Presentation of Relevant Documents in the Administrative Record

Overview Of Administrative Record Presentation

1. MWD Rate Setting and Cost of Service Methodology
2. MWD Rates and Charges at Issue
3. MWD Reasonably Allocates State Water Project Costs to MWD's Transportation Rates
4. This Practice of Allocating SWP Transportation Costs to Transportation Rates Pre-dates the Unbundling
5. MWD Reasonably Allocates the Water Stewardship Rate to Its Transportation Rates
6. Raftelis Review Confirms Reasonableness of MWD's Cost of Service and Rate Setting Methodology
7. San Diego-added Documents in the Administrative Record Do Not Support -- Indeed, Refute -- San Diego's Position
8. MWD Supported Its Determination Under the Wheeling Statute with Written Findings
9. The Exchange Agreement Does Not Undermine MWD's Rates
10. San Diego's Dry Year Peaking Claim Has No Support in the Administrative Record

1. MWD Rate Setting and Cost of Service Methodology

The 2001 Unbundling and Rate-Setting In Subsequent Years

Prior to January 2003, MWD charged a bundled, inclusive single rate for conveyance and supply

July 1998 MWD begins strategic process to review management of assets, revenues and costs

Dec. 14, 1999 Strategic Plan Policy Principles adopted following public hearings and interviews with Directors, Member Agencies, legislators, business and community leaders

Oct. 16, 2001 MWD Board voted to adopt unbundled rate structure

March 12, 2002 MWD Board approves amounts of water rate components to be effective Jan. 1, 2003

January 1, 2003 unbundled rate structure becomes effective

DTX-042: 3/12/2002 MWD Bd. Vote Approving Rates, AR2010-006431 & AR2012-006431; DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6470-6471; DTX-132: Resolution 8805, AR2012-006464_01; DTX-036: 10/16/2001 MWD Bd. Minutes, AR2010-005730 & AR2012-005730 at 5737-5739

1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013

MWD Act § 134

Sec. 134. [Adequacy of Water Rates; Uniformity of Rates]

The Board, so far as practicable, shall fix such rate or rates for water as will result in revenue which, together with revenue from any water stand-by or availability service charge or assessment, will pay the operating expenses of the district, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by the district, and provide for the payment of the interest and principal of the bonded debt subject to the applicable provisions of this act authorizing the issuance and retirement of the bonds. Those rates, subject to the provisions of this chapter, shall be uniform for like classes of service throughout the district.

MWD's Rate Setting Process

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

Date: April 5, 2012

To: Board of Directors
Member Agency Managers

From: General Manager Jeffrey Kightlinger
General Counsel Marcia Scully

Subject: Response to SDCWA Report on Cost of Service Review

At the public hearing on March 12, 2012, the San Diego County Water Authority (Water Authority)

service area in exchange for the obligation to serve. Metropolitan's system is a wholesale system, and at that provides only "supplemental" supplies. Metropolitan is a wholesaler that has no exclusive right to serve in its service area. To the degree a member agency has local resources, develops local resources, implements conservation, or otherwise reduces demands, that member agency does not require Metropolitan's services. Moreover, member agencies are free to acquire supplies from other sources.

requirements, and member agency demands. And it must maintain delivery flexibility—the ability to maintain partial to full water supply deliveries during planned and unplanned facility outages. Each of Metropolitan's integrated conveyance, distribution and storage assets contributes to regional system reliability. It is fair and reasonable, therefore, to expect member agencies to share the cost of developing and maintaining these assets because all member agencies benefit from regional system reliability.

Operational flexibility has been achieved by creating an interconnected regional delivery network integrating the State Water Project (SWP) and the Colorado River Aqueduct (CRA) conveyance systems with the in-basin distribution system. This integrated network allows Metropolitan to incorporate supply from the SWP and the CRA with a diverse portfolio of geographically dispersed storage programs, including the Central Valley groundwater storage programs, carryover storage in San Luis Reservoir, flexible storage capacity in Castaic Lake and Lake Perris, Lake Mead storage, the Desert Water/Coachella Valley (DWCV) Advanced Delivery account, in-basin surface storage in Diamond Valley Lake (DVL) and Lake Mathews, and in-basin groundwater Conjunctive Use Programs. This integrated, regional network allows Metropolitan to move supplies throughout the system in response to supply availability and operational needs, and is shown in **Figure 1: Metropolitan Facilities, Supplies and Storage Portfolio**.

[1] 2007 Integrated Area Study, Report No. 1317, pg 2-10.

MWDRECORD2012_016583

Metropolitan allocates costs in a way that allows it to develop and maintain such a flexible system. And every member agency is served by this system flexibility.

The FCS Review Fails to Appreciate that the System Is Not Local, but Regional

Metropolitan's system is not a point-to-point service, but an interconnected regional system. In order to balance the local concerns within the region, Metropolitan has long maintained postage stamp rates. In fact, Metropolitan has used uniform postage stamp rates since it started delivering water in 1942. Under the postage stamp approach, an agency develops an average rate for a service, as opposed to a point-to-point rate based on each customer's specific use, and all customers receiving that service pay the average rate. This allows the agency to establish non-discriminatory rates that match the cost of providing each service to each customer class. A postage stamp approach is especially appropriate for an interconnected regional system because it allows the agency to develop reliable alternatives to point-to-point service. Here, Metropolitan's uniform, postage stamp rate structure has allowed it to develop an interconnected regional conveyance and distribution system with the ability to deliver supplies from the SWP, the CRA, and its storage portfolio throughout its vast and diverse service area. As shown by Figures 2 and 3,

Indeed, Metropolitan's Board has adopted the concept of "direct access", or customer choice for supplier, to accommodate a water transfer market.[4] Unbundled rates ensure that agencies that use Metropolitan's system to move non-Metropolitan water pay a fair and reasonable share of the relevant system costs, including the cost of facilities, power and conservation programs that help ensure capacity.

In order to accommodate a water transfer market, Metropolitan maintains an unbundled rate structure based on types of service provided. As a result, member agencies pay rates based on the services they use, and agencies that use the same service pay the same rate. Agencies that purchase Metropolitan-supplied water pay for supply, whereas agencies that purchase no water pay no supply costs. Agencies that take treated water cover treatment costs, whereas agencies that take untreated water pay no treatment costs. An agency that transports a third party's water through Metropolitan's system (known as "wheeling") pays transportation costs, but no supply costs. In fact, Metropolitan provides incentives for conservation and local resource development so member agencies do not have to take services from

[4] The Metropolitan Board adopted Strategic Plan Policy Principles on December 14, 1999, consisting of seven principles. The first principle is that Metropolitan is a regional provider of wholesale water services. Another principle is Choice and Competition: Beyond committed demands, the member agencies may choose the most cost-effective additional supplies from either Metropolitan, local resources development and/or market transfers. The policy principles are available at http://www.mwdh2o.com/mwdh2o/pages/finance/PDFs/1999Strategicplan.pdf.

MWDRECORD2012_016587

MWD's Rate Setting Process

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

BOARD ACTION

- **Board of Directors**
  Finance and Insurance Committee

4/10/2012 Board Meeting

8-2

Subject

Authorize the execution and distribution of the Official Statement in connection with issuance of the Water Revenue Refunding Bonds (Index Mode), 2012 Series B

Description

Metropolitan anticipates issuing its Water Revenue Refunding Bonds (Index Mode), 2012 Series B later this month to refund Metropolitan's Water Revenue Bonds, 1999 Authorization, Series B and 1999 Authorization, Series C, in the aggregate amount of $100 million. The Standby Bond Purchase Agreement supporting the 1999 Authorization, Series B and Series C bond issues will expire on May 1, 2012, and Metropolitan has opted to refund these bonds rather than extend or replace the Standby Bond Purchase Agreement.

of the bonds, negotiate the sale of the bonds, and deem the Offering Statement final. The members of the Ad Hoc Committee are individually authorized to execute the bond documents, including the Offering Statement. The Offering Statement is more specifically referred to as an Official Statement for a primary bond offering or a Remarketing Statement for a remarketing of bonds. An Offering Statement describes the bonds, provides summary information on Metropolitan, including Metropolitan's financial and operating condition and its investment portfolio and an analysis of risk factors.

The 2012 Series B Bonds will be the seventh in a series of variable rate water revenue bonds that will bear interest at a rate equal to the Securities Industry and Financial Markets Association (SIFMA) Index Rate for a specified interest period, plus a spread. The spread will be reset periodically through the remarketing of the bonds on a tender date selected by Metropolitan that occurs after the applicable Call Protection Date and before the Scheduled Mandatory Tender Date. Bonds that are not remarketed on an optional tender date selected by Metropolitan will be subject to mandatory tender and purchase on the Scheduled Mandatory Tender Date. Tender and remarketing of the bonds sets a new Call Protection Date and Scheduled Mandatory Tender Date. SIFMA Index Notes are Metropolitan's lowest cost variable rate debt product as no standby bond purchase agreement or other liquidity facility is required and investors do not have a "put" option on these SIFMA Index Notes.

The issuance of the 2012 Series B Bonds will expand Metropolitan's SIFMA Index Note program thereby reducing the ongoing risks of higher cost variable rate water revenue bonds and the ongoing risks and costs of the liquidity facilities associated with the 1999 Authorization, Series B and Series C Bonds. The 2012 Series B Bonds will need to be priced and closed before the expiration of the Standby Bond Purchase Agreement for the 1999 Authorization, Series B and Series C Bonds on May 1, 2012.

MWDRECORD2012_016429

APPENDIX A

The Metropolitan Water District

of Southern California

No member agency of Metropolitan is obligated to purchase water from Metropolitan. However, twenty-four of Metropolitan's 26 member agencies have entered into voluntary 10-year water supply purchase orders for water purchases through December 31, 2012. See "—Member Agency Purchase Orders" below.

MWDRECORD2012_016488

DTX-122: Appendix A to Water Revenue Refunding Bond, 2012 Series B, AR2012-016429 at 16488, 16538

MWD's Rate Setting Process

Metropolitan is a voluntary cooperative of member public agencies created for the purpose of "developing, storing and distributing water." Metropolitan's Board is committed to providing a high quality, reliable supply of affordable water for the residents in its service area.

The strategic planning process was initiated in July 1998 in an effort to address the evolving needs of the member agencies and their retailers to effectively fulfill Metropolitan's mission over the long-term. These diverse needs focus on flexibility, certainty and public stewardship.

Final Draft Strategic Plan Policy Principles

December 14, 1999

Preamble

further discussion and resolution.

Statement of Common Interests

- Regional Provider. Metropolitan is a regional provider of water for its service area. In this capacity, Metropolitan is the steward of regional infrastructure and the regional planner responsible for drought management and the coordination of supply and facility investments. Regional water services should be provided to meet the needs of the member agencies. Accordingly, the equitable allocation of water supplies during droughts will be based on water needs and adhere to the principles established by the Water Surplus and Drought Management Plan.

MWD's Rate Setting Process

THE METROPOLITAN WATER DISTRICT ACT

TABLE OF CONTENTS

Sec

Sec. 51. [Appointment of Directors -- Indefinite Term]

The board shall consist of at least one representative from each member public agency.

Sec. 55. [Voting by Board]

Each member of the board shall be entitled to vote on all questions, orders, resolutions and ordinances coming before the board, and shall be entitled to cast one vote for each ten

Part 4 POWERS AND PURPOSES 120

Sec. 57. [Vote Required for Board Action]

The affirmative votes of members representing more than 50 percent of the total number of votes of all the members shall be necessary and, except as otherwise expressly provided, shall be sufficient to carry any order, resolution or ordinance coming before the board.

Chapter 1 Bonds requiring approval of voters 200
Article 1 Initiation of proceedings 200
Article 2 Bond Election 210
Article 3 Issuance and sale of bonds 220

Chapter 1.5 Substitute bonds 233

12/15/2013 MWD RJN, Ex. 1 at §§ 51, 55, and 57

MWD's Rate Setting Process

§ 4304. Apportionment of Revenues and Setting of Water Rates.

§ 4304. Apportionment of Revenues and Setting of Water Rates.

(a) Not later than at its February meeting the General Manager shall present to the Finance and Insurance Committee of the Board:

(1) Determinations of the revenue requirements and cost of service analysis supporting the rates and charges

…

(2) Recommendations of rates including, but not limited to, the System Access Rate, Water Stewardship Rate, System Power Rate, Treatment Surcharge, and the Supply Rates for the various classes of water service to become effective each January 1 of the biennial period.

…

(c) Not later than its February meeting the Finance and Insurance Committee shall set a time or times for, and shall thereafter hold, one or more meetings of the Finance and Insurance Committee, to be held prior to its regular April meeting, at which interested parties may present their views regarding the proposed water rates and availability of service charges to said committee.

Provisions updated to reflect the actions of the Board of Directors through its 12/11/2012 meeting.

MWD's Rate Setting Process

§ 4304. Apportionment of Revenues and Setting of Water Rates.

(a) Not later than at its February meeting the General Manager shall present to the Finance and Insurance Committee of the Board:

§ 4304. Apportionment of Revenues and Setting of Water Rates.

(d) Not later than its regular April meeting the Finance and Insurance Committee shall make its determination regarding the revenue requirement to be paid from water rates

…

(e) Not later than its April meeting, the Board shall establish water rates for deliveries beginning each January 1 of the biennial period.

(f) Proposals for changes in water rates to become effective at times other than on January 1 shall require adequate notice to the public and a hearing before such proposals are acted upon by the Board

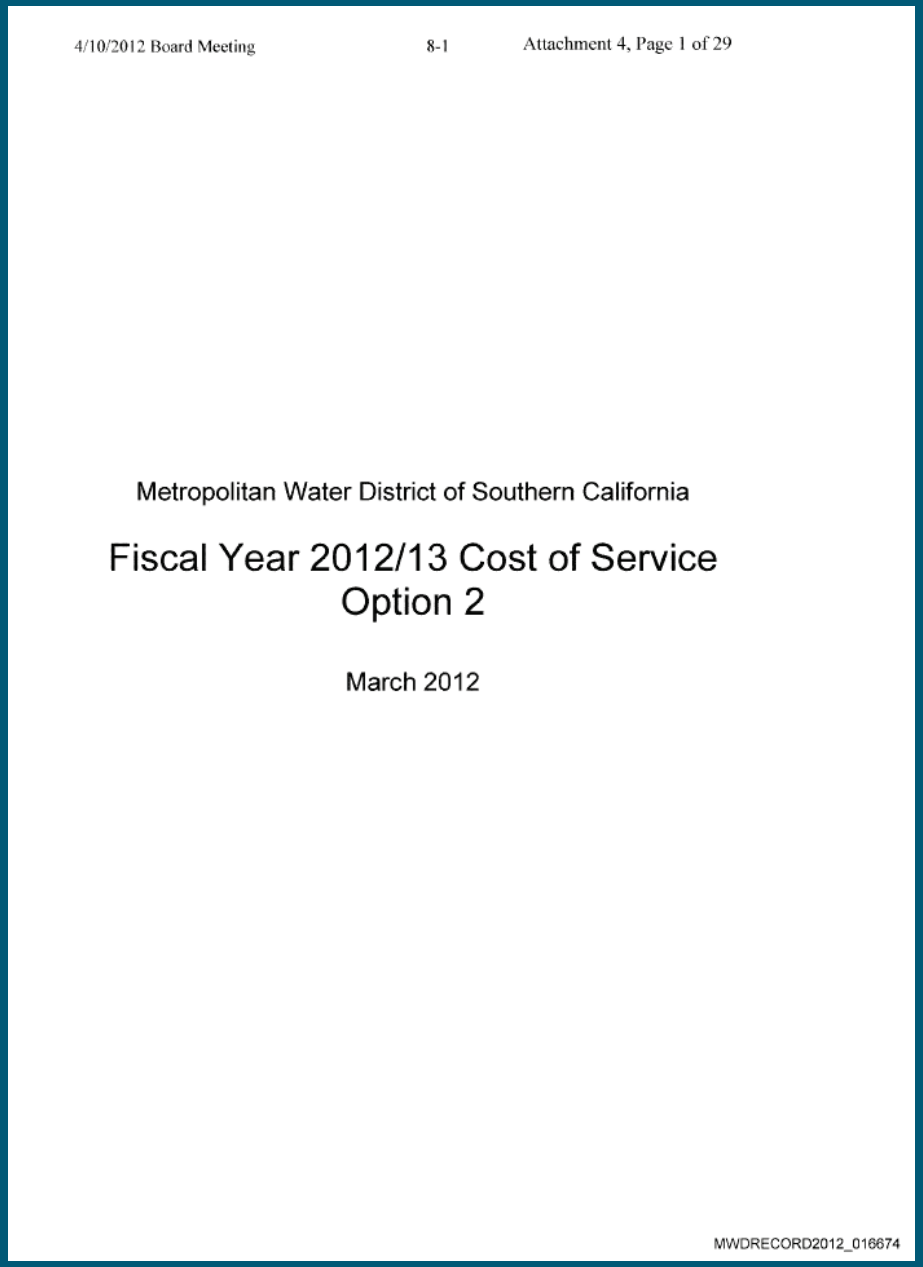
§ 2109. Board Agenda.

(c) The Board agenda shall make provision for public appearances before matters on which action is taken.

Provisions updated to reflect the actions of the Board of Directors through its 12/11/2012 meeting.

12/15/2013 MWD RJN, Ex. 2 at §§ 2109 and 4304

MWD's Cost of Service Studies



4/10/2012 Board Meeting 8-1 Attachment 4, Page 1 of 29

Metropolitan Water District of Southern California

Fiscal Year 2012/13 Cost of Service
Option 2

March 2012

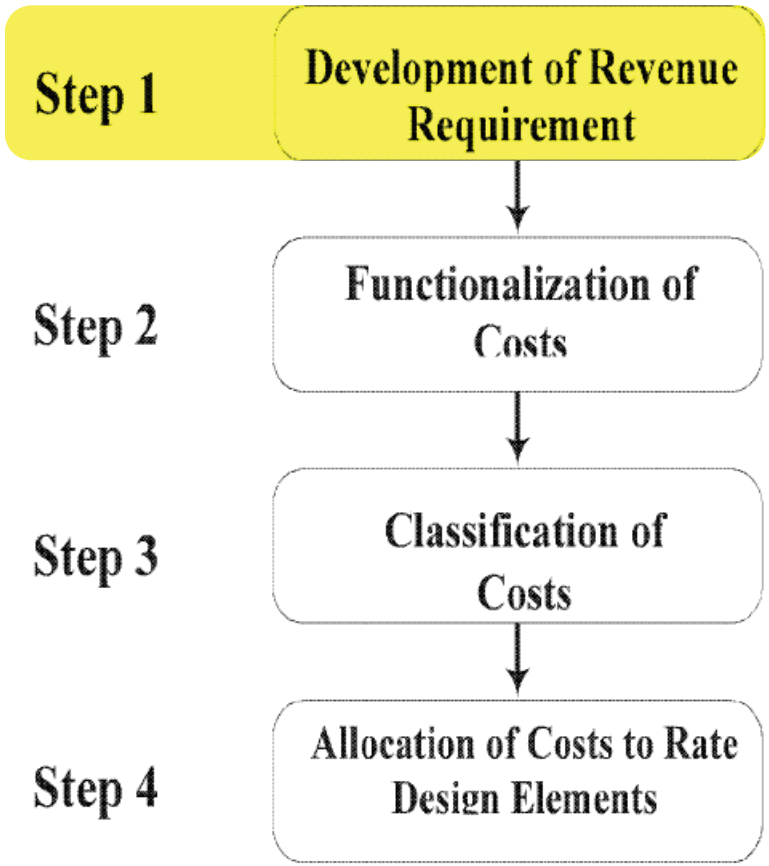
MWDRECORD2012_016674

Since the rates were unbundled in 2003, MWD has engaged in a multi-step **Cost Of Service** ("COS") process during which it assigns certain costs to related operation functions

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11467; DTX-110: 2012 COS, AR2012-016594 at 16674

Procedurally, MWD undertook the following steps to set its Rates:

Figure 1. The Cost of Service Process



Step 1:
MWD Determines its Revenue Requirements for the Fiscal Year

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11472; DTX-110: 2012 COS, AR2012-016594 at 16679

MWD's Cost of Service Studies

Figure 1. The Cost of Service Process

1.2 Revenue Requirements

The estimated revenue requirements presented in this report are for FY 2012/13. Throughout the report, FY 2012/13 is used as the "test year" to demonstrate the application of the cost of service process. Schedule 1 summarizes the FY 2012/13 revenue requirement by the major budget line items used in Metropolitan's budgeting process. Current estimates indicate Metropolitan's annual cash expenditures (including capital financing costs, but not construction outlays financed with bond proceeds) will total approximately $1.49 billion in FY 2012/13.

MWD's Cost of Service Studies

(CIP), and Water Management Programs. General District Requirements also include reserve fund transfers required by bond covenants and Metropolitan's Administrative Code.

When considered in total, General District Requirements make up approximately 71 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to SWP expenditures, which make up approximately 36 percent of Metropolitan's FY 2012/13 revenue requirements. Metropolitan's SWP contract requires Metropolitan to pay its allocated share of the capital, minimum operations, maintenance, power and replacement costs incurred to develop and convey its water supply entitlement, irrespective of the quantity of water Metropolitan takes delivery

Schedule 1. Revenue Requirements (by budget line item)

the Colorado River Aqueduct and other conveyance and supply facilities.

Schedule 1. Revenue Requirements (by budget line item)

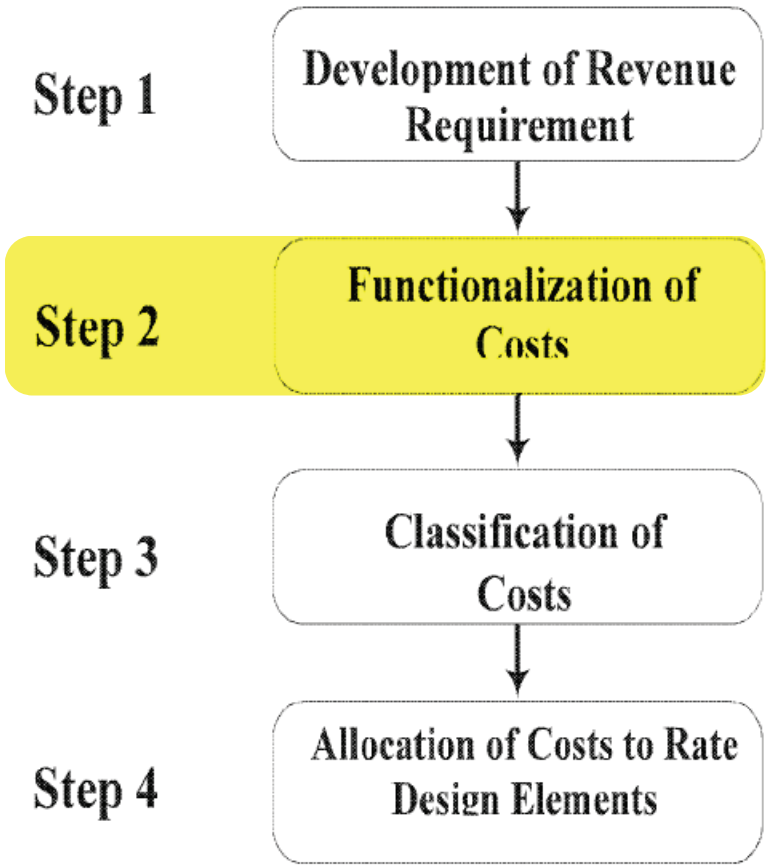
	Fiscal Year Ending 2013	% of Revenue Requirements (1)
Departmental Operations & Maintenance		
Office of the General Manager & Human Resources	$ 19,088,600	1.2%
External Affairs	15,521,800	1.0%

General District Requirements		
State Water Project	593,475,189	36.7%
Colorado River Aqueduct Power	36,178,684	2.2%
Supply Programs	36,287,598	2.2%
Demand Management	53,205,188	3.3%
Capital Financing Program	396,229,175	24.5%
Operating Equipment and Leases	29,194,400	1.8%
Increase (Decrease) in Required Reserves	8,500,000	0.5%
Total	**1,153,070,235**	**71.4%**
Revenue Offsets	**(124,907,622)**	**7.7%**
Net Revenue Requirements	**$ 1,366,040,212**	**100.0%**

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11474; DTX-110: 2012 COS, AR2012-016594 at 16680

Procedurally, MWD undertook the following steps to set its Rates:

Figure 1. The Cost of Service Process



Step 2:
MWD Assigns Costs to Functions

MWD's Cost of Service Studies

Schedule 4. Revenue Requirement (by service function)

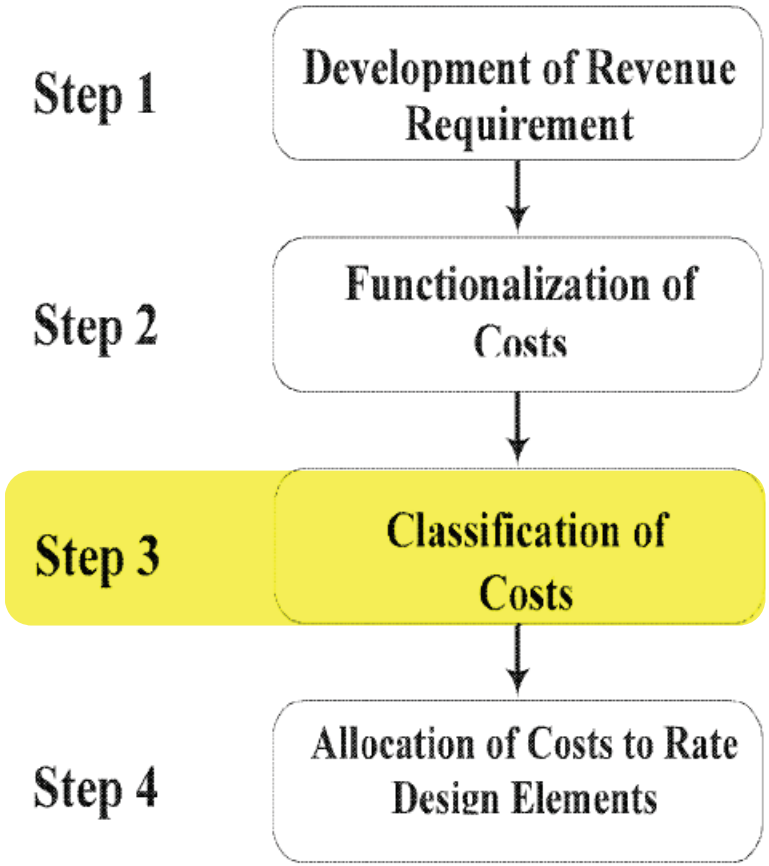
Functional Categories	Fiscal Year Ending 2013	% of Allocated Dollars (1)
Source of Supply		
CRA	$ 37,126,214	2.7%
SWP	98,160,437	7.1%
Other Supply	10,176,450	0.7%
Total	**145,463,102**	**10.5%**
Conveyance & Aqueduct		
CRA		
CRA Power (net of sales)	41,555,192	3.0%
CRA All Other	42,363,613	3.0%
SWP		
SWP Power	270,451,753	19.5%
SWP All Other	201,958,579	14.5%
Other Conveyance & Aqueduct	66,928,992	4.8%
Total	**623,258,130**	**44.9%**
Distribution	118,548,927	8.5%
Demand Management	61,087,495	4.4%
Hydroelectric	(11,167,386)	0.8%
Administrative & General	95,667,234	6.9%
Total Functional Allocations:	**$ 1,366,040,212**	**100.0%**

(1) Given as a percentage of the absolute values of total dollars allocated.
Totals may not foot due to rounding

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11481; DTX-110: 2012 COS, AR2012-016594 at 16686

Procedurally, MWD undertook the following steps to set its Rates:

Figure 1. The Cost of Service Process



Step 3:
MWD Classifies its Costs by Category

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11472; DTX-110: 2012 COS, AR2012-016594 at 16679

MWD's Cost of Service Studies

Schedule 7. Service Function Revenue Requirements (by classification category)

Functional Categories (by sub-Fuction)	Fixed Demand	Commodity	Standby	Variable Commodity	Hydroelectric	Total Classified
Source of Supply						
CRA	$ -	$ 40,903,685	$ -	$ -	$ -	$ 40,903,685
SWP	-	108,147,942	-	-	-	108,147,942
Other Supply	-	11,211,871	-	-	-	11,211,871
Subtotal: Source of Supply	-	160,263,498	-	-	-	**160,263,498**
Conveyance & Aqueduct						
CRA						
CRA Power	-	9,270,391	-	34,170,338	-	43,440,729
CRA All Other	2,021,764	42,038,512	2,384,484	-	-	46,444,761
SWP						
SWP Power	-	-	-	278,852,440	-	278,852,440
SWP All Other	16,688,144	184,244,964	19,682,127	-	-	220,615,235
Other Conveyance & Aqueduct	13,438,855	42,186,950	16,556,767	-	-	72,182,571
Subtotal: Conveyance & Aqueduct	32,148,764	277,740,816	38,623,378	313,022,778	-	**661,535,736**
Storage						
Storage Costs Other Than Power						
Emergency	-	-	55,216,410	-	-	55,216,410
Drought	-	47,062,222	-	-	-	47,062,222
Regulatory	4,257,830	7,145,753	2,326,129	-	-	13,729,712
Storage Power	-	-	-	(323,098)	-	(323,098)
Subtotal: Storage	4,257,830	54,207,975	57,542,539	(323,098)	-	**115,685,245**
Water Quality						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
Subtotal: Water Quality	-	-	-	-	-	**-**
Treatment	48,253,025	135,432,687	28,377,533	30,223,820	-	**242,287,065**
Distribution	20,830,734	96,647,196	11,380,205	-	-	**128,858,135**
Demand Management	-	67,302,949	-	-	-	**67,302,949**
Hydroelectric	-	-	-	-	(9,892,416)	**(9,892,416)**
Total Costs Classified	**$ 105,490,353**	**$ 791,595,121**	**$ 135,923,654**	**$ 342,923,501**	**$ (9,892,416)**	**$ 1,366,040,212**

Totals may not foot due to rounding

MWD's Cost of Service Studies

Schedule 7. Service Function Revenue Requirements (by classification category)

Functional (by sub-Fu	Fixed Demand	Commodity	Standby		Variable Commodity	
Source of S						
CRA						
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Other Supply	-	11,211,871	-	-	-	11,211,871
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Subtotal: Storage	4,257,830	54,207,975	57,542,539	(323,098)	-	**115,685,245**
Water Quality						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
Subtotal: Water Quality	-	-	-	-	-	**-**
Treatment	48,253,025	135,432,687	28,377,533	30,223,820	-	**242,287,065**
Distribution	20,830,734	96,647,196	11,380,205	-	-	**128,858,135**
Demand Management	-	67,302,949	-	-	-	**67,302,949**
Hydroelectric	-	-	-	-	(9,892,416)	**(9,892,416)**
Total Costs Classified	**$ 105,490,353**	**$ 791,595,121**	**$ 135,923,654**	**$ 342,923,501**	**$ (9,892,416)**	**$ 1,366,040,212**

Totals may not foot due to rounding

MWD's Cost of Service Studies

Schedule 7. Service Function Revenue Requirements (by classification category)

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Source of S						
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SWP						
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Regulatory	4,257,830	7,145,753	2,326,129	-	-	13,729,712
Storage Power	-	-	-	(323,098)	-	(323,098)
Subtotal: Storage	4,257,830	54,207,975	57,542,539	(323,098)	-	**115,685,245**
Water Quality						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
Subtotal: Water Quality	-	-	-	-	-	**-**
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Total Costs Classified	**$ 105,490,353**	**$ 791,595,121**	**$ 135,923,654**	**$ 342,923,501**	**$ (9,892,416)**	**$ 1,366,040,212**

Totals may not foot due to rounding

Demand costs are incurred to meet peak demands. Only the direct capital financing costs were included in the demand classification category. A portion of capital financing costs was included in the demand cost category because in order to meet peak demands additional physical capacity is designed into the system and, therefore, additional capital costs are incurred. Commodity costs are

Schedule 7. Service Function Revenue Requirements (by classification category)

Functional (by sub-Fu	Fixed Demand	Commodity	Standby	Variable Commodity		
Source of S						
CRA						
SWP						
Other Supply		11,211,871	-	-	-	11,211,871
Subtotal: Source of Supply		160,263,498	-	-	-	**160,263,498**
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Water Quality						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
Subtotal: Water Quality	-	-	-	-	-	**-**
Treatment	48,253,025	135,432,687	28,377,533	30,223,820	-	**242,287,065**
Distribution	20,830,734	96,647,196	11,380,205	-	-	**128,858,135**
Demand Management	-	67,302,949	-	-	-	**67,302,949**
Hydroelectric	-	-	-	-	(9,892,416)	**(9,892,416)**
Total Costs Classified	**$ 105,490,353**	**$ 791,595,121**	**$ 135,923,654**	**$ 342,923,501**	**$ (9,892,416)**	**$ 1,366,040,212**

Totals may not foot due to rounding

designed into the system and, therefore, additional capital costs are incurred. Commodity costs are generally associated with average system demands. Variable commodity costs include costs of chemicals, most power costs, and other cost components that increase or decrease in relation to the volume of water supplied. Fixed commodity costs include fixed operations and maintenance and capital financing costs that are not related to accommodating peak demands or standby service.

