	29	21	30	47	65	62	65	29	63	21
Carbonate	CO ₃	mg/L	0	0	0	0	0	0	1	0	0	0	0	0	1
Chloride	Cl	mg/L	87	89	91	76	69	98	84	88	91	92	78	95	72
Cyanide	CN	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoride	F	mg/L	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.3	0.9	0.9	0.9	0.8	0.8
Foaming Agents (MBAS)***	MBAS	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Free Carbon Dioxide	CO ₂	mg/L	1.7	1.2	1.5	2.8	1.4	1.8	1.4	1.3	2.7	3.0	1.1	2.9	0.5
Magnesium	Mg	mg/L	28	28	29	12	10	15	21	26	25	26	12	25	10
Nitrate	NO ₃	mg/L	1.6	1.5	1.2	3.1	2.6	<0.1	0.2	1.0	1.3	1.3	3.1	1.2	2.8
Potassium	K	mg/L	4.8	4.9	5.0	2.7	2.6	3.6	4.5	4.6	4.5	4.7	2.7	4.6	2.6
Silica	SiO ₂	mg/L	6.8	6.7	7.1	14.5	11.5	16.3	9.4	7.8	7.8	7.4	14.4	8.0	11.3
Sodium	Na	mg/L	94	96	99	62	53	73	76	90	92	94	66	90	61
Sulfate	SO ₄	mg/L	242	243	248	57	36	58	142	209	208	223	62	202	49
Total Alkalinity as CaCO ₃	TA	mg/L	132	130	129	85	72	97	105	121	113	111	87	110	72
Total Hardness as CaCO ₃	TH	mg/L	298	298	299	120	94	137	203	265	255	270	120	257	92
Total Organic Carbon	TOC	mg/L	2.85	2.76	2.67	1.85	2.80	4.00	2.78	2.64	NA	NA	NA	NA	NA
Color	COLOR	Units	3	3	3	4	7	9	5	4	1	1	1	1	1
Filter Effluent Turbidity	FE TUR	NTU	NA	NA	NA	NA	NA	NA	NA	NA	0.05	0.04	0.04	0.05	0.07
H ⁺ Concentration	pH	pH Units	8.21	8.34	8.27	7.82	8.05	8.10	8.24	8.28	7.94	7.88	8.21	7.89	8.44
Langelier Index @Source Temp.	LI		NA	NA	NA	NA	NA	NA	NA	NA	0.30	0.29	0.19	0.28	0.19
Specific Conductance	EC	µmho/cm	995	1000	1020	551	460	640	765	932	927	958	575	925	496
Temperature	TEMP	°C	19	20	20	15	16	18	16	20	20	21	19	22	18
Threshold Odor Number	TON		17	12	14	8	14	24	14	12	2	2	3	24	2
Total Dissolved Solids	TDS	mg/L	618	620	632	308	250	354	449	566	562	582	322	556	274
Turbidity	TURB	NTU	0.69	0.54	0.89	1.1	1.4	2.6	0.81	1.1	0.05	0.04	0.04	0.05	0.06
Pct. State Project Water	SPW	%	0	0	0	100	100	100	51	15	18	15	100	21	100

Notes:

* Values are from April 2009 sampling. The next sampling event for asbestos will be in August 2010 according to Metropolitan's Chemical Compliance Monitoring Plan.

** Treatment plant bromides are influent values.

*** Methylene blue active substances

NA = Not Applicable

ND = Not Detected

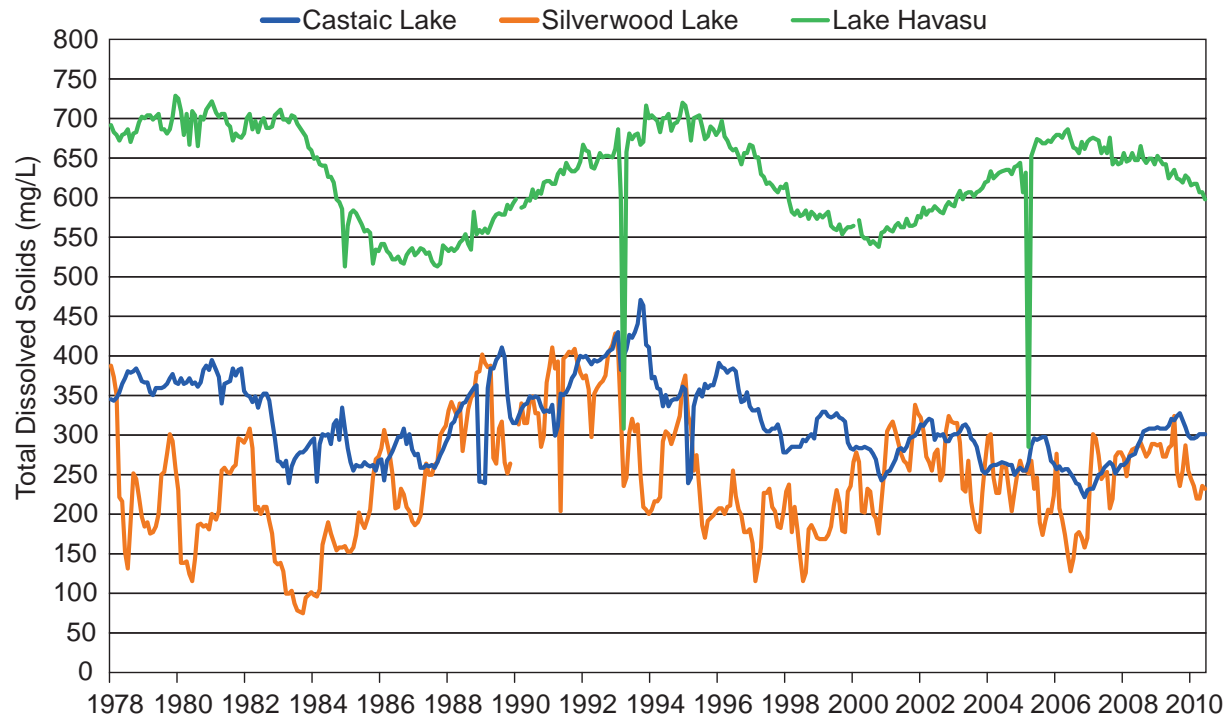


Figure 4-1. Total Dissolved Solids in East Branch SWP (Silverwood Lake), West Branch SWP (Castaic Lake), and CRA (Lake Havasu)

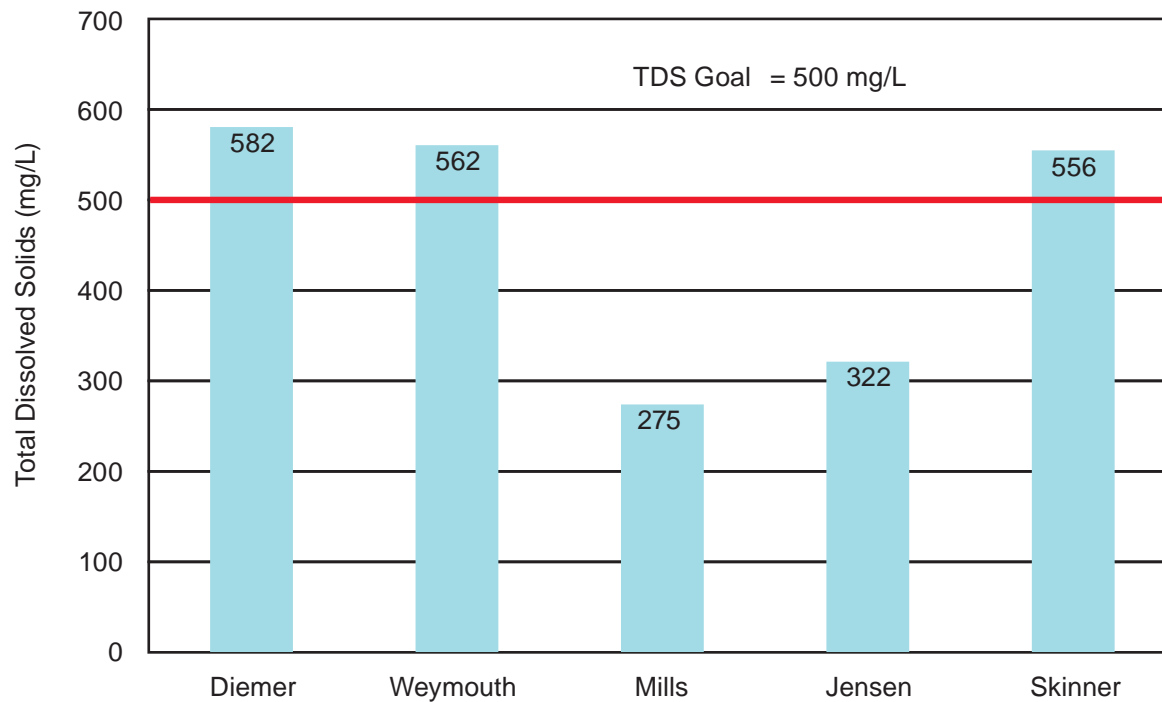


Figure 4-2. Total Dissolved Solids in Plant Effluent, Annual (Flow-Weighted) Averages, Fiscal Year 2009/10

Disinfection Byproducts

Table 4-5 shows the level of disinfection byproducts present in plant effluents, while Figures 4-3 and 4-4 summarize long-term trends for total trihalomethanes (TTHMs) and five haloacetic acids (HAA5), which are byproducts of chlorination. Figure 4-5 shows levels for total organic carbon (TOC) and bromide, which are DBP precursors found in source waters. Chlorination for quagga mussel control at the Lake Skinner Outlet Conduit interfered with bromide measurements at the Skinner treatment plant. This resulted in infrequent bromide data for the Skinner treatment plant influent during FY 2009/10. Figure 4-6 shows levels for bromate, a byproduct of ozonation, which began at Mills in 2003 and Jensen in 2005. Metropolitan's running annual averages were below the regulatory limits, which are 80 µg/L (micrograms per liter) for TTHMs, 60 µg/L for HAA5, and 10 µg/L for bromate, under EPA's Stage 1 Disinfectants and Disinfection Byproducts Rule.

TABLE 4-5
TOTAL TRIHALOMETHANES (TTHMS)/HALOACETIC ACIDS
(HAA5) LEVELS IN PLANT EFFLUENT

Fiscal Year 2009/10

Plant Effluent	TTHM (µg/L)*		HAA5 (µg/L)**	
	Weekly Range	Annual Average	Quarterly Range	Annual Average
Diemer	21-64	42	2.0 – 12	11
Jensen	12-38	20	2.0 - 3.7	2.9
Mills	14-33	21	3.4-5.7	4.5
Skinner	20-71	40	9.3–15	12
Weymouth	26-70	47	8.1-20	13

*µg/L = micrograms per liter or parts per billion.

**HAA5 = five regulated haloacetic acids; beginning in calendar year 2009, Metropolitan switched to quarterly sampling of HAA5.

Microbiological

Staff detected total coliforms but no *E. coli* in four out of the 7,852 samples collected from the distribution system under the Total Coliform Rule. Coliforms are naturally-occurring bacteria that may indicate fecal contamination. Metropolitan was well below the 5.0 percent maximum contaminant level at a monthly average of 0.1 percent total coliform-positive samples, and no violations occurred.

Staff monitored the raw water supply to the treatment plants for total coliforms and *E. coli* for the California Title 22 Surface Water Treatment requirements (Table 4-6).

Staff analyzed more than 200 bacteriological samples to meet the requirements of the California Waterworks Standards. This regulation requires that water systems comply with American Water Works Association standards for disinfection and coliform bacteriological testing of drinking water pipelines, water storage, and treatment plants undergoing new installation or maintenance.

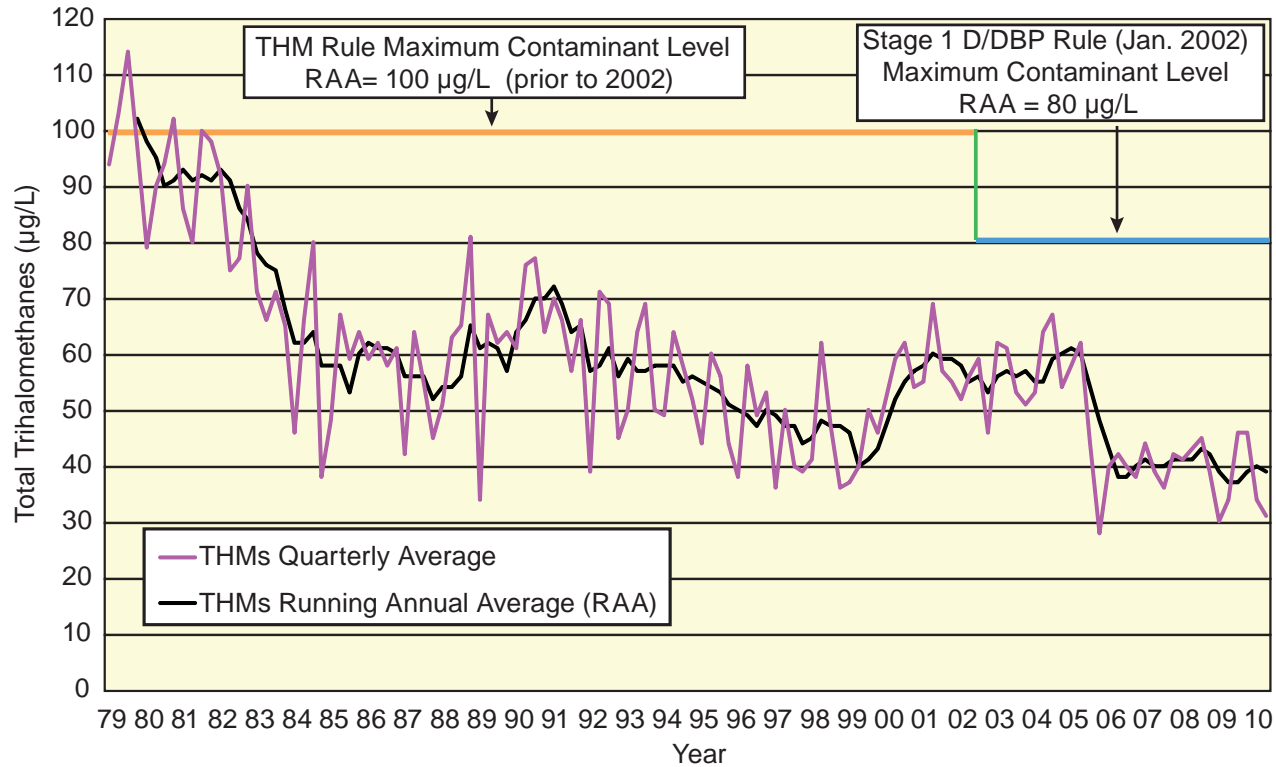


Figure 4-3. Trihalomethane Levels - Distribution Systemwide Quarterly and Running Annual Averages ($\mu\text{g/L}$ = micrograms/Liter or parts per billion)

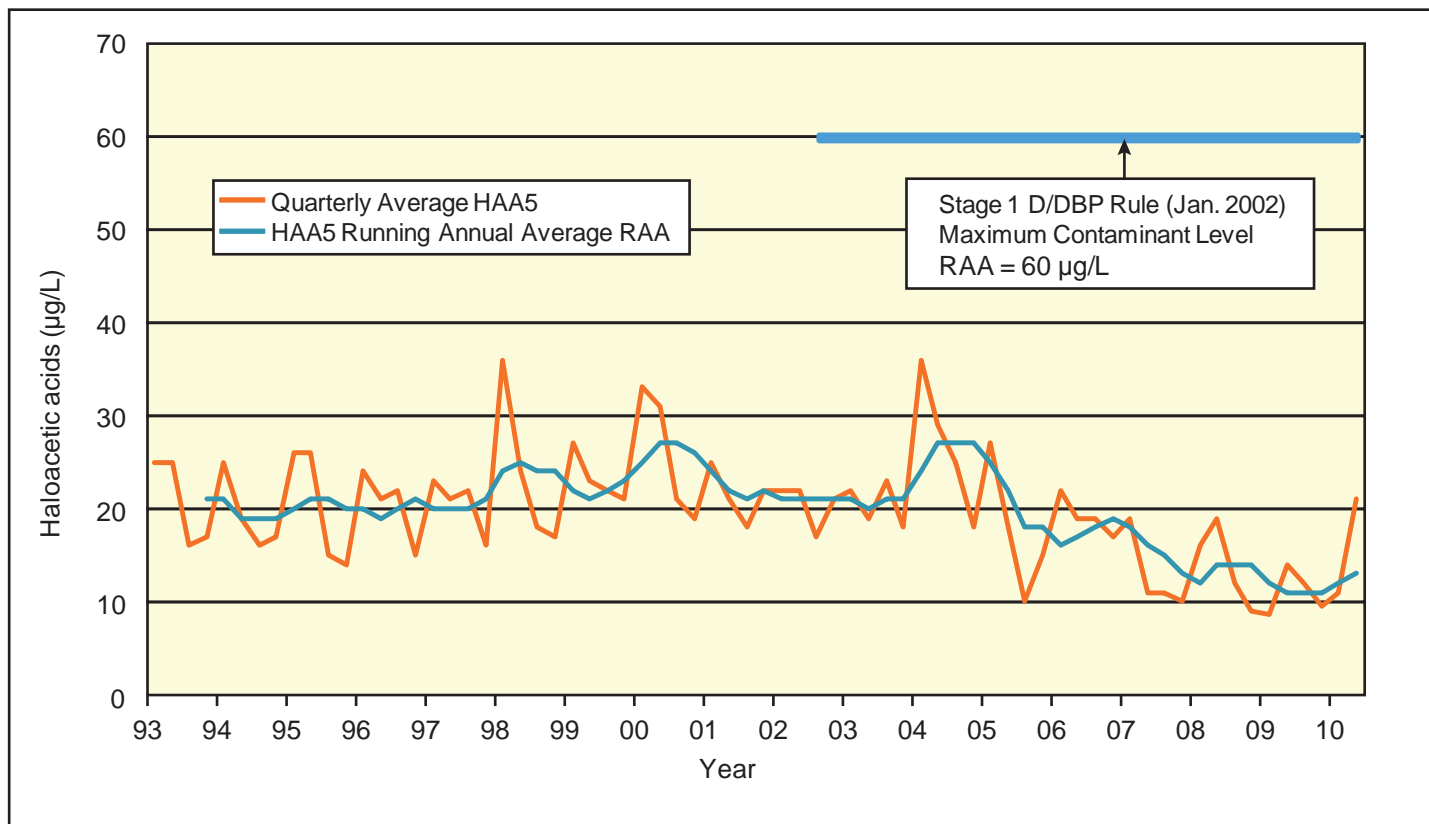


Figure 4-4. Haloacetic Acids - Distribution Systemwide Quarterly and Running Annual Averages

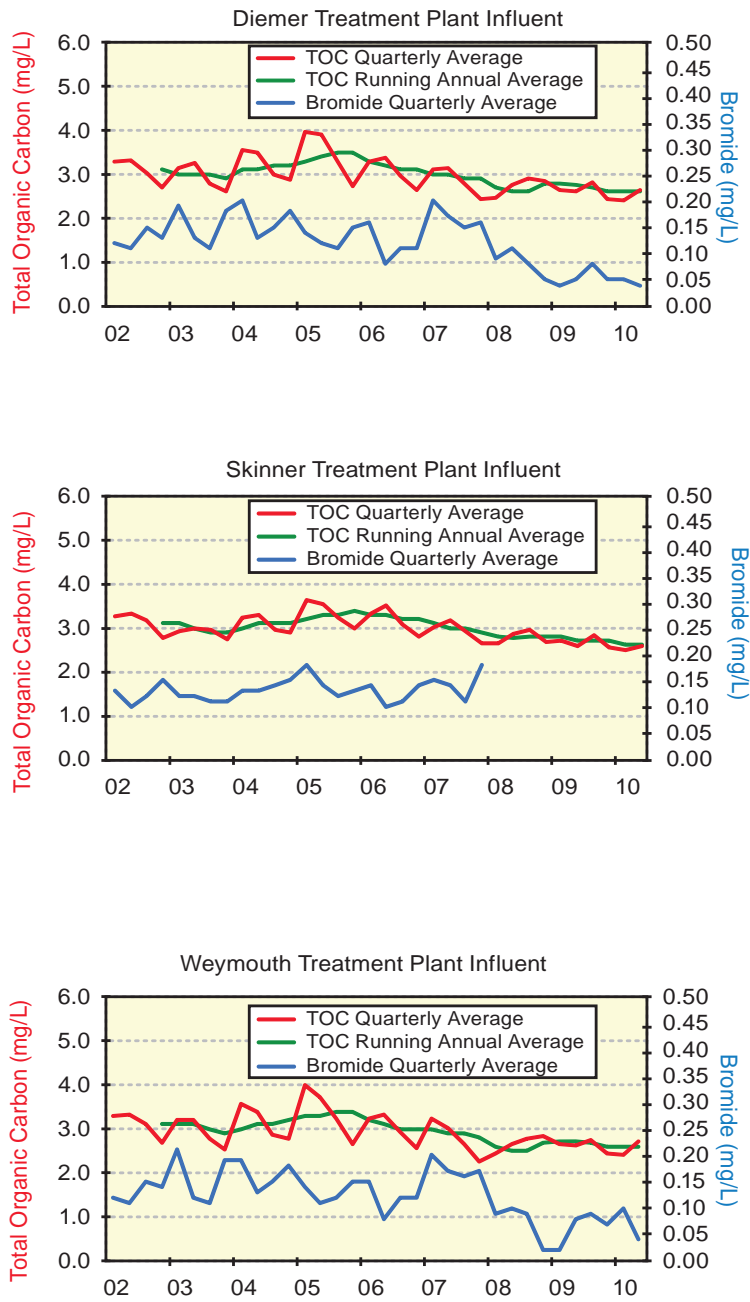


Figure 4-5. Total Organic Carbon (TOC) and Bromide Levels in Treatment Plant Influent, 2002-2010

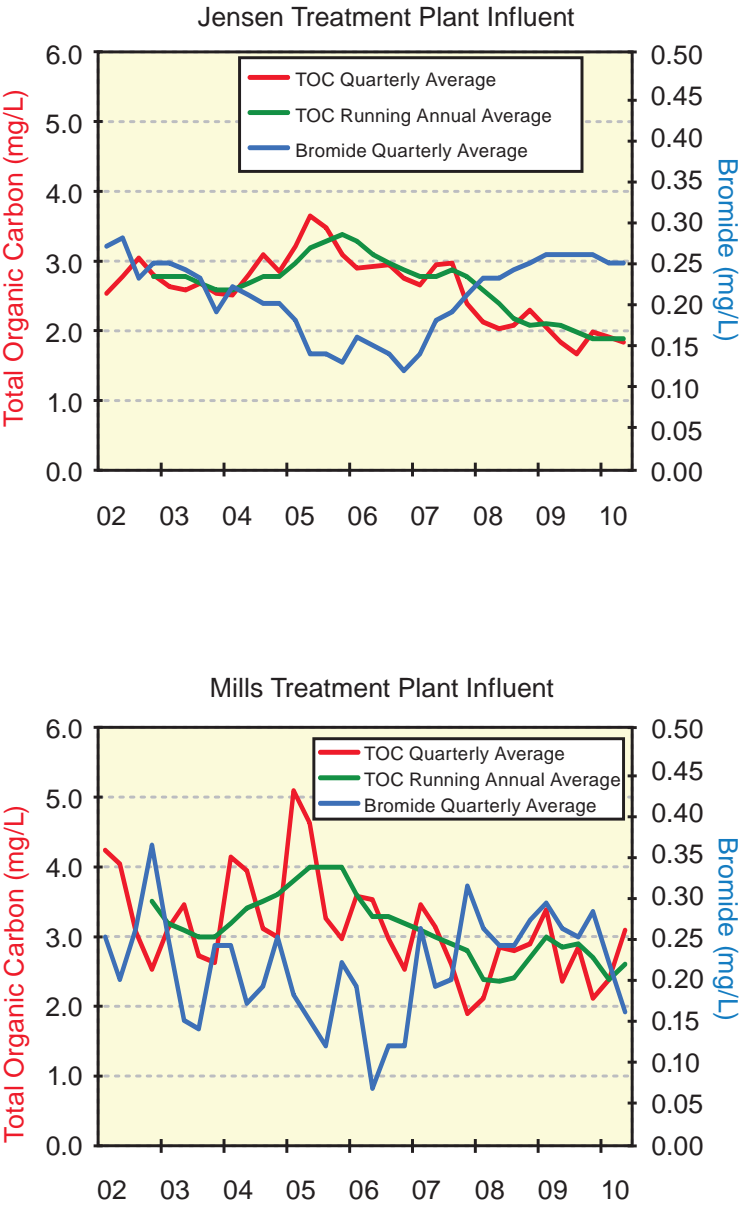


Figure 4-5 (Continued). Total Organic Carbon (TOC) and Bromide Levels in Treatment Plant Influent, 2002-2010

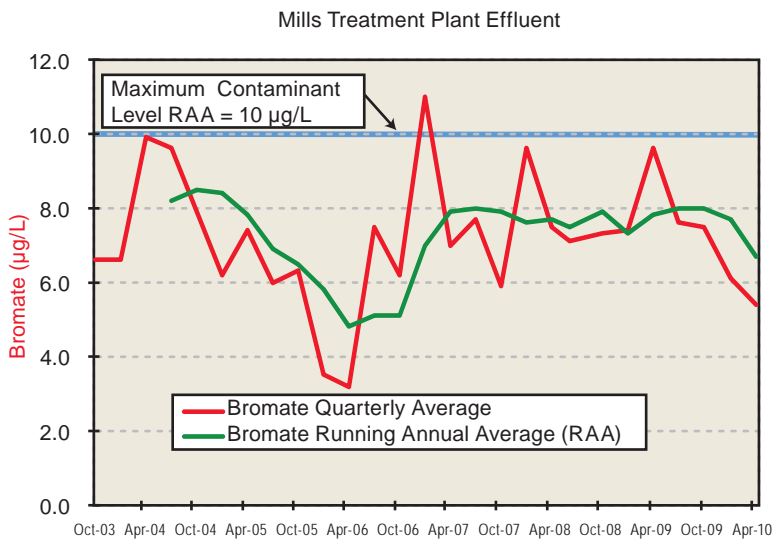
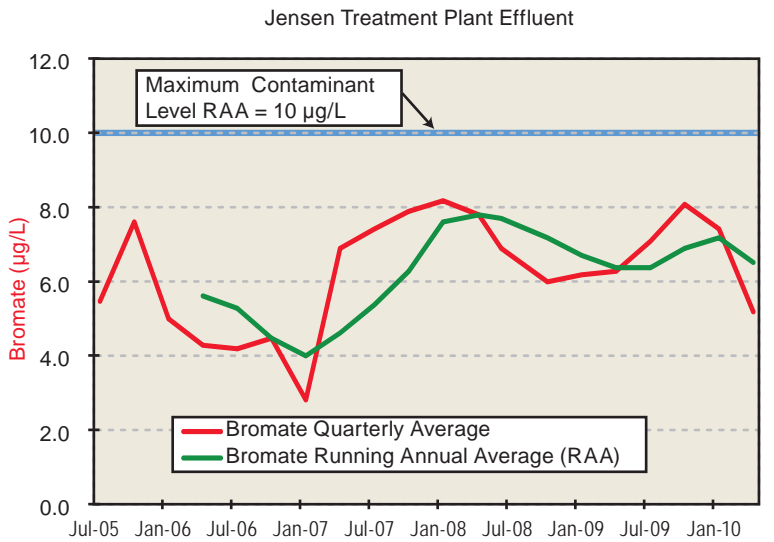


Figure 4-6. Bromate Levels in Treatment Plant Effluent, 2003 - 2010
(Jensen Ozone came online in 2005)

TABLE 4-6
RAW WATER COLIFORM RESULTS
California Title 22 Compliance - Surface Water Treatment
Fiscal Year 2009/10

	Treatment Plant Influent ^{1,2}				
	Diemer	Jensen	Mills	Skinner	Weymouth
	(CFU/100 mL)				
Total Coliforms					
Range	ND-22,000	2-6,600	27-18,000	9-8,200	ND-17,000
Average	1,500	740	1,800	1,600	710
<i>E. coli</i>					
Range	ND-1	ND-3	ND-110	ND-38	ND-17
Average	ND	ND	5	6	1

Notes:

¹ Samples were collected weekly and analyzed by membrane filtration (EPA 1604).