MWD's Cost of Service Studies

Schedule 7. Service Function Revenue Requirements (by classification category)

Functional (by sub-Fu	Fixed Demand	Commodity	Standby	Variable Commodity		
Source of S						
CRA						
SWP						
Other Supply	-	11,211,871		-	-	11,211,871
Subtotal: Source of Supply	-	160,263,498		-	-	**160,263,498**
Conveyance & Aqueduct						
CRA						
CRA Power	-	9,270,391			-	43,440,729
CRA All Other	2,021,764	42,038,512	2		-	46,444,761
SWP						
Drought	-	47,662,222	-	-	-	47,662,222
Regulatory	4,257,830	7,145,753	2,326,129	-	-	13,729,712
Storage Power	-	-	-	(323,098)	-	(323,098)
Subtotal: Storage	4,257,830	54,207,975	57,542,539	(323,098)	-	**115,685,245**
Water Quality						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
Subtotal: Water Quality	-	-	-	-	-	**-**
Treatment	48,253,025	135,432,687	28,377,533	30,223,820	-	**242,287,065**
Distribution	20,830,734	96,647,196	11,380,205	-	-	**128,858,135**
Demand Management	-	67,302,949	-	-	-	**67,302,949**
Hydroelectric	-	-	-	-	(9,892,416)	**(9,892,416)**
Total Costs Classified	**$ 105,490,353**	**$ 791,595,121**	**$ 135,923,654**	**$ 342,923,501**	**$ (9,892,416)**	**$ 1,366,040,212**

Totals may not foot due to rounding

Standby service costs relate to Metropolitan's role in ensuring system reliability during emergencies such as an earthquake or an outage of a major facility like the Colorado River Aqueduct. The two principal components of the standby costs were identified as the emergency storage capacity within the system and the standby capacity within the State Water Project conveyance system.

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11483,1148; DTX-110: 2012 COS, AR2012-016594 at 16688, 16693

Schedule 7. Service Function Revenue Requirements (by classification category)

Functional (by sub-Fu	Fixed Demand	Commodity	Standby	Variable Commodity		
Source of S						
CRA						
SWP						
Other Supply	-	11,211,871	-	-		11,211,871
Subtotal: Source of Supply	-	160,263,498	-	-		**160,263,498**
Conveyance & Aqueduct						
CRA						
CRA Power	-	9,270,391	-		-	43,440,729
CRA All Other	2,021,764	42,038,512	2,384,48		-	46,444,761
SWP						
Drought	-	47,062,222	-	-	-	47,062,222
Regulatory	4,257,830	7,145,753	2,326,129	-	-	13,729,712
Storage Power	-	-	-	(323,098)	-	(323,098)
Subtotal: Storage	4,257,830	54,207,975	57,542,539	(323,098)	-	**115,685,245**
Water Quality						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
Subtotal: Water Quality	-	-	-	-	-	**-**
Treatment	48,253,025	135,432,687	28,377,533	30,223,820	-	**242,287,065**
Distribution	20,830,734	96,647,196	11,380,205	-	-	**128,858,135**
Demand Management	-	67,302,949	-	-	-	**67,302,949**
Hydroelectric	-	-	-	-	(9,892,416)	**(9,892,416)**
Total Costs Classified	**$ 105,490,353**	**$ 791,595,121**	**$ 135,923,654**	**$ 342,923,501**	**$ (9,892,416)**	**$ 1,366,040,212**

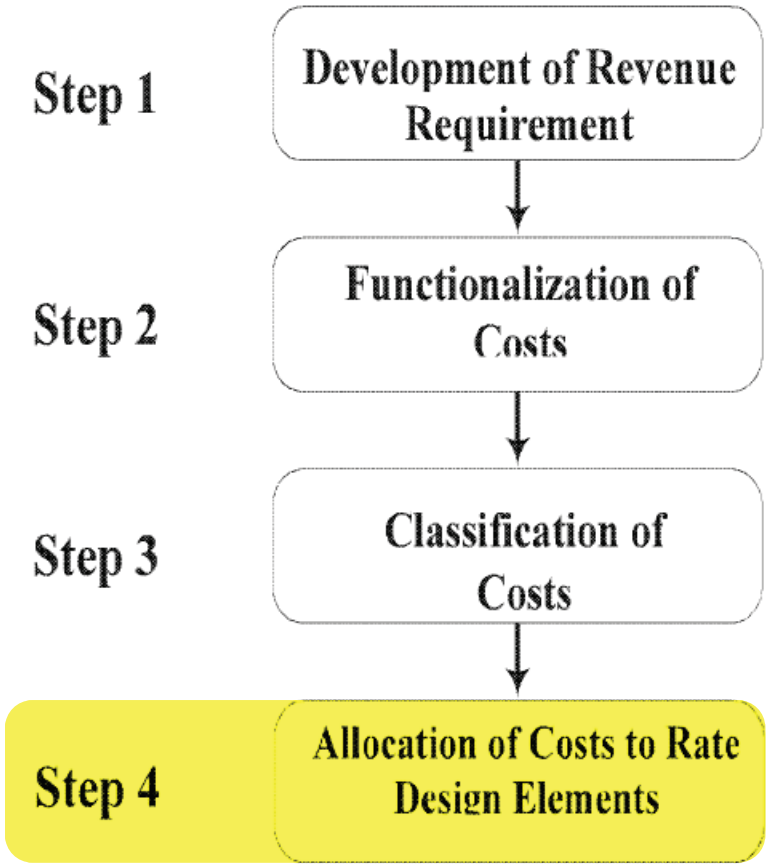
Totals may not foot due to rounding

designed into the system and, therefore, additional capital costs are incurred. Commodity costs are generally associated with average system demands. Variable commodity costs include costs of chemicals, most power costs, and other cost components that increase or decrease in relation to the volume of water supplied. Fixed commodity costs include fixed operations and maintenance and

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11483,1148; DTX-110: 2012 COS, AR2012-016594 at 16688, 16693

Procedurally, MWD undertook the following steps to set its Rates:

Figure 1. The Cost of Service Process



Step 4:
MWD Allocates Costs to Rates and Charges

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11472; DTX-110: 2012 COS, AR2012-016594 at 16679

Schedule 8. Classified Service Function Revenue Requirements (by rate design element)

Service Function by Classification Category	Rate Design Elements							
	Supply Rates	System Access Rate	Water Stewardship Rate	System Power Rate	Capacity Charge	Readiness-to-Serve Charge	Treatment Surcharge	Total Costs Allocated
Supply								
Fixed Demand	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fixed Commodity	160,263,498	-	-	-	-	-	-	160,263,498
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
Subtotal: Supply	160,263,498	-	-	-	-	-	-	160,263,498
Conveyance and Aqueduct								
Fixed Demand	-	-	-	-	-	32,148,764	-	32,148,764
Fixed Commodity	-	277,740,816	-	-	-	-	-	277,740,816
Fixed Standby	-	-	-	-	-	38,623,378	-	38,623,378
Variable Commodity	-	-	-	313,022,778	-	-	-	313,022,778
Hydroelectric	-	-	-	-	-	-	-	-
Subtotal: Conveyance and Aqueduct	-	277,740,816	-	313,022,778	-	70,772,142	-	661,535,736
Storage								
Fixed Demand	-	-	-	-	4,257,830	-	-	4,257,830
Fixed Commodity	47,062,222	7,145,753	-	-	-	-	-	54,207,975
Fixed Standby	-	-	-	-	-	57,542,539	-	57,542,539
Variable Commodity	(323,098)	-	-	-	-	-	-	(323,098)
Hydroelectric	-	-	-	-	-	-	-	-
Subtotal: Storage	46,739,124	7,145,753	-	-	4,257,830	57,542,539	-	115,685,245
Treatment								
Fixed Demand	-	-	-	-	-	-	48,253,025	48,253,025
Fixed Commodity	-	-	-	-	-	-	135,432,687	135,432,687
Fixed Standby	-	-	-	-	-	-	28,377,533	28,377,533
Variable Commodity	-	-	-	-	-	-	30,223,820	30,223,820
Hydroelectric	-	-	-	-	-	-	-	-
Subtotal: Treatment	-	-	-	-	-	-	242,287,065	242,287,065
Distribution								
Fixed Demand	-	-	-	-	20,830,734	-	-	20,830,734
Fixed Commodity	-	96,647,196	-	-	-	-	-	96,647,196
Fixed Standby	-	-	-	-	-	11,380,205	-	11,380,205
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	(9,892,416)	-	-	-	-	-	(9,892,416)
Subtotal: Distribution	-	86,754,779	-	-	20,830,734	11,380,205	-	118,965,718
Demand Management								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	67,302,949	-	-	-	-	67,302,949
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
Subtotal: Demand Management	-	-	67,302,949	-	-	-	-	67,302,949
Total								
Fixed Demand	-	-	-	-	25,088,564	32,148,764	48,253,025	105,490,353
Fixed Commodity	207,325,720	381,533,765	67,302,949	-	-	-	135,432,687	791,595,121
Fixed Standby	-	-	-	-	-	107,546,121	28,377,533	135,923,654
Variable Commodity	(323,098)	-	-	313,022,778	-	-	30,223,820	342,923,501
Hydroelectric	-	(9,892,416)	-	-	-	-	-	(9,892,416)
Total	**$ 207,002,622**	**$ 371,641,348**	**$ 67,302,949**	**$ 313,022,778**	**$ 25,088,564**	**$ 139,694,885**	**$ 242,287,065**	**$ 1,366,040,212**

Totals may not foot due to rounding

MWD's Cost of Service Studies

Schedule 9. Rates and Charges Summary

Effective January 1st	2012	2013	2014
Tier 1 Supply Rate ($/AF)	$106	$140	$148
Delta Supply Surcharge ($/AF)	$58	*	*
Tier 2 Supply Rate ($/AF)	$290	$290	$290
System Access Rate ($/AF)	$217	$223	$243
Water Stewardship Rate ($/AF)	$43	$41	$41
System Power Rate ($/AF)	$136	$189	$161
Full Service Untreated Volumetric Cost ($/AF)			
Tier 1	$560	$593	$593
Tier 2	$686	$743	$735
Replenishment Water Rate Untreated ($/AF)	$442	**	**
Interim Agricultural Water Program Untreated ($/AF)	$537	***	***
Treatment Surcharge ($/AF)	$234	$254	$297
Full Service Treated Volumetric Cost ($/AF)			
Tier 1	$794	$847	$890
Tier 2	$920	$997	$1,032
Treated Replenishment Water Rate ($/AF)	$651	**	**
Treated Interim Agricultural Water Program ($/AF)	$765	***	***
Readiness-to-Serve Charge ($M)	$146	$142	$166
Capacity Charge ($/cfs)	$7,400	$6,400	$8,600

* The Delta Supply Surcharge will be suspended after 2012.

** Discussions on the replenishment program are continuing with the Member Agencies.

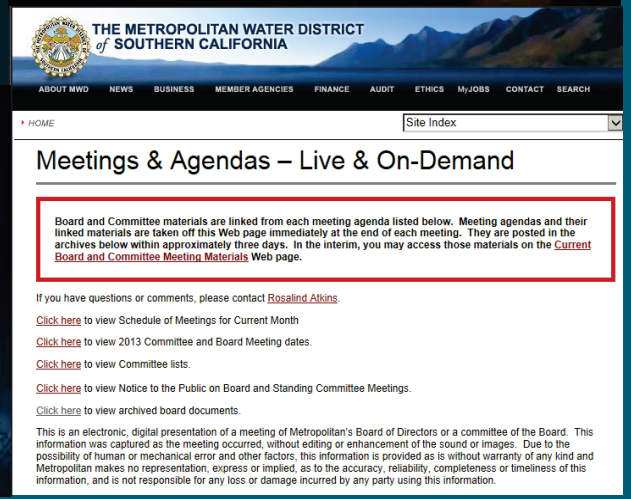
*** The Interim Agricultural Water Program will be discontinued after 2012.

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11491; DTX-110: 2012 COS, AR2012-016594 at 16696

MWD's Rate Setting Process

MWD opens these proposed rates for discussion at :

- Public Board and Committee meetings and workshops
- Meetings open to all Member Agency Managers and other Member Agency staff
- Noticed public hearing on proposed rates and charges
- Public webcast live and on-demand video streaming meetings



MWD staff provides the data supporting each proposal and develops additional rate options throughout these discussions

http://www.mwdh2o.com/mwdh2o/pages/board/VideoStream/index.htm

MWD's Rate Setting Process

Each Board member is presented with a final letter setting forth the details of the proposed rate options and a staff recommendation

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

BOARD ACTION

4/10/2012 Board Meeting

8-1

Subject

Approve proposed biennial budget for fiscal years 2012/13 and 2013/14, and adopt recommended water rates and charges, and resolutions fixing and adopting water rates and charges, for 2013 and 2014

effective on January 1, 2013 and January 1, 2014; (3) the resolution to fix and adopt the Readiness-to-Serve Charge effective January 1, 2013; and (4) the resolution to fix and adopt the Capacity Charge effective January 1, 2013.

The Board, Finance and Insurance (F&I) Committee , and member agencies have been reviewing and evaluating Metropolitan's biennial budget and the required rates necessary to support the budget since January 2012, beginning with a presentation at the F&I Committee meeting on January 9, 2012. Since that time, the Board held two board workshops on January 23 and February 13, as well as discussed the budget and rates and charges options at the February 28 Executive Committee.

PUBLIC HEARING

A public hearing on proposed rates and charges was held on March 12, 2012, where member agencies and members of the public addressed the F&I Committee and provided comments. Forty three speakers provided oral comments to the F&I Committee. A list of all member agencies, subagencies, and members of the public that provided comments in response to the proposed rates and charges is included in **Attachment 11 - Public Hearing Comments**. All materials received at the public hearing are available for review in the office of the CFO.

The General Manager's recommendation on rates and charges and two alternatives were presented to the F&I Committee at the conclusion of the public hearing. The F&I Committee voted to table action on the budget and rates to the April 10, 2012 Board meeting. Staff has reviewed the information submitted at the public hearing, and a separate letter has been provided to the Board responding to the San Diego County Water Authority report on cost of service review.

BIENNIAL BUDGET AND RATES AND CHARGES OPTIONS

Based on the Board discussions over the past three months, three options are presented for the Board's consideration as described below. Options #1 and #3 substantially meet the Board's financial policies by FY 2014/15 by providing revenues that meet the full cost of service, meeting 2-times coverage for revenue bond debt service, and providing PAYGO funding for the capital program of $125 million annually.

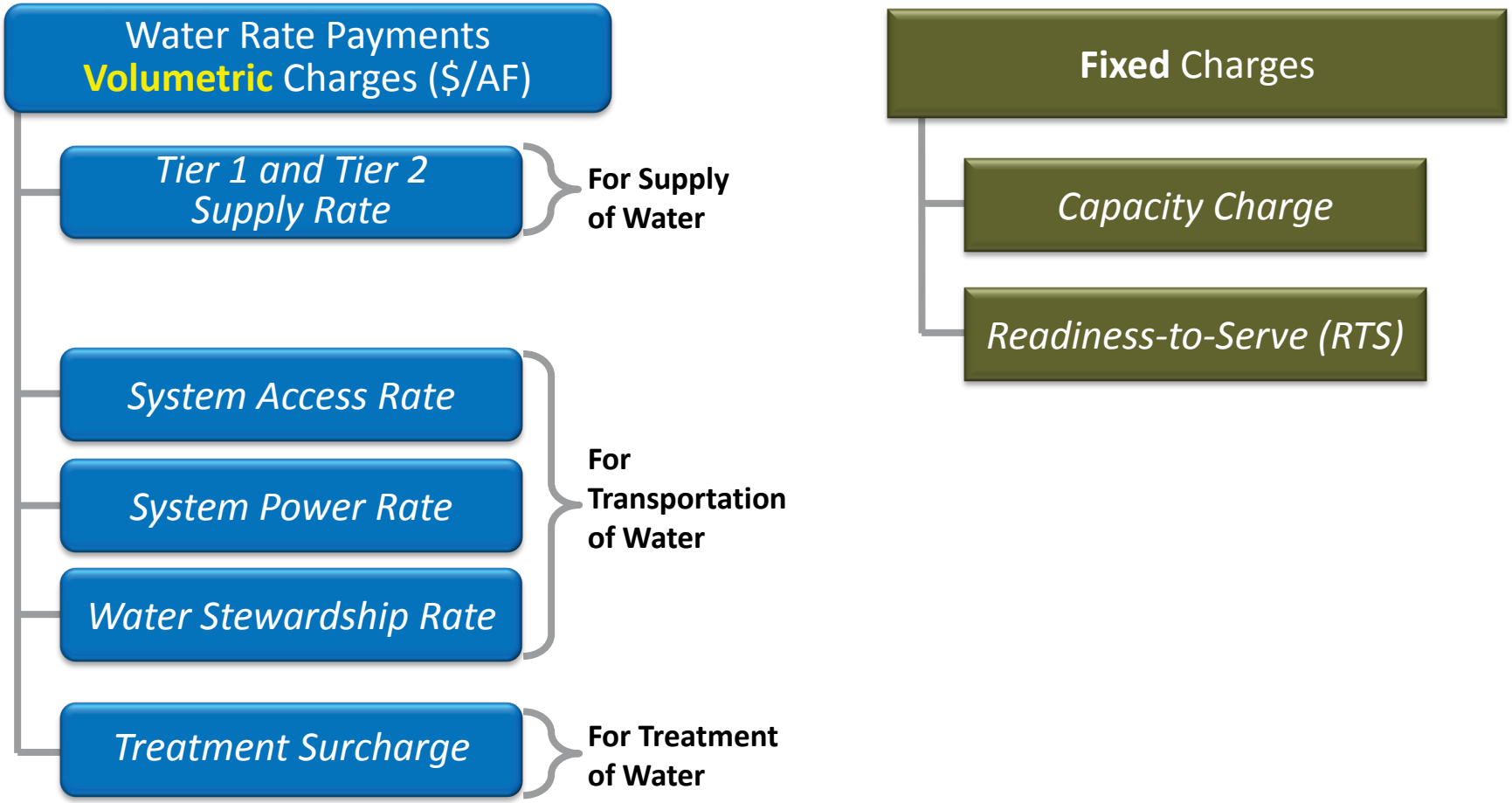
MWDRECORD2012_016594

- Process ensures Board members and Member Agencies they represent are fully informed in advance of the vote and they have sufficient time to consider proposed rates

DTX-090: 4/13/2010 Bd. Action Ltr., AR2010-011443 & AR2012-011443; DTX-110: 4/10/2012 Bd. Action Ltr., AR2012-016594

2. MWD Rates and Charges at Issue

MWD's Rates and Charges Are Uniform for All Member Agencies



$/AF = Dollars per acre-foot of water

One Acre-foot = 325,851 gallons

One Acre-foot of water is amount used by two average households per year

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 006475; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11474-75, 11492, 11495, 11499-500; DTX-110: 2012 COS, AR2012-016594 at 16681, 16689, 16700, 16693, 16695, 16697, 16699

MWD's Rates and Charges Are Uniform for All Member Agencies

Water Rate Payments
Volumetric Charges ($/AF)

Tier 1 and Tier 2 Supply Rate

System Access Rate

System Power Rate

Water Stewardship Rate

Treatment Surcharge

Supply Rates Recover:

- Costs incurred to supply water from the SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the Member Agencies' demands
- Capital financing, operating, maintenance and overhead costs for storage in MWD's reservoirs

Everyone pays the same Tier 1 or Tier 2 Supply Rate per acre-foot

MWD's Rates and Charges Are Uniform for All Member Agencies

Water Rate Payments
Volumetric Charges ($/AF)

- *Tier 1 and Tier 2 Supply Rate*
-  *System Access Rate*
- *System Power Rate*
- *Water Stewardship Rate*
- *Treatment Surcharge*

System Access Rate Recovers:

- Most of the capital, and all of the operations, maintenance and overhead costs for the transportation facilities in the SWP and CRA and MWD distribution system, except power
- Regulatory storage costs
  - This storage provides operational flexibility in meeting peak demands, essentially increasing the physical distribution capacity

Everyone pays the same System Access Rate per acre-foot

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6518; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11473, 11475, 11484-85, 11488, 11490-92; DTX-110: 2012 COS, AR2012-016594 at 16680, 16682, 16695-97

MWD's Rates and Charges Are Uniform for All Member Agencies

Water Rate Payments
Volumetric Charges ($/AF)

- *Tier 1 and Tier 2 Supply Rate*
- *System Access Rate*
- *System Power Rate*
- *Water Stewardship Rate*
- *Treatment Surcharge*

System Power Rate Recovers:

- Energy costs for pumping water to Southern California

Everyone pays the same System Power Rate per acre-foot

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6475, 6520; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11492; DTX-110: 2012 COS, AR2012-016594 at 16697

MWD's Rates and Charges Are Uniform for All Member Agencies

Water Rate Payments
Volumetric Charges ($/AF)

- *Tier 1 and Tier 2 Supply Rate*
- *System Access Rate*
- *System Power Rate*
- *Water Stewardship Rate*
- *Treatment Surcharge*

Water Stewardship Rate Recovers:

- Costs for
  - Local Resources Development
  - Conservation Credits Program
  - Desalination

Everyone pays the same Water Stewardship Rate per acre-foot

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11492; DTX-110: 2012 COS, AR2012-016594 at 16697

MWD's Rates and Charges Are Uniform for All Member Agencies

Water Rate Payments
Volumetric Charges ($/AF)

Tier 1 and Tier 2 Supply Rate

System Access Rate

System Power Rate

Water Stewardship Rate

Treatment Surcharge

- Every member agency pays supply and transportation rates that recover costs for MWD water and the use of MWD's facilities and its rights to use SWP facilities

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6475; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11474-75, 11492, 11495, 11499-500; DTX-110: 2012 COS, AR2012-016594 at 16681, 16689, 16700, 16693, 16695, 16697, 16699

MWD's Rates and Charges Are Uniform for All Member Agencies

March 12, 2002: MWD's Board defined the rate for wheeling service to include the System Access Rate, Water Stewardship Rate, cost for power, and administration fee

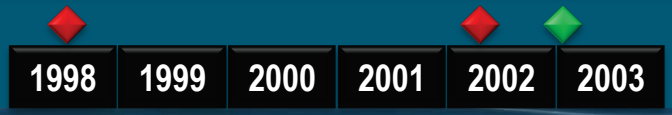
§ 4405. Wheeling Service.

(a) Subject to the General Manager's determination of available system capacity, Metropolitan will offer wheeling service. The determination whether there is unused capacity in Metropolitan's conveyance system, shall be made by the General Manager on a case-by-case basis in response to particular requests for wheeling.

(b) The rates for wheeling service shall include the System Access Rate, Water Stewardship Rate and, for treated water, the Treatment Surcharge, as set forth in Section 4401. In addition, wheeling parties must pay for their own cost for power (if such power can be scheduled by the District) or pay the District for the actual cost (not system average) of power service utilized for delivery of the wheeled water. Further, wheeling parties shall be assessed an administration fee of not less than $5,000 per transaction.

§ 4119. Wheeling Service.

"Wheeling Service" shall mean the use of Metropolitan's facilities, including its rights to use State Water Project facilities, to transport water not owned or controlled by Metropolitan to its member public agencies, in transactions entered into by Metropolitan for a period of up to one year.



MWD Admin. Code § 4405, 4119

3. MWD Properly Passes Through SWP Transportation Charges

Under its contract with the DWR for the State Water Project, MWD pays separate supply and transportation charges:

SWP - SUPPLY

SWP - TRANSPORTATION

DTX-055: 2005 DWR Contract Art. 22(a), AR2010-000001 & AR2012-000001 at 65

SWP Supply Charges Are Allocated to MWD's Supply Rates

The SWP Charges for Supply (Delta Water Charge) Incurred by MWD

Then go into MWD's Supply Charges to MWD'S Member Agencies

SWP – SUPPLY Charges Incurred by MWD

MWD SUPPLY

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11470; DTX-110: 2012 COS, AR2012-016594 at 16677

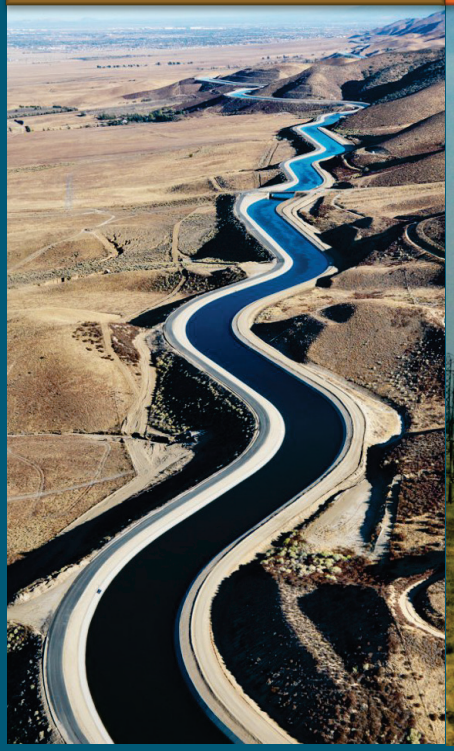
SWP Transportation Charges Are Allocated to MWD's Transportation Rates

The SWP Charges for Transportation Incurred by MWD

Then go into MWD's Transportation Charges to MWD'S Member Agencies

SWP – TRANSPORTATION Charges Incurred by MWD

MWD System Access Rate



MWD System Power Rate

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6518; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11473, 11475, 11490; DTX-110: 2012 COS, AR2012-016594 at 16680, 16682, 16695

SWP Transportation Charges Are Allocated to MWD's Transportation Rates

System Access Rate

Pays for Transportation Facilities
To Make Water Available For Delivery

System Power Rate

Pays for Power for Pumping Water
to Convey It For Delivery

Edmonston Pumping Plant "Big Lift"

Julian Hinds Pumping Plant

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6518, 6520; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11492; DTX-110: 2012 COS, AR2012-016594 at 16697

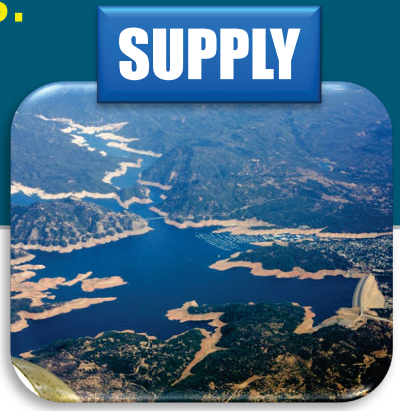
MWD Reasonably Allocates State Water Project Transportation Costs to MWD's Transportation Rates

1. SWP Transportation Costs Are MWD Transportation Costs
2. MWD Uses SWP Transportation Facilities to Transport non-SWP water and SWP water
3. SWP-Owned and MWD-Owned Transportation Facilities Are Integrated
4. Allocating SWP Transportation Costs to MWD's Transportation Rates is Consistent With Industry Guidance
5. Exchange Water is a Blend of SWP and CRA Water

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6518, 6520; DTX-055: 2005 DWR Contract, Art. 23, AR2010-000001 & AR2012-000001 at 71, 74, 86, 153; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11473, 11475, 11490; DTX-110: 2012 COS, AR2012-016594 at 11680-82, 16695; DTX-134: Raftelis Textbook, AR2012-016288_5282 at 5291-92; DTX-109: 4/5/12 MWD Response to SDCWA COS Report, AR2012-016583 at 16586

MWD's Contract with Department of Water Resources (DWR)

Under its contract with the DWR for the State Water Project, MWD pays separate supply and transportation charges:



The Metropolitan Water District of Southern California

C. PAYMENT PROVISIONS

22. Delta Water Charge.

(a) The payments to be made by each contractor for project water shall include an annual charge designated as the Delta Water Charge. This charge, together with the total revenues derived during the project repayment period from the sale or other disposal of electrical energy generated in connection with operation of project conservation facilities, shall return to the State during the project repayment period all costs of the project conservation facilities incurred during the project repayment period, including capital, operation, maintenance, power, and replacement costs, which are allocated to the purpose of water conservation in, above, and below the Delta pursuant to subdivision (e) of this article. Wherever reference is made, in connection with the computation or determination of the Delta Water Charge, to the costs of any facility or facilities included in the System, such reference shall be only to those costs of such facility or facilities which are reimbursable by the contractors as determined by the State.

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MWDRECORD000001

DTX-055: 2005 DWR Contract, Art. 22(a), AR2010-000001 & AR2012-000001 at 65

SWP - SUPPLY

DTX-055: 2005 DWR Contract, Art. 22(a), AR2010-000001 & AR2012-000001 at 65

Under its contract with the DWR for the State Water Project, MWD pays separate supply and transportation charges:

TRANSPORTATION

23. Transportation Charge.

The payments to be made by each contractor entitled to delivery of project water from the project transportation facilities shall include an annual charge under the designation Transportation Charge. This charge shall return to the State during the project repayment period those costs of all project transportation facilities necessary to deliver project water to the contractor incurred during the project repayment period, including capital, operation, maintenance, power, and replacement costs, which are allocated to the contractor in accordance with the cost allocation principles and procedures hereinafter set forth. Wherever reference is made, in connection with the computation, determination, or payment of the Transportation Charge, to the costs of any facility or facilities included in the System, such reference shall be only to those costs of such facility or facilities which are reimbursable by the contractors as determined by the State. The Transportation Charge shall consist of a capital cost component; a minimum operation, maintenance, power, and replacement component; and a variable operation,

(As of January 1, 2005)

MWDRECORD000001

DTX-055: 2005 DWR Contract, Art. 23, AR2010-000001 & AR2012-000001 at 71

MWD's Contract with DWR

The SWP Transportation Charge covers expenses such as operating and repairing the California Aqueduct, a transportation facility necessary for water to be transported to MWD's Member Agencies

DTX-055: 2005 DWR Contract, Art. 23, AR2010-000001 & AR2012-000001 at 71

Under its contract with the DWR for the State Water Project, MWD pays separate supply and transportation charges:

The Metropolitan Water District of Southern California

CONTRACT BETWEEN

TRANSPORTATION

24. Transportation Charge -- Capital Cost Component.

(a) The capital cost component of the Transportation Charge shall be sufficient to return to the State those capital costs of the project transportation facilities necessary to deliver water to the contractor, which are allocated to the contractor pursuant to subdivision (b) of this article. The amount of this component shall be determined in two steps as follows: (1) an allocation of capital costs to the contractor, and (2) a computation of annual payment of such allocated capital costs and interest thereon, computed at the project interest rate, to be made by the contractor.

Disclaimer: This document integrates The Metropolitan Water District of Southern California's State Water Project water supply contract with the many amendments to the contract entered into since 1960. It is intended only to provide a convenient reference source, and the Department of Water Resources is unable to provide assurances that this integrated version accurately represents the original documents. For legal purposes, or when precise accuracy is required, users should direct their attention to original source documents rather than this integrated version.

(As of January 1, 2005)

MWDRECORD000001

DTX-055: 2005 DWR Contract, Art. 24, AR2010-000001 & AR2012-000001 at 74

Under its contract with the DWR for the State Water Project, MWD pays separate supply and transportation charges:

TRANSPORTATION

The Metropolitan Water District of Southern California

25. Transportation Charge -- Minimum Operation, Maintenance, Power, and Replacement Component.

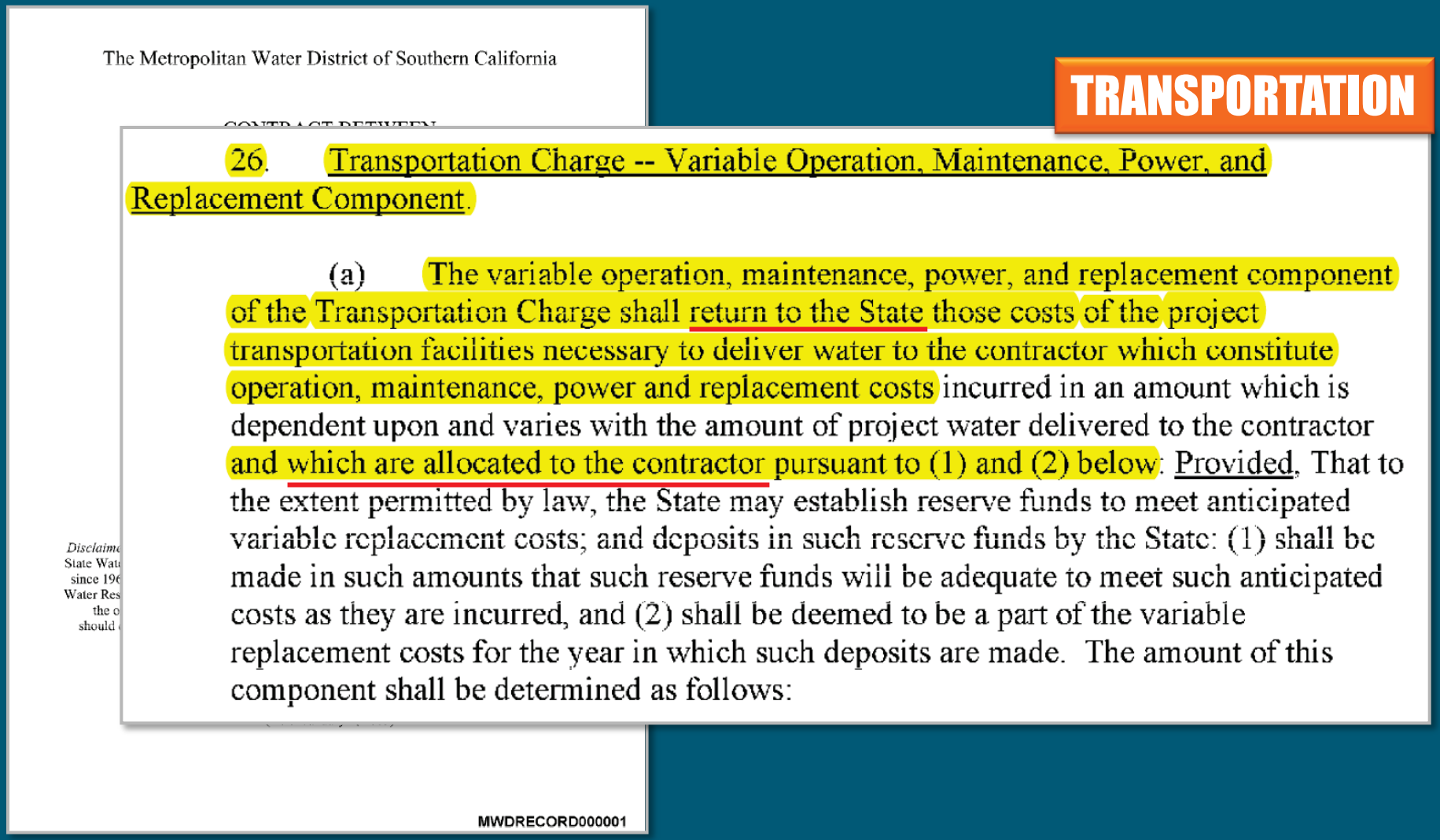
(a) The minimum operation, maintenance, power, and replacement component of the Transportation Charge shall return to the State those costs of the project transportation facilities necessary to deliver water to the contractor which constitute operation, maintenance, power, and replacement costs incurred irrespective of the amount of project water delivered to the contractor and which are allocated to the contractor pursuant to (b) below: Provided, That to the extent permitted by law, the State may establish reserve funds to meet anticipated minimum replacement costs; and deposits in such reserve funds by the State: (1) shall be made in such amounts that such reserve funds will be adequate to meet such anticipated costs as they are incurred, and (2) shall be deemed to be a part of the minimum replacement costs for the year in which such deposits are made.

(As of January 1, 2005)

MWDRECORD000001

DTX-055: 2005 DWR Contract, Art. 25, AR2010-000001 & AR2012-000001 at 83

The transportation charge also contains a variable charge for operation, maintenance, power and replacement, dependent upon the amount of water delivered to MWD



The Metropolitan Water District of Southern California

CONTRACT BETWEEN

TRANSPORTATION

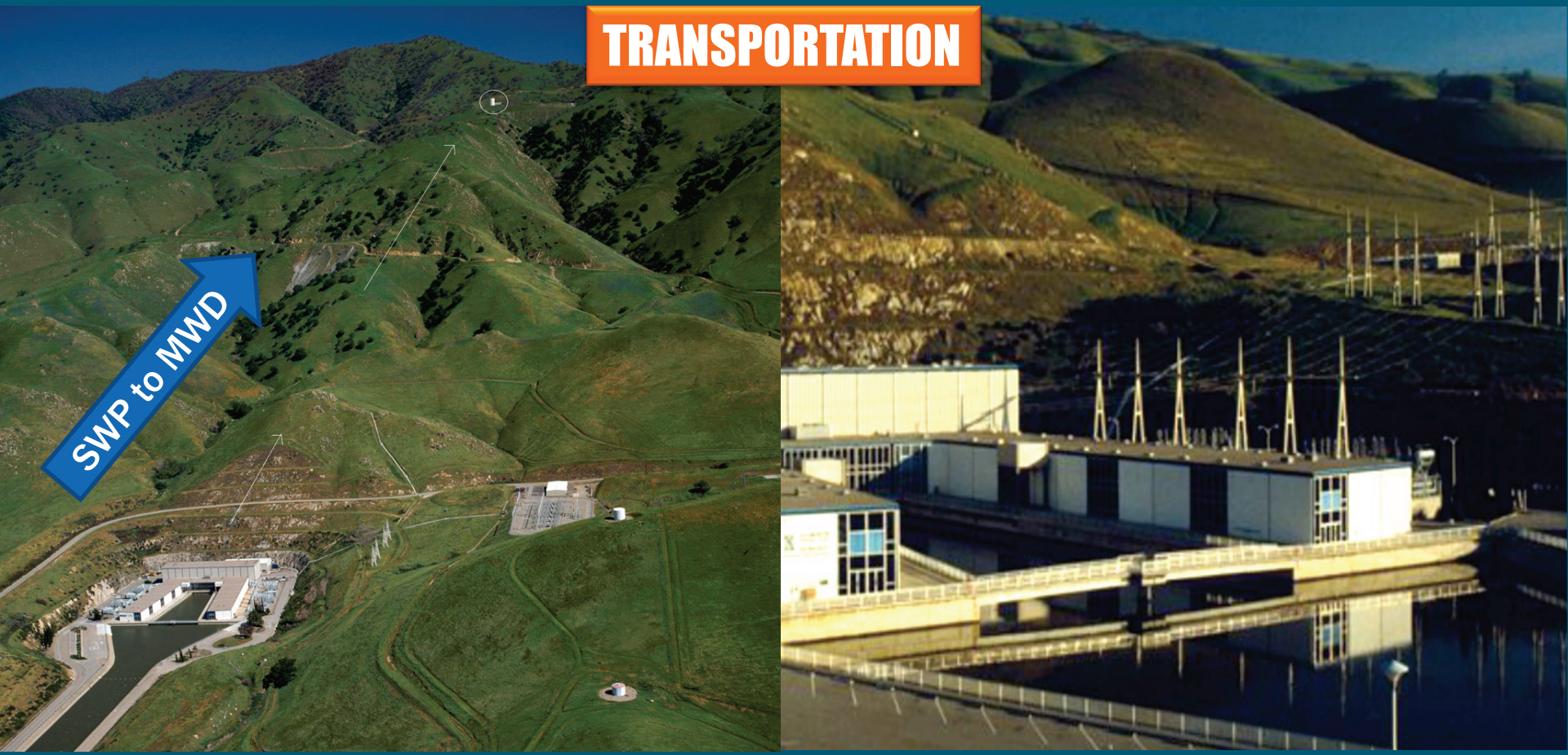
26. Transportation Charge -- Variable Operation, Maintenance, Power, and Replacement Component.

(a) The variable operation, maintenance, power, and replacement component of the Transportation Charge shall return to the State those costs of the project transportation facilities necessary to deliver water to the contractor which constitute operation, maintenance, power and replacement costs incurred in an amount which is dependent upon and varies with the amount of project water delivered to the contractor and which are allocated to the contractor pursuant to (1) and (2) below: Provided, That to the extent permitted by law, the State may establish reserve funds to meet anticipated variable replacement costs; and deposits in such reserve funds by the State: (1) shall be made in such amounts that such reserve funds will be adequate to meet such anticipated costs as they are incurred, and (2) shall be deemed to be a part of the variable replacement costs for the year in which such deposits are made. The amount of this component shall be determined as follows:

MWDRECORD000001

DTX-055: 2005 DWR Contract, Art. 26, AR2010-000001 & AR2012-000001 at 86

SWP's Variable Transportation Charge is principally composed of the **power** cost to pump water through the aqueduct and over the Tehachapi mountains to transport water to MWD and its Member Agencies



DTX-055: 2005 DWR Contract, Art. 26, AR2010-000001 & AR2012-000001 at 86

MWD's Contract with DWR November 4, 1960

THIS CONTRACT, made this 4th day of November, 1960, pursuant to the provisions of the California Water Resources Development Bond Act, the State Central Valley Project Act, and other applicable laws of the State of California, between the State of California, acting by and through its Department of Water Resources, herein referred to as the "State", and The Metropolitan Water District of Southern California, a public agency in the State of California, duly organized, existing, and acting pursuant to the laws thereof with its principal place of business in Los Angeles, California, herein referred to as the "District",

WHEREAS, the State is authorized to construct and oper-

(d) The District shall pay all of the costs of delivery structures for the delivery of project water to it, and shall deposit with the State, prior to the commencement of construction of any such delivery structure, an amount of money estimated by the State to be sufficient to cover the costs thereof.

MWDRECORD000180

l pay all of the costs of
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ure, an amount of money
nt to cover the costs thereof.

MWDRECORD000200

DTX-006: 1960 DWR Contract, AR2010-000173 & AR2012-000173 at 180, 200

MWD's Payments for SWP Transportation Costs Commenced with Building the SWP Transportation Facilities, and Preceded SWP Water Deliveries:

29. Time and Method of Payment.

(a) Payments by the District under the Delta Water Charge shall commence in the year of initial water delivery to the District.

(b) Payments by the District under the capital cost component of the Transportation Charge shall commence in the year following the year in which the State commences construction of the project transportation facilities.

(c) Payments by the District under the minimum operation, maintenance, power and replacement component of the Transportation Charge shall commence for each aqueduct reach in the year following the year in which construction of that reach is completed.

Large scale construction of the California Aqueduct began in 1963, DWR Bulletin 132-64, p.98-99

MWD's Payments for SWP Transportation Preceded Water Deliveries by Nearly 10 Years

6. Annual Entitlements.

(a) The year of initial water delivery to the District is presently estimated to be 1972. To the extent practicable, the State shall notify the District of any change in this estimate.

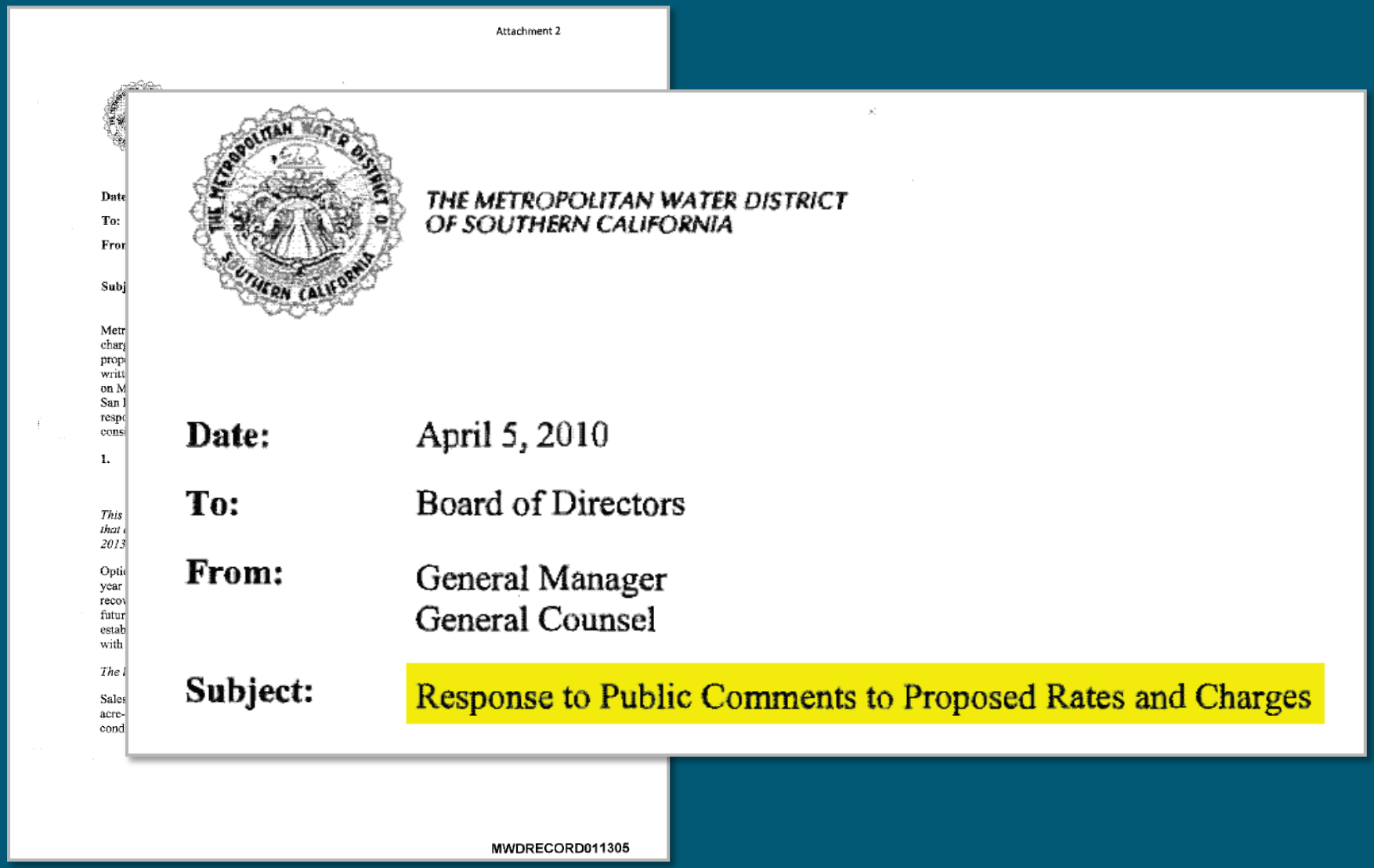
DTX-006: 1960 DWR Contract, AR2010-000173 & AR2012-000173 at 192

SWP Transportation Charges Are Allocated to MWD's Transportation Rates

California Aqueduct State Water Project (SWP)

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11488; DTX-110: 2012 COS, AR2012-016594 at 16693

DWR Contract Expenses Allocated to the System Access Rate and System Power Rate Are Reasonably Related to Transportation



Attachment 2

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Date: April 5, 2010

To: Board of Directors

From: General Manager
General Counsel

Subject: Response to Public Comments to Proposed Rates and Charges

MWDRECORD011305

DWR Contract Expenses Allocated to the System Access Rate and System Power Rate Are Reasonably Related to Transportation

Attachment 2

Date:

To:

From:

Subject:

Metropolitan allocates SWP costs among the various functions, including conveyance and aqueduct, supply and standby because the SWP provides different functions. More specifically:

1) Metropolitan uses the SWP as a conveyance facility. MWD uses the SWP to convey Project and Non-Project water for Metropolitan and its member agencies. For example, Metropolitan used the SWP to convey water transfers acquired in 2009 north of the Delta from a non-State Water Contractor for delivery to Metropolitan's service area. Another example is the 2009 transfer of 14,000 acre-feet of water from the Placer County Water Agency, a non-State Water Contractor, to the San Diego County Water Authority. Because MWD can use the SWP as a conveyance facility, it is reasonable to allocate SWP costs attributable to conveyance, into Conveyance and Aqueduct. Article 55 of the State Water Contract, added in the Monterey Amendment, gives contractors the right to use SWP transportation facilities to transport Non-Project water for delivery to their service areas or for interim storage, by payment for power and incremental operation, maintenance and replacement costs, and other incremental costs. Contractors not participating in repayment for a reach used for the transfer must also pay a use of facilities fee for use of that reach. This is because a contractor that participates in the repayment for a reach has already paid costs of using that reach for conveyance of water supplies in the Transportation Charge invoiced under its Statement of Charges.

MWDRECORD011305

DTX-087: 4/5/10 MWD Resp. to Pub. Comments, AR2010-011305 & AR2012-011305 at 11307

SWP Transportation Charges Are Allocated to MWD's Transportation Rates

The DWR Contract also allows MWD to use SWP "transportation facilities to transport water procured … from [non-DWR] sources for delivery to [its] service areas"

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State Water Project water s
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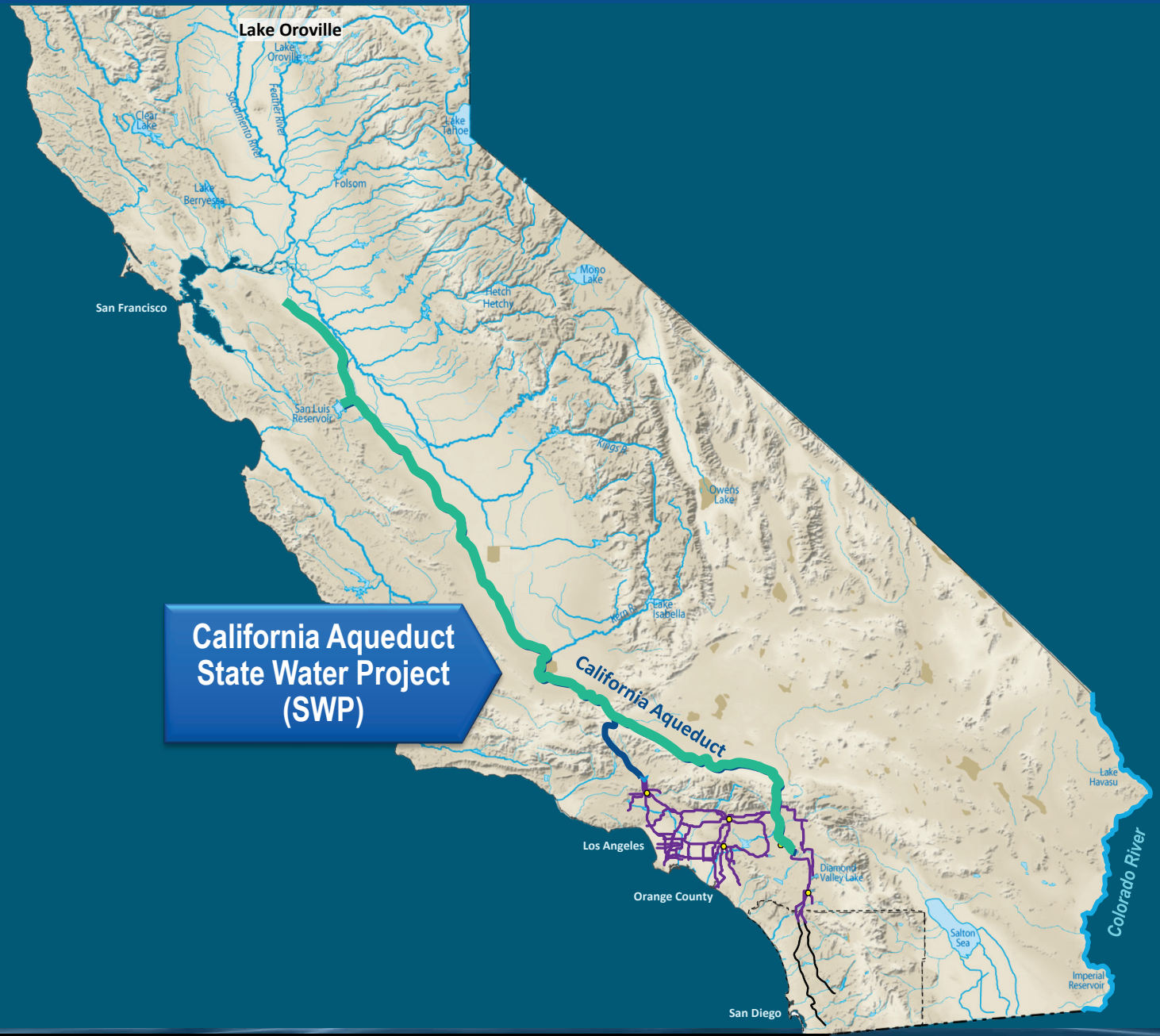
76 55. Transportation of Nonproject Water.

(a) Subject to the delivery priorities in Article 12(f), contractors shall have the right to receive services from any of the project transportation facilities to transport water procured by them from nonproject sources for delivery to their service areas and to interim storage outside their service areas for later transport and delivery to their service areas: Provided, that except to the extent such limitation in Section 12931 of the Water Code be changed, a contractor shall not use the project transportation facilities under this option to transport water the right to which was secured by the contractor through eminent domain unless such use be approved by the Legislature by concurrent resolution with the majority of the members elected to each house voting in favor thereof.

(b) For any nonproject water delivered pursuant to this article, contractors shall pay the State the same (including adjustments) for power resources (including on-aqueduct, off-aqueduct, and any other power) incurred in the conservation and transportation of such water as if such nonproject water were entitlement water, as well as all incremental operation, maintenance, and replacement costs, and any other incremental costs, which may include an administrative or contract preparation charge, all as determined by the State. Incremental costs shall mean those nonpower costs which would not be incurred if nonproject water were not scheduled for or delivered to contractors. Only those contractors not participating in the repayment of a reach shall be required to pay a use of facilities charge for the delivery of nonproject water from or through that reach. Costs for transporting water placed into interim storage shall be paid in the same manner provided for in subdivision (c)(6) of Article 56.

DTX-055: 2005 DWR Contract Art. 55, AR2010-000001 & AR2012-000001 at 153

MWD Wheels Non-SWP Water Through SWP Facilities



4. This Practice of Allocating SWP Transportation Costs to Transportation Rates Pre-dates the Unbundling

This Practice of Allocating SWP Transportation Costs to Transportation Rates Pre-dates Unbundling

The 1997 Wheeling Rate

January 1997: MWD's Board voted to adopt a wheeling rate

42238

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

RESOLUTION 8520

RESOLUTION OF THE BOARD OF DIRECTORS OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA FIXING AND ADOPTING WHEELING RATES

WHEREAS, The Metropolitan Water District of Southern California (Metropolitan) owns and operates a water conveyance system including the Colorado River Aqueduct, pumping plants, reservoirs, water treatment facilities, pipelines and control structures and associated facilities for the transport, storage and delivery of water to its member public agencies;

WHEREAS, Metropolitan has a contract with the State of California which requires Metropolitan, on a take or pay basis, to pay a proportionate share of the costs of constructing and operating the State Water Project (SWP), which consists of Oroville Dam and Reservoir, the Harvey O. Banks Pumping Plant, the California Aqueduct and its pumping plants, reservoirs and associated facilities for conserving, storing and transporting water to Metropolitan's service area;

WHEREAS, under its contract with the State of California, Metropolitan has an entitlement to water and associated transportation thereof by the SWP and the right to use SWP transport facilities for its own purposes, subject to certain conditions. Metropolitan's conveyance system, and its rights to the use of the SWP conveyance system are hereafter referred to as the "conveyance system";

WHEREAS, Metropolitan has in the past wheeled water on an emergency, ad hoc basis pursuant to negotiated agreements, and continues to receive inquiries regarding the use of its facilities, or its rights to use SWP facilities, to transport water not owned or controlled by Metropolitan ("wheeling");

WHEREAS, Water Code Sections 1810-1814 provide, in part, that no public agency may deny a bona fide transferor of water the use of a water conveyance facility owned by the public agency to the extent it has unused capacity, subject to certain conditions, including that the statute applies to only 70 percent of the unused capacity;

75

MWDRECORD002446

1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013

DTX-680: Resolution 8520, AR2010-002446 & AR2012-002446

This Practice of Allocating SWP Transportation Costs to Transportation Rates Pre-dates Unbundling

The 1997 Wheeling Rate

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

RESOLUTION 8520

RESOLUTION OF THE BOARD OF DIRECTORS OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA FIXING AND ADOPTING WHEELING RATES

control structures and associated facilities for the transport, storage and delivery of water

NOW THEREFORE, the Board of Directors of the Metropolitan Water District of Southern California does hereby resolve, find, determine and order as follows:

Section 1. That the Board of Directors of Metropolitan hereby fixes and adopts wheeling charges effective January 15, 1997.

owned or controlled by Metropolitan ("wheeling");

WHEREAS, Water Code Sections 1810-1814 provide, in part, that no public agency may deny a bona fide transferor of water the use of a water conveyance facility owned by the public agency to the extent it has unused capacity, subject to certain conditions, including that the statute applies to only 70 percent of the unused capacity;

75

MWDRECORD002446

1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013

DTX-680: Resolution 8520, AR2010-002446 & AR2012-002446

This Practice of Allocating SWP Transportation Costs to Transportation Rates Pre-dates Unbundling

January 1997: MWD's Board of Directors voted to adopt a wheeling rate – same rate regardless of distance water is transported and source

- Board developed rate in consultation and cooperation with MWD's Member Agencies

MINUTES

REGULAR MEETING OF THE

BOARD OF DIRECTORS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

JANUARY 14, 1997

42213
District
third fl
the City
January

12:43 p

42214
Gary A. Morse

42215
Directo

42216
present
Brick,
Herman,
Mason,
Murph,
Watton,

Griffen
and Wei

RESOLUTION OF THE BOARD OF DIRECTORS OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA FIXING AND ADOPTING WHEELING RATES (Resolution 8520)

The Chair called for a vote on the motion to adopt Resolutions 8520 and 8521.

The following is a record of the vote on the motion:

Ayes: Total 72,932 votes.

Noes: Total 13,402 votes.

MWDRECORD002490

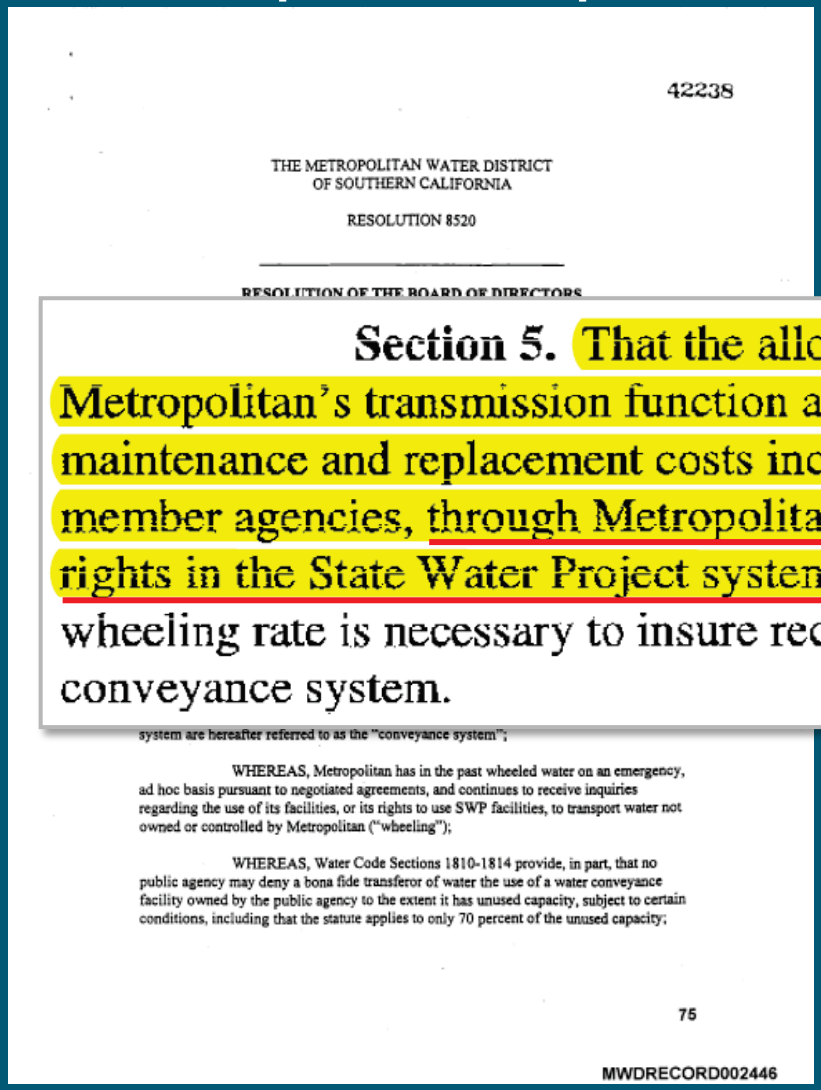
DTX-026: 1/14/97 MWD Bd. Minutes, AR2010-002490 & AR2012-002490 at 2497-99

This Practice of Allocating SWP Transportation Costs to Transportation Rates Pre-dates Unbundling

While the 1997 Wheeling Rate was in place, it included MWD's SWP transportation expenses

1997 Wheeling Rate included:

- MWD's transportation costs under the SWP Contract



42238

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

RESOLUTION 8520

RESOLUTION OF THE BOARD OF DIRECTORS

Section 5. That the allocation of costs as shown in Attachment 1 to Metropolitan's transmission function accurately reflects the capital, operation, maintenance and replacement costs incurred by Metropolitan to convey water to its member agencies, through Metropolitan's conveyance system, including Metropolitan's rights in the State Water Project system, and that including those costs in Metropolitan's wheeling rate is necessary to insure recovery of fair compensation for the use of that conveyance system.

system are hereafter referred to as the "conveyance system";

WHEREAS, Metropolitan has in the past wheeled water on an emergency, ad hoc basis pursuant to negotiated agreements, and continues to receive inquiries regarding the use of its facilities, or its rights to use SWP facilities, to transport water not owned or controlled by Metropolitan ("wheeling");

WHEREAS, Water Code Sections 1810-1814 provide, in part, that no public agency may deny a bona fide transferor of water the use of a water conveyance facility owned by the public agency to the extent it has unused capacity, subject to certain conditions, including that the statute applies to only 70 percent of the unused capacity;

75

MWDRECORD002446

DTX-680: Resolution 8520, AR2010-002446 & AR2012-002446 at 2449

This Practice of Allocating SWP Transportation Costs to Transportation Rates Pre-dates Unbundling

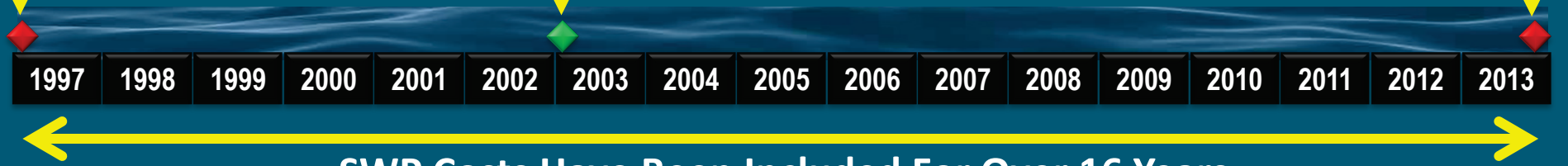
The Rate was assessed on any Member Agency engaged in a wheeling transaction from Jan. 15, 1997 until MWD's unbundled rates took effect in 2003