² The determining factor for measuring the quality of influent water is the *E. coli* level. When *E. coli* levels exceed 100 per 100 mL as a weekly median, additional treatment or operational controls will be provided.

The weekly median *E. coli* was not exceeded.

CFU/100 mL = colony-forming units/100 milliliters

ND = Not Detected; method detection limit is 1 CFU/100 mL.

System Management and Pathogen Monitoring

Algae Control Program

Staff analyzed 2,472 samples for the taste and odor (T&O) compounds 2-methylisoborneol (MIB) and geosmin from Metropolitan's water system during T&O events detected by early-warning monitoring (Fig. 4-7 and 4-8). Copper sulfate was applied to reduce the T&O problems caused by cyanobacteria, also called blue-green algae (Table 4-7). The increased number of samples on the East Branch was due to a significant increase in geosmin at the end of the East Branch just before it enters Silverwood Lake. Staff collected more samples to identify the specific location of geosmin production along the 100-mile stretch of the East Branch where treatment would be recommended.

TABLE 4-7
COPPER SULFATE TREATMENTS TO CONTROL
TASTE AND ODOR EVENTS

Fiscal Year 2009/10

	Taste-and-Odor Treatments	Copper Sulfate (tons)
Lake Mathews	0	0
Lake Skinner	2	15.5
Diamond Valley Lake	0	0
TOTAL	2	15.5

Quagga Mussel Control Program

The Quagga Mussel Control Program continued. Along with chlorinating at strategic locations along the conveyance system and physical removal during shutdowns, staff's manipulation of oxygen levels in source water lakes provided an additional effective technique for controlling mussel populations where chemical disinfectants cannot be used.

Pathogen Monitoring Program

The Pathogen Monitoring Program tests for the pathogenic protozoa *Cryptosporidium* and *Giardia* through monthly sampling of source waters, plant influent, and plant effluent. Neither pathogen was detected in any sample during this period. During the last 11 years, approximately 1 percent of the monthly untreated water samples tested positive for either microbe, but after treatment, all plant effluent samples were negative. Pathogenic enteric viruses that cause gastrointestinal diseases were not detected during quarterly monitoring of plant influent.

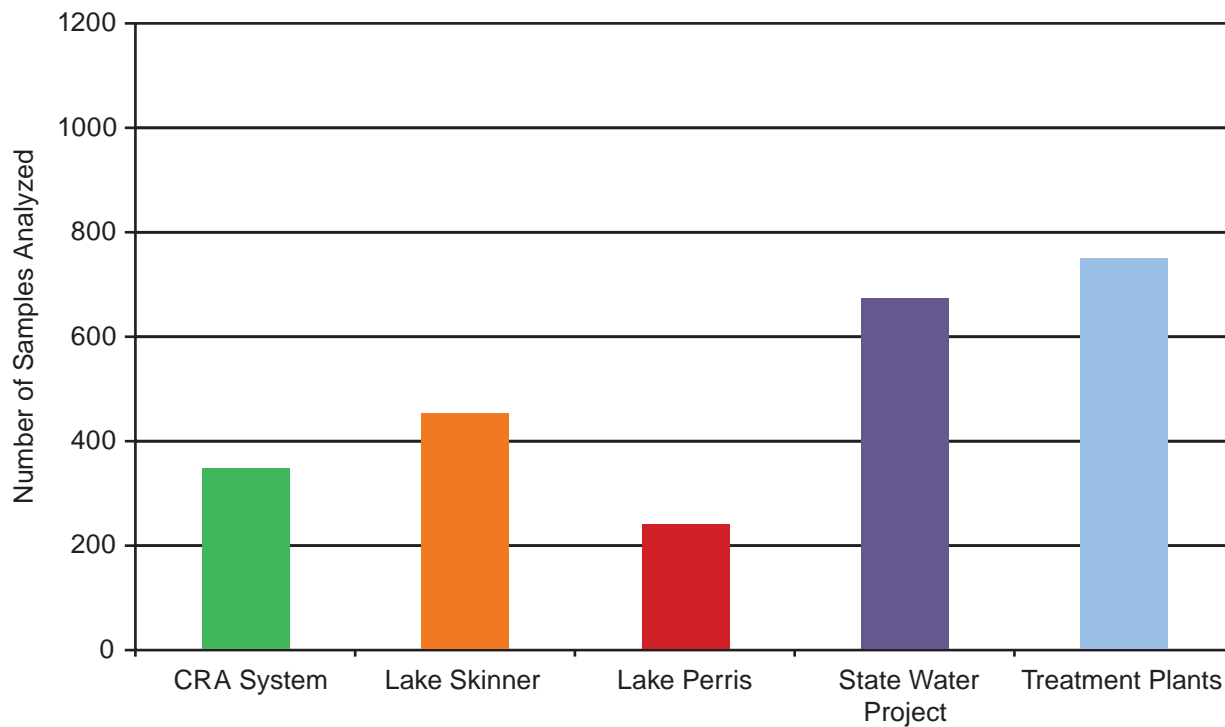


Figure 4-7. Number of Samples Analyzed for the Taste and Odor Compounds, 2- Methylisoborneol (MIB) and Geosmin, in Source and Finished Waters, Fiscal Year 2009/10

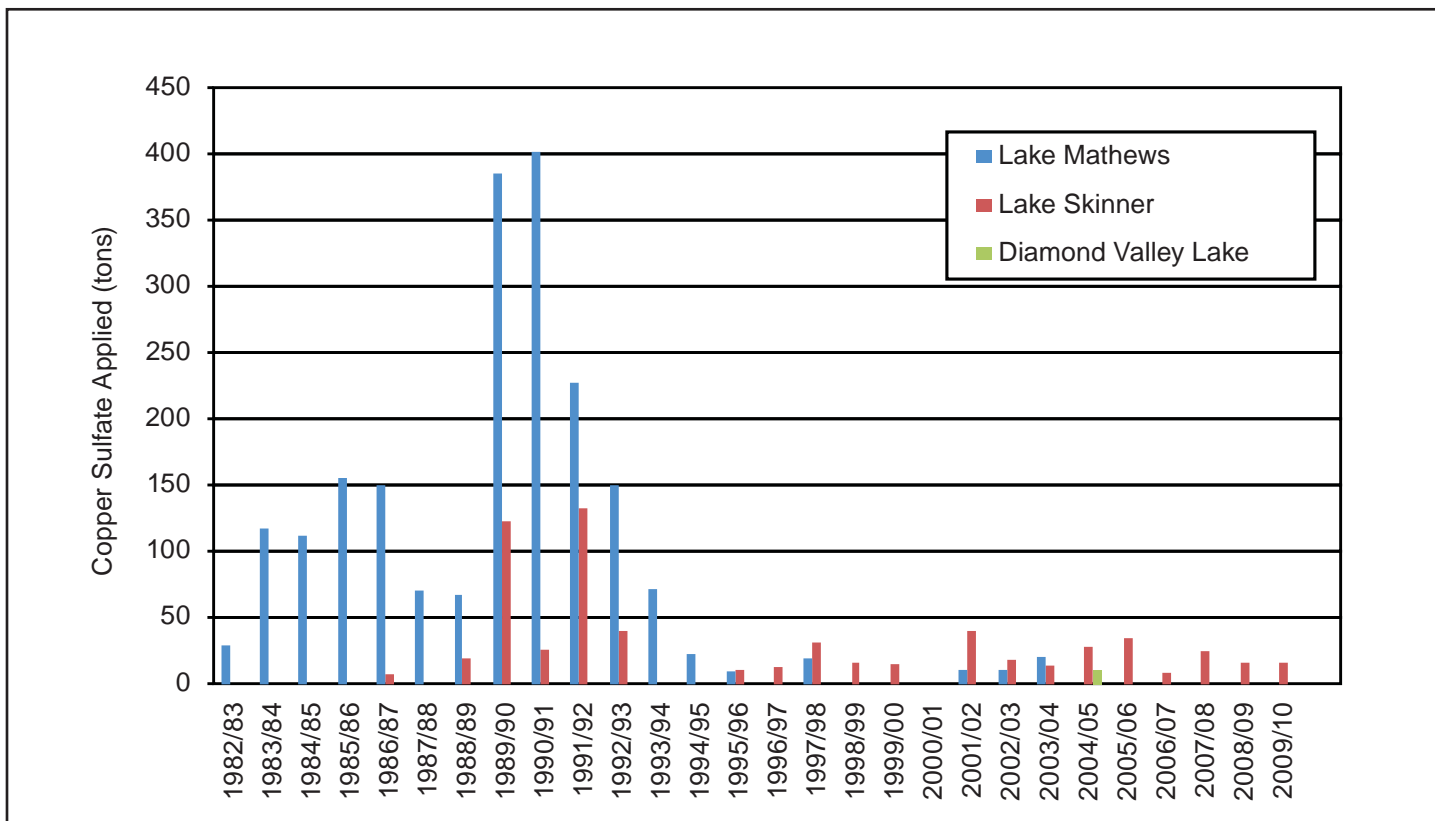
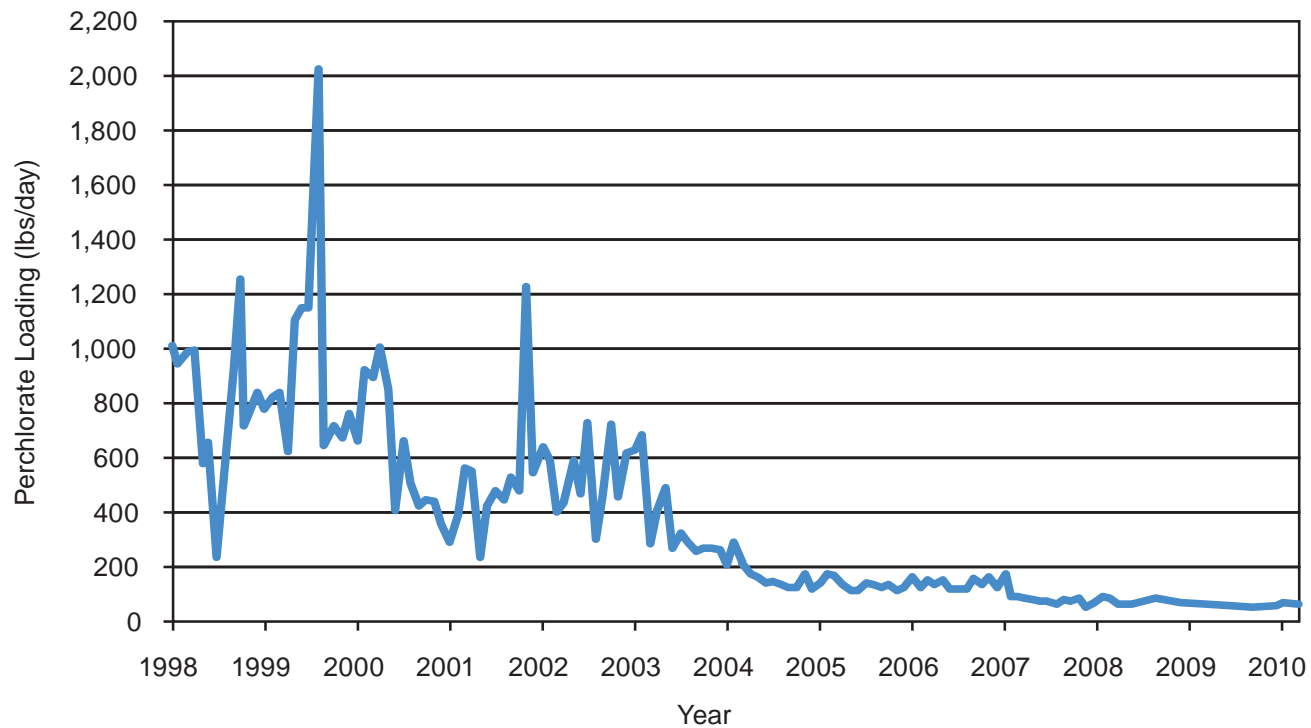


Figure 4-8. Copper Sulfate Usage between 1982 and 2010 in Metropolitan's Reservoirs



*Figure 4-9. Perchlorate Loading in Las Vegas Wash at Northshore Road
(1/2 mile upstream of Lake Mead)*

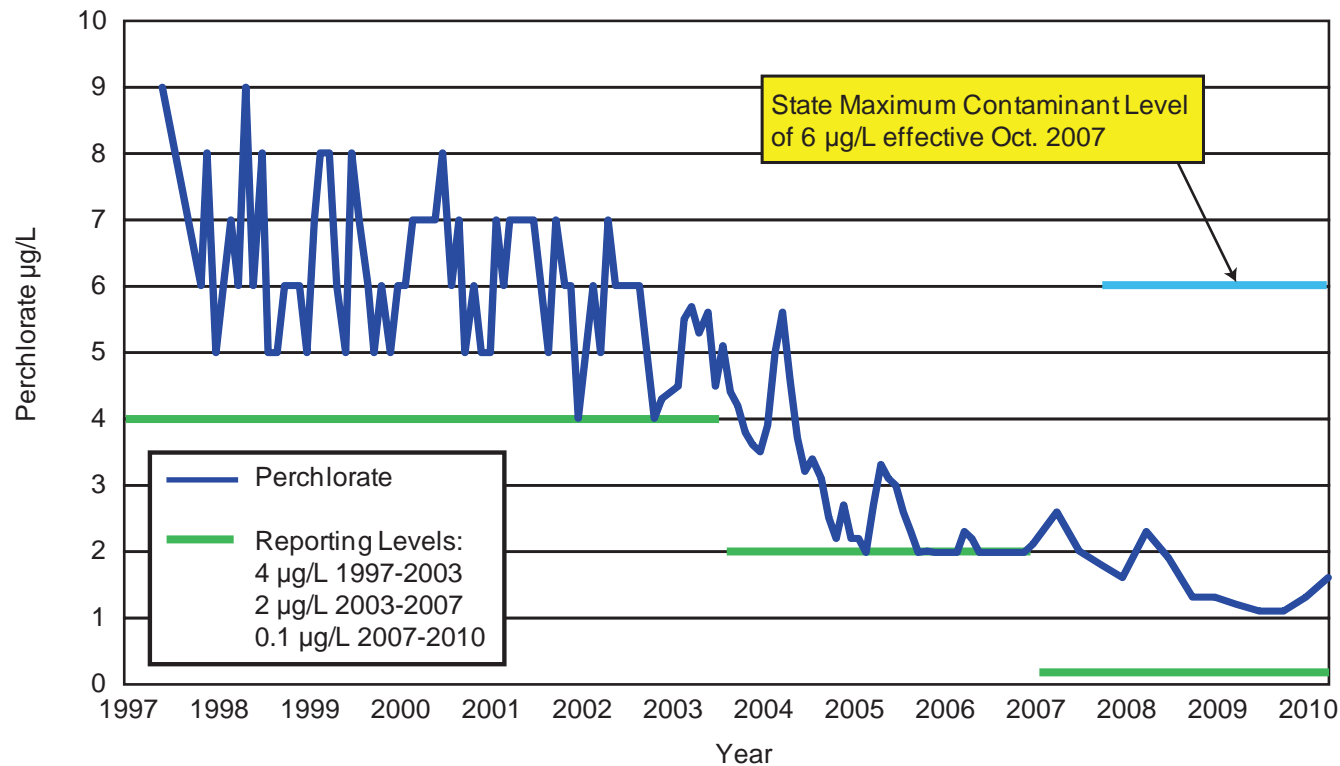


Figure 4-10. Perchlorate Levels at Lake Havasu

Watershed, Water Protection and Supply

Watershed and Source Water Protection

Metropolitan's local watershed planning included continued development of a Lake Mathews watershed computer model to help assess watershed pollutant loading and to develop runoff treatment options. Metropolitan also joined the Lake Mead Water Quality Forum to continue close coordination of wastewater discharges with key Colorado River stakeholders. Other highlights include: continued participation in an adaptive management program that evaluated the impact of wastewater facilities expansion in the Las Vegas area; support for the Colorado River Regional Sewer Coalition; and advocacy for strict oversight of uranium exploration in the Grand Canyon area. Staff reviewed and commented on legislation, policies, and external projects affecting source water protection issues.

Pump-in Programs and Water Banking

Water Quality and Operations Planning staff continued to work with water banking partners, DWR staff, and pump-in programs to ensure that water quality and supply requirements were met. During the fall and winter, stored SWP water was pumped into the California Aqueduct by Metropolitan's banking partners, Arvin-Edison Water Storage District and Semitropic Water Storage District, as well as by facilities belonging to the Kern Water Bank and Kern County Water Agency. Metropolitan maintained its support of a Semitropic pilot plant arsenic removal project and worked with all participating pump-in agencies to ensure that Kern County pump-ins to the California Aqueduct were in compliance with agreed-upon arsenic water quality criteria, while maximizing supply as well.

Water Quality Modeling and Forecasting

Metropolitan uses water quality modeling to systematically evaluate the efficiency of water supply utilization and treatment plant performance. In partnership with SWP municipal contractors, Metropolitan has funded and directed DWR to develop a computer model to forecast water quality at the Delta export pumps and the SWP. These models have been used to assess the impact of in-Delta island reservoir storage on treatment plant performance. Additionally,

DWR now routinely produces a monthly-updated, seasonal water quality forecast for the Delta and the SWP.

Uranium Mill Tailings

The U.S. Department of Energy (DOE) continued removal of the 16 million-ton pile of uranium mill tailings via rail from the banks of the Colorado River near Moab, to a disposal cell at Crescent Junction, Utah, approximately 30 miles northwest of Moab. DOE implemented several project efficiencies during the year, resulting in removal of more than 1.7 million tons of mill tailings through June 2010. Metropolitan continued its dialogue with congressional representatives to support increases in project funding to expedite cleanup efforts.

Topock Chromium VI Remediation Project

Metropolitan continued working with stakeholders in support of Pacific Gas and Electric's (PG&E) groundwater chromium VI remediation process along the Colorado River near Topock, Arizona. In December 2009, the California Department of Toxic Substances Control (DTSC) and the U.S. Department of the Interior approved PG&E's Human and Ecological Risk Assessment of Groundwater and Corrective Measures Feasibility Study. The risk assessment defined hexavalent chromium as a potential hazard that requires treatment. In June 2010, DTSC's draft Statement of Basis and DOI's Groundwater Proposed Plan selected PG&E's preferred alternative of in-situ treatment (underground, within the groundwater aquifer) with freshwater flushing for the groundwater remediation. Metropolitan supports this selection because it will adequately protect the Colorado River and its users.

Metropolitan and PG&E continuously monitored the interim treatment process performance to ensure the protection of the river, where chromium VI remained below the state 1-microgram per liter detection limit.

Perchlorate

Metropolitan coordinated with Southern Nevada Water Authority on their weir construction activities for the Las Vegas Wash Stabilization Program to further minimize long-term perchlorate loading into the wash and the Colorado River. Remediation at two

sites owned by Tronox, Inc. and American Pacific Corp. in Henderson has reduced loading (measured in pounds per day) by more than 90 percent since 1997 (Fig. 4-9). Consequently, perchlorate levels at Lake Havasu intake have dropped significantly (Fig. 4-10) and have consistently remained below 2 µg/L (micrograms per liter). Metropolitan continued working with the Nevada Division of Environmental Protection (NDEP) in tracking perchlorate loading. In addition, Metropolitan continued to work closely with NDEP in tracking the proceedings of the Tronox Chapter 11 bankruptcy protection filed in January 2009 and asserting Metropolitan's interests as needed to ensure cleanup efforts remained at current levels.

Pharmaceuticals and Personal Care Products (PPCPs)

Pharmaceuticals and personal care products are constituents of emerging concern that occur at very low levels (ng/L or nanograms per liter) in drinking water sources. There has been no evidence of human health risks from long-term exposure to low concentrations of PPCPs. Metropolitan has established a PPCP monitoring program to characterize both source and treated water quality. PPCPs have been detected in Metropolitan waters at very low ng/L levels (about one million times lower than a single therapeutic dose). There are no standard analytical methods and no federal or state regulatory requirements for PPCPs in drinking water. Staff initiated bench-scale studies at the Water Quality Laboratory to evaluate the effectiveness of treatment options, including ozone, for select PPCPs.

Metropolitan recently completed a two-year study in collaboration with Orange County Water District and funded by the National Water Research Institute (NWRI) on the source, fate and transport of PPCPs in the SWP, Colorado River, and Santa Ana River. None of the PPCPs detected exceeded the drinking water equivalent levels commonly used to evaluate the potential risks of low-level PPCPs in drinking water.

N-Nitrosodimethylamine (NDMA)

N-nitrosodimethylamine (NDMA) is a byproduct of the disinfection process, particularly during chloramination, and is also associated with the use of liquid rocket fuels. Metropolitan has monitored for NDMA in the distribution system since 1999. Table 4-8

shows that NDMA levels in the distribution system for FY 2009/10 were below the state's notification level of 0.0001 mg/L (milligrams per liter).

In addition, staff studied NDMA and other nitrosamines to investigate: (1) the vulnerability of Metropolitan's two major watersheds to NDMA formation; (2) modeling the formation of NDMA at water treatment plants; and (3) implementing water treatment options to ensure compliance with future regulations.

Technology Assessment

Treatment Process Optimization and Development

Metropolitan staff continued studies to optimize ozone disinfection and treatment, evaluate alternative methods for controlling bromate formation, and identify potential factors controlling NDMA formation within its service area. After completing a five-year study, a new bromate control process will be evaluated at one of Metropolitan's water treatment plants starting in July 2010.

Desalination Research and Innovation Partnership (DRIP)

Metropolitan provided technical oversight and assistance to its DRIP partners as they completed the final phases of their externally-funded research projects. These collaborative studies focused on salinity removal in brackish groundwater, municipal wastewater and agricultural drainage water from inland sources. Advances in desalination technologies developed by the partners included application of nanotechnology in membranes, improved control of mineral scaling of membranes, increased water recovery, and reduced brine discharges. Results and conclusions from these studies, as well as Metropolitan's previous studies of desalination of Colorado River water supplies and the use of ultraviolet light for disinfection, will be incorporated into Metropolitan's final report.

TABLE 4-8
N-NITROSODIMETHYLAMINE (NDMA) LEVELS (NG/L)¹
IN THE DISTRIBUTION SYSTEM
 Fiscal Year 2009/10

Sample Location	Running Annual Average	Range
<u>Diemer Plant DS²</u>		
SA-06 (Santa Ana)	**	ND ³
CM-01* (MWD OC)	2.4	2.0 - 3.3
<u>Jensen Plant DS</u>		
LV-02 (Las Virgenes)	6.8	5.3 - 9.1
CA-02* (Calleguas)	5.9	3.4 - 9.8
B-5 (Burbank)	**	4.4 - 8.5
SEPCYNCF	**	6.4 - 11
<u>Mills Plant DS</u>		
EM-12C (Eastern)	2.1	ND - 4.7
<u>Skinner Plant DS</u>		
EM-17*	ND	ND
SD-07 (SDCWA)	ND	ND - 2.7
<u>Weymouth Plant DS</u>		
PM-22 (Three Valleys)	**	***
Garvey Reservoir Influent	ND	ND - 2.6
Garvey Reservoir Effluent	3.7	2.7 - 4.3
CenB-14 (Central Basin)	3.4	2.8 - 4.0
FM-1 (Foothill)	ND	ND - 2.6
<u>Central Pool Sites</u>		
SMN-01* (Santa Monica)	5	4.1 - 5.6
LA-21 (LADWP)	ND	ND - 4.4
WB-23* (West Basin)	7.4	4.1 - 14
WB-17*	5	2.5 - 8.3
LB-07A* (Long Beach)	ND	ND - 4.3
WB-28*	3.6	ND - 6.0
WB-04*	4	ND - 7.6
T-01* (Torrance)	**	3.3
OC-53 (MWD OC)	**	ND - 3.7
OC-55	**	ND

Notes:

¹Nitrosamines are usually expressed in nanograms per liter (ng/L) with two significant figures; however, comparison to the Notification Level is carried out using the same units (mg/L) and significant figures (one) as the published NL.