1997 Wheeling Rate included:

- MWD's transportation costs under the SWP Contract

Rate Elements San Diego now challenges include:

- MWD's transportation costs under the SWP Contract



SWP Costs Have Been Included For Over 16 Years

DTX-680: Resolution 8520, AR2010-002446 & AR2012-002446 at 2449

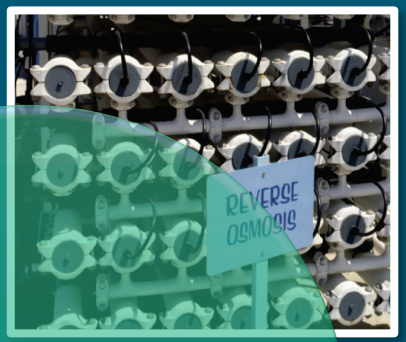
5. MWD Reasonably Allocates the Water Stewardship Rate to Its Transportation Rates

Water Stewardship Rate

Local Resource Programs

Conservation

Desalination



DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11492; DTX-110: 2012 COS, AR2012-016594 at 16697

Allocation of Water Stewardship Rate to Transportation Rather than Supply Is Reasonable

1. WSR Reduces Transportation Costs
2. WSR Frees Up Capacity for Transportation and Facilitates Wheeling
3. Placing WSR In Supply Would Permit Users That Only Use Transportation Services To Avoid These Costs

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519-20, 6775; DTX-087: 4/5/10 MWD Resp. to Pub. Comments, AR2010-011305 & AR2012-011305 at 11307-308; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11511, 11515; DTX-019: 1996 IRP Vol. 1, AR2010-001406 & AR2012-001406 at 1504, 1506

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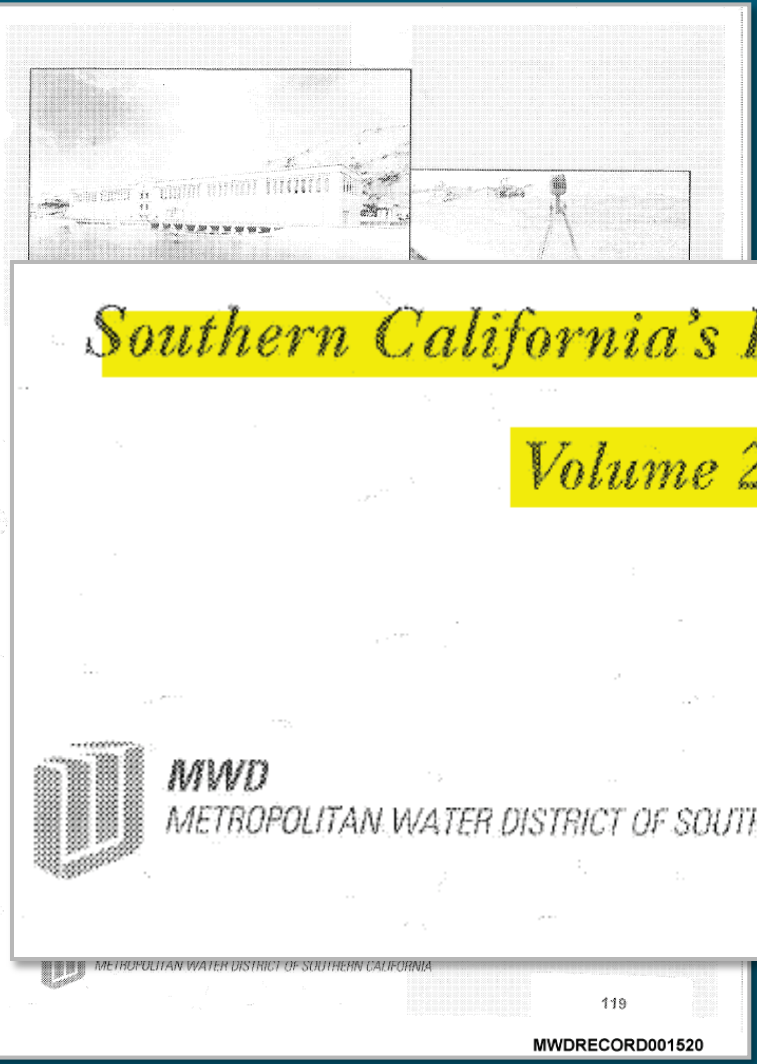
DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519-20, 6775; DTX-087: 4/5/10 MWD Resp. to Pub. Comments, AR2010-011305 & AR2012-011305 at 11307-308; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11511, 11515DTX-019: 1996 IRP Vol. 1, AR2010-001406 & AR2012-001406 at 1504, 1506

MWD's March 1996 Integrated Water Resources Plan Demonstrates that the Economic Benefits of Local Water Management Programs Reduce Infrastructure Requirements



Southern California's Integrated Water Resources Plan

Volume 2: Metropolitan's System Overview

Report Number 1101

March 199(

MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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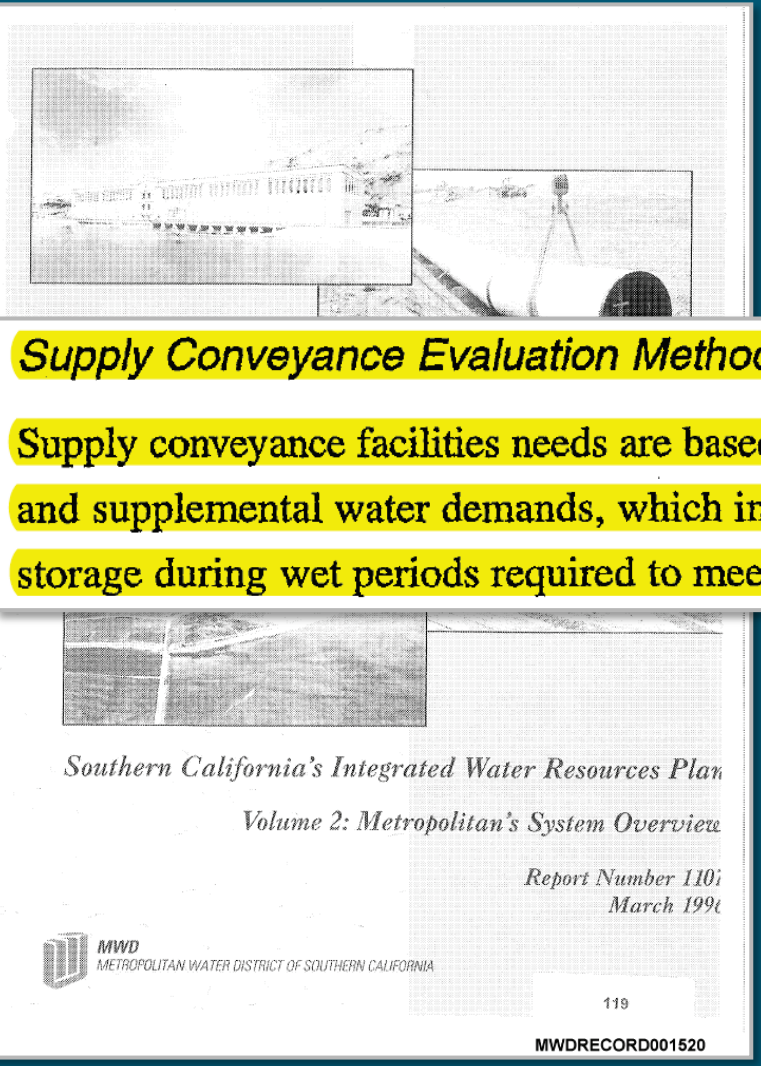
MWDRECORD001520

DTX-020: 1996 IRP Vol. 2, AR2010-001520 & AR2012-001520

MWD's March 1996 Integrated Water Resources Plan Demonstrates that the Economic Benefits of Local Water Management Programs Reduce Infrastructure Requirements



Supply Conveyance Evaluation Methodology

Supply conveyance facilities needs are based on two major factors: the availability of water supplies and supplemental water demands, which include consumptive demands as well as deliveries to storage during wet periods required to meet dry year demands. In addition, other factors that are

Southern California's Integrated Water Resources Plan

Volume 2: Metropolitan's System Overview

Report Number 110
March 199

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METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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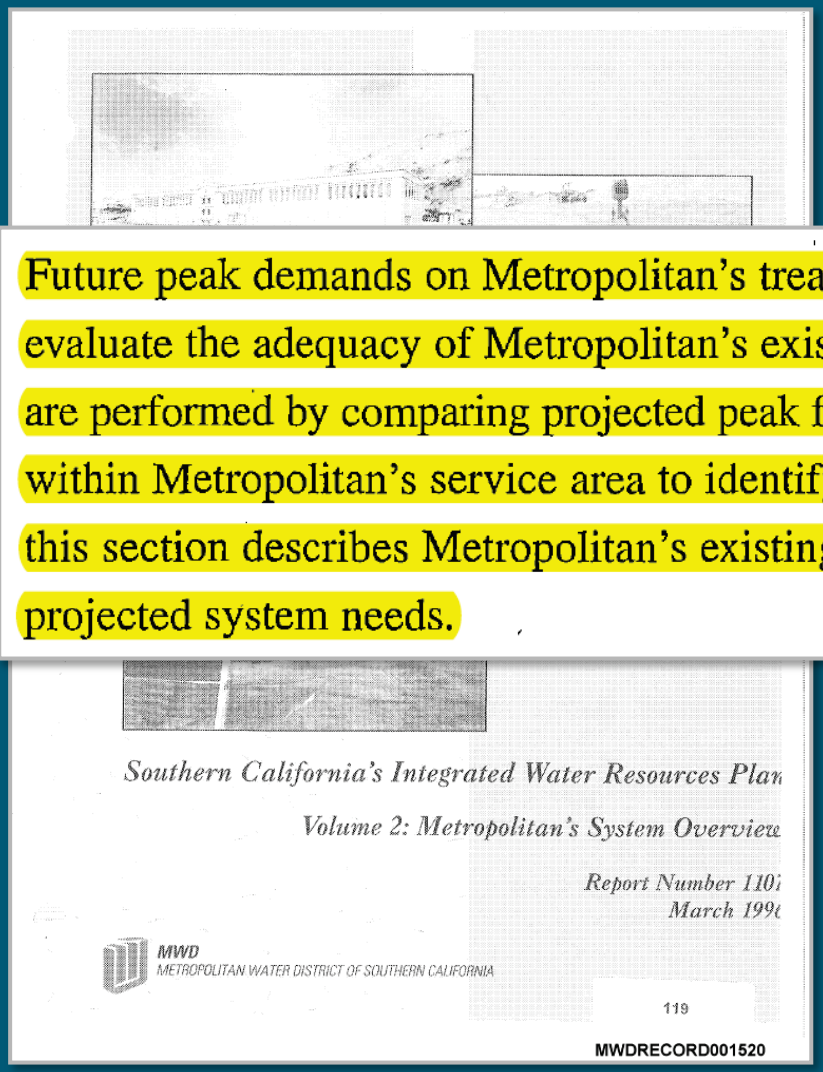
MWDRECORD001520

DTX-020: 1996 IRP Vol. 2, AR2010-001520 & AR2012-001520 at 1590

MWD's March 1996 Integrated Water Resources Plan Demonstrates that the Economic Benefits of Local Water Management Programs Reduce Infrastructure Requirements



Future peak demands on Metropolitan's treatment and distribution system are projected and used to evaluate the adequacy of Metropolitan's existing treatment and distribution system. The analyses are performed by comparing projected peak flows to existing pipeline and treatment plant capacities within Metropolitan's service area to identify where capacity deficiencies exist. The remainder of this section describes Metropolitan's existing distribution system, peak demands on facilities, and projected system needs.

Southern California's Integrated Water Resources Plan

Volume 2: Metropolitan's System Overview

Report Number 1107
March 1996

MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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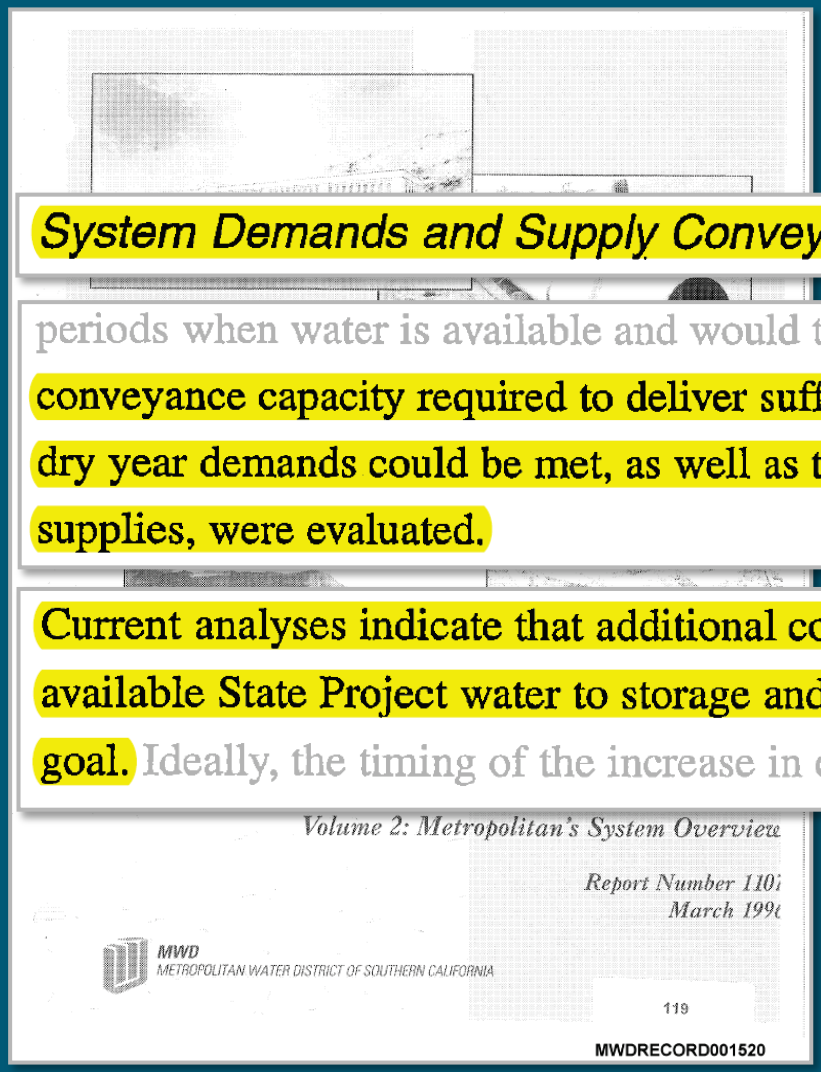
MWDRECORD001520

DTX-020: 1996 IRP Vol. 2, AR2010-001520 & AR2012-001520 at 1592

MWD's March 1996 Integrated Water Resources Plan Demonstrates that the Economic Benefits of Local Water Management Programs Reduce Infrastructure Requirements



System Demands and Supply Conveyance Needs

periods when water is available and would then be available for use later in these dry years. The conveyance capacity required to deliver sufficient water to storage in wet and normal periods so dry year demands could be met, as well as the capacity required in a dry year to deliver available supplies, were evaluated.

Current analyses indicate that additional conveyance is required in the future to reliably deliver available State Project water to storage and meet the regional reliability goal and summer blend goal. Ideally, the timing of the increase in conveyance capacity should follow the timing of

Volume 2: Metropolitan's System Overview

Report Number 110
March 199

MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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MWDRECORD001520

DTX-020: 1996 IRP Vol. 2, AR2010-001520 & AR2012-001520 at 1592

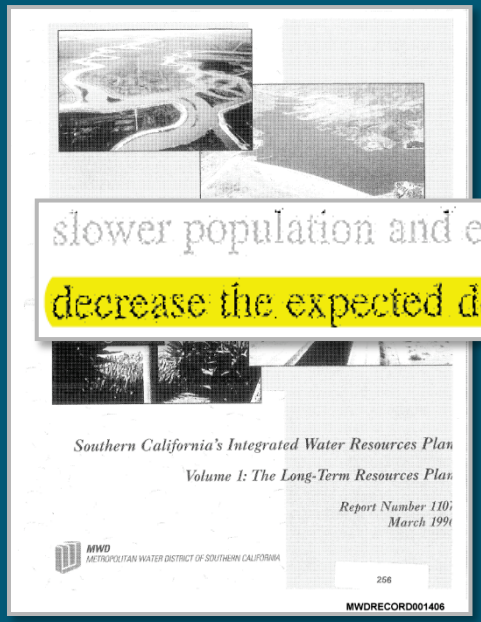
MWD's March 1996 Integrated Water Resources Plan Demonstrates that the Economic Benefits of Local Water Management Programs Reduce Infrastructure Requirements

Table 6-1

Metropolitan's Anticipated Capital Expenditures ($ million)

Description	Escalated Costs Over the Next 10 Years	Escalated Costs Over the Next 25 Years	Total Program Estimate Including Contingencies and Actuals
Supply, Distribution, and Storage Projects			
Regional Water Management Facilities			
Conjunctive Use/Groundwater Storage	175.6	210.1	214.7
Eastside Reservoir Project	1,278.8	1,278.8	1,972.1
Inland Feeder	854.4	854.4	1,027.0
Distribution Facilities			
San Diego Pipeline No. 6	275.2	275.2	324.0
West Valley Interconnection	0.0	8.5	11.2
CPA Conveyance Projects	5.0	808.3	909.6
Treated Water Distribution Facilities	10.8	80.8	210.5

MWD's March 1996 Integrated Water Resources Plan Demonstrates that the Economic Benefits of Local Water Management Programs Reduce Infrastructure Requirements



slower population and economic growth or greater than expected local supply development could decrease the expected demands on Metropolitan's system.

Deferment of Capital Infrastructure

that are not very sensitive to changes in demand. However, projects such as the Central Pool Augmentation Project and the San Diego Pipeline No. 6 were more sensitive to demands. Projects that are mainly driven by demand and that are not needed within the next several years represent opportunities for reassessment if demand conditions change. Projects that are supply driven can

DTX-019: 1996 IRP Vol. 1, AR2010-001406 & AR2012-001406 at 1504, 1506

MWD's March 1996 Integrated Water Resources Plan Demonstrates that the Economic Benefits of Local Water Management Programs Reduce Infrastructure Requirements

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West Valley Interconnection	0.0	8.5	11.2
CPA Conveyance Projects	5.0	808.3	909.6
Treated Water Distribution Facilities	10.8	80.8	210.5

Sensitivity of Projects to a 5% Decrease in Retail Demands

A 5% decrease in retail demands would allow several projects to be delayed. The following list describes projects whose schedules change if retail water demands decrease 5%:

- San Diego No. 6 Pipeline is delayed 4 years to 2006;
- Central Pool Augmentation Conveyance Extension Project is delayed beyond 2021;

DTX-020: 1996 IRP Vol. 2, AR2010-001520 & AR2012-001520 at 1653, 1657

November 21, 1997 Board Letter
Local Resources Program Principles Developed by the Rate Refinement Participants

MWD
METROPOLITAN WA

To: Board

From: for'. Genera

Submitted by: Debra
Planni

Subject: Local
Partici

RECOMMENDATIO

It is recommended that
included as Attachment
proposed program.

EXECUTIVE SUMM

Metropolitan worked w
Resources Program (LF
Force recommends that
as guidelines for definin
principles will help ensu
consistent with the regi
with its member agencie
proposal for your Boar

DETAILED REPORT

In August 1995, your B
Resources Program (LF
applications, your Boar
program rules. Ground
Board, were authorized
finalization of the LRP.
Program agreements to the terms of the proposed LRP were authorized. Those temporary
amendments, principally incorporating the $0 to $250 acre-foot sliding scale incentive, were to be

MWDRECORD2012_002868

7-4

MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

November 21, 1997

To: Board of Directors (Executive Committee--Action)
(Water Planning and Resources Committee--Action)

From: for'. General Manager

Submitted by: Debra C. Man, Chief
Planning and Resources

Subject: Local Resources Program Principles Developed by the Rate Refinement Participants

RECOMMENDATION

It is recommended that the Board of Directors approve the Local Resources Program Principles included as Attachment A to this letter as guidelines for defining administrative rules for the proposed program.

DTX-027: 11/21/97 MWD Bd. Ltr., AR2010-002868 & AR2012-002868 at 2870, 2871

November 21, 1997 Board Letter
Local Resources Program Principles Developed by the Rate Refinement Participants

Local Resources Program (LRP) Principles

To: Board of Directors (Executive Committee--Action)

1. Key goals of the proposed LRP are to:

   a. Assist local projects that improve regional water supply reliability and avoid or defer MWD capital expenditures;

EXECUTIVE SUMMARY

projects. Preference will be given to projects based on the following ranking factors.

with its member agencies to develop LRP administrative rules and will report back with a detailed proposal for your Board's approval.

e. MWD facility benefits - projects that avoid, defer or reduce the cost of MWD's treatment and distribution systems;

Program agreements to the terms of the proposed LRP were authorized. Those temporary amendments, principally incorporating the $0 to $250 acre-foot sliding scale incentive, were to be

MWDRECORD2012_002868

DTX-027: 11/21/97 MWD Bd. Ltr., AR2010-002868 & AR2012-002868 at 2870, 2871

November 21, 1997 Board Letter
Local Resources Program Principles Developed by the Rate Refinement Participants

The principles outlined above are supported by the Rate Refinement Participants for consideration by Metropolitan Water District's ~~Board of Directors~~.

West Basin Municipal Water District

Donald R. Kendall
Calleguas Municipal Water District

Stanley E. Sprague
Municipal Water District of Orange County

Robert R Campbell
San Diego County Water Authority

Foothill Municipal Water District

City of Los Angeles

Donald C Callis
City of Anaheim

City of Long Beach

Las Virgenes Municipal Water District

Metropolitan Water District of Southern California

MWDRECORD002873

DTX-027: 11/21/97 MWD Bd. Ltr., AR2010-002868 & AR2012-002868 at 2870, 2873

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

Metropolitan Water District of Southern Californ

Final Report

Rates and Charges

June 28, 2002

MWDRECORD2012_006463

Metropolitan Water District of Southern California

Final Report

Rates and Charges

June 28, 2002

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

(average use), demand (peak use), and standby (emergency and future growth) related costs.

5.3.2 Benefits

The WSR provides significant benefits including (1) support of a regional approach, and (2) providing a dedicated source of funding for the development of local resources.

Investments in conservation and recycling decrease the region's overall dependence on imported water supplies from environmentally sensitive areas like the Bay-Delta; increase the overall level of water supply reliability in Southern California; reduce and defer system capacity expansion costs; and create available capacity to be used to complete water transfers. Because conservation measures and local resource investments reduce the overall level of dependence on the imported water system, more capacity is available in existing facilities for a longer period of time. The capacity made available by conservation and recycling is open to all system users and can be used to complete water transfers. Similar to public benefit charges in the electric industry, the regional and statewide benefits of demand management programs are assessed to all users of the Metropolitan system, regardless of the source of imported water supply.

By providing a dedicated source of funding for demand management the Board will be able to maintain and, as necessary, increase funding levels for demand management programs. The benefits of demand management programs are recognized by S.B. 60, which requires

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
ENGINEER'S REPORT

4/13/2010 Board Meeting 8-2 Attachment 3, Page 7 of 36

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
ENGINEER'S REPORT

PROGRAM TO LEVY READINESS-TO-SERVE CHARGE,

INCLUDING LOCAL OPTION FOR STANDBY CHARGE,
DURING FISCAL YEAR 2010/11

April 2010

The Me
importe
than 18
include
Metrop

As part
manage
this rep
Metrop
continu
through
the cale
year ba
the RTS
six mor
year 20

Metrop
issued t
charge is levied on parcels of land within certain of Metropolitan's member agencies as a method of collecting part or all of such member agency's RTS charge obligation. The RTS charge will partially pay for the facilities and programs described in this report. The standby charge, if continued within a member agency, will be utilized solely for capital payments and debt service on the capital facilities identified in this report.

METROPOLITAN'S RESPONSE TO INCREASING WATER DEMANDS

To respond to increasing demands for water, Metropolitan and its member agencies collectively examined the available local and imported resource options in order to develop a least-cost plan that meets the reliability and quality needs of the region. The product of this intensive effort was an Integrated Resources Plan (IRP) for achieving a reliable and affordable water supply for Southern California. The major objective of the IRP was to develop a comprehensive water resources plan that ensures (1) reliability, (2) affordability, (3) water quality, (4) diversity of supply, and (5) adaptability for the region, while recognizing the environmental, institutional, and political constraints to resource development. As these constraints change over time, the IRP is periodically revisited and updated by Metropolitan and the member agencies to reflect current conditions. The IRP update is

DTX-090: 4/10 Board Resolution, AR2010-011443 & AR2012-011443 at 11509

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

resource programs and conservation projects. Investments in demand side management programs like conservation, water recycling and groundwater recovery reduce the need to provide additional imported water supplies and help defer the need for additional conveyance, distribution, and storage facilities. A summary of the

member agency-sponsored projects that best help the region achieve its local resource production goals of restoring degraded groundwater resources for potable use and developing recycled supplies. In both instances, the programs provide new water supplies, which help defer the need for additional regional conveyance, distribution and storage facilities.

Combined production from participating recycling and groundwater recovery projects is expected to yield approximately 250,130 acre-feet of water for fiscal year 2010/11 with financial incentive payments of about $39 million. Regional recycling, recovered groundwater, and desalinated seawater production are projected to be about 750,000 acre-feet per year, by year 2025. An estimate of potential benefits as measured by Metropolitan's estimated incentive payments for recycling and groundwater recovery projects is shown in Table 2.

Water Conservation

Metropolitan actively promotes water conservation programs within its service area as a cost-effective strategy for ensuring the long-term reliability of supplies and as a means of reducing the need to expand system conveyance, distribution and treatment capacity. Through the Conservation Credits Program, Metropolitan reimburses local agencies for a share of their costs of implementing conservation projects. Since fiscal year 1990/91, Metropolitan has spent over $268 million in financial incentives to support local conservation projects.

In 1991, Metropolitan agreed to implement conservation "Best Management Practices" (BMPs). By signing the California Urban Water Conservation Council's *Memorandum of Understanding Regarding Urban Water Conservation* (amended March 10, 2004), Metropolitan committed to implement proven and reliable water conserving technologies and practices within its jurisdiction. Based on Metropolitan's IRP, the Conservation Credits Program, in conjunction with plumbing codes and other conservation efforts, has saved over 1,271,000 acre-feet since inception through fiscal year 2008/09. By 2025, it is estimated that conservation practices will save over one million acre-feet per year, reducing Metropolitan's total water requirements by about

15 percent. Conservation is a critical element of Metropolitan's demand management program, effectively increasing the reliability of existing water supplies by lessening the need to import additional water while at the same time deferring the need to expand system capacity. An estimate of the potential benefits of water

repaid over future years. The principal source of revenue for repayment of these bonds is water sales, which is currently Metropolitan's largest source of revenue. In addition, *ad valorem* property taxes provide an additional limited revenue source, which is used to pay pre-1978 voter-approved indebtedness.

Since the passage of Article XIIIA of the California Constitution, Metropolitan has necessarily relied more on water sales revenue than on *ad valorem* property taxes for the payment of debt. Water sales have become the

DTX-090: 4/10 Board Resolution, AR2010-011443 & AR2012-011443 at 11511

Allocation of Water Stewardship Rate to Transportation Rather than Supply Is Reasonable

1. WSR Reduces Transportation Costs
2. WSR Frees Up Capacity for Transportation and Facilitates Wheeling
3. Placing WSR In Supply Would Permit Users That Only Use Transportation Services To Avoid These Costs

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519-20, 6775; DTX-087: 4/5/10 MWD Resp. to Pub. Comments, AR2010-011305 & AR2012-011305 at 11307-308; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11511, 11515; DTX-019: 1996 IRP Vol. 1, AR2010-001406 & AR2012-001406 at 1504, 1506

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

Metropolitan Water District of Southern Californ

Final Report

Rates and Charges

June 28, 2002

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Metropolitan Water District of Southern California

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Rates and Charges

June 28, 2002

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

(average use), demand (peak use), and standby (emergency and future growth) related costs. Only commodity related costs are allocated to the SAR. Therefore, the SAR only pays for as

5.3.2 Benefits

The WSR provides significant benefits including (1) support of a regional approach, and (2) providing a dedicated source of funding for the development of local resources.

Investments in conservation and recycling decrease the region's overall dependence on imported water supplies from environmentally sensitive areas like the Bay-Delta; increase the overall level of water supply reliability in Southern California; reduce and defer system capacity expansion costs; and create available capacity to be used to complete water transfers. Because conservation measures and local resource investments reduce the overall level of dependence on the imported water system, more capacity is available in existing facilities for a longer period of time. The capacity made available by conservation and recycling is open to all system users and can be used to complete water transfers. Similar to public benefit charges in the electric industry, the regional and statewide benefits of demand management programs are assessed to all users of the Metropolitan system, regardless of the source of imported water supply.

source of imported water supply.

By providing a dedicated source of funding for demand management the Board will be able to maintain and, as necessary, increase funding levels for demand management programs. The benefits of demand management programs are recognized by S.B. 60, which requires

Allocation of Water Stewardship Rate to Transportation Rather than Supply Is Reasonable

1. WSR Reduces Transportation Costs
2. WSR Frees Up Capacity for Transportation and Facilitates Wheeling
3. Placing WSR In Supply Would Permit Users That Only Use Transportation Services To Avoid These Costs

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519-20, 6775; DTX-087: 4/5/10 MWD Resp. to Pub. Comments, AR2010-011305 & AR2012-011305 at 11307-308; DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11511, 11515 DTX-019: 1996 IRP Vol. 1, AR2010-001406 & AR2012-001406 at 1504, 1506

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

SB60 Mandate:

Sec. 130.5 [Legislative Findings and Declarations Relating to Conservation]

(a) The Legislature finds and declares all of the following:

(2) It is the intent of the Legislature that the Metropolitan Water District of Southern California expand water conservation, water recycling, and groundwater recovery efforts.

(b) The Metropolitan Water District of Southern California shall place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures.

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

Metropolitan Water District of Southern Californ

Final Report

Rates and Charges

June 28, 2002

MWDRECORD2012_006463

Metropolitan Water District of Southern California

Final Report

Rates and Charges

June 28, 2002

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

(average use), demand (peak use), and standby (emergency and future growth) related costs. Only commodity related costs are allocated to the SAR. Therefore, the SAR only pays for as available conveyance service.

The SAR is an easily understood approach. Like the current water rates, the SAR is a uniform, volumetric per acre-foot rate and is straightforward for both Metropolitan and the member agencies to implement and administer.

5.3 Water Stewardship Rate

acre-foot of water that moves through the Metropolitan system. All system users (member agency or third parties) will pay the same proportional costs for existing and future conservation and recycling investments made by MWD. The WSR is recommended to be $23 per acre-foot in fiscal year 2002/03. The WSR will be set on an annual basis by the Board under its existing authority to levy rates and charges.

By providing a dedicated source of funding for demand management the Board will be able to maintain and, as necessary, increase funding levels for demand management programs. The benefits of demand management programs are recognized by S.B. 60, which requires Metropolitan to increase its investments in conservation, watershed management, and other local resources. Because Metropolitan is mandated under S.B. 60 to fund water supply programs like conservation and recycling it is appropriate to recover the costs of supporting these programs on all water moved through the system.

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6519

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Office of the General Manager

Date: April 5, 2012

To: Board of Directors
Member Agency Managers

From: General Manager Jeffrey Kightlin
General Counsel Marcia Scully

Subject: Response to SDCWA Report on C

At the public hearing on March 12, 2012, the San
provided a report entitled "San Diego County Wat
Service Rate Review" (FCS Review). Our respon

***The Water Authority Misconstrues Metropolitan
Setting***

Overall, the FCS Review appears to be based on n
the system's functionality informs the rate setting.