²DS - Distribution System

³ND - Not Detected; NDMA reporting level is 2 ng/L

* Distribution System terminus

** To be determined after four consecutive quarters have been collected

*** PM-22 was out of service during FY2009/10.

Letters and numbers represent member agencies service connections. Member agencies' names are in parentheses.

MWD OC – Municipal Water District of Orange County

SDCWA – San Diego County Water Authority

The following sample locations were added during FY2009/10 to better characterize the distribution system:

B-5, SEPCYNCF (Sepulveda Canyon Control Facility), FM-1, WB-28, OC-53, and OC-55.

Funded Projects

Metropolitan's partnership with funding agencies such as the EPA, Water Research Foundation and NWRI focused on applied research efforts relating to treatment technologies, membrane technologies for desalination (which includes nanotechnology for water recovery), detection methods for pathogens, emerging contaminants, improved analytical methods, and projects that address future regulatory issues (Table 4-9).

Service to Member Agencies and Drinking Water Industry

Metropolitan conducted meetings and webinars with member agency water quality managers, transitioning to a new web conferencing service provider to reduce costs. Staff continued providing member agencies with technical assistance, water quality updates and regulatory/legislative information. Metropolitan recently completed oversight of a congressionally-mandated grant study with pass-through funding to the city of Pasadena (Table 4-10).

Conveyance, Distribution and Support

Conveyance and Distribution

Metropolitan crews scoured more than 130 miles of tunnels, conduit and siphons during two complete shutdowns of the Colorado River Aqueduct, ensuring optimum performance and energy cost savings. The design capacity of the CRA is 1,600 cubic feet per second. The cleaning operation helped achieve sustained CRA flows of more than 1,740 cfs. This additional flow capacity makes it possible to move an additional 100,000 AF per year into the service area from the Colorado River. Additional CRA reliability efforts included: (1) rigorous maintenance to mechanically clean (drag) and chlorinate the open channel canal portions of the CRA; (2) maintenance and repair of all dikes that protect the CRA from desert rainstorm flood flows; (3) road maintenance to support patrolling and access to all CRA structures; and (4) electrical equipment maintenance and upgrades.

On the Inland Feeder, Metropolitan removed the final bulkhead and conducted a full operational test before placing the pipeline into

TABLE 4-9
ACTIVE WATER QUALITY GRANTS¹
 Fiscal Year 2009/10

Prime Funding Agency	Title of Grant Project	Total Project Budget ³	Amount of Award to MWD ⁴
U.S. Environmental Protection Agency (EPA)	Desalination Research & Innovation Partnership - EPA III ²	866,466	470,500
Water Research Foundation (WaterRF)	Detection of Infectious <i>Cryptosporidium</i> in Filtered Drinking Water	1,024,177	496,405
EPA	Desalination Research & Innovation Partnership - EPA IV ²	788,545	433,700
WaterRF	Iodinated Acids and Iodide in Drinking Water Supplies	208,000	17,249
WaterRF	Challenge Organisms for Inactivation of Viruses by Ultraviolet Treatment	834,180	350,000
EPA	Detecting Pathogens in Water by Ultrafiltration and Microarray Analysis	1,253,833	599,883
National Water Research Institute	Source, Fate and Transport of Endocrine Disruptors, Pharmaceuticals, and Personal Care Products in Drinking Water Sources in California	300,000	150,000
WaterRF	Development of a Protocol to Predict the Formation of Nitrosamines While Minimizing the Formation of Regulated DBPs	604,842	400,000
WaterRF	Evaluation of Analytical Methods for EDCs and PPCPs via Interlaboratory Comparison	533,000	30,000
TOTALS		\$ 6,413,043	\$ 2,947,737

¹ Externally-funded grant projects managed by Water Quality's principal investigators during the fiscal year.

² DRIP-related projects

³ Reimbursable dollars plus total in-kind commitments from all participating agencies; includes payments to subcontractors as applicable.

⁴ Amount managed by Metropolitan; award amounts may occasionally change from prior years due to realigned budgets.

TABLE 4-10
CONGRESSIONALLY-MANDATED GRANT
AWARDED TO METROPOLITAN
 Fiscal Year 2009/10

Grant Project Title	Term of Award	Total Project Budget (Reimbursable Dollars + In-Kind)	Award Amount to Metropolitan (Reimbursable Dollars) 100% Pass-Through Funding to Metropolitan	Project Summary
Biological Treatment for Perchlorate Removal from Groundwater	9/1/2006-10/31/2010	\$496,000	\$496,000	This study addressed the application of hydrogen-based biological treatment for the removal of perchlorate from the city of Pasadena's groundwater. It was successfully completed ahead of schedule in March 2010. This grant was awarded as a result of a congressional mandate and 100% of funding was pass-through to the city of Pasadena (work was performed by Water Quality & Treatment Solutions, Inc.) under Metropolitan oversight. No in-kind was required for this project.
		\$496,000	\$496,000	

service in September 2009. By June 2010, the Inland Feeder was delivering more than 800 cfs into Diamond Valley Lake.

In January 2010, the Upper Feeder and Lower Feeder that originate from Lake Mathews and convey untreated Colorado River water to the Weymouth and Diemer water treatment plants were shut down in order to perform major maintenance and repair work. The work included: (1) the inspection and initiation of repairs on the Lake Mathews Outlet Tower meter; (2) inspection and recoating of the slide gates in the Santiago Control Tower on the Lower Feeder; and (3) repair of a leak on the Upper Feeder at the Santa Ana River crossing.

In February 2010, the Rialto Pipeline and the lower portion of the Etiwanda Pipeline were inspected for mortar loss, and a relocated portion of the Orange County Feeder was tied back into the distribution system. Metropolitan performed pipeline repairs on the Box Springs Feeder in February 2010 and the Lake Skinner Outlet Conduit in April/May 2010. Metropolitan conducted unexpected repairs of the Calabasas Feeder in April 2010, Allen-McColloch Pipeline in June 2010. The Calabasas Feeder was repaired in four locations with carbon fiber. The AMP was repaired with steel sleeves in six previously-inspected sections found to be at risk of failure.

A major multi-year project to replace the control system at the Wadsworth Pressure Control Structure/Hydroelectric Power Plant located at Diamond Valley Lake started this year. The project includes a condition assessment and preliminary design to replace obsolete and out of stock equipment to ensure proper operation of the control system for plant reliability.

In FY 2009/10, more than 338,000 hours of maintenance, including shutdowns, were performed on conveyance and distribution infrastructure. See Table 1-5 for a full list of shutdowns that occurred during the year.

Operations Support Services

Operations Support Services include the machine, fabrication and coatings shops located at the Weymouth treatment plant in La Verne, heavy construction support, specialized power support for the hydroelectric plants and other high voltage facilities, and maintenance engineering support.

Shop Services

Several large pipeline fabrication jobs were completed including nineteen 70-inch-diameter pipe sections for urgent repair of the Allen-McColloch Pipeline and eight 144-inch diameter pipe sections for the Lake Skinner Outlet Conduit replacement project.

On the CRA shutdowns, the shop crew manufactured critical parts for the tunnel cleaning machine; coated the mortar inside the Copper Basin Tunnel to protect it from damage due to chlorine injection for quagga mussel control; injected polyurethane sealant to repair leaks in

the aqueduct liner; and fabricated and installed more than 700 panels of metal curbing to increase the aqueduct capacity in several on-site locations. Several unique critical parts were also machined to repair damaged CRA pumps and valves.

Construction Services

Metropolitan completed the city of Burbank's raw-water B-06 Service Connection, which required installing a control valve at Magazine Canyon shaft and flushing of sediments from the San Fernando Tunnel. Additionally, several repairs to the CRA and support of tunnel cleaning crews were provided throughout the year.

Power Support

A complete refurbishment of the San Dimas Hydroelectric Power Plant by Metropolitan workers included disassembly, blasting, recoating, machining of parts and reassembly of four needle valves. Lessons learned in the process will be applied to the refurbishment of other aging hydroelectric power plant facilities.

Maintenance Engineering

The Performance Excellence (PE) initiative uses focused work teams to develop, test and implement maintenance best practices. Since its inception in 2008, the PE initiative's successes include the rollout of handheld mobile devices that standardized work instructions. Other implemented features electronically capture data that can be used to spot maintenance trends, detect issues earlier, and make more informed decisions on how to address recurring problems. Staff also implemented 150 enhancements to the Computerized Maintenance Management System that will facilitate the communication of metrics, improve organization of work and provide tools to perform long term planning. Twelve new standard maintenance operating procedures and policies were developed to improve initiation of work orders, proper job plans (work instructions), maintenance requirements on emergency power systems, and system protection (pipeline patrolling guidelines).

Security and Emergency Management

Security staff coordinated a chemical facility site visit by representatives of the U.S. Government Accountability Office as part of a national assessment of chemical supply resiliency; staff subsequently supported a Department of Transportation inspection of the same facility. Security personnel also conducted field visits and assisted with addressing access control and surveillance camera requirements for every new ozone building and water treatment plant entrance gate. Security staff worked with Transportation Security Administration inspectors and assisted plant management in passing two separate compliance inspections associated with secure handling of chlorine rail cars. Staff also provided uninterrupted, 52-week tracking of chlorine railcars to enable timely response to TSA regulatory inquiries in the event of an urgent call to account for all such supplies. Additionally, response protocols were tested for tracking chlorine truck deliveries by GPS and via communication protocols during minor, real-world disruptions, including stalled engines and tire blowouts in transit.

Security program management completed security enhancements at the Diemer Chlorine Containment Facility, bringing all chlorine buildings at Metropolitan's water treatment plants to the same security standards. Staff also assisted in supporting meetings with neighborhood associations and with staffers of elected representatives with concerns about security and safety of chlorine in nearby water treatment plants.

Emergency Management staff conducted exercises and workshops for employees and coordinated training focusing on response and communications following a major earthquake. Employees participated in exercises involving activation of the Emergency Operations Center (EOC) and Incident Command Centers (ICC), encompassing about 3,700 hours of training.

Highlights of the year's training included:

- A joint exercise between WSO and Engineering to test Metropolitan's response to two simultaneous pipeline ruptures, where engineering design staff tested its ability to develop design drawings on site.

- A district-wide communications exercise that tested and evaluated the reliability of district radio and associated equipment, protocols and procedures.

Energy Management

Hydroelectric Power Recovery Plant Operations

Metropolitan has 16 small-conduit hydroelectric power recovery plants that generated a total of 263 million kilowatt-hours for FY 2009/10 (as shown in Table 4-11) producing gross revenues of \$19 million. This is about 10 million kilowatt-hours less generation and \$2 million higher revenue compared to FY 2008/09. The lower energy production was the result of lower water deliveries, while the increase in revenues was due to new contracts for the sale of the energy that captured the higher value of “renewable” energy. Generation from 15 of the plants is sold under contractual agreements with Pacific Gas & Electric, Southern California Edison, Southern California Public Power Authority, Los Angeles Department of Water and Power and DWR. Energy produced at the Wadsworth Pumping Plant at DVL is sold in the spot energy market.

Wadsworth Plant Renewable Certification

The California Energy Commission certified Wadsworth as a renewable energy generator in December 2009. This distinction allows energy from Wadsworth to be used by electric utilities to help satisfy the requirement that their portfolio of energy resources contain a certain amount of renewable energy. To obtain this certification, Metropolitan retired three of the 12 turbine generator units, lowering the nameplate generating capacity of Wadsworth from 39.6 megawatts to 29.7 MW, putting it in compliance with the California 30 MW regulatory limit.

DWR Small-Conduit Hydropower Contract

On September 25, 2009, Metropolitan sent DWR a 10-year notice of termination for the contract through which Metropolitan sells the energy produced from five of the 16 small-conduit hydroelectric power plants to DWR. The contract did not have a set termination

date and could only be unilaterally terminated by either party upon a 10-year notice. The contract will now terminate on September 30, 2019. Negotiating a new contract will allow Metropolitan to obtain full market value for the “renewable” energy produced from these five hydroelectric power plants.

**TABLE 4-11
HYDROELECTRIC POWER RECOVERY PLANTS PRODUCTION
FOR THE PAST TWO FISCAL YEARS**

Power Plant	Nameplate Capacity (Megawatts)	2009/10 Production (kWh)	2008/09 Production (kWh)
Greg Ave.	1	9,600	19,200
Lake Mathews	5	33,181,820	30,418,376
Foothill Feeder	9	44,659,175	55,249,022
San Dimas	10	12,522,149	13,459,827
Yorba Linda	5	12,567,523	25,423,396
Sepulveda Canyon	9	22,168,304	5,527,760
Venice	10	10,574,270	693,672
Temescal	3	19,133,283	18,267,960
Corona	3	18,343,314	18,459,613
Perris	8	12,937,583	6,004,356
Rio Hondo	2	3,087,131	3,885,466
Coyote Creek	3	8,348,824	14,987,107
Red Mountain	6	20,893,250	19,862,625
Valley View	4	5,059,298	3,185,483
Etiwanda	24	31,358,362	29,468,810
Wadsworth (DVL)	30	7,889,261	28,327,211
TOTAL	131	262,733,147	273,239,885

Annual Power generation varies significantly, depending on: agency flow demands, mix of water sources (Colorado vs. State Water Project), what shutdowns/outages are taking place and each generator's operational constraints.

Colorado River Aqueduct Power

In FY 2009/10, Metropolitan pumped more than 1.025 million AF through the Colorado River Aqueduct, requiring 2.04 billion kilowatt-hours of electricity. The energy demands for FY 2009/10 required purchasing about 596 million kilowatt-hours from the energy market at a cost of \$21 million, or 3.5 cents per kilowatt-hour. The current and historical energy resources used to meet CRA water delivery energy requirements are shown in Table 4-13 and Figures 4-11 and 4-12. Energy costs for pumping Colorado River water are shown in Table 4-12.

TABLE 4-12
ENERGY COST FOR PUMPING
COLORADO RIVER WATER
 Fiscal Year 2009/10

Energy Source	Cost (\$)
Hoover Power Plant	17,223,474
Parker Power Plant	5,216,086
Supplemental Energy Purchases/Sales ¹	20,959,559
Exchange (Edison & DWR) ²	0
Colorado River Water Pumping Revenue	(966,023)
Benefit Energy and Exchange Surcharge ³	56,545
Reduction in Energy Surcharge	(36,335)
TOTAL	42,453,305

Notes:

¹ Supplemental Energy Purchases/Sales. A negative number indicates the net cost of supplemental energy was revenue to Metropolitan.

² Cost of exchanging energy with another utility.

³ Payments received for energy costs associated with moving non-Metropolitan water on the CRA.

³ Tax paid to State of California for Edison Benefit and Exchange energy.

TABLE 4-13
METROPOLITAN'S HISTORICAL CRA ELECTRIC ENERGY USE
 Kilowatt Hours

	Hoover	Parker	Edison Benefit ¹	Edison Exchange ²	DWR Exchange ³	Edison & DWR Exchange & Edison Benefit	Supplemental Energy Purchases/Sales ⁴	Total
1987/88*	1,432,001,000	290,400,000	216,981,190	1,764,000	0	218,745,190	832,498,639	2,773,644,829
1988/89	1,231,206,000	237,142,000	215,485,363	(27,764,000)	0	187,721,363	735,276,330	2,391,345,693
1989/90	1,205,476,000	230,545,000	219,139,828	24,777,000	0	243,916,828	754,629,485	2,434,567,313
1990/91	1,130,155,000	223,831,000	221,837,010	13,298,000	0	235,135,010	871,799,953	2,460,920,963
1991/92	1,086,888,000	206,513,000	210,490,214	16,145,000	0	226,635,214	891,296,400	2,411,332,614
1992/93	966,614,000	182,606,000	208,800,738	(28,220,000)	0	180,580,738	1,035,586,974	2,365,387,712
1993/94	1,256,009,000	214,961,000	199,304,945	(16,175,000)	0	183,129,945	914,591,730	2,568,691,675
1994/95	1,166,517,000	217,365,000	186,648,325	(88,977,000)	0	97,671,325	680,010,352	2,161,563,677
1995/96	1,357,937,000	237,627,000	286,971,075	(32,150,000)	0	254,821,075	401,318,041	2,251,703,116
1996/97	1,292,375,000	243,993,000	253,134,785	47,302,000	0	300,436,785	595,050,513	2,431,855,298
1997/98	1,370,317,000	302,069,000	200,076,045	90,000,000	(123,316,955)	166,759,090	327,992,313	2,167,137,403
1998/99	1,411,403,000	297,219,000	212,312,000	13,490,000	108,417,736	334,219,736	329,691,494	2,372,533,230
1999/00	1,392,515,000	262,383,000	263,326,907	(26,405,000)	3,967,942	240,889,849	646,961,000	2,542,748,849
2000/01	1,311,068,000	243,647,000	173,785,599	21,586,000	0	195,371,599	788,937,000	2,539,023,599
2001/02	1,322,037,000	241,048,000	199,205,189	(54,931,000)	0	144,274,189	804,044,166	2,511,403,355
2002/03	1,193,682,000	230,871,000	284,085,067	50,371,800	(162,807,504)	171,649,363	232,051,017	1,828,253,380
2003/04	1,179,118,000	229,886,000	164,721,756	(61,823,800)	105,280,095	208,178,051	(141,923,768)	1,475,258,283
2004/05	931,893,000	198,606,000	381,481,989	18,022,000	5,059,196	404,563,185	(39,632,380)	1,495,429,805
2005/06	1,158,901,000	212,687,000	405,612,265	(116,265,000)	37,054,891	326,402,156	74,465,049	1,772,455,205
2006/07	1,143,870,000	229,881,000	387,630,441	(38,400,000)	68,876	349,299,317	(421,365,512)	1,301,684,805
2007/08	1,117,068,000	217,106,000	431,283,980	70,272,000	0	501,555,980	(250,140,000)	1,585,589,980
2008/09	1,075,217,000	223,056,000	260,209,614	90,363,000	0	350,572,614	371,765,025	2,020,610,639
2009/10	994,222,000	195,063,000	233,871,837	21,870,000	0	255,741,837	595,894,000	2,040,920,837

Notes:

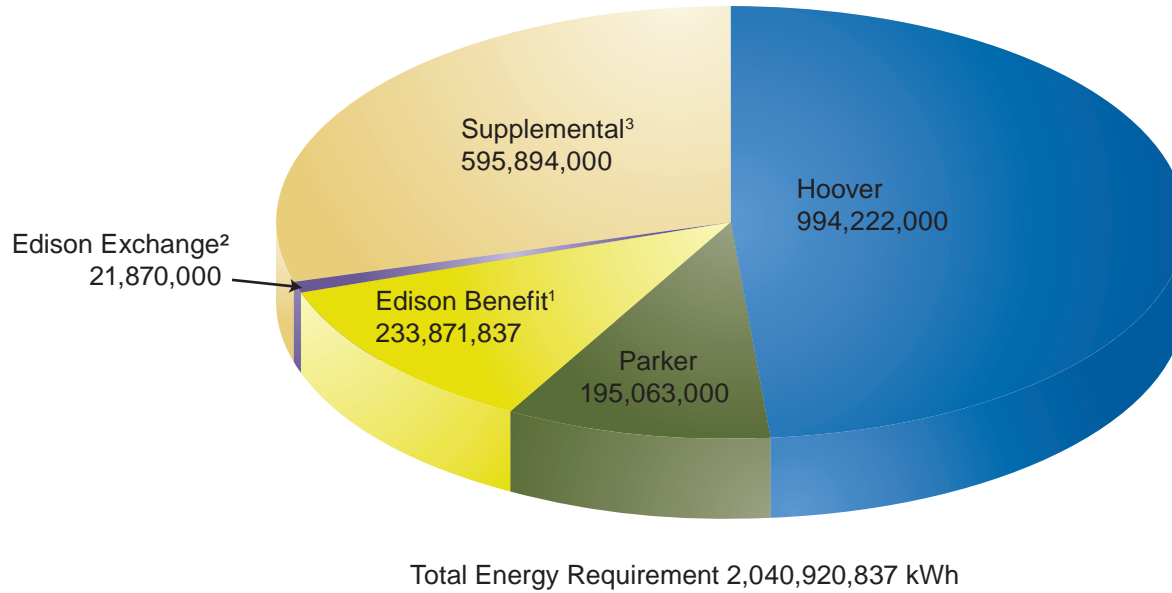
* Includes June 1987 data

1 Energy provided by Edison at no cost pursuant to 1987 Service and Interchange Agreement.

2 Energy exchanged (banked) with another utility. Negative number indicates net energy sent to the other utility.

3 Energy exchanged (banked) with another utility. Positive number indicates net energy received from the other utility.

4 Supplemental Energy Purchases/Sales. A negative number indicates that the net amount of supplemental energy was sold to other utilities.



Notes:

¹Energy provided by Edison at no cost pursuant to 1987 Service and Interchange Agreement.

²Energy exchanged (banked) with another utility. Positive number indicates net energy received from the other utility.

³Supplemental Energy Purchases/Sales. A positive number indicates that the net amount of supplemental energy was purchased from other utilities.

*Figure 4-11. Metropolitan's CRA Electric Energy Use (kWh)
Fiscal Year 2009/10*

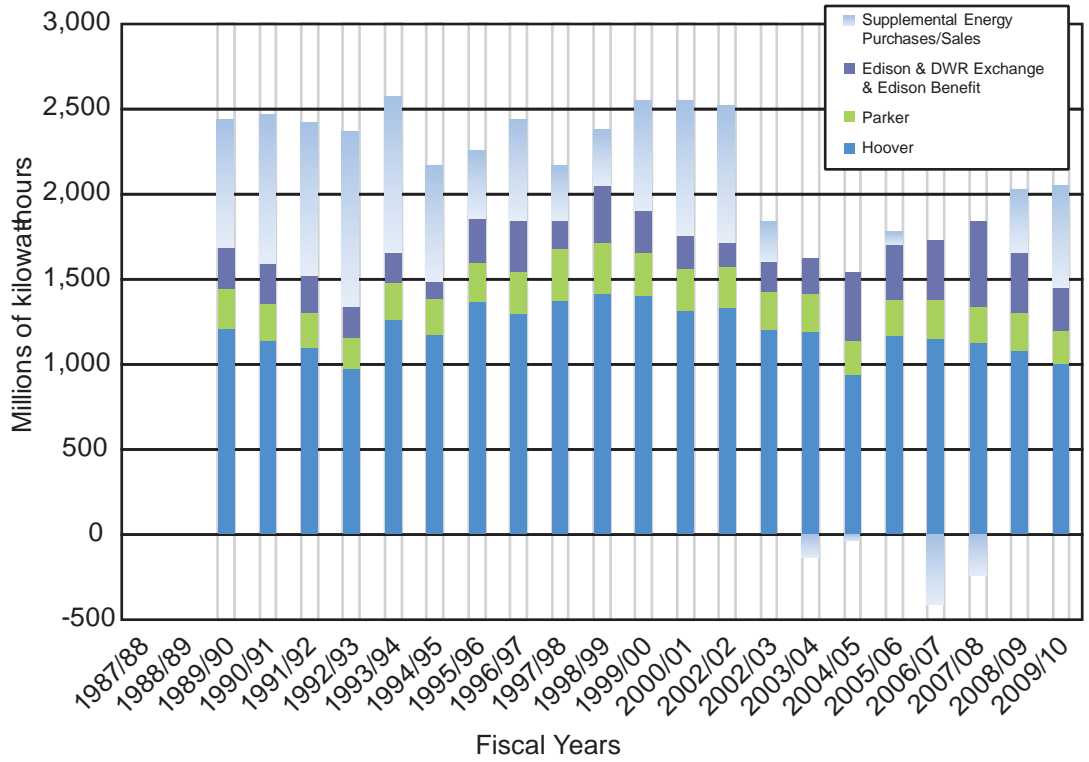


Figure 4-12. CRA Energy Mix 1987 to 2010

Future Hoover Dam Power Contract

On December 22, 2009, legislation that had been developed by Metropolitan and the other Hoover power contractors was introduced in both houses of Congress. The legislation provides for existing Hoover contractors to receive 95 percent of their current entitlement of Hoover energy and capacity, with the remaining 5 percent made available to new entities. The term of the new contract will be 50 years. On June 8, 2010, the House passed the legislation with minor amendments acceptable to the existing contractors. On June 9, the Senate's Subcommittee on Water and Power held a favorable hearing on the legislation and will likely send the bill to the full Senate in July 2010. It is expected the legislation will be sent to the president before the end of 2010.

Energy Management and Reliability Study

During the fiscal year, WSO, CRG and Legal staff drafted an Energy Management and Reliability Study as a mechanism to discuss issues and develop objectives related to energy management, renewable power expansion and greenhouse gas emission reduction. Several presentations to the board identified various options regarding energy and emission objectives and goals. Staff will evaluate and incorporate feedback and recommendations into a set of Energy Management Policies for board consideration and approval.

Renewable Energy Database

On August 24, 2009, Metropolitan began recording the Renewable Energy Credits (REC) associated with the small-conduit hydroelectric plants that have been certified as renewable in the Western Renewable Energy Generation Information System database. The database is operated and maintained through the Western Electricity Coordinating Council. WREGIS allows Metropolitan to fulfill its obligations to record RECs from certain hydro plants and sell RECs that have been retained by Metropolitan.

Hinds Pumping Plant Substation

During the year, Southern California Edison initiated a major expansion of their portion of the Hinds substation as well as limited modifications to Metropolitan's electrical facilities. The expansion

was necessary to incorporate a new, 230 kV transmission line from a thermal generator located in Blythe, California. Two new circuit breakers were installed to allow isolating Metropolitan's portion of the Hinds substation from Edison's facilities. Additionally, a large reactor was incorporated into Metropolitan's substation to prevent excessive voltage during certain CRA operating conditions.