The FCS Review Fails to Appreciate the

Metropolitan's system draws on diverse supply so
distributes water in six counties, and serves an are
the most recent study of the system, the 2007 Inte
flexibility as a key component of overall reliability
the ability to respond to short-term changes in regi
requirements, and member agency demands. And
maintain partial to full water supply deliveries dur
Metropolitan's integrated conveyance, distribution
reliability. It is fair and reasonable, therefore, to e
and maintaining these assets because all member a

Operational flexibility has been achieved by creati
integrating the State Water Project (SWP) and the
with the in-basin distribution system. This integra
from the SWP and the CRA with a diverse portfol
including the Central Valley groundwater storage
flexible storage capacity in Castaic Lake and Lake
Valley (DWCV) Advanced Delivery account, in-b
and Lake Mathews, and in-basin groundwater Cor
network allows Metropolitan to move supplies thr
and operational needs, and is shown in **Figure 1:**
Portfolio.

[1] 2007 Integrated Area Study, Report No. 1317, pg 2-10.

MWDRECORD2012_016583

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Office of the General Manager

Date: April 5, 2012

To: Board of Directors
Member Agency Managers

From: General Manager Jeffrey Kightlinger
General Counsel Marcia Scully

Subject: Response to SDCWA Report on Cost of Service Review

DTX-109: 4/5/2012 MWD Response to SDCWA COS Report AR2012-016583 at 16590

The Water Stewardship Rate Is Appropriately Allocated to Transportation

Water Stewardship Rate

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

Date: April 5, 2012

To: Board of Directors
Member Agency Managers

From: General Manager Jeffrey Kightlinger
General Counsel Marcia Scully

Subject: Response to SDCWA Report on Cost of Service Review

Similar to the public benefit charges implemented in the electric and natural gas industries in California after "open access" (customer choice of supplier) was implemented, the regional benefits of demand management are assessed to all users of the Metropolitan system, regardless of the source of the imported water supply. Otherwise, member agencies could avoid providing revenues to support regional demand management activities through wheeling while still being able to realize the benefits of the program to fund local activities.

§§ 1810-1814.) Nor is it consistent with fairness and reason. Metropolitan's rates are designed to ensure that agencies that receive the same services pay the same amount. Exempting wheeling transactions from transportation costs would mean that agencies receiving the same service would pay different amounts. Such a result is neither fair nor reasonable. Wheeling water should not jeopardize Metropolitan's robust and flexible supply and delivery

flexible storage capacity in Castaic Lake and Lake Perris, Lake Mead storage, the Desert Water/Coachella Valley (DWCV) Advanced Delivery account, in-basin surface storage in Diamond Valley Lake (DVL) and Lake Mathews, and in-basin groundwater Conjunctive Use Programs. This integrated, regional network allows Metropolitan to move supplies throughout the system in response to supply availability and operational needs, and is shown in **Figure 1: Metropolitan Facilities, Supplies and Storage Portfolio**.

[1] 2007 Integrated Area Study, Report No. 1317, pg 2-10.

MWDRECORD2012_016583

DTX-109: AR2012-016583 at 16590

6. Raftelis Review Confirms Reasonableness of MWD's Cost of Service and Rate Setting Methodology

Re: Independent Review of FY 2010/11 Cost of Service and Rate Setting Process

Dear Mr. Thomas:

Raftelis Financial Consultants, Inc. ("RFC") is pleased to submit this Independent Review Report to the Metropolitan Water District of Southern California ("MWD").

Metropolitan Water District of Southern California

Independent Review of
FY 2010/11 Cost of Service
and Rate Setting Process

Final Report
April 6, 2010

RFC
RAFTELIS FINANCIAL CONSULTANTS, INC.

1) The 2010 COS and rate methodology is reasonable, consistent with California law, specifically Government Code Section 54999.7 (requiring a COS study every ten years), and consistent with § 133 and 134 of the Metropolitan Water District Act (requiring the levying of rates sufficient to cover costs) and §4301 of the District's Administrative Code (requiring rates sufficient to cover costs and reflecting the costs of the District's major service functions).

2) The 2010 COS and rate methodology is consistent with water industry best practices, and complies with COS and rate guidelines in the American Water Works Association's ("AWWA") Manual M-1, *Principles of Water Rates, Fees, and Charges.*

3) The 2010 proposed rates have been developed consistent with Board policies and, more specifically, with the 2001 Rate Structure Framework.

4) The 2010 COS is accurate and consistent with the 2001 COS.

Very truly yours,
RAFTELIS FINANCIAL CONSULTANTS, INC.

George A. Raftelis

George Raftelis, CPA
Chief Executive Officer

Plan. As a result, the Tier 1 cutoff would need to be reestablished. The Tier 1 rate would reflect the blended COS for SWP and CRA, while Tier 2 could still reflect the cost of water transfers.

II. Introduction

The Metropolitan Water District of Southern California ("MWD") began a strategic planning process in July 1998 to address the evolving needs of its 27 member agencies[3] and their retailers as they continued to provide a high quality, reliable supply of affordable water for their residents. The MWD Board of Directors ("Board") was involved in the strategic planning process for a year and a half and developed the Rate

In early 2010, MWD engaged RFC to independently review whether the proposed 2010 rates were still consistent with the Rate Structure Framework. RFC also evaluated the COS and rate methodology's consistency with water industry best practices, such as the guidelines in the American Water Works Association's ("AWWA") Manual M-1, *Principles of Water Rates, Fees, and Charges*. The review process included examining the 2010 model for accuracy and consistency with the 2001 model and the identification of potential opportunities for improving MWD's COS and rate structure.

common interests was *"Cost Allocation and Rate Structure."* In determining the most appropriate COS and rate structure, a set of pricing objectives, or guiding rate principles, was developed. These guiding rate principles defined MWD's Rate Structure Framework by which various COS and rate-setting methodologies could be evaluated.

[3] Currently MWD has 26 member agencies.

MWDRECORD2012_011314

for these agencies to reduce their usage of the MWD system during peak demand times. The last rate design element is the RTS charge. This charge relates to the third category of water service – standby service or emergency storage. The RTS charge is allocated to member agencies based on each agency's share of a ten-year rolling average of all firm deliveries.

In both full-service raw water and full-service treated water, all rate components and charges apply including the SAR, WSR, SPR, Tier 1, Tier 2, RTS, and the capacity charge. The only difference between full-service raw water and full-service treated water is that treated water pays for the associated cost for treatment. In wheeling service, the SAR, WSR, RTS, and capacity charge apply. The logic behind wheeling service paying

MWD 2010 COS and rate methodology is consistent with California law, specifically Government Code Section 54999.7, which requires a COS study be conducted every 10 years. MWD conducts a COS on an annual basis. The 2010 COS and rate methodology is consistent with § 133 and 134 of the Metropolitan Water District Act and §4301 of the District's Administrative Code. Section 133 states that MWD can set the rates of water and 134 states that the rates can be sufficient to cover cost associated with operating the district as long as the rates are uniform for like classes of service throughout the district. Lastly, the District's Administrative Code §4301 requires rates and charges to be sufficient to cover cost and be reflective of MWD's major service functions, which include Supply, Conveyance, Power, Storage, Distribution, and Treatment, to the greatest degree practicable.

MWDRECORD2012_011321

DTX-088: 2010 Raftelis Report, AR2010-011309 & AR2012-011309 at 11314, 11321

for these agencies to reduce their usage of the MWD system during peak demand times. The last rate design element is the RTS charge. This charge relates to the third category of water service – standby service or emergency storage. The RTS charge is allocated to

1) Reviewing whether the 2010 COS and rate methodology is reasonable and consistent with California law, Metropolitan Water District Act, and District Administrative Code.

MWD 2010 COS and rate methodology is consistent with California law, specifically Government Code Section 54999.7, which requires a COS study be conducted every 10 years. MWD conducts a COS on an annual basis. The 2010 COS and rate methodology is consistent with § 133 and 134 of the Metropolitan Water District Act and §4301 of the District's Administrative Code. Section 133 states that MWD can set the rates of water and 134 states that the rates can be sufficient to cover cost associated with operating the district as long as the rates are uniform for like classes of service throughout the district. Lastly, the District's Administrative Code §4301 requires rates and charges to be sufficient to cover cost and be reflective of MWD's major service functions, which include Supply, Conveyance, Power, Storage, Distribution, and Treatment, to the greatest degree practicable.

DTX-088: 2010 Raftelis Report, AR2010-011309 & AR2012-011309 at 11321

2) Reviewing whether the 2010 COS and rate methodology is consistent with water

***2) Reviewing whether the 2010 COS and rate methodology is consistent with water industry best practices, and complies with COS and rate guidelines in the AWWA Manual M-1,* Principles of Water Rates, Fees, and Charges.**

MWD's 2010 COS and rate methodology follows the process as prescribed by AWWA's Manual M-1, *Principles of Water Rates, Fees, and Charges.* Specifically, MWD's methodology is consistent with M-1's four step process: 1) development of revenue requirements, 2) identification of service function costs, 3) classification of costs, and 4) allocation of costs to rate design elements.

- Statement of common interests
- Rate structure principles

The 2000 letter from the member agencies presented a proposed Rate Structure Framework which supported the Statement of Common Interests as discussed in Section III. When RFC went through the COS and rate study process in 1998 it developed a rate structure consistent with the Rate Structure Framework. A chart detailing how the rate structure supports, clarifies, or meets the Statement of Common Interests and Rate Structure Framework is provided in Appendix A. Based upon our review of this chart, the current rate structure continues to address the Statement of Common Interests and Rate Structure Framework. However, should the Board's Statement of Common Interests and Rate Structure Framework change, adjustments to the rate structure may be required.

DTX-088: 2010 Raftelis Report, AR2010-011309 & AR2012-011309 at 11322

2) Reviewing whether the 2010 COS and rate methodology is consistent with water industry best practices, and complies with COS and rate guidelines in the AWWA Manual M-1, **Principles of Water Rates, Fees, and Charges.**

MWD's 2010 COS and rate methodology follows the process as prescribed by AWWA's Manual M-1, *Principles of Water Rates, Fees, and Charges.* Specifically, MWD's

3) Reviewing whether 2010 proposed rates have been developed consistently with Board policies, and more specifically, with the 2001 Rate Structure Framework.

The 2000 letter from the member agencies presented a proposed Rate Structure Framework which supported the Statement of Common Interests as discussed in Section III. When RFC went through the COS and rate study process in 1998 it developed a rate structure consistent with the Rate Structure Framework. A chart detailing how the rate structure supports, clarifies, or meets the Statement of Common Interests and Rate Structure Framework is provided in Appendix A. Based upon our review of this chart, the current rate structure continues to address the Statement of Common Interests and Rate Structure Framework. However, should the Board's Statement of Common Interests and Rate Structure Framework change, adjustments to the rate structure may be required.

DTX-088: 2010 Raftelis Report, AR2010-011309 & AR2012-011309 at 11322

Metropolitan Water District of Southern California

4) Reviewing whether the 2010 COS is accurate and consistent with the 2001 model.

In reviewing the 2010 model, RFC performed two tasks to ensure its accuracy and completeness. The first task was to check the accuracy of the model, and the second task was to check for consistency with the 2001 model. To evaluate accuracy, RFC spot-checked formulas throughout the model. RFC also checked the revenue requirements with the proposed budget for FY 2010/11. The allocation bases and the data sources for the model were also checked. After the 2010 model was examined for accuracy and completeness, the 2010 model was then checked for consistency with the 2001 model. The 2010 model has followed the same structure as the 2001 model, but includes some modifications to allocation factors. These modifications should be expected, given changes in growth, member agencies peaking, hydrological conditions, and other factors.

revenue. By looking at this, MWD can address the issues of increased uncertainty in the future and the reality of revenue instability.

Three potential ways for MWD to do this are to maintain the ad valorem property tax rate, develop a fixed revenue for the SAR, or expand the RTS charge and the capacity charge to include related O&M expenses.

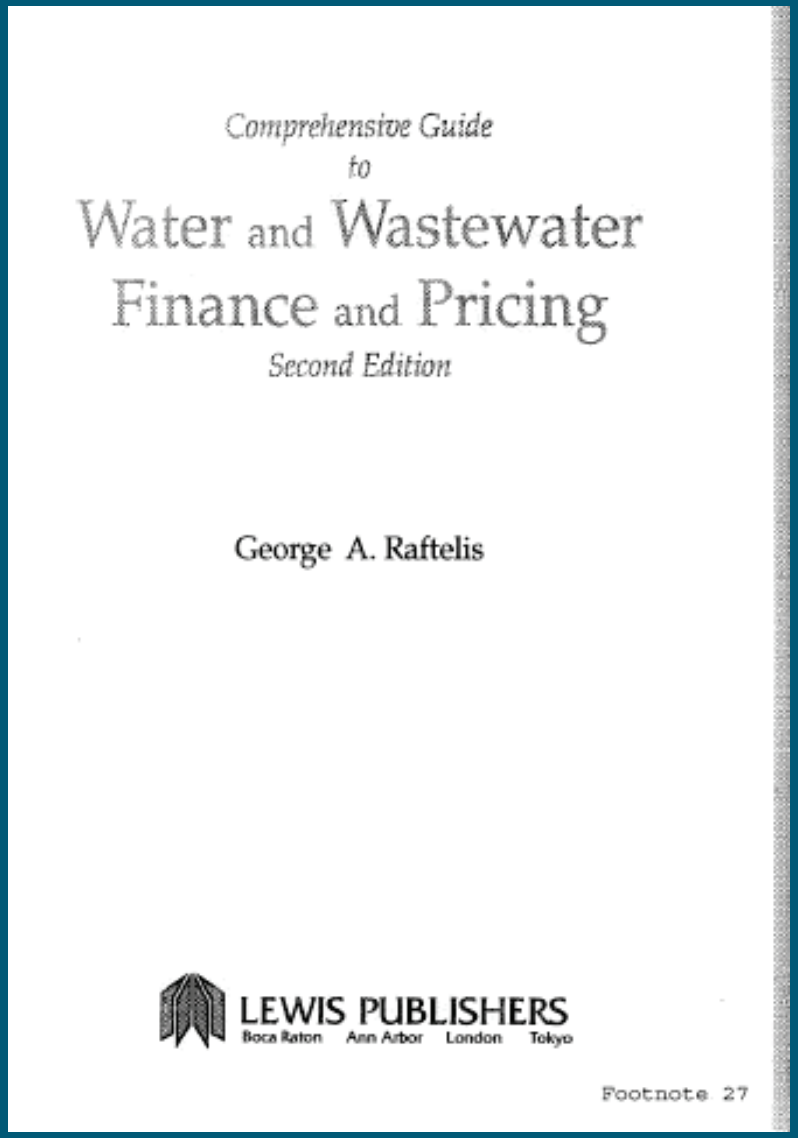
Currently, MWD has statutory authority and voter authorization to collect a portion of its revenues through ad valorem tax assessments on property within its service territory. Since FY 1990/91, Section 124.5 of the MWD Act limits property tax revenues, and thereby the tax levy, to the total needed to pay annual debt service on MWD general

MWDRECORD011323

DTX-088: 2010 Raftelis Report, AR2010-011309 & AR2012-011309 at 11323

7. San Diego's Documents Do Not Undermine the Reasonableness of MWD's Rates

SDCWA: Raftelis Guide to Water and Wastewater Finance and Pricing



Comprehensive Guide
to
Water and Wastewater
Finance and Pricing
Second Edition

George A. Raftelis

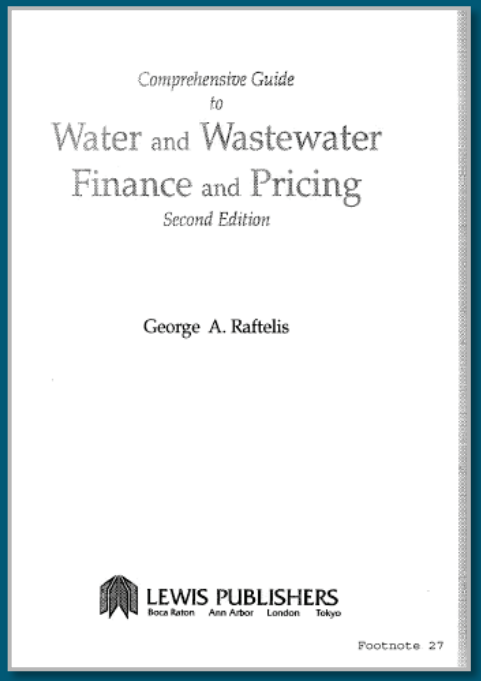
LEWIS PUBLISHERS
Boca Raton Ann Arbor London Tokyo

Footnote 27

DTX-134: Raftelis Textbook, AR2012-016288_5282 at 5291

SDCWA: Raftelis Guide to Water and Wastewater Finance and Pricing

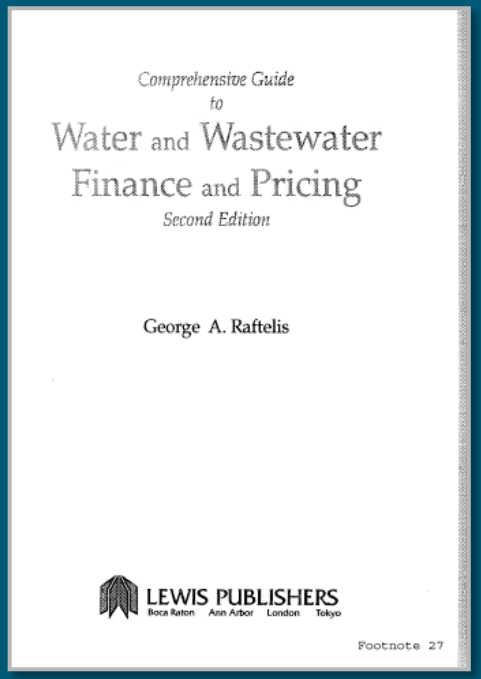
- "Raftelis had already conceded—in his textbook on water rates—that costs 'associated with the source of water supply,' including 'water right purchases,' should be attributed to supply rather than transportation."
  SDCWA Pretrial Brief at 16 citing SDCWA2010-2012_00000907 at 00001090-91



- *Source of supply:* operating and capital costs associated with the source of water supply (reservoir construction and maintenance costs, water right purchases, supply development costs, conservation costs, etc.)

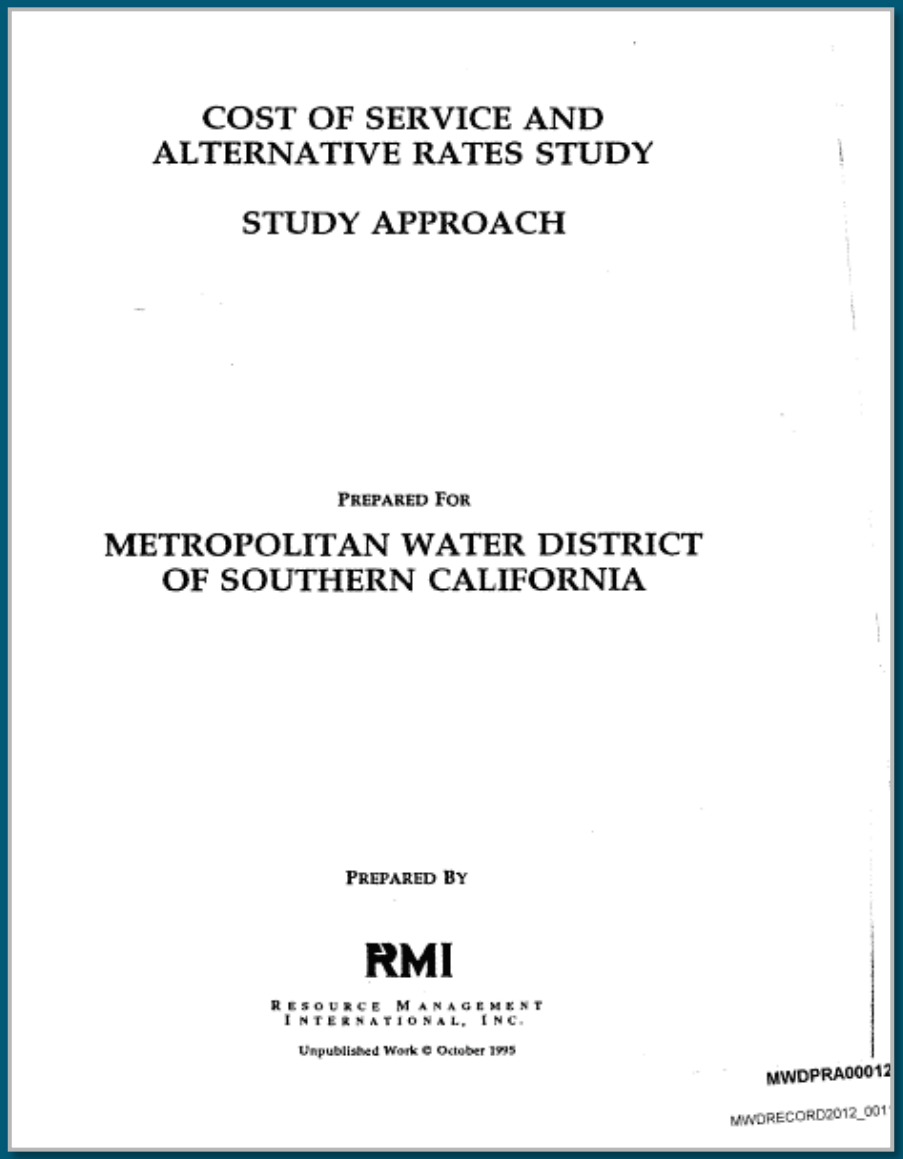
DTX-134: Raftelis Textbook, AR2012-016288_5282 at 5291

MWD: The Raftelis Guide to Water and Wastewater Finance and Pricing Supports MWD's Cost Allocations



- *Source of supply:* operating and capital costs associated with the source of water supply (reservoir construction and maintenance costs, water right purchases, supply development costs, conservation costs, etc.)
- *Pumping and conveyance:* costs associated with pumping raw water from the source of supply and transferring it through a piping network for treatment
- *Transmission:* costs associated with transporting water from the point of treatment through a major trunk to major locations within the service area
- *Distribution:* costs associated with the smaller local service distribution mains transporting water to specific locations within the service area; water storage costs are normally considered a part of distribution costs

SDCWA: October 1995 RMI Cost of Service and Alternative Rates Study



COST OF SERVICE AND
ALTERNATIVE RATES STUDY

STUDY APPROACH

PREPARED FOR

METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

PREPARED BY

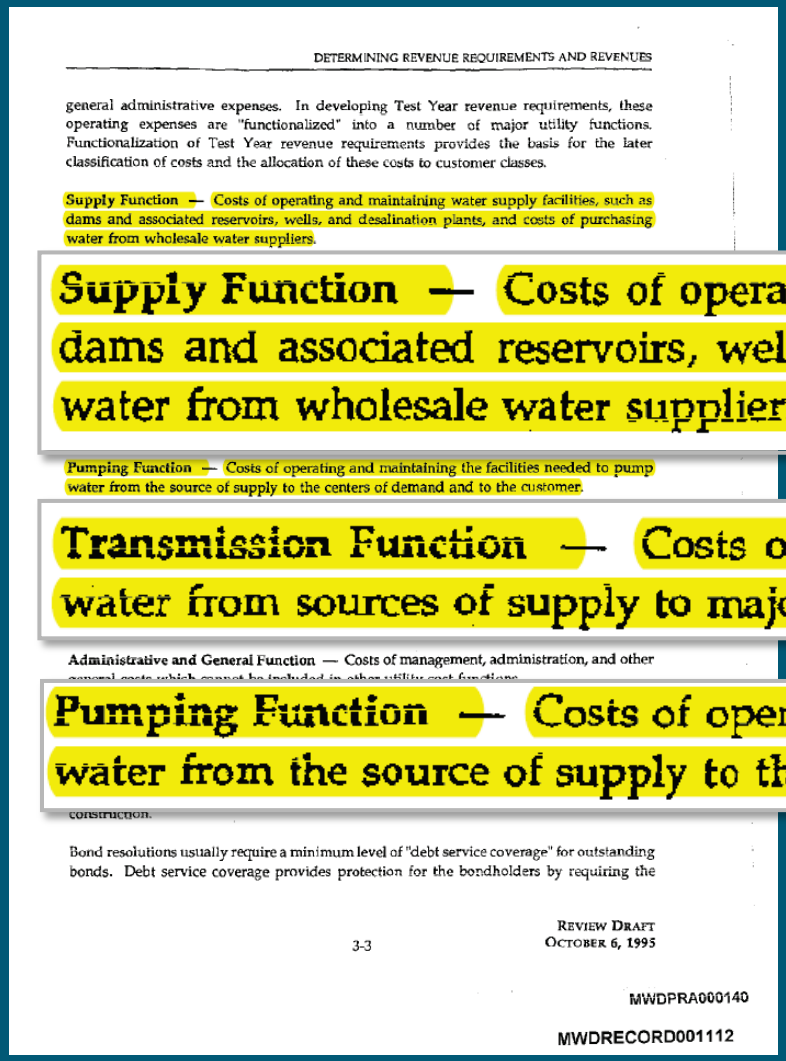
RMI

RESOURCE MANAGEMENT
INTERNATIONAL, INC.

- SWP "costs should be allocated to 'Water Supply and Purchases of Water,' not to transportation and the wheeling rate."
  SDCWA Pretrial Brief at 13 citing AR2010-001101 at 001104 and 001112

DTX-013: Oct. 1995 RMI Study, AR2010-001101 & AR2012-001101 at 1104, 1112

MWD: The October 1995 RMI Assessment Supports MWD's Cost Allocations



DETERMINING REVENUE REQUIREMENTS AND REVENUES

general administrative expenses. In developing Test Year revenue requirements, these operating expenses are "functionalized" into a number of major utility functions. Functionalization of Test Year revenue requirements provides the basis for the later classification of costs and the allocation of these costs to customer classes.

Supply Function — Costs of operating and maintaining water supply facilities, such as dams and associated reservoirs, wells, and desalination plants, and costs of purchasing water from wholesale water suppliers.

Pumping Function — Costs of operating and maintaining the facilities needed to pump water from the source of supply to the centers of demand and to the customer.

Transmission Function — Costs of operating and maintaining the aqueducts to move water from sources of supply to major centers of demand.

Administrative and General Function — Costs of management, administration, and other

construction.

Bond resolutions usually require a minimum level of "debt service coverage" for outstanding bonds. Debt service coverage provides protection for the bondholders by requiring the

3-3

REVIEW DRAFT
OCTOBER 6, 1995

MWDPRA000140

MWDRECORD001112

- RMI does not include **transportation-related SWP costs** in MWD's "supply function."

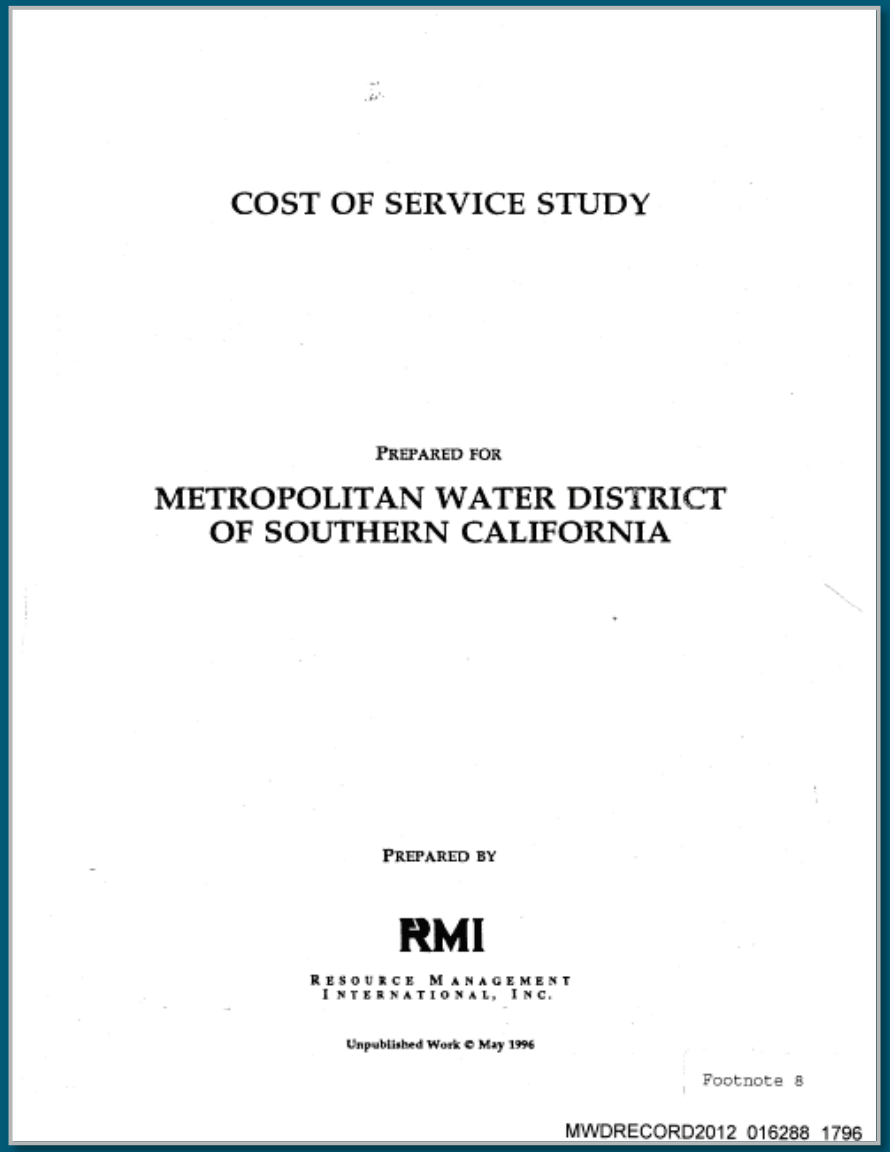
Supply Function — Costs of operating and maintaining water supply facilities, such as dams and associated reservoirs, wells, and desalination plants, and costs of purchasing water from wholesale water suppliers.

Transmission Function — Costs of operating and maintaining the aqueducts to move water from sources of supply to major centers of demand.

Pumping Function — Costs of operating and maintaining the facilities needed to pump water from the source of supply to the centers of demand and to the customer.

DTX-013: Oct. 1995 RMI Study, AR2010-001101 & AR2012-001101 at 1112

SDCWA: 1996 RMI Cost of Service Study



COST OF SERVICE STUDY

PREPARED FOR

METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

PREPARED BY

RMI

RESOURCE MANAGEMENT
INTERNATIONAL, INC.

Unpublished Work © May 1996

Footnote 8

MWDRECORD2012 016288 1796

- Classifying SWP costs as "purchase of water" means all SWP costs should be allocated to "supply."

DTX-133: 1996 RMI COS Study, AR2012-016288_1796

MWD: The 1996 RMI Cost of Service Study Supports MWD's Cost Allocations

specific to their own situation. In the functionalization process, the utility's budget or accounting data is reorganized into functional accounts to provide a consistent basis for the

Source of Supply Function — Source of supply costs include the costs of operating and maintaining water source facilities, such as dams and associated reservoirs, wells, and desalination plants, and costs of purchasing water from wholesale water suppliers.

Transmission Function — Transmission costs consist of the costs of operating and maintaining the aqueducts to move water from sources of supply to major centers of demand.

Distribution Function — Distribution costs consist of the costs of operating and maintaining the distribution pipelines which deliver water from the major aqueducts to storage facilities, to treatment plants, and to customer service connection points.

Distribution Function — Distribution costs consist of the costs of operating and maintaining

For this study insufficient information existed to disaggregate many costs into the transmission and distribution functions. Consequently, transmission and distribution were considered using one joint function, the **Transmission/Distribution** function.

Pumping Function — Pumping costs consist of costs of operating and maintaining the facilities needed to pump water from the source of supply to the centers of demand and to the customer.

SDPRA0260531

DTX-133: 1996 RMI COS Study, AR2012-016288_1796 at 1874

MWD: The 1996 RMI Cost of Service Study Supports MWD's Cost Allocations

PLANT IN-SERVICE AND CWIP

Although not a component of test year revenue requirements, plant in-service and CWIP data are important components of the functionalization process and provide a basis for functionalizing plant-related revenue requirements. Plant in-service and CWIP were functionalized based on a line item by line item review of Metropolitan's accounting data and discussions with Metropolitan's staff. These expenditures were generally functionalized to Source of Supply, Transmission/Distribution, Treatment, Storage, and Other. Where plant in-service or CWIP expenditures existed that could not be specifically assigned to these functional categories, they were prorated across all of the functional categories.