Apprenticeship Program

The Apprenticeship Program training courses continued with an enrollment of 39 apprentices. The cumulative academic testing average for the combined trades was 87 percent, which markedly exceeded the program requirement of 70 percent. In partnership with Human Resources, the Apprenticeship Program engaged in a broad advertising program to recruit 17 new apprentices involving schools, colleges, government agencies, job fairs and Web resources. Additionally, staff participated in two pre-test seminars. As a result of the advertising and seminars, the established cap of 1,300 applications was reached within 12 hours of the opening date for filing.

The Apprenticeship Program expanded into the venue of technical safety training and now encompasses the System Operating Orders Manual (SOOM) training program. Since assuming those responsibilities, staff has completed an extensive multi-tiered curriculum and a new certification program for water distribution and treatment staff involved in large-scale system valving operations. The new courses and certification coincide with, and supplement the existing SOOM High Voltage Switching certification courses. To date, 64 SOOM classes have been presented district-wide, with 653 student enrollments.

Training

In FY 2009/10, the Regulatory and Safety Training staff presented safety and environmental sessions, toolbox and on-the-job training. Centralized files were developed and course materials were updated and stored electronically. The following topics were added to the online training classes: underground storage tanks, injury and illness prevention, National Incident Management System emergency management, and high rise safety. In FY 2009/10, there were 1,133 online course enrollments.

Fleet Services

Fleet Services continued improving business and maintenance practices to effectively and efficiently maintain about 2,000 fleet assets with an estimated value of about \$47 million. Fleet Services re-organized from four regions to two regions which enhanced continuity and control and decreased management overhead. Metropolitan has continued to implement a modern system for managing, maintaining and tracking fleet assets, along with a modern fuel management system that better controls and manages fuel supplies. Metropolitan has also begun installing Global Positioning Systems on emergency response equipment.

Environmental, Health and Safety

Environmental

Environmental, Health and Safety staff performed mock inspections of the treatment plants and several other facilities, examining hazardous material business plans, underground storage tanks, above ground petroleum tanks, hazardous waste generators and hazardous materials management. These self-inspections helped indicate improvements needed and ensured compliance for regulatory inspections.

Staff negotiated with and secured dewatering permits from regulatory agencies in support of Metropolitan shutdown projects. A first-time blanket permit from the Los Angeles County Department of Public Works replaced the requirement for eight individual permits for each separate shutdown project.

Health & Safety

Staff developed Metropolitan's first comprehensive pandemic plan, with portions implemented in response to an 2009 H1N1 influenza outbreak in Mexico and a World Health Organization pandemic alert.

Table 4-14, Accident Incidents, lists the Total Incident Rate and the Days Away Restrictions and Transfers (DART) rate for

FY 2009/10 for each Metropolitan facility. The Occupational Health and Safety Administration (OSHA) defines Total Incident Rate (also known as injury/illness rate) as the number of recordable incidents in a year. Overall, Metropolitan's Total Incident Rate increased slightly from 4.6 in FY 2008/09 to 4.7 in FY 2009/10. A recordable incident is generally defined as a new work-related injury or illness that results in death, lost time from work, work restriction, or medical treatment beyond first aid. Metropolitan's 2009/10 Total Incident and DART rates are below the 2009 federal and state incident and DART rates for water utilities.



Drilling work to allow excavation of the Lake Skinner Outlet Conduit for repair work.

TABLE 4-14
ACCIDENT INCIDENTS
 Fiscal Year 2009/10

Location	Total Incident Rate	DART Incident Rate
Diemer	8.4	7.0
Diamond Valley Lake	9.8	6.5
Eagle Mountain	21.3	10.7
Eagle Rock	0	0
Gene Camp	6.4	2.1
Hinds	0	0
Inland Feeder	0	0
Iron Mountain	18.8	14.1
Jensen Plant	13.0	10.1
La Verne	5.3	3.9
Lake Mathews	16.8	9.6
Lake Skinner	6.0	3.0
Mills Plant	10.7	4.6
Sacramento	0	0
Soto Street	0	0
Sunset	0	0
Union Station	1.4	0.5
Washington, D.C.	0	0
AVERAGE RATE	4.7	2.8

To note the extent and severity of incidents, DART rate is defined as the injuries or illnesses severe enough to warrant days away, restrictions, or transfers. OSHA requires that both rates are adjusted based on 200,000 hours worked by 100 employees, averaging 40 hours per week over a 50 week span (two weeks taken away for leaves). Metropolitan's 2009/10 Total Incident and DART rates are below the 2009 federal and state incident and DART rates for water utilities.



A refurbished turbine nozzle at the San Dimas Hydroelectric Plant.



Urgent repairs take place on the Allen-McCulloch Pipeline, June 2010.

Corporate Resources

The Corporate Resources Group provides technical and general services that assist Metropolitan in securing, conveying, treating, and distributing water to its member agencies. The Office of the Group Manager has responsibility for Metropolitan's strategic initiatives, including oversight of the Capital Investment Plan, Inland Feeder Program, energy management, grant management, business process sustainability, and initiatives related to new technology. These services are organized into three main sections under the Office of the Group Manager: Engineering Services, Information Technology, and Business Services.

Engineering Services' core duties include project management, engineering design, environmental planning, construction management and inspection, regional facility planning, field survey, dam inspection and surveillance, substructures investigations, material quality control and corrosion engineering.

Information Technology delivers services and solutions in computer software/hardware, telecommunications, control systems (SCADA), business applications (e.g., payroll/human resources and maintenance management systems), and geographic information systems.

Business Services provides for a wide variety of Metropolitan's business needs, such as contracting services, procurement of goods and nonprofessional services, graphics, technical writing, video production and photography, warehousing, inventory management, records management, business process sustainability and Rideshare. The group aims to provide exceptional customer service and innovative technology.

Capital Investment Plan

The Capital Investment Plan (CIP) represents Metropolitan's ongoing effort to construct and/or rebuild its facilities to meet demands for a high-quality, reliable water supply. Hundreds of capital projects are implemented every year throughout the service area, ranging in cost from less than \$100,000 to more than \$100 million.

The CIP differs from previous major expenditure periods because in addition to completing the Inland Feeder, constructing new projects like the Perris Valley Pipeline, and expanding facilities like the Skinner Water Treatment Plant, it also includes major investments in new water treatment technology (ozonation), and a growing investment in the rehabilitation of existing facilities. The CIP carries on a tradition of Metropolitan's capital programs that included construction of the Colorado River Aqueduct, and an expanded distribution system in the 1950s, followed by the 1960s construction of additional facilities to treat and distribute supplies from the State Water Project. The last major period of capital facility construction occurred in the 1990s, when Metropolitan built Diamond Valley Lake for approximately \$2 billion.

CIP projects are based on multiple Metropolitan studies of projected water needs that are embodied in board-approved documents such as the Integrated Water Resources Plan, the General Manager's Business Plan, Integrated Area Studies, and the Long Range Finance Plan. Staff also studies the impact of emerging water quality standards, along with the impact of future demands on aging facilities. Staff studies operational and business processes, and recommends programs that will improve efficiency and provide future cost savings.

Staff continuously conducts field investigations that identify critical replacement and refurbishment projects, plus facility upgrades necessary for infrastructure reliability and regulatory compliance. Project schedules get evaluated regularly to help accommodate the urgency of each project, and plan for steadily increasing capital investments in Metropolitan's existing infrastructure.

Driven by a number of factors, CIP projects are categorized as follows: Supply and Delivery Reliability, Infrastructure Reliability, Water Quality, Cost Efficiency & Productivity, and Stewardship. CIP

expenditures totaled approximately \$290 million in FY 2009/10. Figure 5-1 depicts the actual expenditures by category. Water Quality and Infrastructure Reliability projects represent the largest expenditure components at more than \$100 million each. Infrastructure expenditures were spread across 200 projects throughout the system, with the largest being electrical system upgrades at the F.E. Weymouth and Robert B. Diemer water treatment plants and the Colorado River Aqueduct, and urgent repairs to the Allen McColloch Pipeline.

The Water Quality portion of the CIP represents Metropolitan's ongoing investment in the retrofit of its five water treatment plants to use ozone as the primary disinfectant. Through FY 2009/10, the Oxidation Retrofit Program (ORP) has completed construction at the Joseph Jensen and Henry J. Mills plants, and is nearing completion at the Robert A. Skinner plant. Diemer construction is nearly 50 percent complete and final design for Weymouth is nearly complete, while the initial Weymouth ORP projects, such as Inlet Conduit Relocation and Power System Upgrades, are already under construction.

Supply Reliability expenditures of more than \$65 million reflect the completion of all construction activities on the Inland Feeder, a 45-mile long, 12-foot diameter tunnel/pipeline conveyance facility that was the single largest component of the CIP over the past several years. Also, approximately \$19 million was expended on construction of the Perris Valley Pipeline – a 6.5 mile long, 8-foot diameter treated water pipeline – that starts at the Mills plant in Riverside, with a capacity of 375 cubic feet per second. The objectives of the Perris Valley Pipeline are to meet projected demands in Riverside County; maximize use of the Mills plant; offset peak demand on the Skinner plant; and to improve operational flexibility and reliability.

Engineering Services

The Engineering Services Section's core responsibilities include project management, engineering design and construction management, construction and fabrication inspection, field survey, dam inspection and surveillance, material quality control and corrosion engineering, substructures investigation, environmental planning, and regional facility planning to ensure continued reliability and quality of water deliveries. For a list of projects that are completed,

in construction and in design, see Tables 5-1 through 5-3. Major programs and efforts under way include the following:

Inland Feeder

Consisting of 44 miles of pipeline and tunnels, the \$1.2 billion Inland Feeder project provides system reliability by linking together the State Water Project and the Colorado River systems. The Inland Feeder enables Metropolitan to convey up to 1,000 cubic feet per second of State Water Project supplies to Diamond Valley Lake. The project enables conveyance of large amounts of water in a short period of time, helping to minimize the volatility of impacts from climate change and impacts to State Water Project supplies. The Inland Feeder Arrowhead Tunnels were completed 14 months ahead of schedule and within the board-approved budget, which enabled service to commence in late September 2009.

The Inland Feeder is comprised of seven segments, beginning at Devil Canyon in the San Bernardino Mountains and terminating at the Eastside pipeline in Riverside County. The segments are broken into the following geographical reaches: Arrowhead West Tunnel, Arrowhead East Tunnel, Highland Pipeline, Mentone Pipeline, Riverside Badlands Tunnel, Riverside North Pipeline, and Riverside South Pipeline.

Metropolitan was recognized through various awards for the Inland Feeder project including: Award of Merit from the American Society of Civil Engineers' (ASCE) Outstanding Civil Engineering Award (OCEA); Project of the Year Award from the Southern California Chapter of the Construction Management Association of America (SCCMA); Honor Award in Engineering Excellence and National Recognition Award from the American Council of Engineering companies for outstanding project completed in California; and the Environmental Sustainability Award from the American Academy of Environmental Engineers.

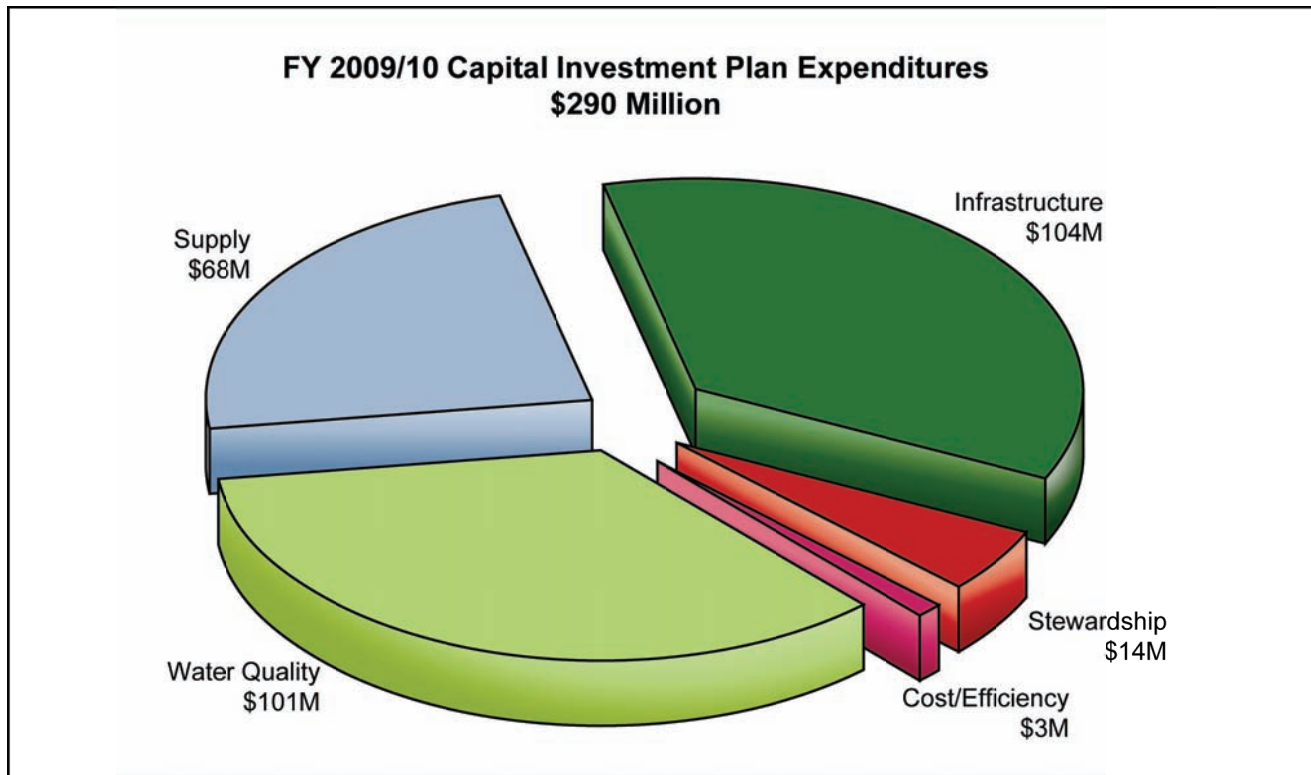


Figure 5-1. Fiscal Year 2009/10 Capital Investment Plan Expenditures

TABLE 5-1
CONSTRUCTION CONTRACTS COMPLETED AS OF JUNE 30, 2010 (Unaudited)

104

Completion Date	Contract / Spec. No.	Project	Base Bid Amount	Final Amount
7/13/09	1669/1575A	Union Station Tenant Improvements	162,457	165,000
9/14/09	1650/1549	Mills Water Treatment Plant Ozone Contactors Nos. 3 and 4	14,556,000	14,900,097
9/22/09	1678/1620	Weymouth Water Treatment Plant Asphalt Rehabilitation	131,120	135,576
10/20/09	1659/1584	Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 4	1,447,500	1,363,633
10/22/09	1668/1619	Skinner Water Treatment Plant Solar Power Generation Facility	9,984,000	10,066,463
10/30/09	1665/1598	Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 6	1,609,100	1,828,119
11/19/09	1684/1650A	Skinner Water Treatment Plant Maintenance Shop Insulation Replacement	126,500	132,292
11/20/09	1542/1437	Inland Feeder Program - Arrowhead Tunnels Project	397,000,000	384,591,179
11/23/09	1685/1651	Diamond Valley Lake Recreation East Marina Phase 3 - Extension of Boat Ramp	465,800	475,608
11/30/09	1653/1568	CRA Reliability Program Phase 6	3,382,110	3,604,746
12/14/09	1651/1589	Perris Valley Pipeline North Reach	39,250,000	40,709,918
3/22/10	1679/1661	Lake Mathews Reservoir Sodium Hypochlorite Tank Farm Roof	224,825	249,748
3/12/10	1686/1638	Box Springs Feeder Repair - Phase 2	438,000	448,770
4/1/10	1681/1594	Skinner Water Treatment Plant Finished Water Reservoir Floating Cover Replacement	3,438,590	3,462,992
4/23/10	1672/1616	Lake Skinner East Bypass Screening Structure Rehabilitation	4,591,500	4,591,500*

TABLE 5-1 (Continued)
CONSTRUCTION CONTRACTS COMPLETED AS OF JUNE 30, 2010 (Unaudited)

Completion Date	Contract / Spec. No.	Project	Base Bid Amount	Final Amount
4/28/10	1673/1557	Jensen Water Treatment Plant Solids Thickeners 5 and 6	5,499,000	5,991,520
5/20/10	1677/1613	Jensen Water Treatment Plant Administration Building Seismic Upgrades	1,535,000	1,764,005
5/27/10	1660/1597	Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 5	1,278,500	1,296,786
6/2/10	1692/1665	Iron Mountain Pumping Plant Delivery Pipe Expansion Joint Repair	177,000	177,000*
6/21/10	1702/1686	Allen McColloch Pipeline 2010 Repair - Sites 1 to 6	1,579,721	1,579,721
6/28/10	1691/1657	Lake Skinner Outlet Conduit Repair	845,777	845,777*

* Final amount pending change order negotiation and/or resolution of outstanding claim(s).

TABLE 5-2
MAJOR CONSTRUCTION CONTRACTS IN PROGRESS
AS OF JUNE 30, 2010 (UNAUDITED)
Accrual Basis

Contract No.	Project	Percent Contract Complete through 6/30/2010	Estimated Contract Completion Date	Contract Earnings through 6/30/2010 (1)	Base Bid Amount
1609	Skinner Water Treatment Plant Oxidation Retrofit Program and Washwater Reclamation Plant No. 3	99	Aug 2010	205,850,658	184,650,000
1663	Perris Valley Pipeline South Reach	60	Oct 2010	13,487,316	22,300,000
1664	Weymouth Water Treatment Plant Coagulant Tank Farm Modifications	71	Jan 2011	7,535,481	10,437,000
1667	Diemer Water Treatment Plant Oxidation Retrofit Program	55	Jun 2012	103,814,150	188,080,588
1682	Weymouth Water Treatment Plant Inlet Conduit Relocation and Rapid Mix Systems	31	May 2011	9,316,807	30,077,700
1683	Skinner Water Treatment Plant Chemical Systems and Solids Collection Improvements	46	Nov 2010	1,094,458	2,392,000
1687	Middle Feeder North Cathodic Protection	98	Aug 2010	816,733	798,006
1688	Diemer Water Treatment Plant North Access Road	19	Jan 2011	1,755,890	9,085,000
1689	Weymouth Water Treatment Plant Power System Upgrade	9	Jun 2012	2,234,494	25,130,000
1690	Colorado River Aqueduct Access Covers and Water Tank Improvements	10	Mar 2011	458,297	4,792,162

TABLE 5-2 (Continued)
MAJOR CONSTRUCTION CONTRACTS IN PROGRESS
AS OF JUNE 30, 2010 (UNAUDITED)
Accrual Basis

Contract No.	Project	Percent Contract Complete through 6/30/2010	Estimated Contract Completion Date	Contract Earnings through 6/30/2010 (1)	Base Bid Amount
1693	Weymouth Water Treatment Plant Filter Rehabilitation Demonstration	49	Aug 2010	791,868	1,588,122
1694	Colorado River Aqueduct Pumping Plants 230 kV Line Reactors and 6.9 kV Switch Houses	62	Apr 2011	3,189,300	5,181,000
1695	Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 7	13	Feb 2011	122,600	944,800
1696	Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 8	23	Feb 2011	272,545	1,182,520
1697	Air Release and Vacuum Valve Relocation for Treated Water Pipelines Construction Package No. 10	19	Feb 2011	209,250	1,095,101
1698	Weymouth Junction Structure Seismic Upgrades	7	Apr 2011	171,350	2,429,481
1699	Diemer Water Treatment Plant East Washwater Tank Roof Refurbishment	59	Sep 2010	288,415	485,500
1700	Calabasas Feeder Carbon Fiber Lining Repair	99	Jul 2010	856,370	810,870
1701	Diemer Water Treatment Plant Fire and Potable Water Pump Station	6	Oct 2011	280,000	4,966,937

(1) Earnings reflected represent the value of work performed by the contractor as of the date indicated and include contract retention and other similar deductions from amounts earned by the contractor but otherwise required to be withheld by Metropolitan by law or contract.

**TABLE 5-3
MAJOR ENGINEERING PROJECTS IN DESIGN**

Program Number	Program Title And Total Program Estimate	Project Number	Project Description	Phase	Estimated or Actual Completion Date Through Phase Indicated
15346	Chlorine Containment And Handling Facilities \$175,900,000	104113	Chemical Unloading Facility (CUF) Chlorination Containment Facility	Preliminary Design	January 2011
		104112	Chemical Unloading Facility (CUF) Dechlorination System	Final Design	September 2009
		104199	Diemer Filter Outlet Chlorination Capacity Increase	Preliminary Design	August 2010
		103828	Jensen Filter Outlet Chlorination Capacity Increase Project	Final Design	January 2011
		104200	Weymouth Filter Outlet Chlorination Capacity Increase	Preliminary Design	August 2010
15377	Conveyance And Distribution System - Rehabilitation Program \$96,100,000	104195	Box Spring Feeder Repairs (Phases 3 and 4)	Preliminary Design/Final Design	October 2010
		103994	Box Spring Feeder Repairs (Phase 2)	Final Design	September 2009
		103181	West Valley Feeder Access Road and Structure	Preliminary Design	October 2010
15441	Conveyance And Distribution System - Rehabilitation Phase II Program \$53,850,000	104150	Allen McColloch Pipeline Stray Current Drain Stations	Preliminary Design	March 2011
		104196	Calabasas Feeder Repairs (Phases 1 and 2)	Final Design	November 2010
		104198	Etiwanda Pipeline Mortar Lining Repair	Preliminary Design	December 2011
		104101	Lake Skinner Outlet Conduit Repairs	Final Design	January 2011
		104128	Santa Ana River Bridge Seismic Retrofit	Preliminary Design/Final Design	October 2010
		103908	Sepulveda Feeder - Repair at Station 1099	Final Design	July 2010
		104211	Upper Feeder Service Connection Upgrade	Preliminary Design	February 2010
		103804	West Valley Feeder #2 Cathodic Protection	Preliminary Design	June 2010

TABLE 5-3 (Continued)
MAJOR ENGINEERING PROJECTS IN DESIGN

Program Number	Program Title And Total Program Estimate	Project Number	Project Description	Phase	Estimated or Actual Completion Date Through Phase Indicated
15373	Colorado River Aqueduct (CRA) - Conveyance Reliability Program	103739	Copper Basin Outlet, and Copper Basin and Gene Wash Dam Sluiceways Rehabilitation	Final Design	May 2011
	\$113,500,000	103749	CRA Access Structure, Transition Structure, and Manhole Covers Replacement	Final Design	October 2010
		103750	CRA Aqueduct Reservoir and Discharge Line Isolation Gates	Final Design	October 2010
		104093	CRA Sand Trap Equipment Upgrades	Preliminary Design	July 2010
15385	CRA - Discharge Containment Program	104241	Hinds Pumping Plant Equipment Wash Area Upgrades	Final Design	December 2010
	\$5,705,000	103318	Transformer Oil and Sodium Hypochlorite Containment Project	Final Design	March 2011
15384	CRA - Electrical/Power Systems Reliability Program	103760	Danby Towers Foundation Rehabilitation	Preliminary Design/Final Design	January 2011
	\$19,900,000				
15374	CRA - Pumping Plant Reliability Program	103742	CRA Access Covers and Water Tank Improvements	Final Design	December 2009
	\$39,700,000	104244	Iron Mountain Pumping Plant Expansion Joint Repair	Final Design	December 2009
		103183	Suction and Discharge Lines Expansion Repair	Final Design	September 2010
15438	CRA Reliability Phase II Program	103874	CRA 2.4 kV Standby Diesel Engine Generators Replacement	Preliminary Design	March 2011
	\$25,350,000	104090	CRA Intake Power Line Relocation	Preliminary Design	January 2011
		103850	CRA Reliability Phase II - Pumping Plant Switch House Fault Current Protection	Final Design	January 2010
		103851	CRA Reliability Phase II-Pumping Plants 230 KV and 69 KV Disconnect Switch Replacement	Preliminary Design	September 2010

TABLE 5-3 (Continued)
MAJOR ENGINEERING PROJECTS IN DESIGN

Program Number	Program Title And Total Program Estimate	Project Number	Project Description	Phase	Estimated or Actual Completion Date Through Phase Indicated
15438	CRA Reliability Phase II Program (Continued)	104172	Eagle Mountain Pumping Plant Standby Generator Replacement	Final Design	August 2010
		104273	Hinds Pumping Plant Standby Generator Replacement	Final Design	October 2010
		104242	Pumping Plant Flow Meters Replacement	Final Design	August 2010
15380	Diemer Water Treatment Plant - Improvements Program \$194,100,000	103904	Diemer Filter Outlet Seismic Upgrade, Northeast Slope	Preliminary Design	December 2010
		103902	Diemer Finished Water Reservoir Seismic Upgrade / South Slope	Final Design	September 2010
		103650	Diemer Power Reliability	Preliminary Design	July 2010
		103527	Second Entrance Road of Diemer Plant	Final Design	October 2009
15436	Diemer Water Treatment Plant - Improvements Program Phase \$123,980,000	104123	Diemer Filter Valve Replacement	Preliminary Design	November 2010
		104122	Diemer Fire and Potable Water Pump Station	Final Design	May 2010
		103772	Emergency Broadcast System Rehabilitation	Final Design	October 2010
15171	Distribution System - Treated Water Cross Connection Prevention \$53,400,000	103529	Treated Water Cross Connection Prevention	Final Design	February 2010
15402	Hayfield Groundwater Storage Program \$46,700,000	104126	Hayfield Groundwater Extraction Project For One Well	Preliminary Design/Final Design	September 2011
15371	Jensen Water Treatment Plant - Improvements Program \$129,738,000	103295	Bulk Chemical Tank Farm Upgrades	Final Design	August 2011
		103222	Jensen Solids Dewatering Facility and Lagoons	Preliminary Design	November 2010
		103569	Jensen Module 1 Filter Valve Refurbishment	Preliminary Design	November 2010
		103220	Jensen Module 1 Traveling Bridge	Preliminary Design	March 2011

TABLE 5-3 (Continued)
MAJOR ENGINEERING PROJECTS IN DESIGN

Program Number	Program Title And Total Program Estimate	Project Number	Project Description	Phase	Estimated or Actual Completion Date Through Phase Indicated
15442	Jensen Water Treatment Plant - Improvements Program Phase \$34,970,000	103892	Jensen Chemical Trench Extension	Final Design	January 2011
		103893	Jensen Filters Nos. 1-20 Surface Wash System Upgrade	Final Design	December 2010
15395	La Verne Shop Facilities Upgrade \$39,567,000	103787	La Verne Shop Buildings and Material Storage Upgrade	Final Design	December 2009
15424	Mills Water Treatment Plant - Capacity Upgrade \$228,000,000	103615	Mills Solids Handling Systems	Preliminary Design	July 2011
15452	Mills Water Treatment Plant - Improvements Program Phase \$12,900,000	104063	Mills Electrical Building Nos. 1 and 2 Seismic Upgrades	Final Design	September, 2010
		104062	Mills Electrical System Reliability	Preliminary Design	December 2011
		104180	Mills Industrial Wastewater Handling Facilities Improvements	Preliminary Design	September 2010
		104179	Mills Modules 3 and 4 Potable Water Safety Stations and Water Line Extensions	Preliminary Design	September 2010
		104141	Mills Weir Gate and Filter Valve Rehabilitation	Preliminary & Final Design	January 2010
15365	Skinner Water Treatment Plant - Improvements Program \$163,700,000	104058	Skinner Chemical Systems and Solids Handling Improvements	Final Design	August 2009
		103781	Skinner Electrical Buildings and Ground Fault Protection Upgrade	Final Design	December 2009
15388	Skinner Water Treatment Plant - Oxidation Retrofit Program \$252,022,000	104057	Skinner Completion Project	Final Design	July 2011

TABLE 5-3 (Continued)
MAJOR ENGINEERING PROJECTS IN DESIGN

Program Number	Program Title And Total Program Estimate	Project Number	Project Description	Phase	Estimated or Actual Completion Date Through Phase Indicated
15369	Weymouth Water Treatment Plant - Improvements Program \$272,390,000	103744	Junction Structure Seismic Upgrade	Final Design	March 2010
		103898	Weymouth Incoming Electrical Service	Final Design (SCE)	September 2010
		103487	Weymouth Power System Upgrade	Final Design	November 2009
		103746	Weymouth Washwater Reclamation Reliability Upgrade	Final Design	December 2010
15440	Weymouth Plant Improvements Program Phase II \$37,100,000	103840	La Verne Site Public Address System, Voice, Fire Alarm Emergency Evaluation	Preliminary Design	October 2010
		104137	Weymouth Combined Filter Outlet Chemical Trench	Final Design	September 2011
		104036	Weymouth Dry Polymer System Replacement	Preliminary Design	March 2010
		104037	Weymouth Filter Outlet Conduit Repairs	Final Design	October 2010
		103880	Weymouth Filter Rehabilitation	Final Design	January 2010
		103881	Weymouth Raw Water Bypass	Final Design	August 2011
		103879	Weymouth Reservoir Inlet Gates Replacement	Preliminary & Final Design	August 2010
15392	Weymouth Water Treatment Plant - Oxidation Retrofit Program \$357,700,000	104192	Weymouth ORP Final Design	Final Design	August 2011
15446	Yorba Linda Power Plant Modifications \$29,875,000	103805	Yorba Linda Power Plant	Final Design	December 2011

Oxidation Retrofit Program

The Oxidation Retrofit Program upgrades Metropolitan's water treatment plants to use ozone as the primary treatment to meet disinfection objectives, control taste and odor, and reduce the level of disinfection byproducts in the finished water at all five water treatment plants. Ozone will enable Metropolitan to meet state and federal drinking water regulations.