Tables 10 and 11 provide summary information on the functionalization of plant in-service and CWIP accounts, respectively. Appendix III provides a detailed listing of the functionalized CWIP accounts.

DIVISIONAL BUDGETS

STATE WATER PROJECT

Metropolitan pays SWP costs on the basis of billings from the Department of Water Resources (DWR). These expenses were functionalized to either Source of Supply or to Transmission/Distribution. The distinction was drawn on the basis of the nature of the expense. DWR breaks the SWP bills into a number of different categories. Two categories are clearly transmission-related, namely the capital charges for transmission facilities and the operations and maintenance charges for transmission facilities. These expenses were

Metropolitan pays SWP costs on the basis of billings from the Department of Water Resources (DWR). These expenses were functionalized to either Source of Supply or to Transmission/Distribution. The distinction was drawn on the basis of the nature of the expense. DWR breaks the SWP bills into a number of different categories. Two categories are clearly transmission-related, namely the capital charges for transmission facilities and the operations and maintenance charges for transmission facilities. These expenses were

SDPRA0260533

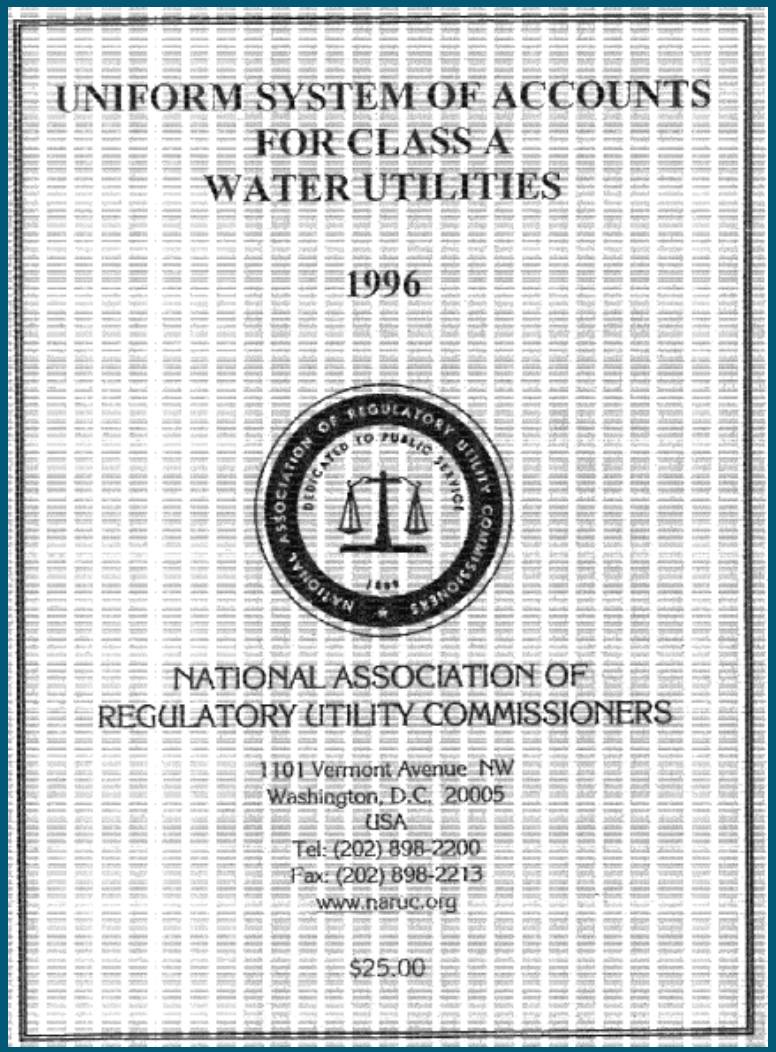
DTX-133: 1996 RMI COS Study, AR2012-016288_1796 at 1876

MWD: The 1996 RMI Cost of Service Study Supports MWD's Cost Allocations

Table II-F
Factors Used In Functionalization of Operations & Maintenance Expenses
Metropolitan Water District Of Southern California

Program	Total	Source Of Supply			Storage	Treatment	Trans. / Dist.	Customer Billing & Support	Admin. & General	Functionalization Of Line Item
		CRA	SWP	General						
Administrative Services Division:										
Mngrmnt & Support	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Purchasing/Warehouse	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Off Srvcs & Support	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Facilities Management	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Graphics Systems	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Fleet Management	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Environmental Compliance Division:										
Office of the Director	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Regulatory Affairs	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Work Place Hlth &Sfty	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Environmental	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Legal Department, Total	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
Audit Department, Total	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Administrative & General
NON-DEPARTMENTAL O&M										
Source of Supply										
State Water Project										
Operations and Maintenance										
Delta Water Charges	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100% Source Of Supply, SWP
Transport. (Incl. East Branch)	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	Transmission Distribution
Off-Aqueduct	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100% Source Of Supply, SWP
Off-Aqueduct Transportation	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100% Source Of Supply, SWP
Capital Charges										
Delta Water Charges	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100% Source Of Supply, SWP
Transport. (Incl. East Branch)	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	Transmission Distribution
Off-Aqueduct	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100% Source Of Supply, SWP

SDCWA: National Association of Regulatory Utility Commissioners' ("NARUC") Uniform System of Accounts


UNIFORM SYSTEM OF ACCOUNTS
FOR CLASS A
WATER UTILITIES

1996

NATIONAL ASSOCIATION OF
REGULATORY UTILITY COMMISSIONERS

1101 Vermont Avenue NW
Washington, D.C. 20005
USA
Tel: (202) 898-2200
Fax: (202) 898-2213
www.naruc.org

$25.00

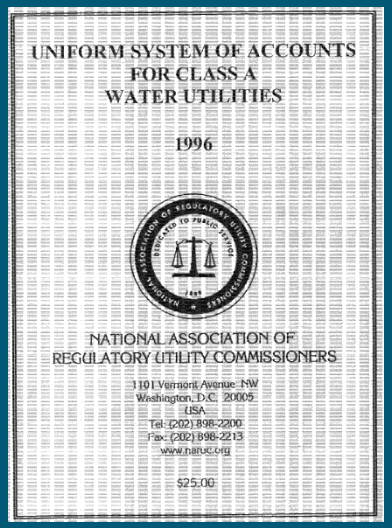
- "The NARUC system, which Raftelis cites as authoritative . . . provides that 'the cost at the point of delivery of water purchased for resale' must be accounted for as a supply cost."
  SDCWA Pretrial Brief at 16 citing at SDCWA2010-2012_00000744 at 00000902

PTX-005; 1996 NARUC Chart of Accounts, AR2012-016288_1754 at 1755, 1757

SDCWA: National Association of Regulatory Utility Commissioners' ("NARUC") Uniform System of Accounts

610. Purchased Water

A. This account shall include the cost at the point of delivery of water purchased for resale.



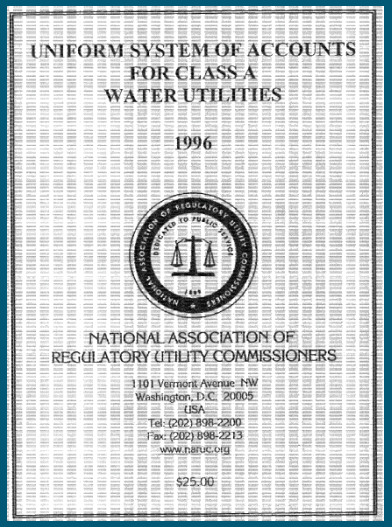
.1

Source of Supply and Expenses - Operations

601.	Salaries and Wages - Employees	601.1
603.	Salaries and Wages - Officers, Directors and Majority Stockholders	603.1
604.	Employee Pensions and Benefits	604.1
610.	Purchased Water	310.1

PTX-005; 1996 NARUC Chart of Accounts, AR2012-016288_1754 at 1755, 1757

SDCWA: National Association of Regulatory Utility Commissioners' ("NARUC") Uniform System of Accounts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- "[I]f the NARUC chart of accounts is effectively integrated into the utility's accounting system, identification of cost by functional category is **provided by the accounting system**." SDCWA2010-2012_00000907 (Raftelis Textbook) at 00001091

- "[T]he detailed accounting of operation and maintenance expenses, in accordance with the NARUC guidelines, **provides for adequate breakdown of expenses for cost of service allocation and appropriated distribution of functionally allocated expenses** to customer classes in proportion to their respective demands on the water system." AR2010-003865 (AWWA M1 Manual) at 004176

AWWA Manual M1

Principles of Water Rates,
Fees, and Charges

As with the other manuals prepared by the Rates and Charges Subcommittee, this manual will not prescribe a solution. Rather, it is intended to provide guidance and advice. The examples presented are merely examples. The underlying data and assumptions are not endorsed or recommended either by AWWA or the Rates and Charges Subcommittee for use elsewhere. The purpose of this manual is to describe and present issues associated with developing water rates and charges, to enumerate the advantages and disadvantages of various alternatives, and to provide information to help users determine water rates and charges that are most relevant to a particular situation.

FOUNDED 1881

American Water Works Association

MWDRECORD2012_003865

MWD: The NARUC System of Accounts Does Not Mandate Allocating SWP Costs to Supply

Principles of Water Rates,

Fees, and Charges

FOUNDED 1881

American Water Works Association

MWDRECORD2012_003865

CLASSIFYING O&M EXPENSES

To properly account for O&M expenses, it is necessary to develop a common accounting method for classifying expenses consistently from year to year. Specifically, O&M expenses should be classified in a manner to achieve the following goals:

- Permit proper monitoring and reporting of each O&M expense item.
- Separate capital expenditures from O&M expenses.
- Provide appropriate information to utility managers for operating the utility in a cost-effective manner.
- Provide historical data in a format that facilitates projections.
- Support cost-of-service and rate-making calculations.
- Enhance comparability of expenses among water utilities.

Chart of Accounts

The most effective way to classify and track O&M expenses on a consistent basis is through a detailed chart or system of accounts. For an O&M expense to be

The National Association of Regulatory Utility Commissioners (NARUC) has recommended a "Uniform System of Accounts," which is widely used by regulated utilities and can be modified for government-owned utilities as shown in the AWWA publication, *Water Utility Accounting*. Other charts of accounts that meet the goals previously set forth are also used.

are performed in connection with operating source and supply, the account is 601.1. If, on the other hand, the salaries are required for maintenance in source and supply, the account number is 601.2.

IDENTIFYING NONRECURRING O&M EXPENSES

Some O&M expenses do not have the characteristics of ongoing annual expenses. These expenses are not incurred repeatedly from year to year, but occur infrequently. A good example of a non-recurring O&M expense is the cost of painting a water storage tank. Tank painting does not create a new asset, but provides maintenance to an existing asset. This expense is an O&M expense, even though it might be incurred only once every 10 years.

Amortization

Many utilities amortize infrequently occurring O&M expense over the expected period between expenditures to minimize major fluctuations in annual expenses.

MWDRECORD2012_003904

MWD: The NARUC System of Accounts Does Not Mandate Allocating SWP Costs to Supply

Principles of Water Rates, Fees, and Charges

AWWA MANUAL M1

Fifth Edition

FOUNDED 1881

American Water Works Association

MWDRECORD2012_003865

AWWA MANUAL M1

Chapter 14

Fixed Versus Variable Charges

Cost-of-service water rate designs often include a fixed and a variable charge. The fixed charge in a rate design may take many forms, but this portion of a customer's bill will be the same, or fixed, for each bill regardless of the amount of water the

Fixed and variable charges for cost recovery in a cost-of-service water rate analysis is not the same as recovering fixed and variable costs from an accounting standpoint.

associated with serving customers irrespective of the amount or rate of water they use. These types of costs are referred to as *customer costs* and typically are costs that would be recovered through a fixed charge. These costs are usually recovered on a per customer basis or some other nonconsumption basis.

Utilities also incur costs associated with meeting average and above average consumption. As described in chapter 7 of this manual, these costs may be categorized as base and extra-capacity costs, or commodity and demand costs, depending on the allocation method used. Regardless of the allocation method selected, a utility incurs these costs because of the amount and pattern of its customers' water demands. Based on cost causation, these costs are most appropriately recovered through a consumption charge that varies with the customer's consumption.

Fixed and variable charges for cost recovery in a cost-of-service water rate analysis is not the same as recovering fixed and variable costs from an accounting

113

MWDRECORD2012_003997

MWD: The NARUC System of Accounts Does Not Mandate Allocating SWP Costs to Supply

Principles of Water Rates,

Fees, and Charges

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AWWA MANUAL M1

Chapter 9

Selecting Rate Structures

PLANNING THE RATE STRUCTURE STUDY

The process of selecting the most appropriate rate structure for a particular utility is not simple. The selection is complex because there are so many types of rate structures. No one rate structure meets all utility objectives equally, and not all objectives are valued the same by the utility or its customers.

Because selecting the most appropriate rate structure is an important undertaking, it is advisable that the utility spend some time up front planning the

sometimes competing objectives.

When diverse and competing objectives are well understood and evaluated, a utility has the opportunity to design a rate structure that does more than simply recover its costs. A properly selected rate structure should support and optimize a blend of various utility objectives and should work as a public information tool in communicating these objectives to customers.

PLANNING THE RATE STRUCTURE STUDY

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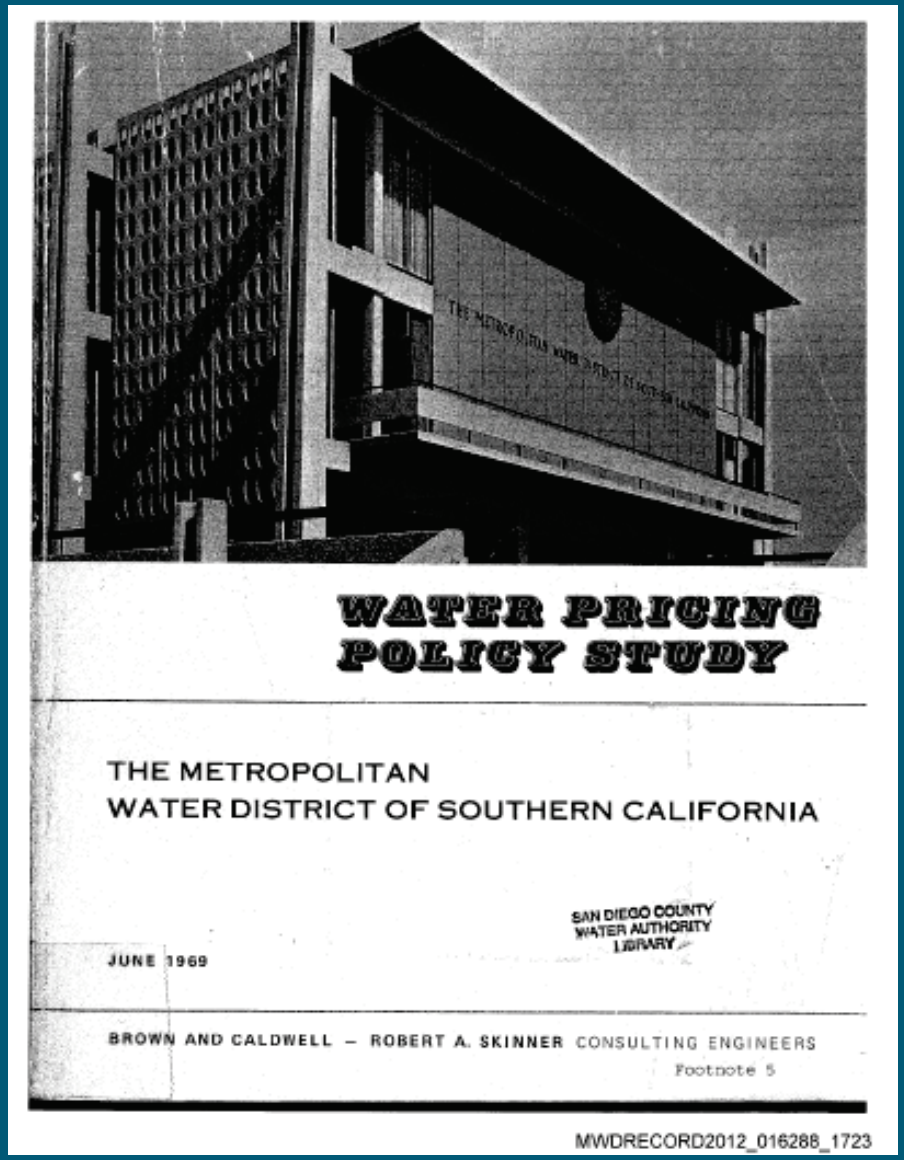
Because selecting the most appropriate rate structure is an important undertaking, it is advisable that the utility spend some time up front planning the

79

MWDRECORD2012_003963

DTX-030: AWWA Manual M1, AR2010-003865 & AR2012-003865 at 3963

SDCWA: 1969 Brown and Caldwell Water Pricing Policy Study



MWDRECORD2012_016288_1723

- "The 1969 Study . . . accounted for SWP costs . . . as water ***supply*** costs."

PTX-006; June 1969 Brown & Caldwell Study, AR2012-016288_1723 at 1744

SDCWA: 1969 Brown and Caldwell Water Pricing Policy Study

- "The 1969 Study . . . accounted for SWP costs . . . as water ***supply*** costs."

Allocation to Functional Cost Components. For purposes of making the cost separation discussed above all costs of the MWD system are considered allocable to functional cost groups. The four functional components of cost considered in this study are the following:

1. Supply System. The supply system includes all facilities involved in the function of making water available to the initial regulating reservoirs of the MWD distribution system. This includes the Colorado River Aqueduct up to the inlet works of Lake Mathews, the proposed Bolsa Island desalination plant and its treated water transmission system, and the State Water Project facilities excluding the terminal reservoirs of that system. In sum, this category includes facilities whose function is the delivery of water from the sources of supply to the MWD distribution system but whose operation is essentially unrelated to the problems of meeting short term fluctuations in demand of the individual customer agencies of MWD.

JUNE 1969

BROWN AND CALDWELL – ROBERT A. SKINNER CONSULTING ENGINEERS

Footnote 5

MWDRECORD2012_016288_1723

SDCWA2010-2012_00206541 of Brown and Caldwell Report

PTX-006; June 1969 Brown & Caldwell Study, AR2012-016288_1723 at 1744

SDCWA: 1969 Brown and Caldwell Water Pricing Policy Study

- "The 1969 Study . . . accounted for SWP costs . . . as water ***supply*** costs."

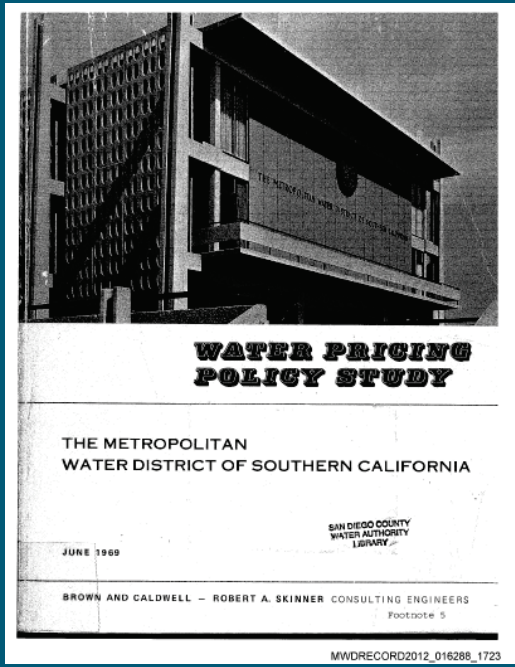


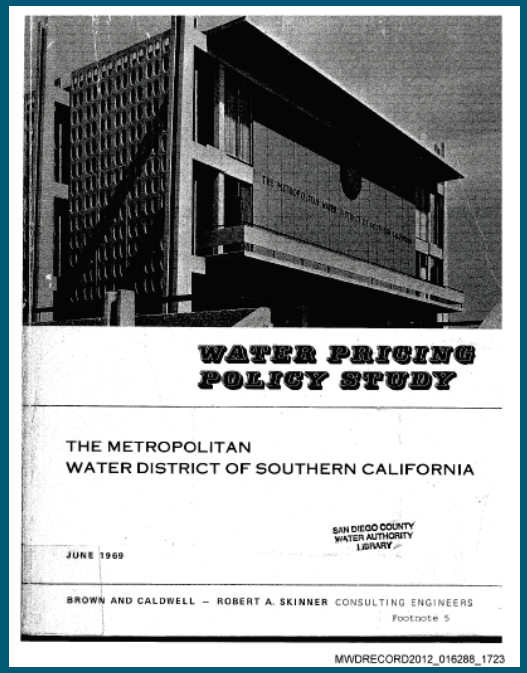
Table 9-4. (Continued)

Item	Total	Cost assigned to function, thousand dollars: Supply Fixed	Supply Variable	Dist. system Fixed	Dist. system Variable	Treatment Fixed	Treatment Variable	Admin. and general
Fiscal year 1989-90								
Operating expenses charged to:								
Colorado River aqueduct	10,087	3,429	6,658	0	0	0	0	0
Distribution system	6,400	0	0	3,840	2,560	0	0	0
Water treatment plants	9,124	0	0	0	0	3,572	5,552	0
Desalting plant	1,196	598	598	0	0	0	0	0
Electricity for aqueduct pumping	3,724	0	3,724	0	0	0	0	0
Water purchase								
Colorado River	131	0	131	0	0	0	0	0
State of California								
Delta water charge	16,070	16,009	61	0	0	0	0	0
Transportation charge	72,431	43,696	18,573	10,162	0	0	0	0
Administrative and general	9,850	433	0	571	0	266	0	8,580
Total operating expense	129,013	64,165	29,745	14,573	2,560	3,838	5,552	8,580
Capital requirements								
Interest	32,530	6,886	0	22,716	0	2,720	0	208
Bond redemption[a]	12,277	2,548	0	8,645	0	1,007	0	77
Net capital for construction[b]	1,070	226	0	747	0	90	0	7
Total capital from rates and taxes	45,877	9,660	0	32,108	0	3,817	0	292
Revenue required from rates and regular taxes	174,890	73,825	29,745	46,681	2,560	7,655	5,552	8,872
Revenue available from regular taxes	(23,090)	(4,834)	0	(16,200)	0	(1,910)	0	(146)
Redistribution of admin. and general expenses	0	1,859	0	6,133	0	734	0	(8,726)
Revenue required from water sales	151,800	70,850	29,745	36,614	2,560	6,479	5,552	0
Percent of revenue from water sales	100.0	46.67	19.59	24.12	1.69	4.27	3.66	0

[a] Bond redemption plus payments to city of Pasadena and San Diego County Water Authority.
[b] Gross estimated capital construction, less funds available from bond proceeds, annexation fees, miscellaneous revenue and reserves.
[c] Includes payment on State contract.

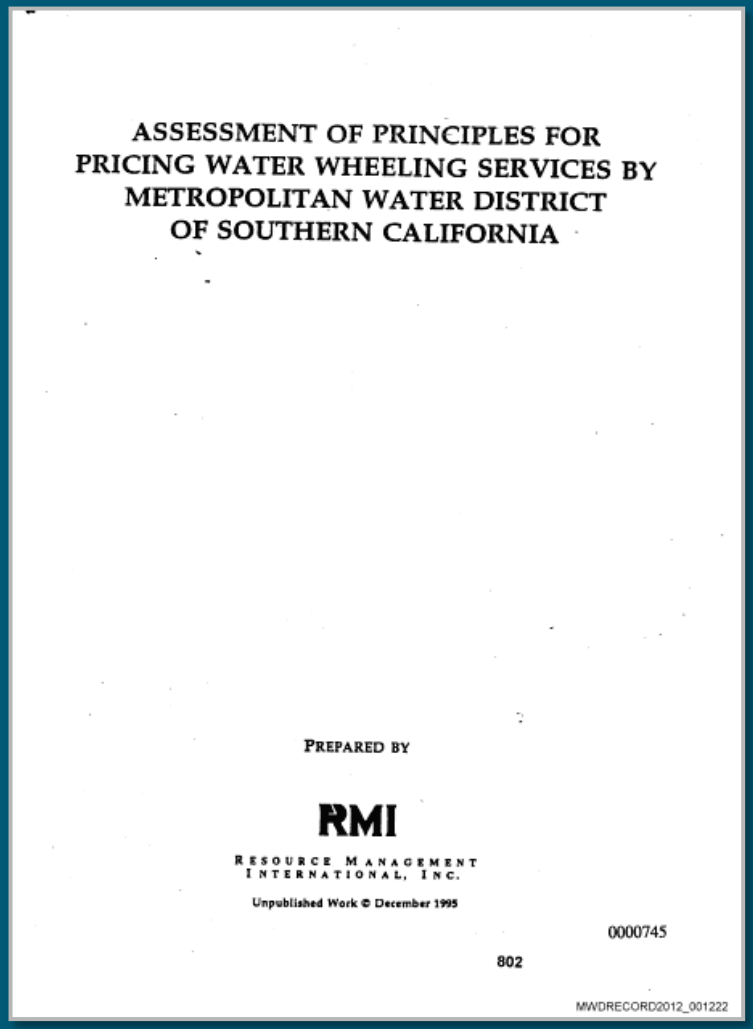
SDCWA Pretrial Brief, p. 7 (citing SDCWA2010-2012_00206354 at 00206541, 00206543); PTX-006; June 1969 Brown & Caldwell Study at AR2012-016288_1723 at 1746

MWD: The 1969 Brown and Caldwell Study Does Not Mandate Allocating SWP Costs to Supply



- The study was commissioned **almost 50 years ago** when MWD had not yet unbundled its rates and **did not yet charge separately for transportation and supply expenses**.
- Study noted "[t]here are essentially **two steps** in a cost of service study. The first is separation of total costs into cost segments. . . . The **second step** is assignment of these cost segments to appropriate cost components **for rate formulation**." AR2012-016288_1723 at 1739
- Brown and Caldwell separated supply from other costs in **step one**. AR2012-016288_1739
  Step two lumped "the cost[s] of producing and delivering water" together because MWD had a single "commodity component of a water rate" and not separate supply and transportation rates. AR2012-016288_1723 at 1750

SDCWA: December 1995 RMI Assessment of Principles For Pricing Water Wheeling Services



ASSESSMENT OF PRINCIPLES FOR
PRICING WATER WHEELING SERVICES BY
METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

PREPARED BY

RMI

RESOURCE MANAGEMENT
INTERNATIONAL, INC.

0000745

802

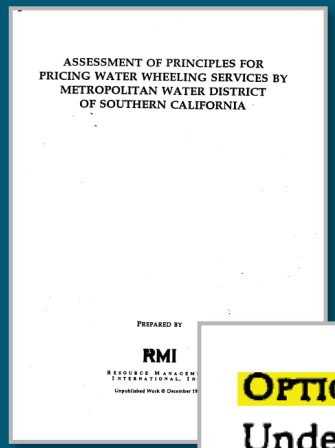
MWDRECORD2012_001222

- "RMI concurred [with industry standards] that SWP costs are 'supply costs' that cannot reasonably be included in a wheeling rate."
  SDCWA Pretrial Brief at 13 citing AR2010-001222 at 001245-46

- RMI "concluded that the wheeling rate MWD ultimately adopted 'could be perceived as excessive' because it 'includes costs not incurred to provide wheeling service,' such as 'fixed SWP costs.'"
  SDCWA Pretrial Brief at 13 citing AR2010-001222 at 001249

DTX-136: Dec. 1995 RMI Study, AR2010-001222 & AR2012-001222 at 1245-46, 1249

MWD: The December 1995 RMI Assessment Does Not Mandate Allocating SWP Costs to Supply


ASSESSMENT OF PRINCIPLES FOR PRICING WATER WHEELING SERVICES BY METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

PREPARED BY

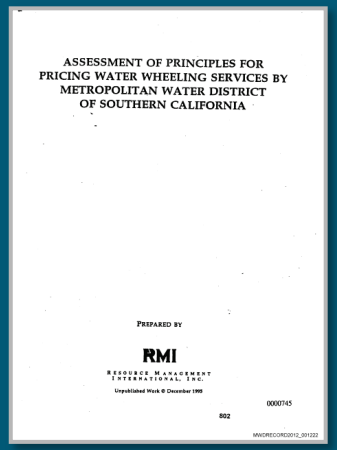
RMI

- MWD did not adopt **any** of the four options that RMI suggested, and did **not**, as SDCWA suggests, adopt Option I

OPTION I: INCREMENTAL POWER AND OTHER VARIABLE COST APPROACH

Under this option, Metropolitan's initial wheeling rate would be based on the differential between Metropolitan's firm sales rate and Readiness-To-Serve Charge (RTS) and SWP's charges for incremental power and other variable costs. Under Metropolitan's contract with the SWP, incremental power and fish program and replacement costs are the only costs that Metropolitan would avoid in the short-run if its takes of water from the SWP were reduced at the margin. Hence, they are a reasonable proxy for the costs that Metropolitan would not incur to provide wheeling service. Hence, a wheeling Member Agency paying the firm sales rate plus the RTS minus avoided costs would make the same contribution to the recovery of Metropolitan fixed costs (or margin) as a Member Agency purchasing water from Metropolitan at the firm sales rate. This would be consistent with the equivalent margin method of deriving an initial wheeling rate.

MWD: The December 1995 RMI Assessment Does Not Mandate Allocating SWP Costs to Supply



ASSESSMENT OF PRINCIPLES FOR PRICING WATER WHEELING SERVICES BY METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

PREPARED BY

RMI

RESOURCE MANAGEMENT INTERNATIONAL, INC.

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802

- **Option I:** MWD's rate for wheeling service is not MWD's firm sales rate plus the Readiness-to-Serve Charge minus SWP's charges for incremental power and other variable costs

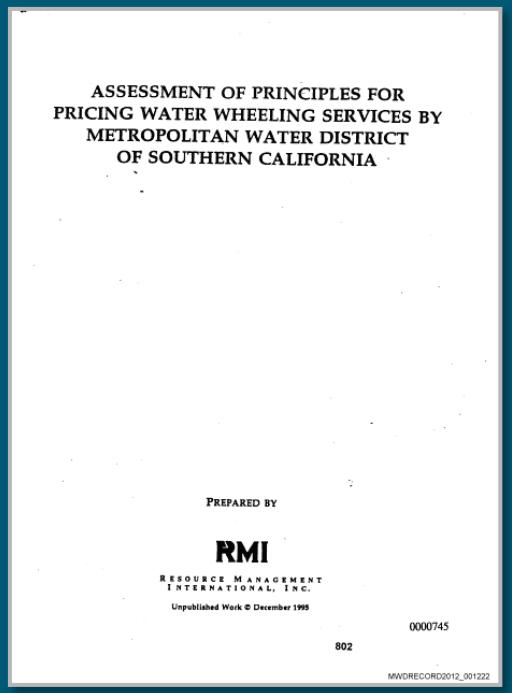
§ 4405. Wheeling Service.

…

(b) The rates for wheeling service shall include the **System Access Rate, Water Stewardship Rate** and, for treated water, the **Treatment Surcharge**, as set forth in Section 4401. In addition, wheeling parties must pay for their **own cost for power**

DTX-136: Dec. 1995 RMI Study, AR2010-001222 & AR2012-001222 at 1244; MWD Administrative Code § 4405

MWD: The December 1995 RMI Assessment Does Not Mandate Allocating SWP Costs to Supply



ASSESSMENT OF PRINCIPLES FOR PRICING WATER WHEELING SERVICES BY METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

PREPARED BY

RMI

RESOURCE MANAGEMENT INTERNATIONAL, INC.

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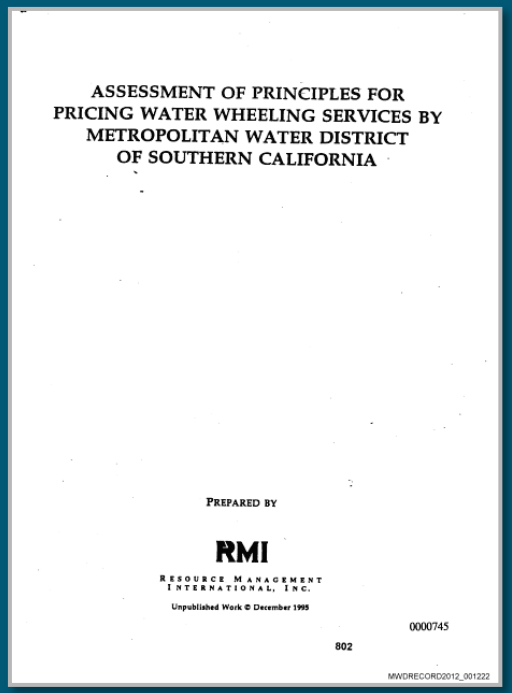
MWDRECORD2012_001222

- RMI does **not** state that **all SWP costs are supply costs**; it states that a wheeling rate **may** be designed "by subtracting all SWP and CRA **supply** costs." RMI **does not address transportation-related** SWP costs. AR2010-001222 at 001245-46
- RMI does **not** state that SWP costs cannot reasonably be included in a wheeling rate; the "total avoided supply cost approach" was **one of four options** RMI evaluated for MWD's wheeling rate— some options **included fixed SWP costs**. AR2010-001222 at 01244-45

DTX-136: Dec. 1995 RMI Study, AR2010-001222 & AR2012-001222 at 1244-46

MWD: The December 1995 RMI Assessment Does Not Mandate Allocating SWP Costs to Supply *(cont'd)*



ASSESSMENT OF PRINCIPLES FOR PRICING WATER WHEELING SERVICES BY METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

PREPARED BY

RMI

RESOURCE MANAGEMENT INTERNATIONAL, INC.

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MWDRECORD2012_001222

- RMI evaluated the **pros and cons** of **four** different proposed wheeling rates. RMI concluded that two of the four options could be **perceived as excessive**. AR2010-001222 at 001249, 001251
- RMI recommended MWD adopt the wheeling rate option that included fixed SWP costs because it was the "**only rate method** examined that would satisfy the requirement . . . that Member Agencies be 'held harmless' from any cost shifting due to wheeling." AR2010-001222 at 01254

DTX-136: Dec. 1995 RMI Study, AR2010-001222 & AR2012-001222 at 1249, 1251, 1254

8. MWD Supported Its Determination Under the Wheeling Statute with Written Findings

The Wheeling Statute

- No "public agency may deny a bona fide transferor of water the use of a water conveyance facility which has unused capacity, for the period of time for which that capacity is available, if fair compensation is paid for that use" Cal. Water Code § 1810
- "Fair compensation" is defined as "the reasonable charges incurred by the owner of the conveyance system, including capital, operation, maintenance, and replacement costs, increased costs from any necessitated purchase of supplemental power" Cal. Water Code § 1811(c)
- The public agency "shall support its determinations by written findings" Cal. Water Code § 1813

MWD's Written Findings Under The Wheeling Statute

42238

NOW THEREFORE, the Board of Directors of the Metropolitan Water District of Southern California does hereby resolve, find, determine and order as follows:

RESOLUTION OF THE BOARD OF DIRECTORS
OF THE METROPOLITAN WATER DISTRICT OF

Section 3. That in order to recover fair compensation for the use of its conveyance system for wheeling, it is necessary for Metropolitan to adopt wheeling rates according to the methodology set forth in Attachment 1.

to its member public agencies;

WHEREAS, Metropolitan has a contract with the State of California which requires Metropolitan, on a take or pay basis, to pay a proportionate share of the

Section 4. That it is appropriate to set the wheeling rate on a "postage

moved. A uniform rate is appropriate because of the integrated nature of Metropolitan's conveyance system; because Metropolitan's historic and current rate setting policy has been, and is, based on the postage stamp concept; because postage stamp rate setting is

regarding the use of its facilities, or its rights to use SWP facilities, to transport water not

service throughout Metropolitan; and because Water Code Section 1811(c) defines "fair compensation" to include reasonable charges for the use of the entire conveyance "system."

75

MWDRECORD2012_002446

DTX-680: MWD Resolution 8520 Fixing and Adopting Wheeling Rates, AR2010-002446 & AR2012-002446 at 2448

MWD's Written Findings Under The Wheeling Statute

Section 5. That the allocation of costs as shown in Attachment 1 to Metropolitan's transmission function accurately reflects the capital, operation, maintenance and replacement costs incurred by Metropolitan to convey water to its member agencies, through Metropolitan's conveyance system, including Metropolitan's rights in the State Water Project system, and that including those costs in Metropolitan's wheeling rate is necessary to insure recovery of fair compensation for the use of that conveyance system.

WHEREAS, The Metropolitan Water District of Southern California

Section 9. That wheeling rates for member agencies during non-shortage periods shall be a rate equal to $262 per acre-foot for firm wheeling service and a rate equal to $141 per acre-foot for non-firm wheeling service effective January 15, 1997.

Aqueduct and its pumping plants, reservoirs and associated facilities for conserving, storing and transporting water to Metropolitan's service area;

Section 11. That such wheeling rates for the period after June 30, 1997 shall be set annually as part of Metropolitan's rate-setting practice under Sections 4300 through 4304 of Metropolitan's Administrative Code.

regarding the use of its facilities, or its rights to use SWP facilities, to transport water not owned or controlled by Metropolitan ("wheeling");

Section 15. That the determination whether there is unused capacity in Metropolitan's conveyance system, and in particular facilities of the conveyance system, shall be made by the General Manager on a case-by-case basis in response to particular requests for wheeling.

MWDRECORD2012_002446

DTX-680, MWD Resolution 8520 Fixing and Adopting Wheeling Rates, AR2010-002446 & AR2012-002446 at 2449 and 2450

9. The Exchange Agreement Does Not Undermine MWD's Rates

The Exchange Agreement Is Irrelevant to the Rate Challenge

Prior to January 2003, MWD charged a bundled, inclusive single rate for conveyance and supply

July 1998 MWD begins strategic process to review management of assets, revenues and costs

Dec. 14, 1999 Strategic Plan Policy Principles adopted following public hearings and interviews with Directors, Member Agencies, legislators, business and community leaders

Oct. 16, 2001 MWD Board voted to adopt unbundled rate structure

March 12, 2002 MWD MA's approve unbundled components of water rates to be effective Jan. 1, 2003

January 1, 2003 unbundled rate structure becomes effective

October 10, 2003 SDCWA Executes Amended Exchange Agreement

Not Administrative Record

DTX-042: 3/12/2002 MWD Bd. Vote Approving Rates, AR2010-006431 & AR2012-006431; DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 6470-6471; DTX-132: Resolution 8805, AR2012-006464_01; DTX-036: 10/16/2001 MWD Bd. Minutes, AR2010-005730 & AR2012-005730 at 5737-5739

1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013

Exchange Water is a Blend of SWP and CRA Water

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Office of the General Manager

Date: April 5, 2012

To: Board of Directors
Member Agency Managers

From: General Manager Jeffrey Kightlinge
General Counsel Marcia Scully

Subject: Response to SDCWA Report on Co

At the public hearing on March 12, 2012, the San Di
provided a report entitled "San Diego County Water
Service Rate Review" (FCS Review). Our response

***The Water Authority Misconstrues Metropolitan's
Setting***

Overall, the FCS Review appears to be based on mis
the system's functionality informs the rate setting.

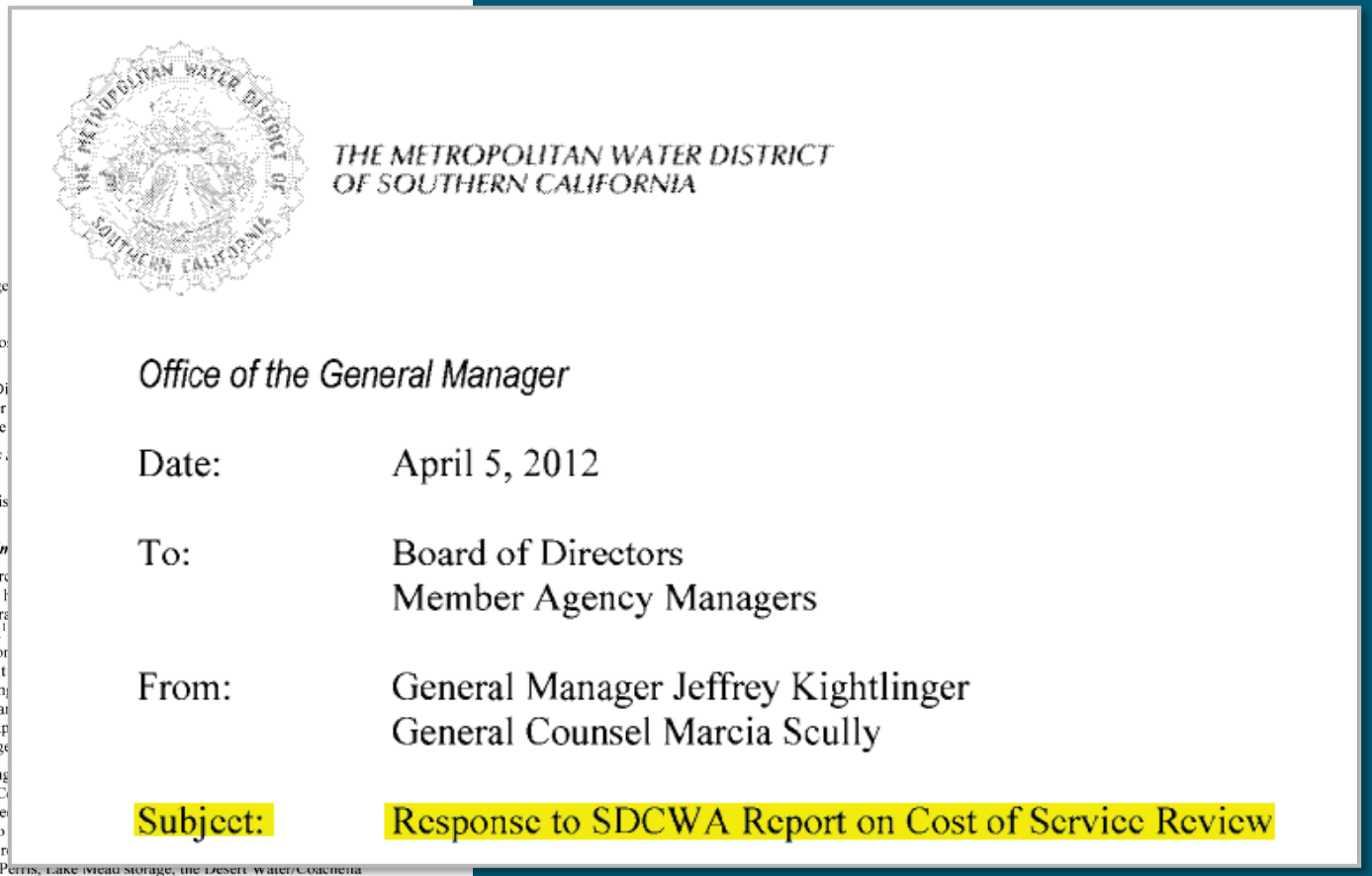
The FCS Review Fails to Appreciate the In

Metropolitan's system draws on diverse supply sourc
distributes water in six counties, and serves an area l
the most recent study of the system, the 2007 Integra
flexibility as a key component of overall reliability.[1]
the ability to respond to short-term changes in regio
requirements, and member agency demands. And it
maintain partial to full water supply deliveries durin
Metropolitan's integrated conveyance, distribution a
reliability. It is fair and reasonable, therefore, to exp
and maintaining these assets because all member age

Operational flexibility has been achieved by creating
integrating the State Water Project (SWP) and the C
with the in-basin distribution system. This integrate
from the SWP and the CRA with a diverse portfolio
including the Central Valley groundwater storage pr
flexible storage capacity in Castaic Lake and Lake Perris, Lake Mead storage, the Desert Water/Coachella
Valley (DWCV) Advanced Delivery account, in-basin surface storage in Diamond Valley Lake (DVL)
and Lake Mathews, and in-basin groundwater Conjunctive Use Programs. This integrated, regional
network allows Metropolitan to move supplies throughout the system in response to supply availability
and operational needs, and is shown in **Figure 1: Metropolitan Facilities, Supplies and Storage
Portfolio**.

[1] 2007 Integrated Area Study, Report No. 1317, pg 2-10.

MWDRECORD2012_016583



DTX-109: 4/5/12 MWD Response to SDCWA COS Report, AR2012-016583 at 016586

Exchange Water is a Blend of SWP and CRA Water

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

Date: April 5, 2012

To: Board of Directors
Member Agency Managers

From: General Manager Jeffrey Kightlinger
General Counsel Marcia Scully

Subject: Response to SDCWA Report on Cost of Service Review

At the public hearing on March 12, 2012, the San Diego County Water Authority (Water Authority) provided a report entitled "San Diego County Water Authority Metropolitan Water District Cost of Service Rate Review" (FCS Review). Our response to the Water Authority FCS Review follows.

The Water Authority Misconstrues Metropolitan's System and How System Functionality Informs Rate Setting

Overall, the FCS Review appears to be based on misperceptions regarding Metropolitan's system and how the system's functionality informs the rate setting.

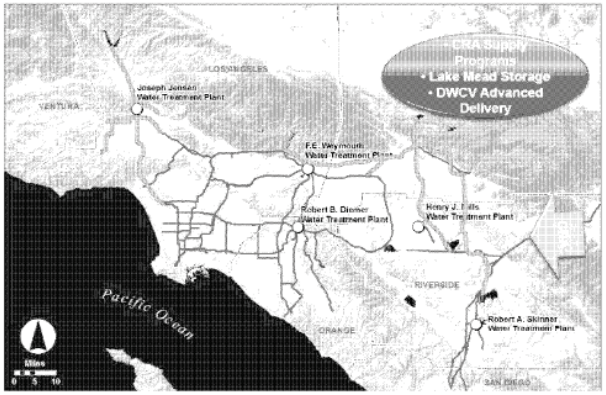
The FCS Review Fails to Appreciate the Importance of Regional System Flexibility

Metropolitan's system draws on diverse supply sources, transports water across a large part of the State

intake for Colorado River water at Lake Havasu. Metropolitan delivers the Exchange Water in approximately equal monthly installments throughout the calendar year from whatever source or sources and by whatever delivery path is determined by Metropolitan. Metropolitan's integrated, flexible system makes these deliveries possible.[3] And Metropolitan's ability to blend water from various sources means that the Exchange Water delivered to the Water Authority is less saline than the Conserved Water transferred to Metropolitan at Lake Havasu. Given the operating flexibility of Metropolitan's system,

and Lake Mathews, and in-basin groundwater Conjunctive Use Programs. This integrated, regional network allows Metropolitan to move supplies throughout the system in response to supply availability and operational needs, and is shown in **Figure 1: Metropolitan Facilities, Supplies and Storage Portfolio**.

[1] 2007 Integrated Area Study, Report No. 1317, pg 2-10.



The same flexibility principles inform development and operation of Metropolitan's storage functionality. Metropolitan's ability to shift among resources in its storage portfolio in order to enhance the regional reliability of Metropolitan's imported water service in the face of so many changing conditions is the result of its integrated, flexible operating system, consisting of the entitlement to use the SWP

[2] Amended and Restated Agreement between the Metropolitan Water District of Southern California and the San Diego County Water Authority for the Exchange of Water, dated as of October 10, 2003 ("Exchange Agreement").
[3] As a result, the 24-day maintenance shutdown of the CRA in March 2012 did not interrupt Metropolitan's deliveries of Exchange Water.

10. San Diego's Dry Year Peaking Claim Has No Support in the Administrative Record

San Diego Alleges That MWD's Rates and Charges Fail to Properly Allocate Costs Associated With Annual Variations in Water Use

SDCWA 2012 Complaint, ¶ 65

San Diego's "Dry Year Peaking" Claim

65. Second, as discussed above, Metropolitan fails to fully account for the costs of "dry-year peaking," that is, buying more water from Metropolitan in dry years or when local water supplies are otherwise reduced or not available. The chief beneficiary of Metropolitan's flawed approach is the City of Los Angeles and its Department of Water & Power (LADWP). LADWP's water supply purchases from Metropolitan vary widely from year to year—they can increase by as much as 200,000 acre-feet in a year, depending on the water supply conditions in the Owens Valley that serves LADWP's own Los Angeles Aqueduct. When its own water supplies are short, LADWP can simply pick up the telephone and order more water from Metropolitan—a supply of water Metropolitan holds "on call" for LADWP at little cost to LADWP during years it does not need more water, but at great cost to steady Metropolitan water purchasers like the Water Authority. Metropolitan has not conducted a cost of service study that would allow a proper allocation of the costs of this standby service to the member agencies that receive the benefit of that service. The failure to properly allocate the costs of standby service

SDCWA 2012 Complaint, ¶ 65

San Diego's "Dry Year Peaking" Claim

- MWD's peak-related rates and charges are designed to recover:

1. The cost of MWD standing by to deliver any unusually high amount of water
2. The cost of having the capacity available to satisfy the highest water demands throughout each year

- MWD's volumetric supply and transportation rates ensure that when a member agency buys more, it pays more for variations in annual demand

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11473, 11483, 11492, 11494-95; DTX-110: 2012 COS, AR2012-016594 at 16697-80, 16688, 16698-99

MWD Accounts for Peaking

- San Diego is referring to ***annual*** **variations** in Member Agency water deliveries
- MWD accounts for annual variations in Member Agency deliveries through:
  - Readiness-to-Serve Charge
  - Volumetric Rates
  - Tiered Supply Rates

- MWD also recovers capital costs of peaking due to variations in water deliveries ***within*** a year for its distribution system through its Capacity Charge
- Capacity Charge is allocated based on each Member Agency's peak summer day over prior three years

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11492-96; DTX-110: 2012 COS AR2012-016594 at 16697-99;
DTX-030: AWWA Manual M1, AR2010-003865 & AR2012-003865 at 3935, 3941

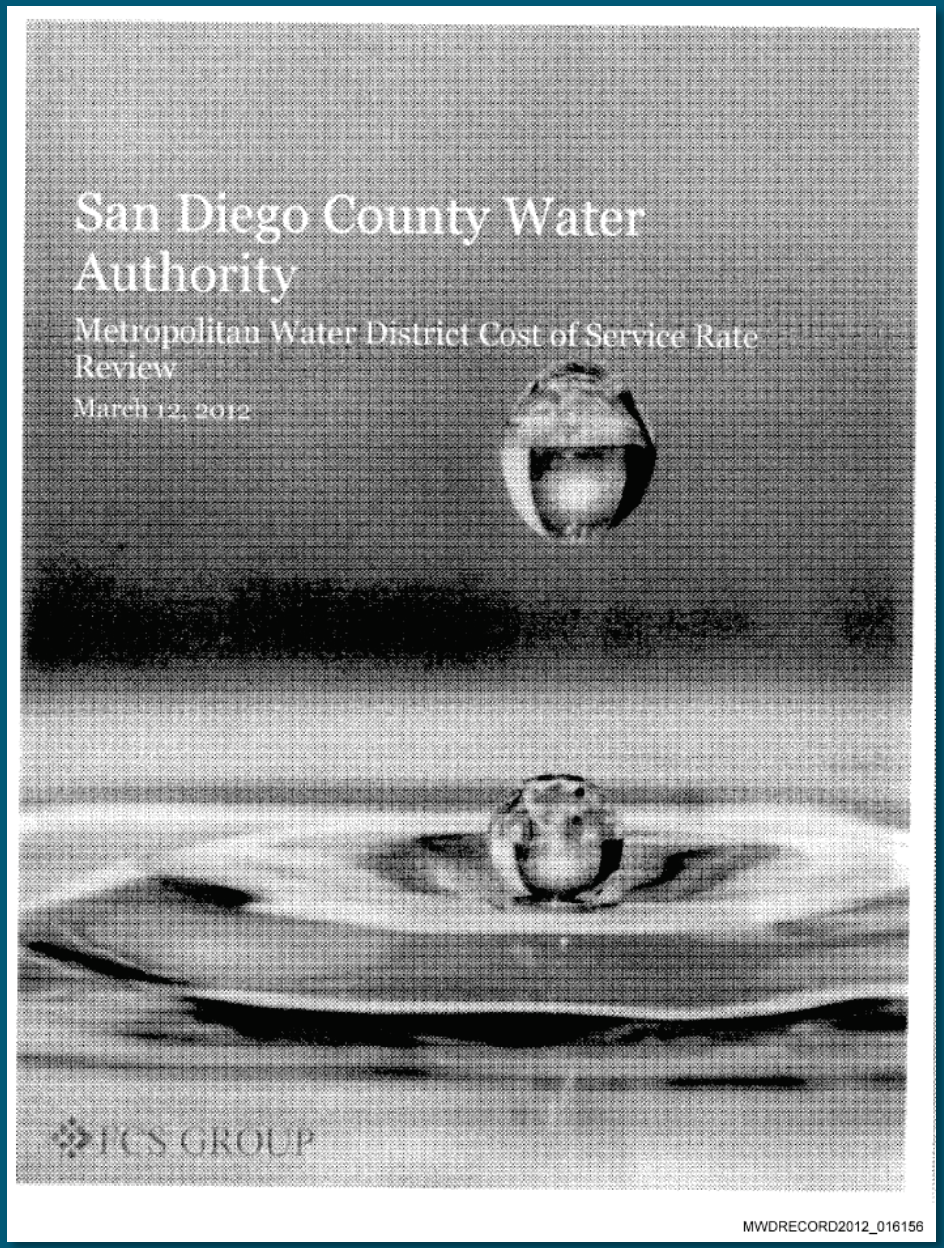
San Diego's "Dry Year Peaking" Claim

- San Diego contends that some Member Agencies "roll on" and "roll off" the MWD system and do not pay for their proportionate share of costs

- San Diego misrepresents the differences between member agency annual variations
- San Diego's own expert showed that MWD's Member Agencies all vary the amount of water they use, and they are not significantly different from each other in how they do it

DTX-108: March 2012 FCS COS Review, AR2012-016154 at 16176-77

San Diego's "Dry Year Peaking" Claim



DTX-108: March 2012 FCS COS Review, AR2012-016154 at 16156

San Diego's "Dry Year Peaking" Claim

Table 1. Evaluation of Water Deliveries

Agency	Average Annual Deliveries (AF)[1]	Peak Deliveries (AF)	Peak Increase (AF)	Peak/Ave Sales Ratio	Standard Deviation/Ave Sales[2]
Central Basin	84,900	119,200	34,300	1.40	0.26
Compton	3,000	3,900	900	1.30	0.18
Eastern	104,100	136,900	32,800	1.32	0.14
Foothill	12,000	14,800	2,800	1.23	0.11
Fullerton	12,500	17,800	5,300	1.42	0.32
Glendale	22,900	29,100	6,200	1.27	0.14
Inland Empire	76,500	96,800	20,300	1.27	0.12
Las Virgenes	23,200	27,100	3,900	1.17	0.09
Long Beach	40,900	47,500	6,600	1.16	0.15
Los Angeles	332,500	434,700	102,200	1.31	0.23
MWDOC	283,100	360,600	77,500	1.27	0.16
Pasadena	23,300	25,500	2,200	1.09	0.08
San Diego	603,300	667,900	64,600	1.11	0.09
San Fernando	300	900	600	3.00	1.16
San Marino	1,000	1,600	600	1.60	0.46
Santa Ana	15,600	22,000	6,400	1.41	0.35
Santa Monica	12,700	14,400	1,700	1.13	0.08
Three Valleys	75,200	89,700	14,500	1.19	0.13
Torrance	20,300	22,800	2,500	1.12	0.08
Upper San Gabriel	44,000	75,600	31,600	1.72	0.55
West Basin	140,100	150,400	10,300	1.07	0.07
Western MWD	92,300	115,100	22,800	1.25	0.19

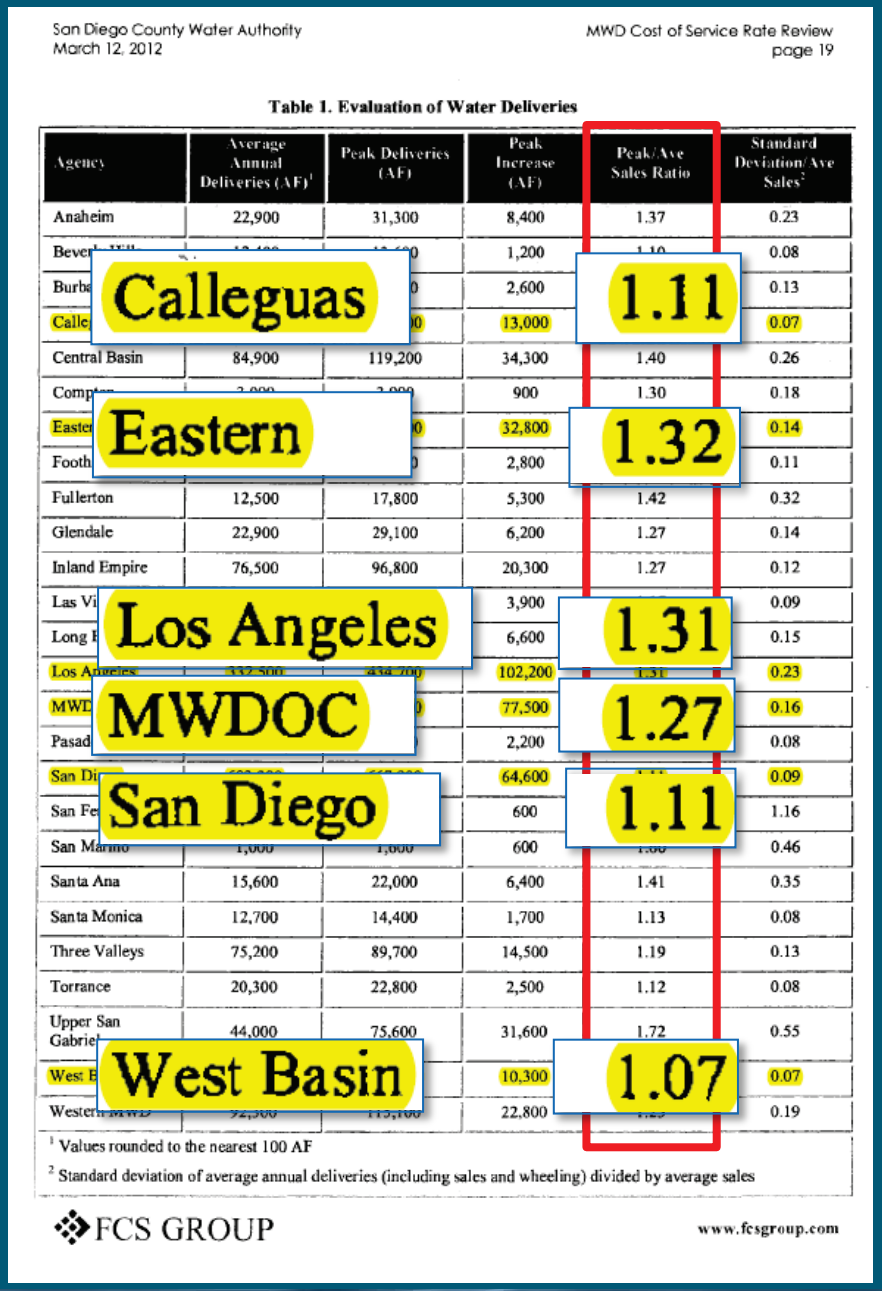
[1] Values rounded to the nearest 100 AF

[2] Standard deviation of average annual deliveries (including sales and wheeling) divided by average sales

- SDCWA's expert calculated the **ratios** of ***highest*** annual water use to ***average*** annual water use for all Member Agencies over the last decade

DTX-108: March 2012 FCS COS Review, AR2012-016154 at 16177

San Diego's "Dry Year Peaking" Claim



San Diego County Water Authority
March 12, 2012

MWD Cost of Service Rate Review
page 19

Table 1. Evaluation of Water Deliveries

Agency	Average Annual Deliveries (AF)[1]	Peak Deliveries (AF)	Peak Increase (AF)	Peak/Ave Sales Ratio	Standard Deviation/Ave Sales[2]
Anaheim	22,900	31,300	8,400	1.37	0.23
Beverly Hills			1,200		0.08
Burbank			2,600		0.13
Calleguas			13,000	1.11	0.07
Central Basin	84,900	119,200	34,300	1.40	0.26
Compton			900	1.30	0.18
Eastern			32,800	1.32	0.14
Foothill			2,800		0.11
Fullerton	12,500	17,800	5,300	1.42	0.32
Glendale	22,900	29,100	6,200	1.27	0.14
Inland Empire	76,500	96,800	20,300	1.27	0.12
Las Virgenes			3,900		0.09
Long Beach			6,600	1.31	0.15
Los Angeles			102,200		0.23
MWDOC			77,500	1.27	0.16
Pasadena			2,200		0.08
San Diego			64,600	1.11	0.09
San Fernando			600		1.16
San Marino	1,000	1,000	600		0.46
Santa Ana	15,600	22,000	6,400	1.41	0.35
Santa Monica	12,700	14,400	1,700	1.13	0.08
Three Valleys	75,200	89,700	14,500	1.19	0.13
Torrance	20,300	22,800	2,500	1.12	0.08
Upper San Gabriel	44,000	75,600	31,600	1.72	0.55
West Basin			10,300	1.07	0.07
Western MWD			22,800		0.19

[1] Values rounded to the nearest 100 AF

[2] Standard deviation of average annual deliveries (including sales and wheeling) divided by average sales

FCS GROUP

www.fcsgroup.com

- **MWD's largest customers** (>100,000 AF per year, accounting for more than 70% of total water deliveries) **all had a ratio between 1.07 and 1.32**
- SDCWA's was **1.11**
  - higher than West Basin's **1.07**
  - same as Calleguas **1.11**
  - lower than Los Angeles **1.31**

DTX-108: March 2012 FCS COS Review, AR2012-016154 at 16177

San Diego's "Dry Year Peaking" Claim

San Diego County Water Authority
March 12, 2012

MWD Cost of Service Rate Review
page 19

Table 1. Evaluation of Water Deliveries

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Anaheim	22,900	31,300	8,400	1.37	0.23
Beverly Hills	12,400	13,600	1,200	1.10	0.08
Burbank	13,400	16,000	2,600	1.19	0.13
Calleguas	118,400	131,400	13,000	1.11	0.07
Central Basin	84,900	119,200	34,300	1.40	0.26
Compton	3,000	3,900	900	1.30	0.18
Eastern	104,100	136,900	32,800	1.32	0.14
Foothill	12,000	14,800	2,800	1.23	0.11
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Glendale	22,900	29,100	6,200	1.27	0.14
Inland Empire	76,500	96,800	20,300	1.27	0.12
Las Virgenes	23,200	27,100	3,900	1.17	0.09
Long Beach	40,900	47,500	6,600	1.16	0.15
Los Angeles	332,500	434,700	102,200	1.31	0.23
MWDOC	283,100	360,600	77,500	1.27	0.16
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Santa Ana	15,600	22,000	6,400	1.41	0.35
Santa Monica	12,700	14,400	1,700	1.13	0.08
Three Valleys	75,200	89,700	14,500	1.19	0.13
Torrance	20,300	22,800	2,500	1.12	0.08
Upper San Gabriel	44,000	75,600	31,600	1.72	0.55
West Basin	140,100	150,400	10,300	1.07	0.07
Western MWD	92,300	115,100	22,800	1.25	0.19

[1] Values rounded to the nearest 100 AF

[2] Standard deviation of average annual deliveries (including sales and wheeling) divided by average sales

FCS GROUP

www.fcsgroup.com

- **All** Member Agencies had ratios **between 1.07 and 1.72**, except for MWD's smallest customer – San Fernando at **3.0**, who averages 300 AF/yr (approx. 0.000176% of total MWD projected water sales)

DTX-108: March 2012 FCS COS Review, AR2012-016154 at 16177

San Diego's "Dry Year Peaking" Claim

Principles of Water Rates, Fees, and Charges

AWWA MANUAL M1

Fifth Edition

American Water Works Association

MWDRECORD003865

AWWA MANUAL M1

Chapter 31

Wholesale Rates

WATER SERVICE

Wholesale service may be defined as "a situation in which water is sold to a customer at one or more major points of delivery for resale to individual retail customers within the wholesale customer's service area." Most wholesale customers are communities purchasing water to distribute and resell to their own citizens. In some cases, investor-owned water utilities may purchase wholesale water service from other water utilities. A provider of wholesale service that is growing in importance is regional water authorities. The rates developed under regional water authorities benefit from the economies of scale associated with efficiently meeting territorial water demands.