The expansion of the Mills plant's ozonation capacity was accomplished in September 2009, after originally being completed in 2003. The Skinner ozone facility will be completed in late 2010. At Diemer, construction of the ozone facilities and fabrication of the ozone equipment continues, with completion expected by mid-2012. Design of the Weymouth ozone facility is currently under way, with completion planned for fiscal year 2014/15. The award-winning Jensen ozone retrofit was completed in 2005.

Perris Valley Pipeline

Extending east and south from the Mills plant, the 6.5-mile long, 96-inch diameter Perris Valley Pipeline will provide service to Eastern Municipal Water District and Western Municipal Water District of Riverside County. Water deliveries from the 2.6-mile long North Reach commenced in June 2009; construction of the 3.9-mile long South Reach continues.

Rehabilitation and Replacement

Metropolitan invested \$108 million on upgrades, refurbishments, replacements, or repair of existing facilities, as it continued focusing on long-term system reliability, rehabilitating or replacing aging infrastructure as needed. Examples include:

- Completed construction of the Weymouth polymer tank farm.
- Awarded construction contracts for the Weymouth inlet conduit, coagulant tank farm upgrades, fire and domestic water system upgrades and electrical power system upgrades.
- Awarded construction contract for the Diemer North Access Road.

- Completed preliminary design of Phase II electrical upgrades and final design of the emergency broadcast system rehabilitation at Diemer.
- Finished installation of the Skinner finished water reservoir floating cover.
- Finalized seismic upgrades to the Jensen Administration Building.
- Completed construction of two solid thickeners and a water circulation pipeline at Jensen.
- Finished construction of the Lake Skinner east bypass screening structure replacement.
- Completed repairs of seven distressed pipe segments of prestressed concrete cylinder pipe (PCCP) on the Calabasas Feeder.
- Finished repairs of four "broken back" PCCP sections on the Box Springs Feeder.
- Completed repair of six sections of PCCP on the Allen McColloch Pipeline.

Energy Management

Metropolitan established the Energy Management Program to coordinate all energy-related activities and to enable the design and operation of Metropolitan's facilities in the most energy-efficient and cost-effective manner. The four primary goals are to: (1) identify Metropolitan's greenhouse gas emissions inventory; (2) implement additional renewable energy productions; (3) reduce energy consumption; and (4) develop and implement comprehensive strategies to manage power resources in the most cost-effective manner.

Since 2007, Metropolitan has been a member of the California Climate Action Registry, a voluntary, private, non-profit organization formed by the state of California to monitor greenhouse gas emissions. Metropolitan submitted verified emissions reports to the CCAR for the calendar years 2005 through 2008. Metropolitan has been recognized as a Climate Action Leader successfully measuring, verifying and reporting to the climate registry. Currently, Metropolitan has submitted the 2009 emission data to the California Air

Resources Board. The 2009 report to the Climate Registry (the North American version of CCAR) is under review and awaiting submission.

Metropolitan's first large-scale solar energy project – a 1-MW capacity system at the Skinner plant – began generating electricity (without greenhouse gas emissions) in May 2009. As of May 2010, the solar facility had generated more than 2.4 million kilowatt-hours of clean, renewable energy. In addition, as part of the California Solar Initiative, Metropolitan has to date received approximately \$1 million in performance-based rebates from Southern California Edison and expects to receive more than \$5 million through 2014. Metropolitan received the 2010 Engineering Excellence Merit Award from the American Council of Engineering Companies (ACEC) for the Skinner facility. Metropolitan also received the "Environmental Stewardship" recognition award from Southern California Edison for its commitment to a cleaner, green environment. In its continued commitment to renewable energy, Metropolitan is currently in final design for the Weymouth 1-MW solar facility and expects to begin construction in 2011.

Infrastructure Protection

Metropolitan regularly monitors critical facilities such as dams, reservoirs, pipelines and chemical tanks as part of its mission to protect Metropolitan's above- and underground infrastructure and ensure system reliability. This prevents third-party damage and ensures facilities are fit for service, preserving Metropolitan's rights-of-way and improving public/worker safety. Engineering Services also works to identify rehabilitation needs.

Staff perform predictive assessments using data collection, specialized equipment, visual inspections, trend analysis, coordination with external agencies, and support to Water System Operations maintenance staff. Some key FY 2009/10 accomplishments include the following:

- Completed the second round of non-destructive electromagnetic testing of 34 miles of pre-stressed concrete cylinder pipe within Metropolitan's distribution system.
- Maintained a continuous dam safety surveillance program for all Metropolitan dams; completed 54 dam inspections;

submitted 19 annual dam safety surveillance reports to the California Division of Safety of Dams; coordinated daily inspections of facilities and dams with WSO staff; analyzed seismic acceleration time histories when dams are subjected to earthquakes; and participated in a large emergency exercise for a major earthquake.

- Responded to more than 320 field survey requests, 110 mapping requests, 400 Geographic Information System (GIS) requests and 330 right-of-way engineering requests, preventing third-party damage to Metropolitan's pipelines and unauthorized use of its property, while greatly improving Metropolitan's property and property rights database, which is now readily available to staff via the Enterprise GIS and Google Earth.
- Surveyed more than 100 sites to avert contractor damage to pipelines and prevent or document possible unauthorized encroachments onto Metropolitan properties.
- Assessed 450 miles of electrically continuous pipeline in the distribution system.
- Completed installation of a stray current mitigation system at the Sepulveda Feeder/Inglewood Lateral Interconnection and completed 90 percent of the installation of the Middle Feeder North cathodic protection system.

Information Technology

The Information Technology section delivers information technology options, services and solutions in the areas of enterprise and business applications, control systems, mobile/wireless computing, telecommunications, network services and information security.

Water Cybersecurity Workshop

Metropolitan continued to take a leadership role in local and national efforts to enhance cybersecurity capabilities for water utilities.

Metropolitan hosted the Water Sector Coordinating Council Cybersecurity Training Workshop, sponsored by the Department of

Homeland Security, and designed to improve the knowledge, skills and abilities of U.S.-based water utility employees responsible for control systems security. The workshop drew 65 individuals from more than 30 water utilities, law enforcement, national labs and the California Department of Public Health.

Metropolitan's Information Technology Strategic Plan

Metropolitan completed a major update to its Information Technology Strategic Plan. Originally prepared in 2002, the plan provides the framework to guide Metropolitan's investment and deployment of information technology. During FY 2009/10, Metropolitan updated the plan to address Metropolitan's changing needs and emerging new technologies. Metropolitan looks to IT to optimize water system operations, improve asset management, streamline business operations, and manage costs. The goal is to leverage information technology investments to increase long-term reliability, while improving Metropolitan's overall efficiency and effectiveness.

Headquarters Technology Project

Metropolitan completed the replacement of 12-year-old outdated audio/video equipment in the main board and committee rooms located at Metropolitan Union Station headquarters in December 2009.

Fuel Management System

Staff wrapped up deployment of a new fuel management system at the end of December that will allow Metropolitan to more effectively and efficiently manage fuel inventory. Instead of requiring employees to enter data manually, the new system automatically captures information from the vehicle and fuel pump, improving productivity while minimizing data errors.

Server Consolidation Project

Staff continued to reduce the number of network servers in Metropolitan's data center by the deployment of software. Use of this technology has resulted in \$676,000 in net cost savings to date resulting from fewer hardware purchases and energy savings. The projected savings over a five year period is more than \$1.39 million.

IT Network Upgrade

Metropolitan completed upgrades to the grounding equipment at key communication sites by September 2009. The upgrades provide enhanced reliability to Metropolitan's Wide-Area Network (WAN) by protecting communication equipment from lightning damage and other power disruptions. Staff also continued other WAN upgrades to provide alternate communication paths to/from selected Metropolitan sites to improve reliability by eliminating potential single points of failure.

E-Discovery Software and Hardware

Staff began deploying the Electronic Discovery Management project, which will help reduce legal liability, as well as time, effort and costs associated with locating and preserving electronically-stored information needed to address discovery requests.

Business Services

Business Services works collaboratively to support a broad range of Metropolitan's business needs in the areas of contracting services, procurement of goods and nonprofessional services, inventory management, warehousing, business process sustainability and Rideshare.

Spring Green Expo

The annual Spring Green Expo provided an opportunity for employees and the public to attend seminars on a wide variety of environmental topics and view nearly 70 exhibits of environmentally friendly products and services. Highlights of this year's event included opening remarks by Los Angeles Mayor Antonio Villaraigosa and the addition of the Eco-Innovators Showcase that featured sustainable concept projects created by more than 100 students enrolled at Southern California colleges and universities.

Automated Inventory Management System

Staff implemented a warehouse bar-coding system with associated process enhancements to more efficiently and accurately track

inventory and increase efficiencies in repetitive receipt and issuance of material supplies. Utilizing bar-coding technology and mobile handheld devices that communicate through wireless communications, the new system enhances Metropolitan's warehouse operations.

Online Operations and Maintenance Manuals

Business Services staff implemented a new Web-based information system that enables electronic access to maintenance and operations records, allowing them to be developed, updated and edited more rapidly.

Business Process Sustainability

Staff managed a number of successful Metropolitan initiatives to promote Metropolitan's ongoing commitment to sustainability and environmentally friendly practices

Metropolitan continued to produce Our Legacy, a monthly e-newsletter that provides timely information to MWD employees on environmental topics and how they can "green" their office, home and garden.

Metropolitan's Paper Wise program resulted in a 69 percent reduction in paper usage for the year, equating to an \$80,000 cost savings.



The Delta smelt and water supply from the Sacramento-San Joaquin Delta are the subject of litigation pending before the federal U.S. District Court in Fresno.

CHAPTER 6

Legal

The Legal Department represents Metropolitan, its directors, officers, and, on occasion, employees in litigation and administrative proceedings; renders legal advice on a variety of matters; prepares or reviews contracts; and monitors litigation, administrative proceedings, and state and federal legislative proposals that could affect Metropolitan.

Major Events

State Water Project

In *Alameda County Flood Control and Water Conservation District, Zone 7, et al. v. DWR* (the Hyatt-Thermalito litigation), the court issued a tentative ruling on August 21, 2009, in favor of Department of Water Resources and intervenors, including Metropolitan, that it was permissible for DWR to use revenues derived from the sale or use of Hyatt-Thermalito power to offset State Water Project transportation costs, rather than SWP conservation costs. On September 14, 2009, the court affirmed the tentative ruling, and on October 16, 2009 it approved the proposed Statement of Decision. A motion for judgment on the pleadings and dismissal of all remaining causes of action in two related lawsuits was granted on April 21, 2010, and the original case was dismissed in its entirety on May 3, 2010.

Legal participated and coordinated with other water contractors litigating Metropolitan's complaint challenging the 2008 Delta smelt biological opinion (*Consolidated Delta Smelt Cases*) and the 2009 salmon biological opinion (*Consolidated Salmon Cases*). Legal assisted in lawsuits challenging the California Endangered Species Act take regulation and take permit for longfin smelt; and listing of splittail

as endangered or threatened under the federal Endangered Species Act. Legal also provided assistance and analysis on biological opinions regarding ocean harvest of threatened and endangered salmon and other stressors that adversely impact threatened and endangered species in the Bay-Delta.

Staff attorneys negotiated and helped draft legislation for the successful 2010 Delta Water Package. Legal participated in various contractor and agency groups/committees engaged in developing the Bay Delta Conservation Plan and assisted on topics under the ESA and CESA, the Natural Communities Conservation Planning Act, California Environmental Quality Act and National Environmental Policy Act. Legal successfully defended Metropolitan in a federal court lawsuit that challenged the procedures being used in the BDCP.

Legal worked with DWR in finalizing the Environmental Impact Report for the Monterey Amendments to the SWP delivery contracts and coordinated with the state and other defendants concerning new challenges to the EIR filed in June 2010.

After successfully intervening in *Solano County Water Agency v. Department of Water Resources* to support DWR's administration of the State Water Contract's shortage provisions, Legal coordinated litigation activities and defense of SWP among DWR and co-parties. Legal negotiated and drafted water transfer agreements among SWC member buyers, Sacramento Valley sellers and DWR. Metropolitan transferred approximately 100,000 acre-feet of water.

Legal participated in the State Water Contractors Endangered Species Committee strategy discussions and National Academy of Sciences review of Bay-Delta ESA issues.

Colorado River

In the Quantification Settlement Agreement litigation, staff attorneys prepared and responded to various pleadings and participated in the trial in November/December 2009. Legal commented on the court's adverse tentative ruling, attended various pre- and post-trial case management and status conferences and assisted in preparing the appeal and petition for writ of supersedeas to stay the ruling, which was granted by the Third District Court of Appeal. Legal answered

the federal complaint filed by County of Imperial and Imperial County Air Pollution Control District alleging that approval of the QSA violated the Clean Air Act and NEPA, and participated in the early neutral evaluation conference conducted by the federal magistrate.

Legal helped protect Colorado River water supplies through negotiations on rules governing inadvertent overruns and Lake Mead storage, potential use of Colorado River water for new solar power plants, and removing or reducing other conflicting uses such as consumptive use on Yuma Island.

Water Quality

In *Orange County Water District, et al v. Northrop Grumman Corp., et al and Northrop Grumman Corp. v. Metropolitan Water District, et al.*, Legal engaged in written discovery requests, and coordinated analysis of treatment protocols, costs, and historical sources of perchlorate. In *In re Tronox, Inc.*, Metropolitan and other water agencies are pursuing claims in bankruptcy court for potential damages and costs of remediation that may be incurred if the ongoing remediation of contaminants, including perchlorate, is interrupted.

Legal assisted Water Quality staff regarding proposed remediation of chromium VI groundwater contamination adjacent to Colorado River at PG&E's Topock compressor station site.

Legal coordinated preparation of two technical submittals to the Central Valley Regional Water Quality Control Board concerning the Sacramento Regional Sanitation District's discharge permit and monitored activities of regional water quality boards considering adoption of municipal stormwater discharge permits having the potential to impact Metropolitan's operations.

Water Supply

Legal provided advice regarding the 2009 Drought Water Bank and assisted in defense of a CEQA lawsuit filed by environmental groups challenging the water bank.

Staff attorneys participated in stakeholder work groups regarding conjunctive use of groundwater and availability of replenishment

water by Metropolitan, and provided legal analyses of legislative proposals for statewide reductions in urban water use, water recycling, and groundwater management.

Legal analyzed CEQA-related issues associated with seawater desalination and supported activities of the Member Agency Seawater Desalination Program group. Legal assisted in negotiating and drafting agreements approved by the board in September 2009 for funding the pilot project for short-term operation of the Yuma Desalting Plant, which will provide MWD with about 23,000 AF.

Legal assisted in review of the Conservation Credits Program and modifying existing rebate programs and contracts for program changes instituted by the board. Staff advised and drafted contracts with member agencies under the conservation credits program and other local resources incentives programs.

After obtaining Central Basin Municipal Water District's dismissal of its litigation challenging the Water Supply Allocation Plan, Legal reviewed several appeals under, and participated in discussions to revise, the WSAP and provided advice on proposed revisions and implementation for a second year.

Legal analyzed how the 2010/2011 Regional Urban Water Management Plan could be revised consistent with the Urban Water Management Planning Act and other requirements. Staff attorneys provided support for the Integrated Resources Plan update, participated in board workshops and assisted the planning process.

Capital Projects

Legal concluded eminent domain actions to acquire easement rights for construction of the South Reach of the Perris Valley Pipeline Project and negotiated settlement of a potential inverse condemnation claim related to interference with access and water rights on the North Reach of the project. Legal provided support for state and federal regulatory construction and permit activities for the Diemer North Access Project.

Legal negotiated the settlement of the remaining eminent domain actions for the Inland Feeder Project involving property owned by

Campus Crusade for Christ. The settlement ends 12 years of litigation and avoids a costly retrial.

Energy

Legal provided support for the ongoing Federal Energy Regulatory Commission (FERC) relicensing process for hydroelectric facilities at Oroville Dam and assisted in defending a CEQA lawsuit filed by the counties of Butte and Plumas, which challenges DWR's environmental impact report for the new license. Legal helped defend against Butte County's complaint with FERC seeking economic damages for alleged violations of the current license. Staff participated in mandatory settlement conferences held by the federal mediator and provided support in connection with DWR's applications for various regulatory permits and approvals needed for a new license.

Legal provided support for renewable energy projects and renewable energy credit transactions. Staff attorneys assisted with a management plan for the district's short- and long-term power procurement. Legal participated in proceedings at FERC and state administrative agencies involving transmission rate increases, regional transmission operator activities and regulations, and other electricity issues.

Legal provided advice and drafting for the proposed Hoover Power Allocation Act and supporting documents. This legislation resolves disputes among the Lower Basin States over allocation of Hoover power when existing contracts expire in 2017.

Workforce

Legal provided support in negotiations with Metropolitan's four bargaining units and provided legal assistance in interpreting and applying existing MOUs focusing on proper, uniform, and equitable application.

Legal continued implementing the settlement agreement in *Cargill v. Metropolitan*, assisting Human Resources with CalPERS enrollment of individual class members eligible for CalPERS benefits.

Legal assisted with labor/employment law compliance and provided strategic advice, including with respect to employment actions, employee relations, reasonable accommodation and leave issues, Affirmative Action and EEO matters, wage/hour issues, drug/alcohol issues, and potential workforce violence matters.

Staff attorneys defended Metropolitan in several employment lawsuits, handling the cases entirely in-house.

Staff attorneys defended Metropolitan's interests and management rights before the PERB in several matters alleging unfair labor practices pursuant to the Meyers-Milias-Brown Act. Of the 10 PERB matters active during 2009/10, one was decided in Metropolitan's favor, two were dismissed, three were withdrawn by the filing bargaining unit based on Legal's objections, one was settled with no admission or finding of wrongdoing by Metropolitan, one matter was in settlement discussion and one set for trial.

Legal defended Metropolitan in hearing officer appeal requests lodged by bargaining units. The Legal Department processed hearing officer appeals involving 18 grievances and six disciplinary actions during the fiscal year. Hearing officer's decisions are pending on six grievances. Ten hearing officer decisions were rendered, with Metropolitan prevailing in seven. The Legal Department negotiated settlements of six appeals involving nine grievances and three disciplinary actions. Legal reduced the backlog of hearing officer appeal requests by nearly 70 percent.

Communications

Legal continued to provide comprehensive, timely, and accurate reports and advice to the board and management, including reviewing board letters, committee minutes, and attending meetings.

Legal continued to work with Information Technology staff on the electronic discovery management system, which will produce more effective and efficient responses to litigation and Public Records Act requests. Legal is also working with Corporate Resources staff to develop a comprehensive document management process.

Staff attorneys reviewed and analyzed state and federal legislation and provided support on enacted Delta legislation.

Finance

Legal provided advice regarding adoption of rates and charges and provided legal support for bonds and other financing matters.

Staff attorneys assisted outside bond counsel with the issuance of almost \$500 million in water revenue bonds, including Metropolitan's first Build America Bonds and self-liquidity variable rate bonds, and \$45 million Waterworks General Obligation Refunding Bonds. Staff helped in posting Metropolitan's annual financial information filings for outstanding bond issues. For the first time, these filings were posted on the new electronic system established in 2009 by the Municipal Securities Rulemaking Board.

Staff monitored Metropolitan's claim for the payment of corporate notes issued by Lehman Brothers Holdings, Inc. in the Lehman bankruptcy proceedings.

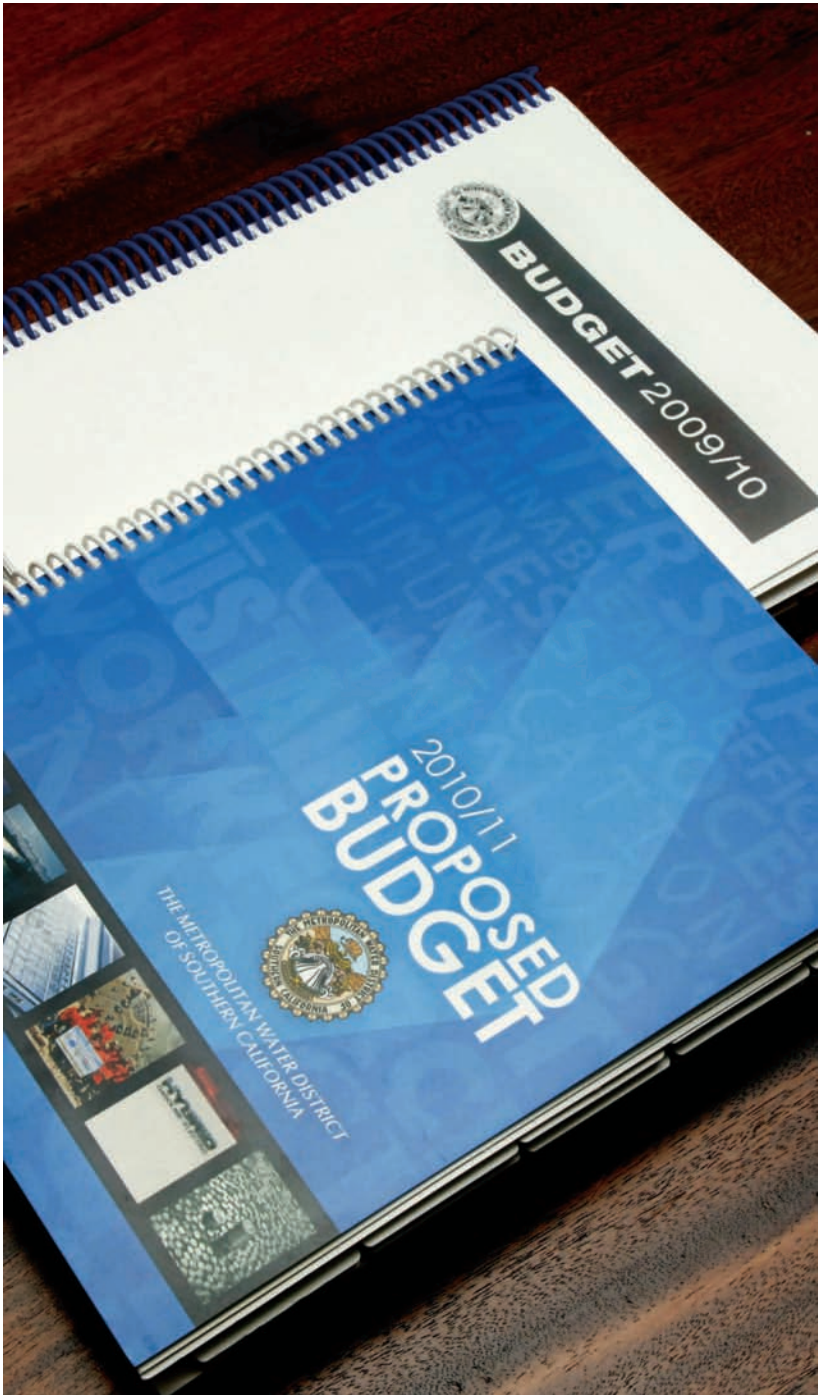
Administration

Legal managed costs by handling several cases in-house, providing assistance for outside counsel, decreasing travel through increased utilization of voice and video teleconferencing and eliminating a number of library subscriptions by identifying other research sources.

Legal provided a continuing education course for attorneys and support staff on Testimony and Technology that covered use of video depositions and other new litigation support technology.

Legal reviewed and approved procurement and professional contracts, streamlined contract review procedures, and trained IT administrators and contract staff on purchasing software.

Legal administered the annual filing of economic interest statements by directors and designated staff with the Fair Political Practices Commission, and responded to Public Records Act requests and document subpoenas.



Metropolitan began conversion to a two-year budget cycle.

Finance

The Office of the Chief Financial Officer (CFO) is responsible for providing strategic, innovative and proactive financial guidance to support the financial policies of Metropolitan's board, management, and staff; efficiently managing Metropolitan's financial resources; working to achieve low, stable water rates and charges by maintaining Metropolitan's strong financial position; and ensuring that adequate financial controls are in place to accurately communicate financial results and protect Metropolitan's assets. Financial information is presented throughout this chapter, as noted, on either the accrual basis or the cash basis of accounting.

Chief Financial Officer

The Office of the CFO's roles and responsibilities include:

- Collecting, investing, safekeeping, and disbursing Metropolitan's funds.
- Developing the budget and managing, refining and supporting Metropolitan's business planning and performance measurement programs.
- Maintaining effective financial controls to safeguard assets.
- Developing and maintaining accounting guidelines and policies for accurate and timely financial reporting and control.
- Issuing debt to efficiently fund Metropolitan's Capital Investment Plan at the lowest possible cost, and managing the debt program by prudently utilizing interest rate swaps and asset liability management techniques.
- Providing innovative and proactive financial analyses, planning, and management services including developing the annual

revenue requirement, cost-of-service study, and recommended water rates and charges.

- Maintaining Metropolitan's official accounting records, cash control, and accounting services related to vendor, payroll, and other payments.
- Managing Metropolitan's Business Continuity Program to ensure critical business processes can be restored in the event of a disaster.
- Accounting for cash receipts and receivables, and determining the availability of funds for investment.
- Providing monitoring and reporting services, preparing the annual tax levy and annexation fee calculations, and administering rates and charges.

FY 2009/10 Major Financial Activities and Accomplishments

Security Sales/Debt Administration

Metropolitan maintained S&P long-term water revenue bond ratings of AAA. Fitch and Moody's ratings were upgraded to AAA and Aa1 respectively, reflecting recalibration of municipal credit ratings by the bond agencies as well as Metropolitan's exceptional credit strength.

During fiscal year 2009/10, Metropolitan addressed ongoing challenges in the capital markets by refunding approximately \$256 million of variable rate water revenue bonds. This eliminated the risk of higher interest rates resulting from any future credit downgrades, and offset rising costs for liquidity. Metropolitan successfully issued \$250 million Build America Bonds in July 2009 to provide funding for the ongoing CIP. These bonds were issued at a true interest cost of 4.19 percent (net of the federal subsidy). The bonds have an average life of about 21 years, with a final maturity in 2039.

Metropolitan successfully repriced 2009 Series A-1 and A-2 SIFMA Index Bonds. The 2009 Series A-2 bonds were reoffered at a rate of SIFMA minus five basis points, an improvement from the original rate of "SIFMA flat" from May 2009. Metropolitan also

renewed liquidity requirements for the 1997 Series B and C Water Revenue Bond issue in September 2009.

Metropolitan received \$40 million of Proposition 50 grant funds to help offset the cost of the Oxidation Retrofit Program.

Treasury Operations

- Continued to meet all liquidity requirements and managed Metropolitan's investment portfolio in compliance with the California Government Code and Metropolitan's investment policy.
- Exceeded the respective rates of return of short and long-term portfolio benchmarks by 1.04 percent and 1.28 percent, translating to approximately \$7.2 million and \$3.8 million of additional earnings, respectively.
- Managed net interest exposure within board-approved parameters.

Accounting Operations

- Provided accurate, timely, and transparent standard financial reports to the board and member agencies.
- Recorded and reported Metropolitan's financial activities in a timely manner, ensuring sufficient financial controls to protect Metropolitan's assets.
- Adhered to accounting cycle time requirements including the processing of bi-weekly payroll, matching and approving invoices for payment, calculating the tax levy, and completing the monthly closing of the cash and the accrual general ledger.
- Continued the documentation and testing of internal controls over financial reporting, using a methodology based on specialized software that provides a structured process to efficiently and effectively document and assess internal controls.
- Completed the FY 2008/09 external audit with a clean opinion.
- Achieved internal financial audit reviews with ratings of generally satisfactory or higher and no major findings.

- Maintained the 90-day past-due amounts on non-DWR accounts receivable to below \$600,000.
- Received the Award of Excellence from the Government Finance Officers Association (GFOA) for FY 2008/09 for financial reporting.
- Funded \$37 million for asset replacement and refurbishment projects from the Replacement and Refurbishment Fund.

Budget and Financial Planning

- Conducted a comprehensive review of the cost of service process with the board and Metropolitan's member agencies; no changes were made to the cost of service methodology.
- Completed the cost-of-service report and prepared the five-year rate plan for the board and member agencies.
- Received the GFOA Award of Excellence for the FY 2009/10 budget.
- Completed the revenue requirements and board-approved 2011 and 2012 rates and charges.

Business Continuity

- Initiated revision of the Risk Assessment as part of the update of the Business Impact Analysis, which will review potential threats to Metropolitan facilities and business processes, in order to prioritize efforts and resources, particularly in information technology and other critical business processes.

Financial Information

Metropolitan operates as a utility enterprise within the state of California. Metropolitan has established separate funds in accordance with regulations, bond covenants, trust arrangements, and board policies. These funds are classified as either "restricted" or "unrestricted." Most restricted funds have minimum cash and investment balance requirements and all are non-discretionary in terms of the use of assets. The board has discretion in establishing the minimum cash and investment balance requirements for the various unrestricted funds and in the use of such assets. The fund groupings maintained are as follows:

- Operating Funds
- Debt Service Funds
- State Contract Funds
- Construction Funds
- Rate Stabilization Funds
- Trust and Other Funds

Revenues

Metropolitan's principal revenue source is water sales, which include all revenues received by Metropolitan from charges for the sale and availability of water, including Metropolitan's water rates, readiness-to-serve charges, a capacity charge, and wheeling/exchange transactions. Other sources of revenue include property taxes, interest income and hydroelectric power sales. Water rates and charges are established by the board of directors on an annual basis and are not subject to regulation by the California Public Utilities Commission or any other governing body.

The rate structure implemented on January 1, 2003 unbundles Metropolitan's previous water rate into separate rates and charges (a power rate, a treatment surcharge, a system access rate, a water stewardship rate, and a capacity charge) to reflect the different services provided by Metropolitan. This rate structure also includes a two-

tiered block pricing structure for water supply. Effective January 1, 2010, the full service Tier 1 rate (including all rate elements), which is based on recovering the cost of maintaining a reliable amount of supply, was \$484 per acre-foot for untreated water. Likewise, the full service Tier 2 rate, which is set at Metropolitan's cost of developing additional supply to encourage efficient use of local resources, was \$594 per acre-foot. The surcharge for water treatment was set at \$217 per acre-foot. A complete list of current water rates and charges is available in Table 7-1.

Table 7-1 ⁽¹⁾
WATER SALES RATE STRUCTURE-CURRENT
(Dollars per acre-foot-unless otherwise specified)

	Calendar Year ⁽²⁾							
	2010	2009	2008	2007	2006	2005	2004	2003
Tier 1 Supply Rate	\$ 101	\$ 109	\$ 73	\$ 73	\$ 73	\$ 73	\$ 73	\$ 73
Delta Supply Surcharge	69	--	--	--	--	--	--	--
Tier 2 Supply Rate	280	250	171	169	169	154	154	154
Water Supply Surcharge	--	25	--	--	--	--	--	141
System Access Rate	154	143	143	143	152	152	163	141
Water Stewardship Rate	41	25	25	25	25	25	30	23
System Power Rate	119	110	110	90	81	81	60	89
Full Service Untreated:								
Tier 1	484	412	351	331	331	331	326	326
Tier 2	594	528	449	427	427	412	407	407
Replenishment Water Rate:								
Untreated	366	294	258	238	238	238	233	233
Treated	558	436	390	360	335	325	300	290
Interim Agricultural Water Program								
Untreated	416	322	261	241	241	241	236	236
Treated	615	465	394	364	339	329	304	294
Treatment Surcharge	217	167	157	147	122	112	92	82
Full Service Treated:								
Tier 1	701	579	508	478	453	443	418	408
Tier 2	811	695	606	574	549	524	499	489
Capacity Charge (\$ per cubic foot second)	7,200	6,800	6,800	6,800	6,800	6,800	6,100	6,100
Readiness-to-Serve Charge (\$Millions)	114	92	82	80	80	80	80	80

(1) Effective January 2003 a new rate structure was implemented.

(2) Rates are set on a calendar year basis.

In accordance with revenue bond covenants, operating revenues are allocated to the Water Revenue Fund upon receipt and are transferred to various funds for payments or deposits in the following order of priority:

- Operations and Maintenance Fund to pay operations and maintenance expenditures;
- Revenue Bond Interest and Principal Funds, as required;
- Revenue Bond Reserve Fund, if required;
- Excess Earnings Funds, as needed, in accordance with tax and non-arbitrage certificates;
- Payments required for any obligation of Metropolitan that is junior to the lien on the Revenue Bonds; and
- Revenue Remainder Fund, if any funds remain in the Water Revenue Fund after the above transfers.

Metropolitan is empowered under the Metropolitan Water District Act to levy and collect taxes on all taxable property within its boundaries for the purpose of carrying on its operations and paying obligations. Property taxes are levied annually by the board to pay Metropolitan's general obligation bond debt service and a portion of Metropolitan's obligations under its State Water Project contract.

Metropolitan's total cash receipts in fiscal year 2009/10 totaled \$1.314 billion. Sources of cash receipts include collections from water sales, property taxes, interest earnings, hydroelectric power sales, readiness-to-serve (RTS) charge, capacity charge, wheeling transactions, and miscellaneous collections, such as rents. Total receipts were \$29 million more than the prior fiscal year. This was due primarily to \$57 million of higher other receipts, which included \$27 million more of wheeling and exchange sales, a \$15 million board-approved increase in the RTS charge, and \$14 million more of miscellaneous receipts primarily due to Proposition 13 collections. This was partially offset by \$13 million of lower interest on investments due to lower interest rates, and \$8 million of lower tax revenue.

Table 7-2 lists receipts by source and the change in receipts from the prior year.

TABLE 7-2
RECEIPTS BY SOURCE
Cash Basis
(Dollars in millions)

	Year Ended June 30,		
	2010	Change	2009
Water sales	\$ 957	\$ (4)	\$ 961
Property Taxes and Annexation Receipts	97	(8)	105
Readiness-To-Serve, Connection Maintenance and other charges ⁽¹⁾	222	57	165
Interest on Investments ⁽²⁾	19	(13)	32
Hydroelectric Power Sales	19	(3)	22
Total	\$ 1,314	\$ 29	\$ 1,285

⁽¹⁾ Includes receipts from readiness-to-serve, connection maintenance charge, capacity charge, wheeling/exchange transactions, and miscellaneous receipts

⁽²⁾ Excludes construction and trust funds.

Expenses

Metropolitan continued its efforts to manage finances, control costs, enhance productivity, and maintain conservation programs during the fiscal year. Major components of Metropolitan operations and maintenance costs include labor, chemicals, utilities, outside services, materials, and operating equipment.

Metropolitan is one of 29 contractors to the State Water Project. Under the contract, Metropolitan is obligated to pay the state Department of Water Resources its portion of the costs for construction of the system as well as the minimum operations, maintenance, power and replacement costs of the project regardless of the amount of water actually delivered. Variable power charges are based on actual deliveries of State Project water.

In addition, Metropolitan has an obligation to pay its share of the capital and operating costs of certain off-aqueduct power facilities

regardless of the amount of water delivered; adjustments to such charges are made in subsequent periods based on actual water deliveries.

Metropolitan also buys power to pump Colorado River water into its service area. The power is secured by Metropolitan under federal energy contracts and from purchases of supplemental energy from a variety of sources as available. In addition, Metropolitan has entered into, and is negotiating, a number of agreements with entities along the Colorado River that have higher priority rights to water on the Colorado River. These agreements give Metropolitan firm rights to water that it otherwise would not have.

Future construction requirements to expand facilities, construct new facilities, and provide enhanced water treatment capability are being funded by a variety of financing mechanisms. The CIP is being financed through a combination of long- and short-term debt along with R&R funding from operating revenues. General obligation bond debt service is funded from ad valorem property taxes. Revenue bond and commercial paper debt service is funded from water sales revenues.

Fiscal year 2009/10 cash expenditures totaled \$1.334 billion. Cash is expended for ongoing operations, debt service, state water contract (SWC) capital costs, water supply programs, and R&R construction. Total expenditures were \$92 million higher than the prior year, mostly due to \$45 million higher expenditures on operating costs, \$21 million higher debt service costs, and \$20 million higher costs on the State Water Project.

Table 7-3 lists expenditures by function and the changes from the prior year.

TABLE 7-3
CASH EXPENDITURES
(Dollars in millions)

	Year Ended June 30,		
	2010	Change	2009
O&M/Operating Expenses ⁽¹⁾	\$ 825	\$ 45	\$ 780
Debt service	292	21	271
SWC capital costs ⁽²⁾	165	20	145
Water supply programs	12	4	8
R&R construction	35	5	30
Other, net	5	(3)	8
Total	\$ 1,334	\$ 92	\$1,242

⁽¹⁾ Includes operating equipment.

⁽²⁾ Net of credits.

Budget Process

Metropolitan combines elements of program budgeting and performance reporting in its budget system. These elements provide for funding, analysis, review, and control. The process begins one year in advance, starting in July when each group identifies major maintenance projects and capital projects. These requests are submitted to the Engineering Section in July, giving staff adequate time to plan project design and construction schedules, and to allow the Water System Operations Group to plan for system shutdowns. Each department and group prepares operating budgets from August to November based on established directives from top management. Each program is analyzed and reviewed as to resources required and the extent to which the program is consistent with the priorities and strategies of the General Manager's Business Plan for the fiscal year. All recommended programs are then incorporated into the overall budget. The proposed budget documents include an updated 5-year forecast of expenditures and projected rates and charges. These forecasts incorporate projected costs associated with a Bay-Delta conveyance solution and ecosystem restoration to help member agencies and the general public understand long-term cost trends and potential future water rate impacts.

After an unprecedented review process, including revisions as a result of public comment and four board workshops, the board approved the fiscal year 2010/11 budget at its June meeting. The board also directed staff to initiate conversion of Metropolitan's annual budget process to a biennial budget. Staff developed a proposed 2011/12 fiscal year budget and presented it during the board workshops. Action on that budget was expected in August 2010.

Budgetary control is maintained through monthly variance reports, which compare budget estimates with actual receipts and expenditures for board and management information purposes, and form the basis for corrective actions. This is one of several control measures used to ensure efficient operations and attainment of Metropolitan's goals and objectives within the limits of allocated resources. All major expenditure categories are controlled via the board-approved annual budget and authorized appropriations during the year. Receipts and expenditures are summarized monthly by account type for cash basis reporting purposes.

Treasury Operations and Cash Management

Metropolitan has adopted an investment policy which specifies the types and amounts of investments that may be made. In accordance with Section 53600 et seq. of the Government Code of the State of California, the authority to invest public funds is expressly delegated to the board of directors for subsequent re-delegation to the Treasurer.

Investments by the Treasurer are limited to those instruments specified in Metropolitan's board-approved Statement of Investment Policy. The policy sets out, in order of importance, that investments will be made based on safety, liquidity and return.

As an investment standard, any investment shall be made as if it is one which would be purchased by a prudent person, not for speculation. The Treasurer may invest in any security authorized for investment under state law as follows:

- Time Deposits
- Repurchase Agreements
- Reverse Repurchase Agreements

- Local Agency Investment Fund Deposits
- Negotiable Certificates of Deposit
- Bankers' Acceptances
- Commercial Paper
- U.S. Government and Agencies
- Securities Related to the State Water Project
- Medium-Term Notes
- Mortgage Obligations and Asset-Backed Securities

The overall treasury activities during the year, including bond construction and trust funds, involved an average investment portfolio of \$1,126.3 million with cash basis investment earnings of \$29.5 million. The fair value of the investment portfolio on June 30, 2010 was \$1.095 billion.

The Metropolitan Water District has received the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association (GFOA) for its 2008/09 Comprehensive Annual Financial Report. The Certificate of Achievement is the highest form of recognition in the area of governmental accounting and financial reporting. Metropolitan has received the award for each of the past 16 fiscal years. A Certificate of Achievement is valid for a period of one year only.

In addition, the GFOA presented its award for Distinguished Budget Presentation to Metropolitan for the district's annual budget for the fiscal year 2009/10. The GFOA judged Metropolitan's budget document to be proficient in several categories including policy documentation, financial planning and organization. Metropolitan has received the award from the GFOA for seven consecutive years and 17 times over the last 20 years.

TABLE 7-4
SUMMARY OF CHANGES IN NET ASSETS - ACCRUAL BASIS
(Dollars in millions)

	Fiscal Year Ended June 30,									
	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
Water sales	\$ 1,044.3	\$ 1,032.1	\$ 991.3	\$ 963.2	\$ 864.2	\$ 810.2	\$ 914.2	\$ 844.3	\$ 871.4	\$ 806.7
Readiness-to-serve charges	103.0	87.0	82.1	80.0	80.0	80.0	80.0	80.0	80.0	80.0
Power recoveries	18.3	17.4	23.1	26.1	26.8	20.9	23.0	20.6	15.3	21.2
Operating revenues	1,165.6	1,136.5	1,096.5	1,069.3	971.0	911.1	1,017.2	944.9	966.7	907.9
Taxes, net	98.1	105.6	98.7	96.4	102.7	91.8	96.7	94.0	101.8	105.1
Investment income	40.6	30.0	65.9	55.3	32.5	47.2	10.3	42.3	45.8	61.7
Other, net	6.4	6.0	2.9	10.1	4.6	7.2	4.4	3.0	6.0	7.6
Nonoperating revenues	145.1	141.6	167.5	161.8	139.8	146.2	111.4	139.3	153.6	174.4
Total revenues	1,310.7	1,278.1	1,264.0	1,231.1	1,110.8	1,057.3	1,128.6	1,084.2	1,120.3	1,082.3
Power and water costs	(433.7)	(402.1)	(350.3)	(335.4)	(366.2)	(278.5)	(244.9)	(304.6)	(377.9)	(221.6)
Operations and maintenance	(395.6)	(440.0)	(405.0)	(368.4)	(370.4)	(321.2)	(310.6)	(288.0)	(262.5)	(236.4)
Member agency distribution	-	-	-	-	-	-	(36.3)	-	(33.4)	-
Depreciation and amortization	(246.4)	(226.1)	(229.0)	(214.4)	(205.3)	(210.5)	(201.7)	(203.6)	(177.4)	(199.4)
Operating expenses	(1,075.7)	(1,068.2)	(984.3)	(918.2)	(941.9)	(810.2)	(793.5)	(796.2)	(851.2)	(657.4)
Bond interest	(133.3)	(101.3)	(120.0)	(118.9)	(110.0)	(100.3)	(100.9)	(107.1)	(117.7)	(136.8)
Interest and adjustments on OAPF ⁽¹⁾	(3.4)	(3.8)	(4.1)	(4.5)	(4.9)	(5.4)	(6.9)	(5.9)	(12.2)	(5.8)
Nonoperating expenses	(136.7)	(105.1)	(124.1)	(123.4)	(114.9)	(105.7)	(107.8)	(113.0)	(129.9)	(142.6)
Total expenses	(1,212.4)	(1,173.3)	(1,108.4)	(1,041.6)	(1,056.8)	(915.9)	(901.3)	(909.2)	(981.1)	(800.0)
Contributed capital	4.6	66.1	15.6	14.5	15.2	7.7	0.1	4.5	-	-
Change in net assets	\$ 102.9	\$ 170.9	\$ 171.2	\$ 204.0	\$ 69.2	\$ 149.1	\$ 227.4	\$ 179.5	\$ 139.2	\$ 282.3

⁽¹⁾ Off-Aqueduct Power Facilities

TABLE 7-5
TEN MEMBER AGENCIES WITH
LARGEST ASSESSED VALUATIONS
YEAR ENDED JUNE 30, 2010
(Dollars in Billions)

Member Agency	Assessed Valuation	Percent of Total
Los Angeles	\$406.8	19.54
San Diego County Water Authority	375.3	18.03
MWD of Orange County	348.2	16.73
West Basin MWD	139.9	6.72
Central Basin MWD	111.5	5.36
Inland Empire Utilities Agency	82.2	3.95
Calleguas MWD	80.3	3.86
Western MWD	76.9	3.69
Upper San Gabriel Valley MWD	73.2	3.52
Eastern MWD	57.9	2.78
	\$1,752.2	84.18
Total Gross Assessed Valuation (All 26 Member Agencies)	\$2,081.8	

TABLE 7-6
TEN-YEAR SUMMARY OF ASSESSED VALUATIONS
AND PROPERTY TAX RATES
(Dollars in Billions)

Fiscal Year Ended June 30,	Gross Assessed Valuation ⁽¹⁾	Homeowner's Exemption	Net Assessed Valuation	Secured Property Percentage Tax Rate
2010	\$ 2,081.9	\$ 17.2	\$ 2,064.7	0.0043
2009	2,120.9	17.2	2,103.7	0.0043
2008	2,015.4	17.1	1,998.3	0.0045
2007	1,839.5	16.9	1,822.6	0.0047
2006	1,642.2	17.0	1,625.2	0.0052
2005	1,478.0	16.8	1,461.2	0.0058
2004	1,359.5	16.6	1,342.9	0.0061
2003	1,257.3	16.3	1,241.0	0.0067
2002	1,169.3	16.2	1,153.1	0.0077
2001	1,081.5	16.0	1,065.5	0.0088

⁽¹⁾ Gross assessed valuations (before deduction of Homeowner's and Business Inventory Exemptions), as of August each year, of all secured and unsecured property within Metropolitan's service area, as certified by the County Auditor-Controllers for the respective counties.

TABLE 7-7
TEN-YEAR SUMMARY OF PROPERTY TAX LEVIES AND COLLECTIONS - CASH BASIS
(Dollars in Thousands)

Fiscal Year Ended June 30,	Total Tax Levy	Tax Collections			Outstanding Delinquent Taxes ⁽¹⁾	Percent of Current Taxes Collected to Total Tax Levy	Percent of Total Tax Collections to Total Tax Levy	Percent of Delinquent Taxes to Total Tax Levy
		Current	Delinquent	Total				
2010	\$ 107,892	\$ 82,373	\$ 15,083	\$ 97,456	\$ 16,987	76.3	90.3	15.7
2009	109,776	91,632	12,951	104,583	15,083	83.5	95.3	13.7
2008	107,059	87,670	11,224	98,894	12,951	81.9	92.4	12.1
2007	103,913	81,315	13,647	94,962	11,224	78.3	91.4	10.8
2006	104,531	91,042	4,988	96,030	13,647	87.1	91.9	13.1
2005	100,114	88,201	8,761	96,962	4,988	88.1	96.9	5.0
2004	99,307	89,178	3,838	93,016	8,761	89.8	93.7	8.8
2003	100,239	91,420	7,906	99,326	3,838	91.2	99.1	3.8
2002	106,497	96,566	7,114	103,680	7,906	90.7	97.4	7.4
2001	111,265	102,516	6,102	108,618	7,114	92.1	97.6	6.4

(1) Delinquent taxes shown are net of the "Allowance for Uncollectibles" - determined by historical trends of collections and payments.

TABLE 7-8
TEN-YEAR SUMMARY OF NET OPERATING INCOME AND
REVENUE BOND DEBT SERVICE COVERAGE ⁽¹⁾

Cash Basis - (Dollars in Millions)

	Fiscal Year Ended June 30,									
	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
							(Restated)	(Restated)	(Restated)	(Restated)
Receipts from Water Sales	\$ 957	\$ 961	\$ 948.0	\$ 878.0	\$ 814.1	\$ 813.0	\$ 839.0	\$ 870.0	\$ 844.0	\$ 809.0
Additional Receipt Sources	189	146	134.0	126.0	123.9	119.0	104.0	89.0	83.0	84.0
Total Receipts	1,146	1,107	1,082.0	1,004.0	938.0	932.0	943.0	959.0	927.0	893.0
Operating Expenditures ⁽²⁾	(825)	(780)	(792.0)	(648.0)	(693.0)	(603.0)	(604.0)	(530.0)	(609.0)	(522.0)
Net Operating Receipts	321	327	290.0	356.0	245.0	329.0	339.0	429.0	318.0	371.0
Hydroelectric Power Receipts & Other ⁽²⁾	52	41	48.0	52.0	54.0	40.0	36.0	26.0	20.0	28.0
Interest on Investments ⁽³⁾	19	32	47.0	33.0	26.0	27.0	23.0	42.0	39.0	41.0
Adjusted Net Operating Receipts	392	400	385.0	441.0	325.0	396.0	398.0	497.0	377.0	440.0
Prior Lien Bonds Debt Service	-	-	-	-	-	-	-	-	-	-
Adjusted Net Operating Receipts after Prior Liens	392	400	385.0	441.0	325.0	396.0	398.0	497.0	377.0	440.0
Junior Lien Bonds and Additional Bonds Debt Service	-	-	-	-	-	-	-	-	-	-
Bonds and Additional Bonds Debt Service	(244)	(223)	(219.0)	(200.0)	(176.0)	(157.0)	(159.0)	(151.0)	(154.0)	(178.0)
Subordinate Revenue Obligations	(1)	(1)	(1.0)	(1.0)	(1.0)	(1.00)	-	-	0.0	(3.0)
Funds Available from Operations	<u>\$ 147</u>	<u>\$ 176</u>	<u>\$ 165.0</u>	<u>\$ 240.0</u>	<u>\$ 148.0</u>	<u>\$ 238.0</u>	<u>\$ 239.0</u>	<u>\$ 346.0</u>	<u>\$ 223.0</u>	<u>\$ 259.0</u>
Ratios										
Bonds and Additional Bonds Debt Service Coverage	1.61	1.79	1.76	2.21	1.85	2.52	2.50	3.29	2.45	2.47
Debt Service Coverage on all Obligations	1.60	1.78	1.75	2.19	1.84	2.51	2.50	3.29	2.45	2.43

⁽¹⁾ Cash basis financial information is presented using the flow of funds criteria as described in Metropolitan's revenue bond covenants. The flow of funds criteria is used, among other things, to determine the debt service coverage ratios.