In providing wholesale service, most utilities are dealing with a few high-consumption customers. In most cases, wholesale customers do not use certain facilities and services required by retail customers. Usually, the wholesale customer provides these additional services to its customers. Thus, the utility provides water at one or more delivery points, and the wholesale customer provides the distribution system, meter reading services, individual customer billing, and customer service. The wholesale customer also frequently repumps and provides ground or elevated storage of water.

DETERMINING COST OF SERVICE

A cost analysis is required to determine revenue requirements of wholesale water service and to allocate this revenue requirement to individual wholesale customers or to the wholesale group as a class. The analysis should include specific conditions of service to wholesale customers, specific type and level of service provided, and consideration of the way in which the utility actually provides service to its customers. Properly designed rates should recover the cost, as nearly as is practicable, of providing service to a customer, or a class of customers, with minimal cross-subsidizing among customer classes.

Section II of this manual describes cost allocation methodologies. These methods emphasize that the cost of providing water service varies with the total amount of

MWDRECORD004117

DTX-030: AWWA Manual M1, AR2010-003865 & AR2012-003865 at 4117

San Diego's "Dry Year Peaking" Claim

Table 31-1 Customer class demand factors

Customer Class	Maximum-Day Factor* (*range*)	Maximum-Hour Factor (*range*)
Residential	1.50–4.00	2.00–8.00
Commercial	1.20–3.00	1.75–4.50
Industrial	1.05–2.25	1.30–3.00
Wholesale*	1.20–2.50	1.50–4.00

*Maximum-week factors, where applicable, are somewhat lower than maximum-day factors.

water consumed and the relative peak demand of customers or classes of customers. This fact has important implications for wholesale customers. Peak demand often is

Table 31-1 Customer class demand factors

Customer Class	Maximum-Day Factor* (*range*)	Maximum-Hour Factor (*range*)
Residential	1.50–4.00	2.00–8.00
Commercial	1.20–3.00	1.75–4.50
Industrial	1.05–2.25	1.30–3.00
Wholesale*	1.20–2.50	1.50–4.00

*Maximum-week factors, where applicable, are somewhat lower than maximum-day factors.

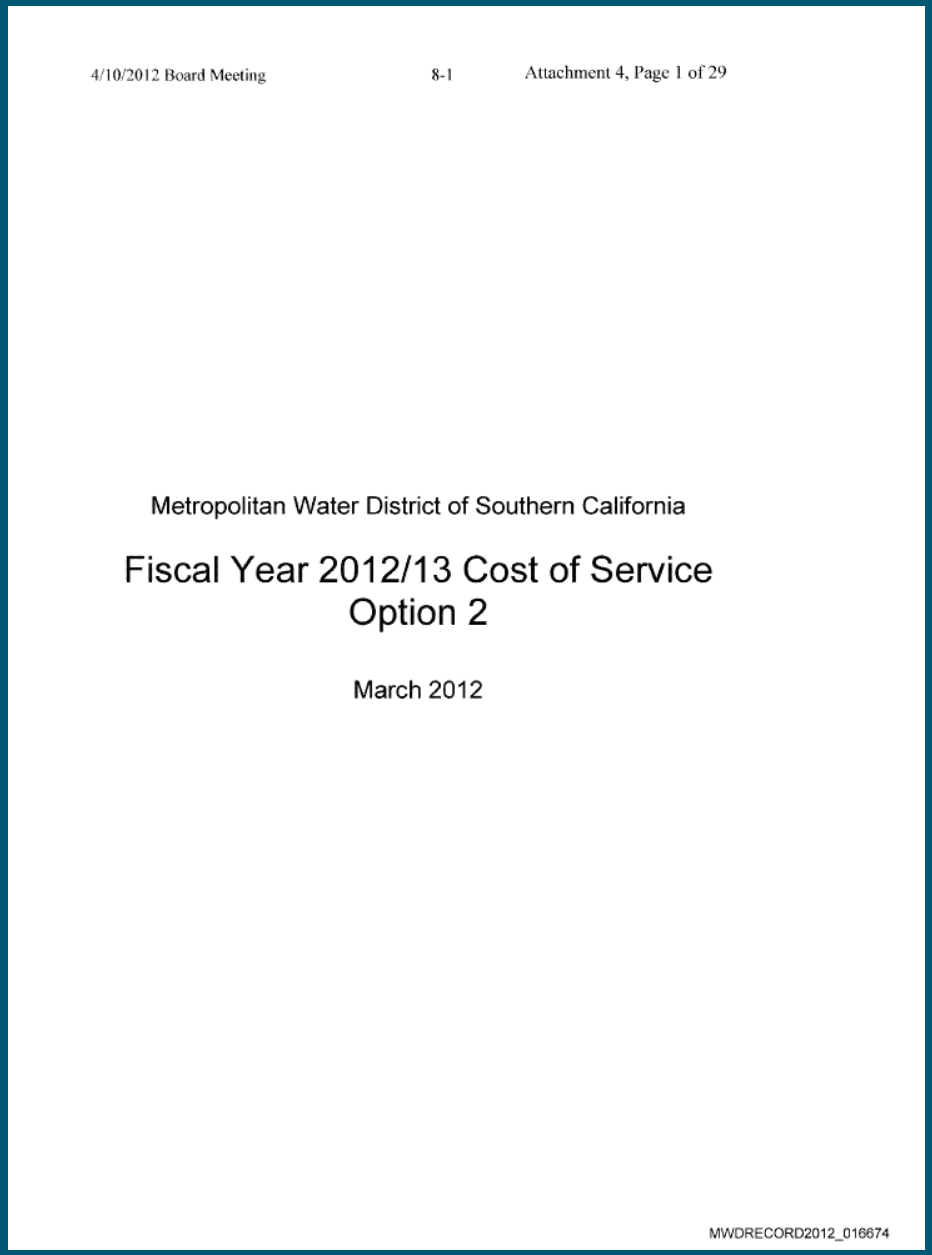
variation of these.

Table 31-1 illustrates that the maximum-day and maximum-hour demand factors for wholesale water service may vary widely; however, as the illustration depicts, the range of intra-class diversity for the wholesale class is somewhat greater than is present within the industrial class, and lower than is exhibited within the residential class. Such variability is understandable when one considers that a typical wholesale customer serves a mix of residential, commercial, and industrial customers. The many types of customers served by the wholesale customer translate into a more uniform demand on the supplying utility. In addition, the wholesale customer may modify its system with purchased water to better manage system water resources. For example, a wholesale utility may purchase water to recharge a water storage facility. Allowing the storage tank elevation to rise or fall with demand of end-use customers, the wholesale customer's demand profile may more resemble that of a large industrial customer and can actually result in reducing the maximum-hour demand placed on the water supplier.

MWDRECORD004118

DTX-030: AWWA M1 Manual, AR2010-003865 & AR2012-003865 at 4118

San Diego's "Dry Year Peaking" Claim



4/10/2012 Board Meeting 8-1 Attachment 4, Page 1 of 29

Metropolitan Water District of Southern California

Fiscal Year 2012/13 Cost of Service
Option 2

March 2012

MWDRECORD2012_016674

- Regardless, even if it were true that Member Agencies rolled off and on in very different ways, **MWD's rates and charges still reasonably account for annual variations in Member Agency water usage**
- Contrary to SDCWA's allegations, in every rate-setting cycle MWD has done a Cost of Service study (sometimes multiple studies) that properly allocates costs to rates and charges

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11467; DTX-110: 2012 COS, AR2012-016594 at 16674

Costs Associated with Annual Water Use Are Recovered Through MWD's Volumetric Rates and Charges

Water Rate Payments
Volumetric Charges ($/AF)

- ***Tier 1 and Tier 2 Supply Rate***
- ***System Access Rate***
- ***System Power Rate***
- ***Water Stewardship Rate***
- ***Treatment Surcharge***

- ***Readiness-to-Serve (RTS)***
- ***Capacity Charge***

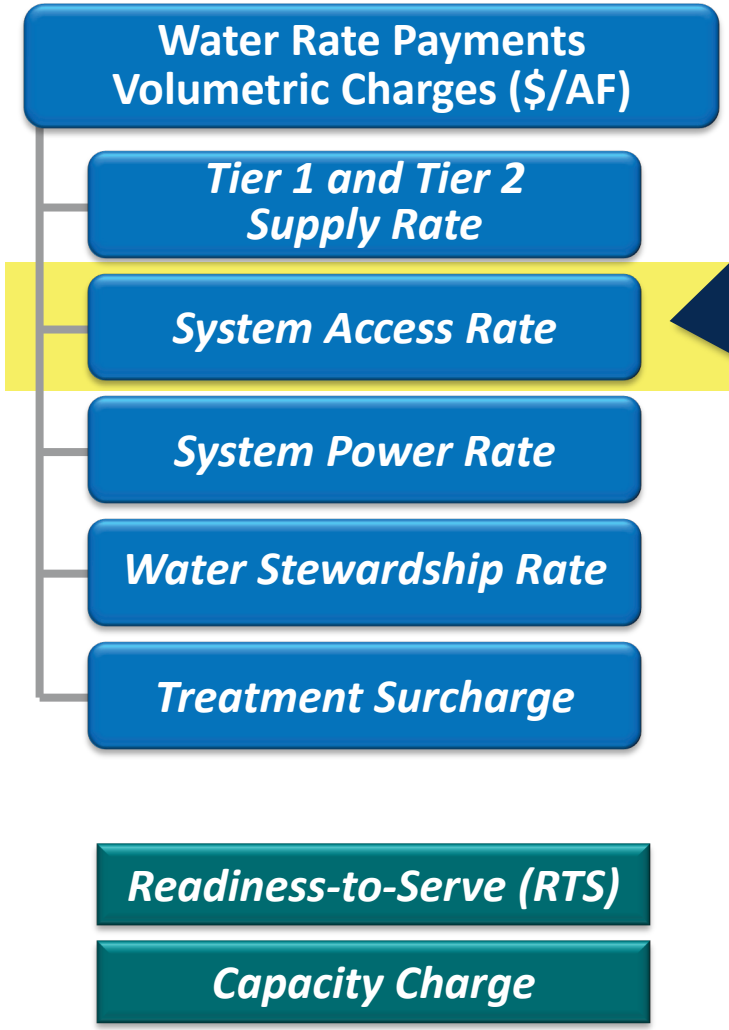
Supply Rates Recover:

- Costs for SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the Member Agencies' demands
- Capital financing, operating, maintenance and overhead costs for drought storage in MWD's reservoirs
  - Drought storage provides reliable supplies by carrying over surplus supplies from periods of above normal precipitation and snow pack to drought periods when supplies decrease

Tier 1 v. Tier 2:

- If a Member Agency's water purchases in a calendar year exceed a base amount, then it must pay a higher Tier 2 Supply Rate

Costs Associated with Annual Water Use Are Recovered Through MWD's Volumetric Rates and Charges

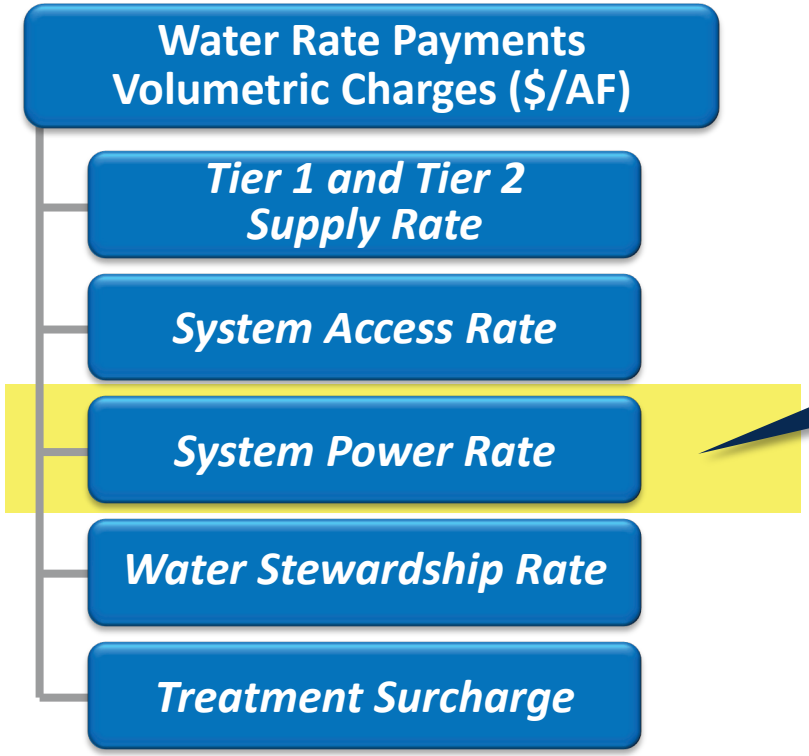


System Access Rate Recovers:

- Most (in 2013-14 rate cycle, 52%) of the capital, and all of the operations, maintenance and overhead costs for the transportation facilities in the State Water Project and Colorado River Aqueduct, except power
- A portion of regulatory storage costs
  - This provides operational flexibility in meeting peak demands, essentially increasing the physical distribution capacity

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 006518; DTX-090, 2010 Cost of Service, AR2010-011443 & AR2012-011443 at 011492, 11484-11485, 11488, 11490; DTX-110, 2012 Cost of Service, AR2012-016594 at 016697, 016689, 016693, 016695

Costs Associated with Annual Water Use Are Recovered Through MWD's Volumetric Rates and Charges



System Power Rate Recovers:

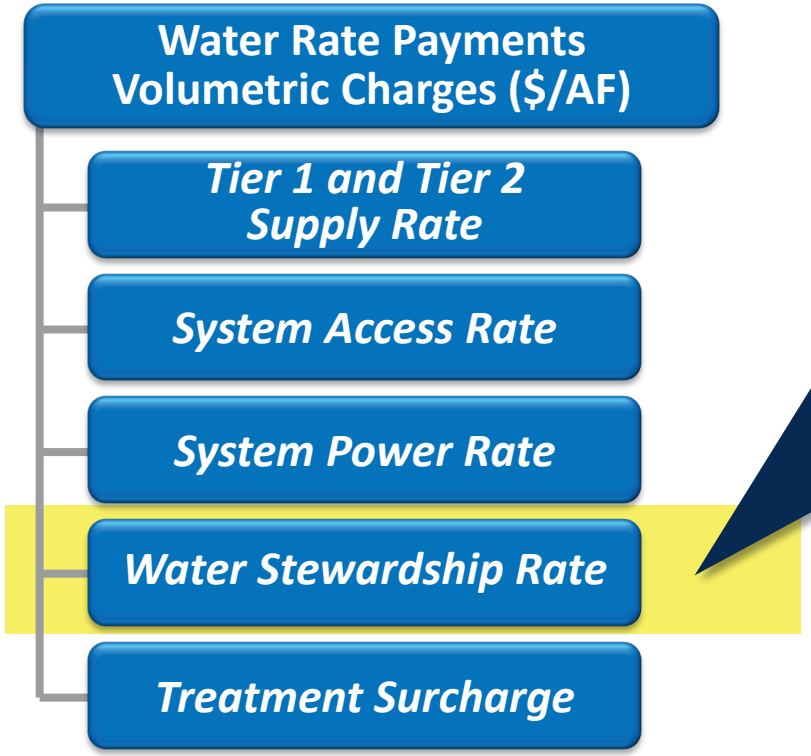
- Energy costs for pumping water to Southern California

Readiness-to-Serve (RTS)

Capacity Charge

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 006520; DTX-090, 2010 Cost of Service, AR2010-011443 & AR2012-011443 at 011492; DTX-110, 2012 Cost of Service, AR2012-016594 at 016697

Costs Associated with Annual Water Use Are Recovered Through MWD's Volumetric Rates and Charges



Readiness-to-Serve (RTS)

Capacity Charge

Water Stewardship Rate Recovers:

- Costs for
  - Local Resources Development
  - Conservation Credits Program
  - Desalination

DTX-045: Final Report on Rates and Charges, AR2010-006463 & AR2012-006463 at 006519; DTX-090, 2010 Cost of Service, AR2010-011443 & AR2012-011443 at 011492; DTX-110, 2012 Cost of Service, AR2012-016594 at 016697

Costs Associated with Annual Water Use Are Recovered Through MWD's Volumetric Rates and Charges

Water Rate Payments Volumetric Charges ($/AF)

- *Tier 1 and Tier 2 Supply Rate*
- *System Access Rate*
- *System Power Rate*
- *Water Stewardship Rate*
- *Treatment Surcharge*

Treatment Surcharge Recovers:

- Capital, operating, maintenance and overhead costs for MWD's five treatment plants

- *Readiness-to-Serve (RTS)*
- *Capacity Charge*

San Diego's "Dry Year Peaking" Claim

Schedule 9. Rates and Charges Summary

Effective January 1st	2012	2013	2014
Tier 1 Supply Rate ($/AF)	$106	$140	$148
Delta Supply Surcharge ($/AF)			
Tier 2 Supply Rate ($/AF)			
System Access Rate ($/AF)			
Water Stewardship Rate ($/AF)			
System Power Rate ($/AF)			
Full Service Untreated Volumetric Cost ($/AF)			
Tier 1			
Tier 2			
Replenishment Water Rate Untreated ($/AF)	$442	**	**
Interim Agricultural Water Program Untreated ($/AF)	$537	***	***
Treatment Surcharge ($/AF)	$234	$254	$297
Full Service Treated Volumetric Cost ($/AF)			
Tier 1	$794	$847	$890
Tier 2	$920	$997	$1,032
Treated Replenishment Water Rate ($/AF)	$651	**	**
Treated Interim Agricultural Water Program ($/AF)	$765	***	***
Readiness-to-Serve Charge ($M)	$146	$142	$166
Capacity Charge ($/cfs)	$7,400	$6,400	$8,600

* The Delta Supply Surcharge will be suspended after 2012.

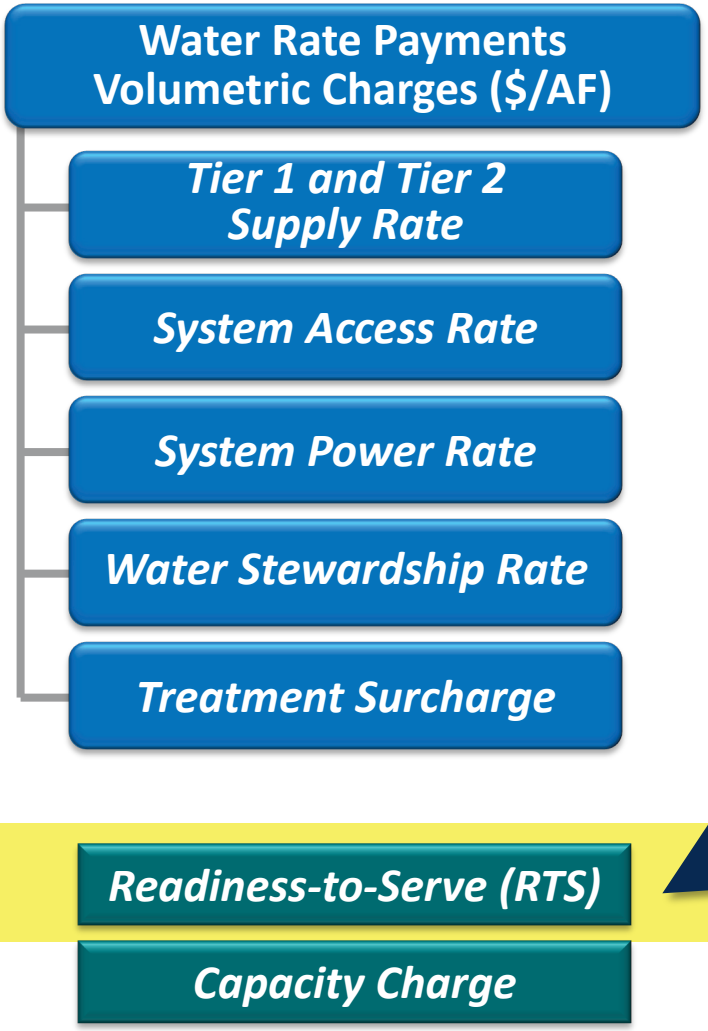
** Discussions on the replenishment program are continuing with the Member Agencies.

*** The Interim Agricultural Water Program will be discontinued after 2012.

- Annual variations in water usage are also recovered through the Readiness-to-Serve Charge, which is allocated based on a 10-year rolling average

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11491; 2012 COS, DTX-110: AR2012-016594 at 16696

San Diego's "Dry Year Peaking" Claim



Annual Variations in Water Usage Are Also Reflected in the Readiness-to-Serve Charge:

RTS Recovers:

- Emergency and regulatory storage in MWD's reservoirs
- Capital costs for State Water Project and Colorado River Aqueduct facilities to meet peak monthly or seasonal deliveries

If a Member Agency's water use goes up or down annually, that affects its RTS allocation for the next decade

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11473, 11483, 11494-95; DTX-110: 2012 COS, AR2012-016594 at 16697-80, 16688, 16698-99

San Diego's "Dry Year Peaking" Claim

Schedule 9. Rates and Charges Summary

Effective January 1st	2012	2013	2014
Tier 1 Supply Rate ($/AF)	$106	$140	$148
Delta Supply Surcharge ($/AF)	$58	*	*
Tier 2 Supply Rate ($/AF)	$290	$290	$290
System Access Rate ($/AF)	$217	$223	$243
Water Stewardship Rate ($/AF)			
System Power Rate ($/AF)			
Full Service Untreated Volumetric Cost ($/AF)			
Tier 1			
Tier 2			
Replenishment Water Rate Untreated ($/AF)			
Interim Agricultural Water Program Untreated ($/AF)			
Treatment Surcharge ($/AF)			
Full Service Treated Volumetric Cost ($/AF)			
Tier 1			
Tier 2	$920	$997	$1,032
Treated Replenishment Water Rate ($/AF)	$651	**	**
Treated Interim Agricultural Water Program ($/AF)	$765	***	***
Readiness-to-Serve Charge ($M)	$146	$142	$166
Capacity Charge ($/cfs)	$7,400	$6,400	$8,600

* The Delta Supply Surcharge will be suspended after 2012.

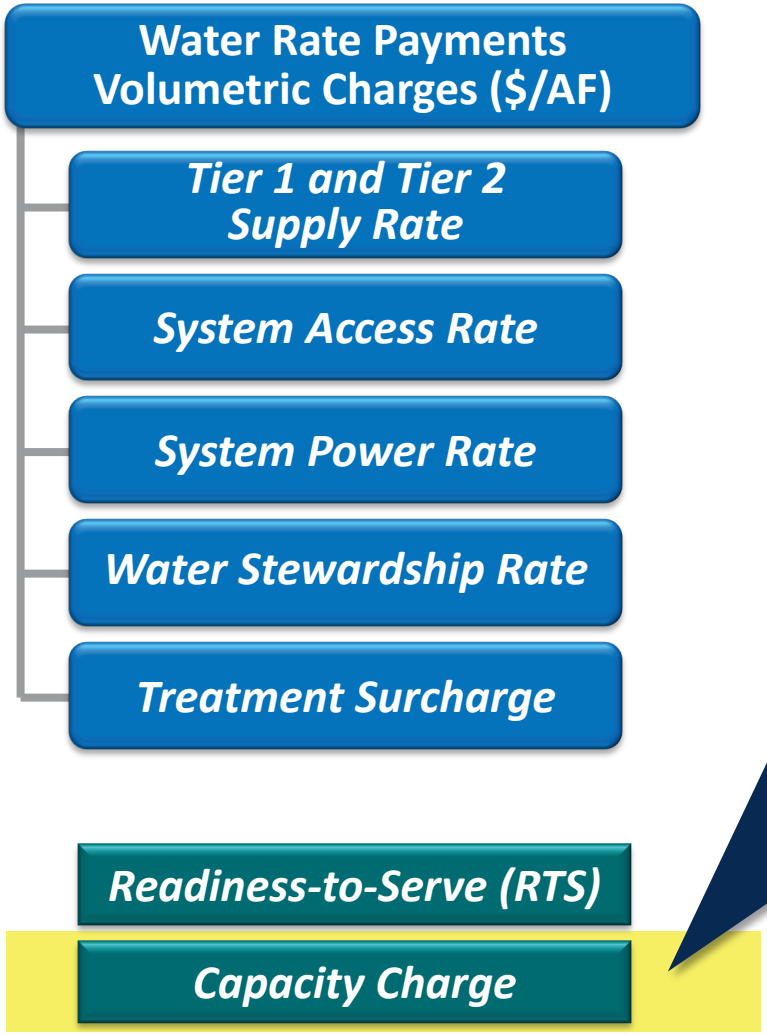
** Discussions on the replenishment program are continuing with the Member Agencies.

*** The Interim Agricultural Water Program will be discontinued after 2012.

- Variations in water usage also affect the Capacity Charge, which is allocated based on the Member Agency's maximum summer day demand over the course of a three-year period

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11491; DTX-110: 2012 COS, AR2012-016594 at 16696

San Diego's "Dry Year Peaking" Claim



Variations in Water Usage Are Also Reflected in the Capacity Charge:

Capacity Charge Recovers:

- Cost of providing MWD's distribution facilities for peak usage
- Cost of providing seasonal peak storage capacity within MWD's system
  - Gives MWD the operational flexibility to meet peak demands

The Capacity Charge recovers the costs of variations within a year

DTX-090: 2010 COS, AR2010-011443 & AR2012-011443 at 11,484-85, 11488, 11490, 11492; DTX-110: 2012 COS, AR2012-016594 at 16688-89, 16693, 16695, 16697

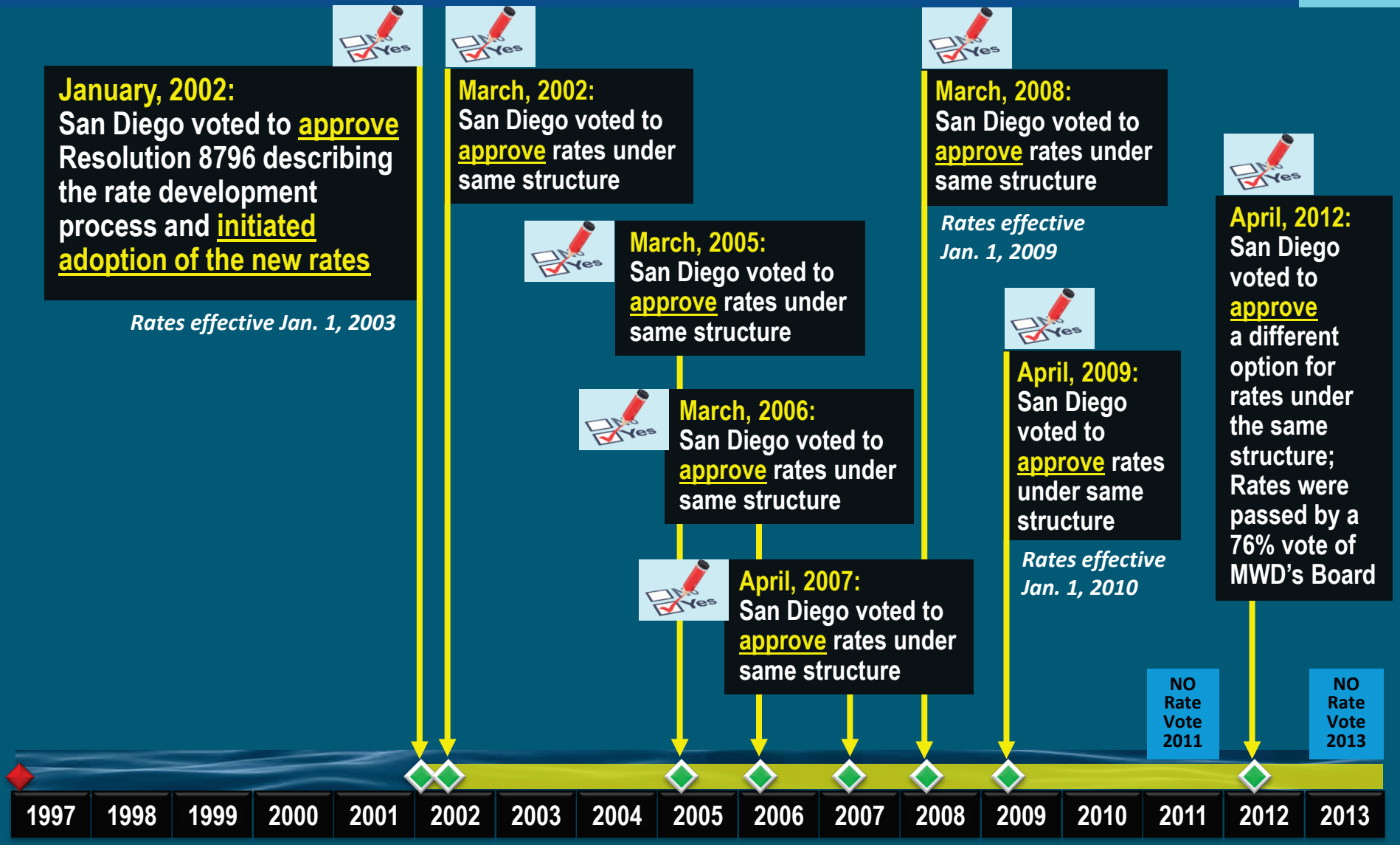
San Diego's "Dry Year Peaking" Claim

- San Diego complains Los Angeles is rolling on and rolling off the MWD system

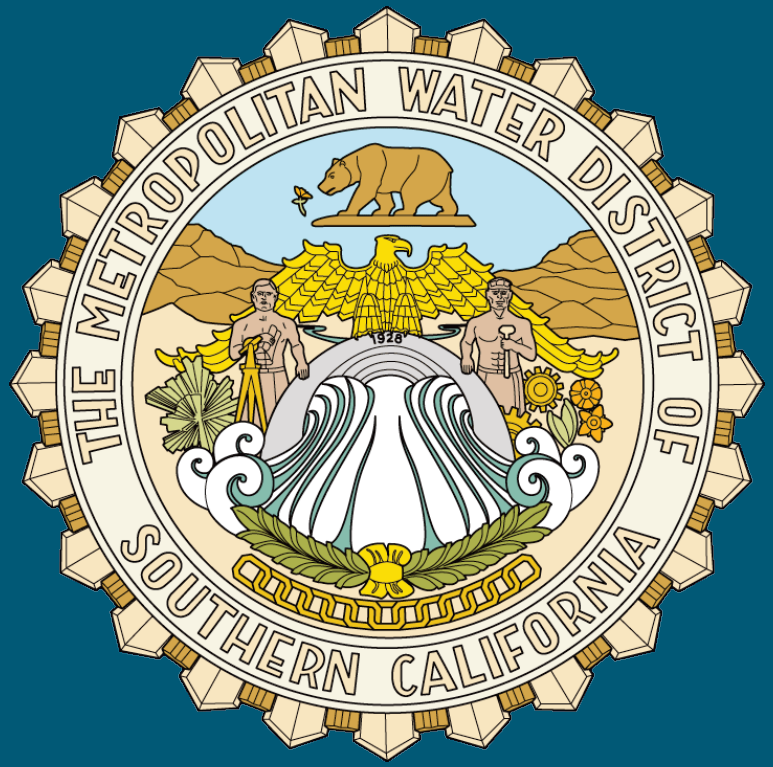
- It is not possible to "roll on" and "roll off" MWD's system without paying for its costs

SDCWA 2012 Complaint, ¶ 65

San Diego Was an Active Participant in Designing, Evaluating, and Approving Rates Along With The Other Member Agencies



MWD Bd. Meeting Minutes and Rate Votes, DTX-040: AR2010-006223 & AR2012-006223; DTX-042: AR2010-006431 & AR2012-006431; DTX-059: AR2010-008252 & AR2012-008252; DTX-062: AR2010-008676 & AR2012-008676; DTX-066: AR2010-009261 & AR2012-009261; DTX-071: AR2010-009618 & AR2012-009618; DTX-082: AR2010-010376 & AR2012-010376; DTX-111: AR2012-016995


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928