⁽²⁾ Fiscal Years 2000 - 2001 restated to include O&M water transfer costs. Fiscal Years 2001 - 2004 restated to include other receipts.

⁽³⁾ Excludes interest applicable to Bond Construction accounts, Excess Earning account(s), Other Trust accounts, and the Deferred Compensation Trust account.

Minor differences are due to rounding.

TABLE 7-9
TEN LARGEST WATER CUSTOMERS
Year Ended June 30, 2010
 Accrual Basis (Dollars in Millions)

<u>Agency</u>	<u>Water Sales</u>	<u>Percent of Total</u>	<u>Water Sales in Acre-Feet</u>	<u>Percent of Total</u>
San Diego CWA	223.4	22.1	492,046	27.6
City of Los Angeles	140.7	13.9	258,680	14.5
MWD of Orange County	138.4	13.7	217,442	12.2
West Basin MWD	82.2	8.1	121,315	6.8
Calleguas MWD	68.8	6.8	102,175	5.7
Eastern MWD	54.9	5.4	88,392	5.0
Western MWD of Riverside	48.3	4.8	79,065	4.4
Central Basin MWD	38.9	3.8	63,443	3.6
Three Valleys MWD	34.4	3.4	58,385	3.3
Inland Empire Utilities Agency	<u>29.3</u>	<u>2.9</u>	<u>73,737</u>	<u>4.1</u>
Total	\$859.3	84.9	1,554,680	87.2
Total Revenue	\$1,010.9	Total Acre-Feet	1,781,398	



A meeting of the Metropolitan Board of Directors.

Administrative

Administrative staff provides needed services for Metropolitan directors, oversees workforce administration and development, manages the district's real estate holdings and promotes reinvestment in the region's business community, thereby enhancing Metropolitan's core mission of importing, treating, managing and distributing water supplies.

Office of the Board of Directors

The Office of the Board of Directors coordinates and supports a variety of administrative roles for the board of directors and related committees, Metropolitan staff and the general public.

Highlights for Fiscal Year 2009/10

Board of Directors Retreat—MWD 2060

The Office of the Board continued to support board leadership in the planning and implementation of a three-day board retreat, "MWD 2060: Shaping a Sustainable Future." The retreat allowed board members to participate in a lively dialogue with a number of experts, as they considered how Southern California will change and adapt to meet future demand in terms of water supplies, energy, agriculture, workforce development and communications. Directors also learned how Australia has met challenges similar to those faced by Southern California.

After extensive discussion, directors agreed to establish a Blue Ribbon Committee comprised of experts who will provide insight into the global, natural, economic and demographic changes that Metropolitan's service area will encounter in the future.

Access DC

Metropolitan board members participated in "Southern California on the Hill," sponsored by the Los Angeles Area Chamber of Commerce, which brought together a bipartisan delegation of more than 250 Southern California business and civic leaders focused on job creation and economic recovery. Metropolitan co-hosted a congressional briefing with the Los Angeles and San Francisco chambers of commerce and labor organizations focusing on the Sacramento San Joaquin Delta.

General Administration

In supporting the business of the board, the Office of the Board of Directors prepared monthly board and management reports; promptly responded to directors' questions and requests; provided regularly scheduled oral reports on various Metropolitan programs, and enhanced communication with an updated, secured board of directors Web site.

Chairman's Bike Ride at Diamond Valley Lake

The Chairman of the Board's annual bike ride around Diamond Valley Lake drew approximately 200 participants, including directors, employees and community members.

Inspection Trip Program

Inspection trips provide a first-hand look at Colorado River Aqueduct facilities, the Bay-Delta/State Water Project, and Diamond Valley Lake, and have long been integral to Metropolitan's educational and outreach efforts. The trips offer an up-close experience of the systems that provide drinking water to Metropolitan's service area and educate participants about Metropolitan operations, programs and objectives. They also have been instrumental in educating local, state and federal elected officials, staff and the news media on complex planning and policy matters related to water. Equipped with a factual understanding about Metropolitan and current water issues, participants can become grassroots community advocates for water-related issues vital to Southern California.

Metropolitan conducted 54 inspection trips during 2009/10, introducing new excursions focusing on local water resources, infrastructure and sustainability, in addition to ongoing visits to

reservoirs, aqueducts, pumping plants, Delta levees, fish facilities and agricultural operations.

Staff worked closely with various business associations from San Diego to San Francisco to provide opportunities for key business leaders to participate on inspection trips. Metropolitan and its member agencies also launched an “Inspection Trip Alumni Program” that provides briefings and updates on key water issues to participants in past inspection trips.

Real Property Development and Management

Reorganization and Revenue

Fiscal year 2009/10 became the hallmark year of transition for Real Property Development and Management, as the group began implementing planned revenue enhancements through appropriate development at various Metropolitan properties, compatible with Metropolitan’s mission. To respond more effectively and achieve the strengthened emphasis on income generation, the group was reorganized to optimize real property revenue through best practices, protect water system right-of-ways, and manage the Union Station Headquarters Building and Diamond Valley Lake Visitor Center in the most effective manner possible.

Staff also drafted a game plan with strategies to enhance revenue generation utilizing Metropolitan’s real property assets. The plan includes short-term and long-term activities focused on the headquarters building, telecommunications, and right-of-way leases. It also deals with revenue-producing recreation at Diamond Valley Lake; commercial development on Arrow Highway property in La Verne; and, solar facility development at DVL and MWD acreage in the Palo Verde Valley.

A Request for Qualifications dealing with commercial development of the Arrow Highway property resulted in two qualified respondents. The Real Property and Asset Committee will consider the next steps for this property in July 2010. An RFQ was also issued for solar facility development on DVL properties, and Metropolitan has invited five qualified solar developers to submit proposals by August 2010. In

addition, staff has drafted an RFP for solar facility development on Palo Verde land that will be issued in July 2010.

Diamond Valley Lake

To enhance recreation experiences for the public and increase revenue from Metropolitan's DVL properties, substantial steps were initiated to seek out developers for a recreational vehicle park and a long-term marina operator.

Additional Revenues

- Received \$33,000 in revenue through the resurgence of private boat launchings since the boat ramp reopened in December 2009, with more than 6,000 safe private boat launches in the new facility's first six months of operation.
- Finalized the lease of DVL Visitor Center classroom space to the Western Science Center for the Western Center Academy, a high-tech charter middle school, which will generate \$4,000 in revenue per month.



Boat ramp improvements under way just prior to reopening in late 2009.

Property Management

Staff from both the Right-of-Way and Revenue Optimization units addressed varied requests from outside parties seeking to use Metropolitan's properties. These requests comprise a range of uses and timeframes, from single-issue entry permits for other utilities to perform maintenance and construct new infrastructure, to agricultural uses and ecological studies, to television and film production. Managed by Metropolitan's real estate representatives, these requests entail numerous complex legal and review steps to ensure protection of Metropolitan's real property assets including right-of-ways, water distribution and treatment facilities, and associated property rights.

Highlights for Fiscal Year 2009/10

- Processed more than 100 property transactions including leases, licenses and entry permits in less than 45 days on average, despite the loss of two real estate representatives due to retirements. Processing ranged from a few days for simple permits, to a few months for complex leases involving multiple internal and external parties.
- Issued multiple easements and entry permits to member agencies and other utilities seeking to maintain or improve their infrastructure, among them: Three Valleys Municipal Water District, Inland Empire Utilities Agency, Eastern Municipal Water District, AT&T, Southern California Edison, Riverside County, Caltrans, the cities of Temecula and Placentia, and the California Department of Water Resources.
- Continued to conduct frequent all-staff review of pending transactions, reducing the need for second-level reviews, cutting the frequency of Property Review Council meetings, and halving the associated staff time and costs.
- Awarded Building of the Year (Government) for the second time from the Building Operators and Managers Association.

Right-of-Way

The Right-of-Way Unit actively prepared documentation and analyzed properties that may be needed for future water conveyance facilities.

Key Activities

- Conducted property research, planning, and valuation studies for the Bay-Delta initiative, including participation in workshops associated with the proposed conveyance system, as well as property acquisition for restoration of ecosystems.
- Finalized 20 quitclaim deeds as construction was completed on the North Reach of the San Diego 6 Pipeline.
- Fulfilled appraisal and acquisition requirements for 15 easements, including six for the Perris Valley Pipeline Project.

Facility Services

Facilities Services staff was kept busy maintaining and improving the working environment at the Union Station Headquarters building and the DVL Visitor Center.

Highlights for the Year

- Awarded “Energy Star” certification for the Headquarters Building from the U.S. Environmental Protection Agency, for effective energy practices including the use of energy saving equipment and products.
- Received Silver LEED (Leadership in Energy and Environmental Design) certification from the U.S. Green Building Council for the headquarters building Silver LEED Certification, acknowledging management consistent with or exceeding environmental standards and practices.
- Received a \$9,900 rebate check from the Los Angeles Department of Water and Power (DWP) for the installation of energy saving equipment, systems and procedures.

Human Resources

Human Resources continued working with management, the board and labor to ensure Metropolitan's workforce delivers outstanding business performance, continually improves productivity and decreases costs.

Metropolitan expanded its efforts to ensure it is well-prepared for the future with a high performance workplace, excellent leadership practices, cost-effective processes and talented and engaged employees who deliver value for Metropolitan stakeholders. An integrated talent management framework established a foundation for proactive and consistent management of workforce talent from pre-hire through separation.

High Performance Workplace

Voices 2009 Survey

Employee feedback from almost two-thirds of the workforce on the Voices 2009 Survey assessed how effectively Metropolitan fostered a high performance work climate. A video e-mail from the General Manager shared the results with all employees, who gave favorable ratings of 50 percent or higher for 39 of the 45 topics covered. Metropolitan's overall 63 percent positive score compares favorably with many well known public- and private-sector organizations. Detailed results were also provided to groups and sections to target improvements that address their key issues identified in the survey.

Management Forum

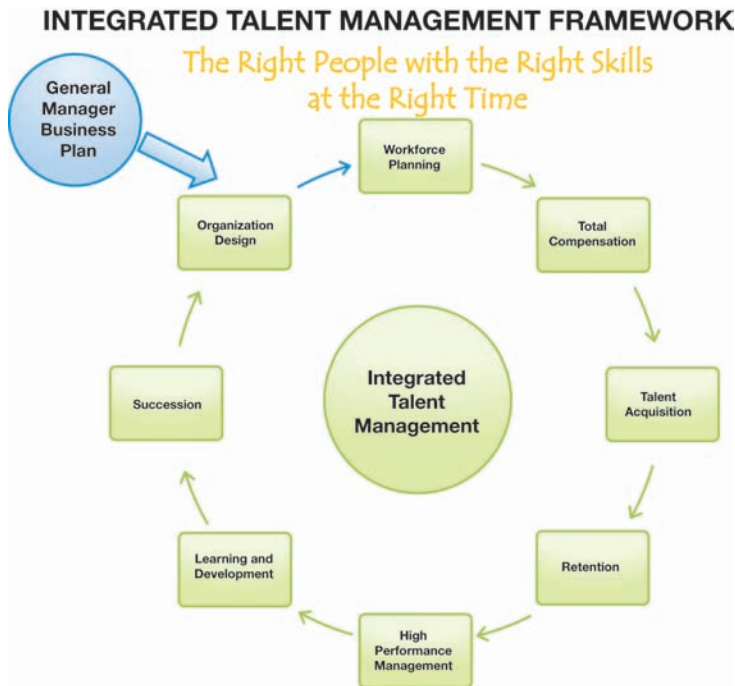
Metropolitan conducted its first all-manager Management Forum to set expectations and align priorities across the management team. Presentations by executive and senior management covered topics including Metropolitan business challenges, financial responsibility, management excellence, and effective people management. The findings and action strategies from the Voices 2009 Survey were discussed and additional presentations updated managers on ethics, potential legal landmines, employee relations guidelines, upcoming HR automation tools and conducting effective performance conversations. The entire management team provided feedback on performance management, training needs and improvement priorities and heard a board director's perspective on management challenges.

Labor Relations

Metropolitan continued use of interest-based bargaining with all four bargaining units. This speeded negotiations and is credited with transforming a historically contentious process into a mutual, respectful negotiation. Even with a disagreement on the final details of a proposed tentative agreement, Metropolitan’s board, labor and management continued working together to develop an alternative recommendation acceptable to all parties. The bargaining units re-entered the negotiation process in June 2010 and agreed to extend current labor agreements through December 2010.

Talent Management

The board’s newly chartered Organization and Personnel Committee called for deploying integrated workforce planning and talent management to manage a workforce where almost half of experienced staff is eligible to retire. Building on various group initiatives, Metropolitan expanded its efforts to consistently deploy an organizational talent management strategy that ensures timely recruitment, expands career development, and builds succession pipelines that place the right people with the right skills in the right position at the right time.



Human Resources Excellence

Human Resources restructured the HR organization, streamlining and automating HR processes, while also improving working relationships with both management and employees. Staff reduced grievances and rapidly addressed employee concerns while working to strengthen the credibility, leadership and effectiveness of the HR organization. This was accomplished while budgeted expenditures were cut by 8.3 percent.

Total Compensation

A newly-created Total Compensation Section resulted from the merger of Benefits, Classification and Compensation with Human Resources Information Systems to optimize efficiency and customer service.

Classification/Compensation

Staff continued to perform job analyses and market assessments to satisfy MOU requirements and finalize the AFSCME classification and compensation study. The study resolved a range of issues, including the long-standing System Operator classifications at the Eagle Rock Control Center, enabling Metropolitan to use up-to-date job descriptions when posting job openings for each of Metropolitan's four bargaining units (i.e., the American Federation of State, County and Municipal Employees, the Management and Professional Employees Association, the Supervisor's Association, and the Association of Confidential Employees.)

Human Resources Information Systems

Human Resources maintained personnel data and record tracking systems, and provided HR data reporting, while completing the implementation of PeopleSoft 8.9, and improving non-employee tracking and employee relations modules. Staff streamlined the Employee Data Change Notices process and conducted testing and vendor coordination on the new MyLearning system to ensure compliance with regulatory requirements. Human Resources also implemented the Cargill settlement, performing due diligence and extensive research to determine claimant benefits eligibility.

Benefits

Metropolitan administered a host of health, voluntary retirement and deferred compensation plans, leaves, and other benefit and recognition programs for employees and retirees. Changes in the Family Medical Leave Act and COBRA regulations required revisions to internal policies and procedures. Meanwhile, staff renegotiated the 401k and 457 administration contracts to reduce participant fees.

Metropolitan hosted nine Pre-Retirement and Estate Planning workshops for 234 participants. Eleven financial education workshops drew 203 participants. The Leave Donation Program processed 21 Leave Donation requests which resulted in employees transferring 5,422 leave hours to colleagues who had exhausted their sick leave. Metropolitan recognized 327 employees whose service to the district ranged from five to 40 years. Metropolitan also held fall and spring Service Awards Luncheons that drew nearly 120 employees with 20 or more years of service.

Staffing

Although budget constraints limited hiring to filling critical vacancies, Metropolitan maintained participation in regional and Hire-a-Vet job fairs. New recruitment tools have streamlined application processing. More than 60 percent of all recruitments were completed within 60 working days, and 100 percent in fewer than 90 working days. Metropolitan also facilitated the recruitment for the executive director's position for the State and Federal Contractors Water Agency in Sacramento.

Human Resources screened, scheduled and supported efforts by Water System Operations to fill 17 positions for the Pre-Apprentice Program. A new automated tracking system enabled more than 1,400 applicants for the Pre-Apprentice Program to apply using Web-based applications within 12 hours of posting. Metropolitan provided test preparation workshops to nearly 500 applicants and almost 900 applicants sat for the Pre-Apprentice Testing session to ensure candidates could meet basic foundational skill requirements of the job.



Nearly 900 applicants were tested for Metropolitan's apprenticeship program.

Training and Organizational Development

An expanded e-learning curriculum of 200 online courses increased learning opportunities for staff while reducing time away from work. Employees also invested their own time in management development courses to assess their interest in becoming managers, attending workshops on Moving into Management and Preparing for Job Interviews. Onsite educational fairs by local universities and colleges offered staff educational opportunities. More than 100 employees took

advantage of the Tuition Reimbursement Program. An expanded Internship Program was introduced to attract students to opportunities at Metropolitan.

The New Manager Orientation set expectations and provided tools for new managers. Managers also took advantage of opportunities for personalized coaching to improve their management skills in managing performance, developing strategy, addressing difficult personnel issues and improving team effectiveness. The interest-based bargaining communication tool, Success Signals, was deployed at the CRG Leadership Forum and WSO Etiwanda Manager Meetings. Staff also developed a comprehensive career development curriculum for aspiring managers.

Equal Employment Opportunity

Staff finalized and implemented Metropolitan's Affirmative Action Plan for Covered Veterans and Persons with Disabilities. Metropolitan also completed investigations of EEO complaints and worked closely with the staffing unit to ensure effective recruitment diversity outreach. The EEO office achieved more than 91 percent compliance in ensuring Metropolitan managers completed state-required training on preventing workplace harassment. EEO also reported on workforce demographics to management and the board.

Employee Relations

Employee Relations played an integral role in ongoing contract negotiations. Joint efforts with management and the Legal Department, led to a continued drop in the number of grievances and unfair labor practice charges, while also maintaining 100 percent timely resolutions/responses to grievances. Employee Relations also assisted on the update of the AFSCME job descriptions to complete a classification/compensation commitment under the Memorandum of Understanding, and worked with the Talent Management unit to successfully deliver training to managers on reasonable suspicion of drug and alcohol use. Employee Relations staff made several speaking appearances before managers in other groups (e.g., CRG, WSO), and also issued the third edition of the "Manager's Guide to Employee Relations."

Performance Management

Staff worked with the Human Resources Advisory Council on prototypes for improved performance management to improve employee alignment with Metropolitan business objectives, clarify performance expectations, streamline administration and improve tools for addressing and improving poor performance.

Workers' Compensation

Staff continued comprehensive management of Workers' Compensation claims, and held loss rates at 50 percent below that of other public agency employers, with costs per claim almost 20 percent below those of other public agency employers.

Risk Management

The risk management unit completed more than 742 incident reports involving Metropolitan property damage, liability claims filed against Metropolitan, workplace injuries, regulatory visits and inspections, chemical spills and releases and industrial injuries. Staff also conducted 655 risk assessments for contracts including professional service agreements, construction contracts, entry permits, special events and film permits. Metropolitan obtained all excess liability and specialty insurance coverage at \$73,000 below budget.

Business Outreach

Metropolitan's Business Outreach Program promoted economic development in Southern California by doing business with a large number of small, regional, and disabled veteran-owned firms in Metropolitan's service area.

The program's investment in Southern California companies and communities injected approximately \$90 million into the region's economy this fiscal year, amounting to 85 percent of Metropolitan dollars. Metropolitan is also responsible for creating more than 14,000 direct and indirect jobs through contracts with local businesses.

Highlights for Fiscal Year 2009/10

- Planned and implemented the inaugural day-long Global Water & Technology Forum, which showcased the latest innovations in water and clean technology from all over the world, with presentations, exhibitors, panel discussions and consumer “how to” sessions, attracting more than 900 attendees and a global Webcast audience of more than 200,000 people, including viewers in Australia, China, South Korea, Canada and others.
- Exceeded Metropolitan’s overall 18 percent goal by helping direct 30 to 35 percent of contract dollars toward small business and disabled veteran business enterprises.



Working models and prototypes in robotics at Metropolitan's Global Water and Technology Forum.

- Certified more than 2,000 small business enterprises through the NetConnect electronic procurement system using a centralized, Web-based portal, while also launching a new online Contract Compliance System that will monitor approximately

\$600 million in construction contracts and professional service agreements.

- Coordinated and held two “Connect 2 Met” collaboration conferences, partnering with Metropolitan board members to bring more than 400 constituents and members of the small business community to a half-day seminar on public agency contracting.
- Provided more than 300 business owners, panelists, speakers, and exhibitors with an opportunity to participate in Metropolitan’s “Reflections On Leadership” Women’s Business Conference.
- Hosted the fourth annual multi-agency California Construction Expo in August 2009 in Los Angeles, providing details about Southern California public contracting opportunities to more than 2,000 contractors, designers, and construction professionals as Metropolitan staff who operated several exhibits and answered questions.
- Testified before a State Senate Select Committee on Procurement, chaired by State Senator Curren Price (D-Los Angeles), on best practices in regards to certifying small, minority, veteran and woman-owned businesses in California.
- Continued to reach more than 30,000 potential vendors and strategic partners with “Tap Into Opportunities,” a weekly outreach newsletter listing Southern California job announcements, events and contracting opportunities.



External Affairs

The External Affairs Group focuses on legislative services; community and customer services; educational programs; media, communications and publication services. The group is headed by the Group Manager and the Deputy General Manager of External Affairs.

External Affairs works with state and federal lawmakers to support and protect the operational interests of Metropolitan and its member public agencies. The group disseminates information about the board's adopted policies, and Metropolitan's operations, policies and programs. External Affairs also provides direct and clear communication regarding emerging challenges related to water quality, supply, reliability and delivery, and also offers responsive service to member agencies and other key audiences.

A broad spectrum of programs provides ongoing contact with member agencies; local, state and federal officials; the news media; the business community; environmental and community organizations and the general public. External Affairs staff produces and distributes numerous publications, brochures and videos, and also manages Metropolitan's Web sites and a wide-ranging K-12 water resource education program.

Following is a summary of key responsibilities and programs of the respective sections within External Affairs.

Legislative Services

The job of protecting and promoting the interests of Metropolitan and its member agencies is a key responsibility of the Legislative Affairs offices in Sacramento, Washington, D.C., and Southern California, which deal with executive, legislative and regulatory branches of state and federal governments, as well as local government entities.

At the state level, Metropolitan embarked on an aggressive legislative agenda that included working with partners across the state to enact a historic, comprehensive water policy reform package for the Delta. Of the eight bills Metropolitan sponsored, six were signed into law. Two bills that established a statewide water use efficiency program and eliminated an outdated reporting exemption for in-Delta water diversions were folded into the broader water package. Three other bills provided tools for maximizing available water supplies: One allowed communities to create assessment districts allowing homeowners to finance permanent water use efficiency projects on their property, another clarified water conservation policies for common interest developments, and a third required that inefficient indoor plumbing fixtures be retrofitted by specified dates. The sixth bill signed into law expanded local control over salinity discharges from self-regenerating water softeners. The two remaining bills (regarding Delta fish predation and quagga mussel liability) were reintroduced by their authors and were progressing through the Legislature at the end of this fiscal year.

To educate the public on the state's water crises and the comprehensive water package, staff developed presentations and educational materials, including Delta Update Alerts. Metropolitan created "Resolving a Crisis," a dedicated Web page for the Delta, allowing up-to-the-minute access to proposed legislation, testimony, press statements and news articles. In addition, management and staff provided numerous presentations on the water package and held community leader briefings with state legislators, reaching leaders in business, the community and local government.

At the federal level, staff worked on legislation regarding the handling of chemicals used to treat drinking water, helped advance several bills in support of U.S. Environmental Protection Agency's WaterSense program, and introduced legislation to authorize a new 50-year contract for the continued use of hydropower generated at Hoover Dam.

Staff also pursued federal appropriations that would fund efforts to control invasive quagga mussels; stabilize priority levees in the Delta; expedite operation of a desalination plant in Yuma, Arizona; advance planning and environmental documentation for the Bay Delta Conservation Plan; support regional water conservation planning in Metropolitan's service area; finance key Water Research Foundation studies; and support the Title XVI infrastructure funding program.

Board members and staff participated in various congressional briefings, field hearings, and legislative meetings to educate members of Congress on California's water crisis, the value of the state's comprehensive water legislation package and the importance of the Bay Delta Conservation Plan as the central component of a Delta solution. Staff also conducted inspection trips for congressional and administration staff, and arranged for Chairman Timothy F. Brick and other directors to join more than 200 Los Angeles-area business leaders in Washington, D.C., where the chairman delivered a briefing on "Solutions to California's Water Crisis" to members of Congress and attendees from across California, while a delegation of Metropolitan board members held a variety of legislative meetings to provide information about California's water shortage and ongoing efforts to fix the Delta.

Conservation and Community Services

The Conservation and Community Services Section helps residents, businesses and member agencies on a variety of issues impacting Metropolitan's service territory. These include conservation, water quality, environmental issues, and general public outreach. Staff also meets regularly with member agency education coordinators.

Conservation Outreach

Metropolitan sponsored conservation and Delta-related educational advertising campaigns throughout Southern California during fiscal year 2009/10. From August through October, the "Move the Needle" campaign continued from the prior fiscal year, appearing on broadcast television, cable networks, radio stations and Web sites. Radio ads were in English, Spanish, Chinese (Mandarin and Cantonese), Korean and Vietnamese. Online and social media included Google search advertising, a YouTube channel devoted to water conservation and a Facebook fan page.

After a series of winter storms in 2010, Metropolitan ran radio traffic ads in February and March to inform listeners that despite the rain, California's water problems were not over.

A new educational campaign called "50 Percent Less" focused on water supply shortages caused by pumping restrictions in the Sacramento-San Joaquin Delta, the need to modernize the water delivery system and the ongoing need to practice long-term conservation. Metropolitan also created two new television ads and updated an existing "Reservoir"

television ad with new information. The ads began airing in May, 2010, with television, radio and online ads continuing into June.

Metropolitan's bewaterwise.com® Web site continued playing a key role in outreach efforts, attracting nearly 600,000 unique visitors in 2009/10, a 21 percent increase from the previous year. A Spanish-language version of the site was launched in September.

External Affairs conducted bilingual focus groups and online surveys to determine awareness and attitudes toward the state's water supply issues and continued calls for conservation. These findings were used to help develop and refine Metropolitan's outreach messages in the "50 Percent Less" campaign.

Community Programs

The Community Partnering Program in 2009/10 provided sponsorships for education and other water-related programs for non-profit organizations, community organizations, educational institutions, member agencies, public agencies and professional associations. Established in 1999, the CPP coordinates tracks and evaluates Metropolitan's sponsorships of these programs and projects through a centralized system. Additionally, the CPP helps foster new partnerships and enhances established relationships throughout Metropolitan's service area.

Community Programs also operates the California Friendly® Landscape Training Program. Working with its member agencies, Metropolitan conducted classes in California Friendly landscaping techniques for homeowners and professional landscapers, training more than 4,000 participants in Metropolitan's service area.

Education Programs

During the year, Education Programs launched its new Web site for K-12 students, teachers and families. The site includes a collection of water education curricula and supplemental resources, student activities and active Web links to increase the awareness and understanding of water in Southern California.

Metropolitan's newest curriculum for middle schools, titled "Conservation Connection: Water and Energy in Southern California,"

was approved by the California Department of Education and will appear on its Web page. The curriculum is scheduled to be rolled out in fall 2010. Metropolitan introduced or updated teachers about Metropolitan's educational programs, using in-service training and workshops that covered a wide variety of K-12 curriculum and programs. Through these initiatives Metropolitan provided classroom curricula, outreach programs, classroom presentations and field trips to almost 35,000 K-12 students.

Staff completed Solar Cup 2010 at Lake Skinner in Temecula on May 14-16. Thirty-six teams from Southern California high schools competed in the eighth-annual event with more than 700 students participating. The seven-month program included schools from three member agencies participating for the first time from Compton, San Diego and Torrance. As in years past, the event attracted coverage from roughly a dozen print and electronic media outlets, including live broadcasts from the Lake Skinner site. In addition to immersing themselves in engineering, math and communication concepts, students created water conservation-focused public service announcements.

The 17th year of the Diamond Valley Lake Education Program conducted numerous field trips engaging nearly 2,000 grade 4-7 students in the all-day program. This year staff also conducted in-class presentations for students on the science of water and the DVL reservoir. Additionally, during the year, staff provided ongoing activities for nearly 9,000 grades 2-5 students visiting the DVL Visitor Center in collaboration with the Western Science Center outreach program.

Student artwork from 24 participating member and retail agencies was featured in the 2010 "Water is Life" calendar and was exhibited on a tour at participating member agencies throughout Metropolitan's service area.

In addition to a number of K-12 classroom presentations, staff participated in a variety of water education outreach events, conducting hands-on activities and staffing educational booths at conferences and water/environmental festivals throughout the region.

Media Services

The Media Services Section coordinates the communication of Metropolitan's messages, programs, information and achievements. The Press Office prepares and distributes news releases, conducts briefings, maintains media contacts, assists with opinion pieces and letters to the editor, and develops videos. The Publications team produces print, video and online materials that support Metropolitan's external and internal communications needs, while Web Services manages Metropolitan's various Web sites to provide a coordinated presentation to Metropolitan's audiences and customers.

Press Office

The Press Office ensures that the media and the public are informed about Metropolitan's programs and issues as well as water-related subjects, working with reporters and editors from television, newspapers, radio, magazines, wire services, Internet news sites, as well as trade and specialty publications. Metropolitan news is disseminated through electronic press releases, letters to editors, opinion pieces, speeches, videos and special events produced by staff.

The Press Office managed numerous media inquiries, including those related to water-supply and environmental issues and restrictions in the Sacramento-San Joaquin Delta, along with approval of new water rates, state water allocations and the historic Bay-Delta legislative water package. Staff coordinated on-camera, radio and print interviews, managed the writing and placement of opinion pieces, and prepared and distributed press releases, media advisories and other related materials.

The Press Office also ensured that reporters and editors were apprised of Metropolitan positions on year-long legislative developments through press releases, and statements issued by Chairman Timothy F. Brick and General Manager Jeffrey Kightlinger. Opinion articles under the bylines of the chairman, general manager and board members appeared in various newspapers throughout the state. The topics included water reliability, Delta issues and the need for continuing conservation.

During the year, the Press Office issued releases about various topics, including the second year of mandatory conservation, shutdowns, and

various programs (such as Solar Cup and the Global Water & Technology Forum).

Staff met and coordinated with member agency Public Information Officers on various water-saving messages and water-use efficiency initiatives.

Metropolitan received coverage in the region's major newspapers and in other print and electronic outlets throughout the region, the state and the nation. With staff's assistance, newspapers throughout the state published opinion articles authored and co-written by the general manager, the chairman and other directors, dealing with the drought and the statewide water situation.

Publications

Metropolitan produced *Your Water*, an electronic newsletter that covers important water quality and supply issues, special notices, and member agency news. It also produced *People Interactive*, a multi-media online newspaper devoted to employee news and profiles, as well as the Annual Report. Other brochures and publications included the annual Water Quality Report, and the annual report to the California Legislature on Achievements in Conservation, Recycling and Reuse, an updated Member Agency Directory, and materials providing an overview of the district, various programs and Diamond Valley Lake. External Affairs, working with other Metropolitan staff, developed a video update on the General Manager's business plan, and launched "Waterworks," short online videos about Metropolitan projects.

Web Services

The Web Services program develops and manages Metropolitan's multiple Internet and intranet sites, along with Web sites for the board of directors and member agencies.

Web Services created a watering index and made it available to be posted on external Web sites, and also created Web pages for the Global Water Technology Forum, Blue Ribbon Committee, Spring Green Expo and the Board of Directors' retreat. Web Services also implemented the Pre-Apprentice Program Web interface, and helped refine the posting of the board packet on the Web. It also added information to the Delta Web pages, including a library of links to newspaper and journal articles.

Customer Service

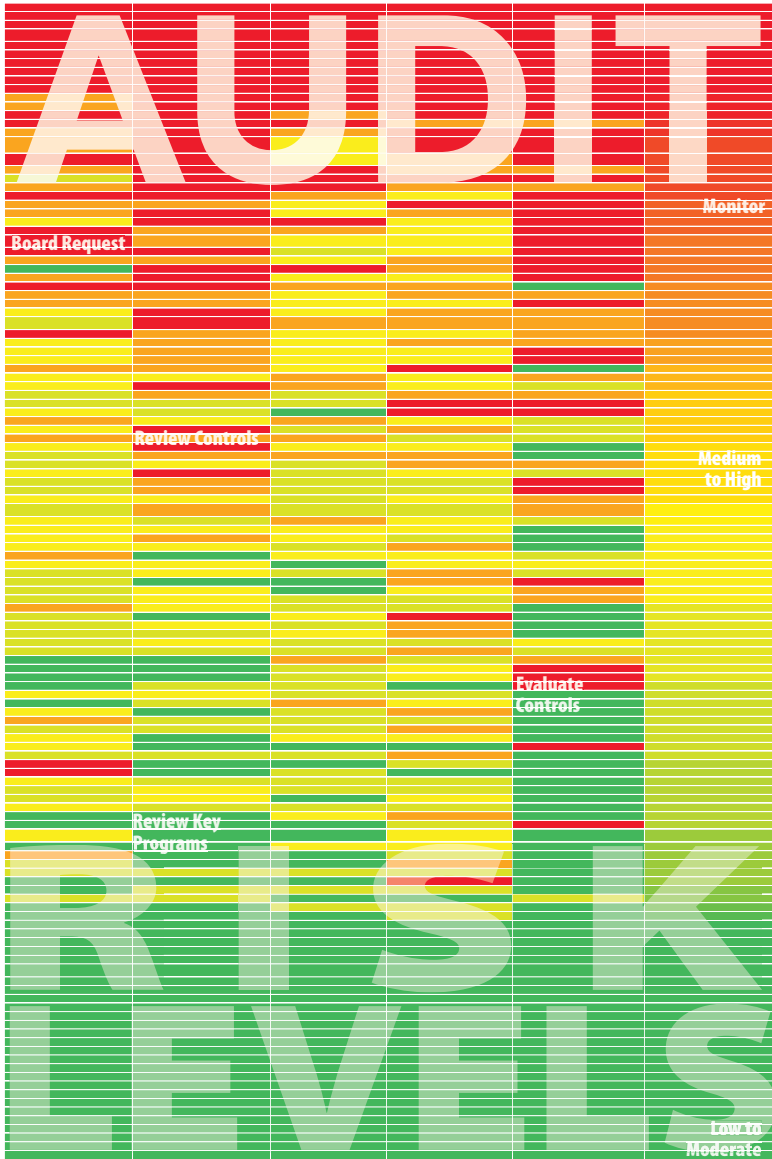
The Customer Service unit coordinates specialized services to member agencies, businesses, and the public and also conducts customer satisfaction surveys. Survey results (ratings and written comments) are shared with management and the staff responsible for information and follow-up action.

Staff assisted member agencies, businesses and the public with requests for general information, speakers, and other services. Staff also coordinated management's regular meetings with member agency managers. Staff also assisted the Real Property Group with property management issues, and conducted and coordinated inspection trips and special events at Diamond Valley Lake, including daily operation of the Visitor Center.

During capital improvement and maintenance projects, staff oversaw and conducted outreach to residents, local governments and businesses affected by work at these facilities, including the Allen-McColloch Pipeline, Diamond Valley Lake, Cross Connection Project, West Valley/Calabasas Feeder, Etiwanda Pipeline, Rialto Feeder, Box Springs Feeder, Garvey Reservoir, Perris Valley Pipeline, Middle Cross Feeder, and the Diemer, Weymouth and Mills water treatment plants.



Metropolitan continues its legislative efforts on federal priorities in Washington, D.C.



Internal Audit

The Office of the General Auditor provides independent, objective assurance and consulting services designed to add value and improve Metropolitan's operations. The General Auditor's reporting structure to the Audit and Ethics Committee establishes this independence. The Internal Audit professionals carry out the responsibilities of the Auditor's Office with an understanding of Metropolitan's business culture, systems and processes. The internal auditors also conduct their review in accordance with the Institute of Internal Auditors' *International Standards for the Professional Practice of Internal Auditing (IIA International Standards)*. The Auditor's Office adds value to Metropolitan by proactively and systematically assessing whether Metropolitan's network of risk management, internal control, and governance processes, as designed and represented by management, has been successfully implementing the following actions:

- Achieving the organization's programs, plans and objectives, and appropriately identifying, managing and monitoring critical risks and exposures relating to governance, operations and information systems.
- Ensuring that significant legislative or regulatory issues impacting the organization are recognized and addressed appropriately and that employees' actions are in compliance with policies, standards, procedures and applicable laws and regulations.
- Verifying that resources are acquired economically, used efficiently and protected adequately, and that significant financial, managerial and operating information is accurate, reliable and timely.
- Fostering quality and continuous improvement in the organization's control processes.

Major Accomplishments

The 2009/10 Audit Plan emerged from a thorough assessment of risks coupled with input from key stakeholders, including board members, management and staff. During fiscal year 2009/10, Internal Audit performed the following major activities:

- Successfully carried out the 2009/10 Audit Plan and finished 40 audits; responded flexibly to board and management requests by performing three special requests; monitored two higher risk areas and participated in 13 Information Technology implementation projects. Results are summarized below:

List of Completed Reviews	Number of Reports
Financial/Contractual Audits:	40
Mills Plant Ozone Contactors 3 and 4 and Ozone System Reliability Upgrade	
Semitropic Water Banking and Exchange Program and Arvin-Edison Water Management Program	
Legal Contracts and Settlements	
Imperial Irrigation District/Metropolitan Water District Water Conservation Program	
External Affairs Activities – Community Partnering Program	
Facilities Management – Mills Plant	
Sustainability of Water Supply – Consulting Agreements on Bay-Delta Issues	
Engineering Consulting Agreements Less Than \$250,000	
Consulting Contract with Johnson Controls, Inc.	
Consulting Contract with FluidIQs	
Inland Feeder Project Salvage Equipment Program	
Remote Site Activities – Desert and Western Regions	
Remote Site Activities – Eastern Region	
Employee Training and Development Program	
Consulting Agreements – Reams Asset Management Company, LLC; Seb Asset Management America, Inc.;	
MuniFinancial; Public Resources Advisory Group	
Business Outreach	
Sacramento Valley Water Transfer Program	
Workers' Compensation Program Management	
External Affairs Activities – California Friendly Landscape Training Program	
Information Technology Consulting Agreements with CBH Consultants, Inc. and Total Resource Management, Inc.	

List of Completed Reviews	Number of Reports
Consulting Agreements – Jacobs Associates and P&D Consultants, Inc.	
Infrastructure Reliability – Weymouth Plant Improvements Program	
Infrastructure Reliability – Conveyance and Distribution System Rehabilitation Program	
Transit Reimbursement Program	
Tax Revenue	
Consulting Agreements on Hayfield Extraction Project	
Weymouth Water Treatment Plant Coagulant Tank Farm Modifications	
District Housing	
Payroll	
Colorado River Aqueduct Reliability Program	
Skinner Plant Solar Power Generation Facility	
Budgeting Process	
Assist External Auditing firm (2)	
Revenue Bonds (6)	
Special Requests:	3
Water Resource Management Conservation Program	
Human Resources Audit Update	
Colorado River Water Users Association	
Monitoring:	15
Inland Feeder Project	
Quarterly Consulting Contracts	
Systems Development Life Cycles (SDLC) (13)	

- Devoted significant effort to communicating issues and developing recommendations related to four “Less Than Satisfactory” audit opinions (Imperial Irrigation District/Metropolitan Water District Water Conservation Program, Sustainability of Water Supply-Consulting Agreements on Bay-Delta Issues, Information Technology Consulting Agreements with CBH Consultants, Inc. and Total Resource Management, Inc., Human Resources Follow-up audit).
- Reassessed the Audit Plan quarterly to determine whether (1) the plan met the needs and requests of the board and management, (2) the plan was focused on areas of most concern or highest risks, and (3) adequate progress was being made against the plan. Adjusted resources accordingly.

Quality Assurance Activities

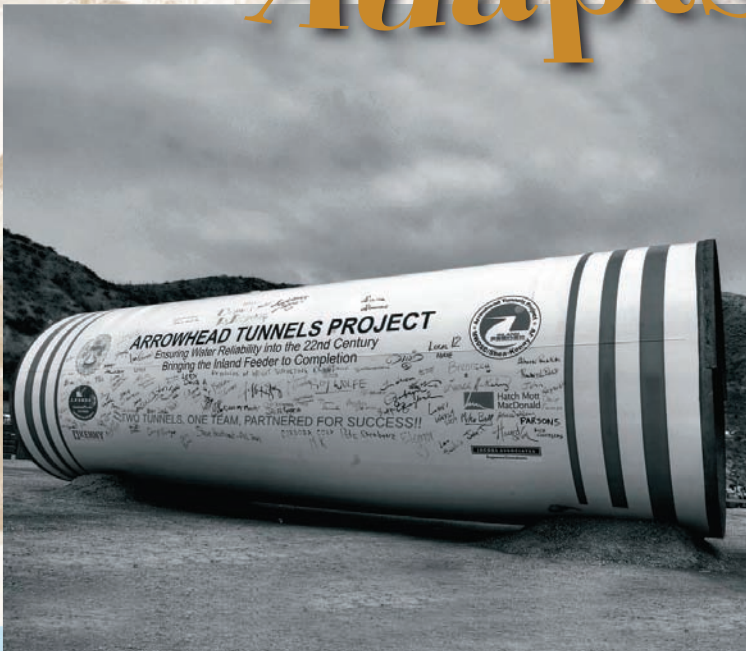
The Office of the General Auditor adheres to the Institute of Internal Auditors' international standards, which require that internal auditors commit to improving their internal processes and methods and maintain a quality program. Accordingly, the Audit Department maintains a documented Quality Assurance & Improvement Program (QA&IP) that encompasses ongoing and periodic internal quality assessments, internal monitoring, and external quality assessments that are conducted every five years. Related fiscal year 2009/10 activities included the following:

- Requested client feedback surveys for each completed audit to ensure that the department met expectations and that the auditor demonstrated courtesy, professionalism, a constructive and positive approach, and provided a value-added service.
- Completed an internal quality self-assessment of conformance with industry standards related to governance and auditing; evaluated governance practices (such as Internal Audit's reporting relationship to the board); assessed planning, field work, and reporting routines; reviewed a sample of audit work papers; and evaluated staff training and development activities.
- Identified training opportunities for audit staff to enhance competencies in risk assessment, internal audit and broaden their knowledge of Metropolitan operations.

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In Challenging Times Metropolitan

Adapts



Photography by MWD employee Tom Bleicher

November 1, 1960: MWD agrees to become largest subscriber of State Water Project

March 18, 2000: Diamond Valley Lake opens

October 1, 2009: Completion of Inland Feeder

If you have ethical concerns about work at Metropolitan, you can call The Network, an independent hotline that accepts anonymous calls at (888) 228-7794. Or contact Metropolitan's Ethics Office by phone (213) 217-5521, or by fax (213) 217-7809.



Ethics

Metropolitan's Ethics Office works collaboratively with Metropolitan's Board of Directors, General Manager, General Counsel and General Auditor to promote the agency's core values: integrity, stewardship, diversity, leadership, open communication and teamwork. The Ethics Office enforces ethics-related laws and policies; educates directors, officers, and employees about what is expected of them in terms of ethical behavior and compliance, and works with the board of directors and with other departments to enhance Metropolitan's ethical culture.

Highlights of the 2009/10 fiscal year include the revision of the Board of Directors Ethics Manual, the creation of an online sexual harassment prevention course for board members, ethics seminars for new managers and inspection trip leaders, plus the development of online and face-to-face training modules that dealt with conflicts of interest, outside employment, and how to keep office gossip under control.

The Ethics Office, as it is currently organized, came into being in fall 2003 with the hiring of the current Ethics Officer, and now includes, in addition, two full-time professionals and a full-time support person.

Enforcement

The Ethics Office utilizes a multi-layer review and enforcement process. Individuals express their concerns in writing directly to the Ethics Office or through the off-site, independent hotline. The Ethics Officer conducts initial investigations, resolving matters informally, if possible. Complicated matters or those involving members of the Board of Directors are reviewed by an Intake Committee. Each credible allegation involving a possible violation of ethics laws or policies can trigger a more formal process, under the direction of the

Inquiry and Review Committee, when informal resolution is not appropriate or possible. The Inquiry and Review Committee is comprised of executive management for staff matters, and composed of directors for matters relating to board members. Working in consultation with the Ethics Officer and General Counsel, the committee's findings can mean disciplinary action for employees, officers, and directors who are found to have violated MWD ethics policies. Individuals are encouraged to bring questions to the Ethics Office to prevent inadvertent violations of policy.

In the 2009/10 fiscal year, Metropolitan's Ethics Office logged 87 matters, including 34 concerns that required investigation and 53 queries that required research and interpretation of policies. Policy issues, gifts, misuse of funds, conflicts of interest, and outside employment issues topped the list of issues that required attention this year.

Education

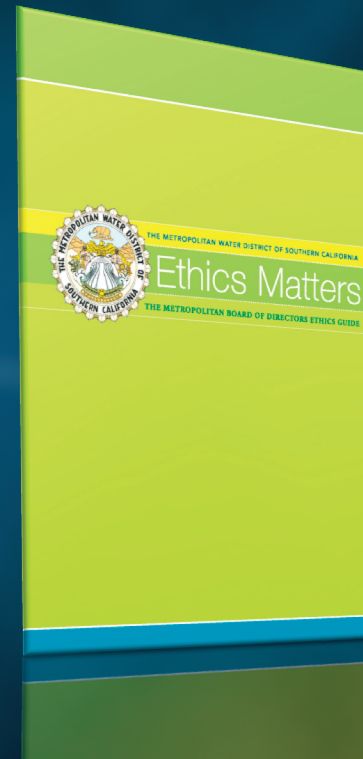
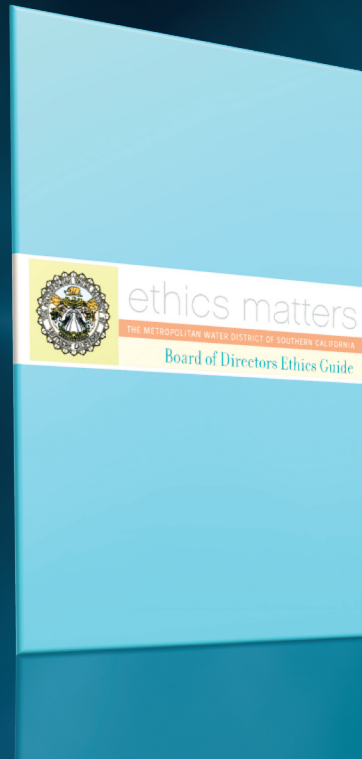
Every two years, Metropolitan provides AB 1234 state-mandated ethics training to all directors and officers. The Ethics Office offers Metropolitan officials face-to-face training, a self-study CD series and up-to-date reference books on state ethics law for their review. Board members are also required to complete an online course in harassment and discrimination prevention. This course, developed collaboratively with the Ethics Office, Legal Department, and the vendor that provides online training for managers in this area, is, believed to be the only course in the state designed specifically for a board of directors.

The Ethics Educator participated in new employee and new manager orientations and held seminars throughout the district to address the special concerns of various work groups.

Enhancement

The Ethics Officer continued to work with the General Manager and the General Counsel to create or amend policies and/or the ethics sections of Metropolitan's Administrative Code to better encourage actions and decisions based on Metropolitan's core values.

The Ethics Office regularly updated its Web pages and distributed posters each month throughout Metropolitan to provide a continuing and welcoming resource for all employees.



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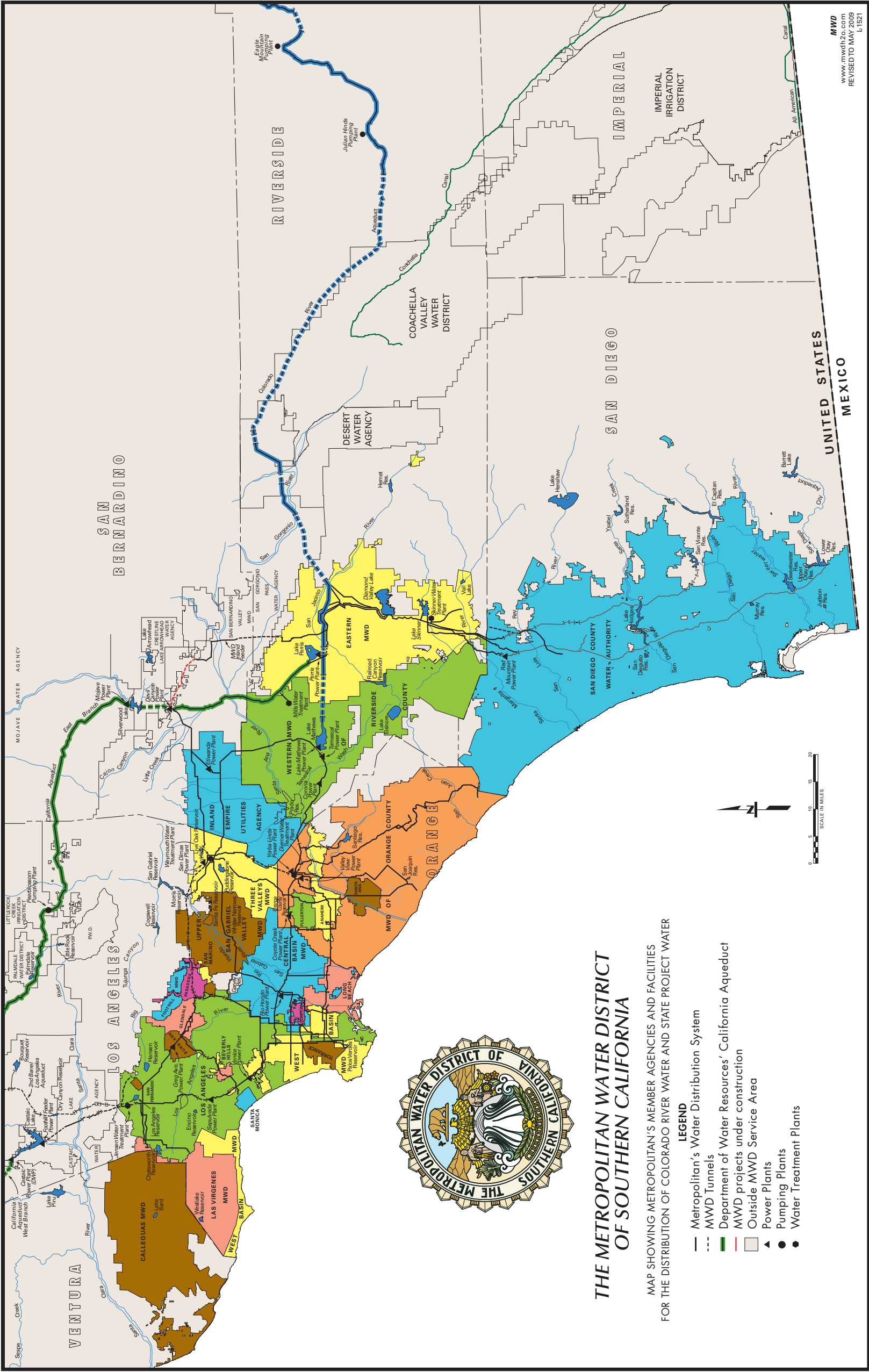
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THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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

LEGEND

Metropolitan's Water Distribution System

MWD Tunnels

Department of Water Resources' California Aqueduct

MWD projects under construction

Outside MWD Service Area

Power Plants

Pumping Plants

Water Treatment Plants