



● **Board of Directors**
Business and Finance Committee

1/12/2010 Board Meeting

8-1

Subject

Set a public hearing date; and receive report on proposed revenue requirements, and water rates and charges

Description

SUMMARY

In April 2009, the Board directed staff to conduct a comprehensive review of Metropolitan's Cost of Service methodology with the intent to ensure that all rates and charges recover the full cost of service when the Board establishes rates for the 2010/11 fiscal year. After conducting this Cost of Service review from June to October of 2009, the Board chose to adopt no changes to the cost of service methodology at this time, although the longer-term IRP Update and Long Range Finance Plan Update may result in future changes. A 12.6 percent overall rate increase would be necessary to achieve the Board's objective to recover the full cost of service in fiscal year 2010/11 without a draw on reserves.

In four of the last five years Metropolitan has not collected sufficient revenues to cover its costs. Instead, in an effort to mitigate rate increases, Metropolitan has been utilizing its reserves to fund expenditures. At the same time, the largest court ordered supply cutback in the history of the State Water Project (SWP) occurred. Supply cutbacks are expected to continue due to hydrology and pumping restrictions imposed to protect endangered fish (e.g. Delta smelt). In July 2009 Metropolitan responded to continued supply constraints by declaring a Level 2 Regional Water Supply Allocation. This allocation imposes a set of penalties for member agencies that use more than their allocation limits. Conservation measures have been implemented throughout Southern California to manage within the limits of the water supply allocation. These conservation measures, combined with lower levels of economic activity due to the recession, have helped to reduce water sales throughout Metropolitan's service area. Metropolitan's water sales in fiscal year 2009/10 are trending at the budgeted levels of 1.9 million acre-feet, significantly lower than water sales of almost 2.3 million acre-feet just three years ago.

At the same time that water supplies and water sales are constrained, Metropolitan's costs are expected to increase in 2010/11 primarily due to the following factors:

- a. **Higher costs for State Water Project deliveries:** The cost payable under the State Water Contract in 2010/11 is estimated to be about \$48 million higher than projected in 2009/10. These cost increases are primarily driven by increases in off-aqueduct power and capital-related costs, as well as Metropolitan's share of the environmental work and preliminary engineering of the Delta Habitat Conservation and Conveyance Program (DHCCP). An additional factor leading to the year-over-year increase is a significant refund from DWR in 2009 that is helping to reduce Metropolitan's 2009/10 costs. This one-time refund will not be available in 2010/11, thus the revenue requirement must be higher to cover the costs without the benefit of the refund.
- b. **Debt service:** The financing costs for Metropolitan's ongoing \$3.85 billion capital program will result in an increase of about \$43 million in debt service from 2009/10. A significant portion of the capital program is to repair and improve treatment processes and to upgrade and repair Metropolitan's aging water delivery system.

- c. **Increase in Pay-as-you-go (PAYGO) capital funding:** PAYGO funding of the CIP is projected to increase by almost \$58 million from about \$37 million in 2009/10 to \$95 million in 2010/11. This increase is necessary to meet the Board's policy of funding \$95 million of capital expenditures associated with replacement and refurbishment of existing facilities from revenues. Funding higher levels of PAYGO is consistent with restoring Metropolitan's revenue bond coverage and fixed charge coverage ratios to board-adopted targets, thus helping to preserve Metropolitan's current bond ratings. In addition, funding more of the CIP from revenues will reduce the long-term cost of the program by reducing interest costs.
- d. **Higher power costs on the Colorado River Aqueduct (CRA):** CRA power costs are projected to be \$13 million higher in 2010/11 as a result of higher flows on the CRA.

In order to help mitigate impacts on member agencies, the proposed 2010/11 departmental operating budget has been reduced by almost \$3 million compared to the 2009/10 budget. Additionally, proposed demand management costs are equal to the 2009/10 budget and Metropolitan's Capital Investment Plan has been reduced by \$85 million from the 2009/10 budget as expenditures for large capital projects like the Inland Feeder and Skinner Oxidation Retrofit Program come to a close.

RATES AND CHARGES FOR 2010/11

Pursuant to Metropolitan's Administrative Code (section 4304), at its January meeting, the Business and Finance Committee is to set a public hearing to receive input on Metropolitan's rates and charges. This hearing is to take place prior to the committee's regularly scheduled meeting in March. In addition to this action, the committee also reviews the General Manager's analysis of the revenue requirement for 2010/11, and the rates and charges needed to meet the revenue requirement. The Cost of Service analysis detailed in [Attachment 1](#), "Metropolitan Water District of Southern California, Fiscal Year 2010/11 Cost of Service", is consistent with the Cost of Service process used since the Board adopted the current rate structure in 2002. This analysis shows that an overall increase of 12.6 percent would be necessary to achieve the Board direction of collecting the full Cost of Service in fiscal year 2010/11 without drawing from reserves to meet expenditures. The Cost of Service analysis also allocates costs to the various rate elements.

The specific elements of an increase of 12.6 percent in water rates and charges for the coming fiscal year are shown in Table 1, "Estimated Rates and Charges." Revenue bond coverage is estimated to be 1.91 times, while fixed charge coverage would be approximately 1.28 times in 2010/11. The estimate of rates and charges for 2010/11 was determined based on a total revenue requirement of \$1.39 billion. The existing rates, which are effective through December 31, 2010, and the rates under a 12.6 percent increase, effective January 1, 2011, would generate combined revenue of \$1.37 billion based on total sales of 1.93 million acre-feet. Due to the continuing need to acquire water transfers, Metropolitan will maintain the Delta Supply Surcharge to fund such purchases and reflect the impact of Delta pumping restrictions. As shown in Table 1, the Delta Supply Surcharge can be expected to decrease over time if a near-term Delta solution is realized that results in increased SWP deliveries or if supply program costs drop. However, any drop in the Delta Supply Surcharge is likely to be more than offset by increases in other rate elements to pay for the costs of Delta improvements.

Table 1. Estimated Rates and Charges

	Effective Jan 1, 2010*	Effective Jan 1, 2011
Tier 1 Supply Rate (\$/AF)	\$101	\$112
Delta Supply Surcharge (\$/AF)	\$69	\$51
Tier 2 Supply Rate (\$/AF)	\$280	\$280
System Access Rate (\$/AF)	\$154	\$217
Water Stewardship Rate (\$/AF)	\$41	\$43
System Power Rate (\$/AF)	\$119	\$135
Full Service Untreated Volumetric Cost (\$/AF)		
Tier 1	\$484	\$558
Tier 2	\$594	\$675
Replenishment Water Rate Untreated (\$/AF)	\$366	\$440
Interim Agricultural Water Program Untreated (\$/AF)	\$416	\$513
Treatment Surcharge (\$/AF)	\$217	\$217
Full Service Treated Volumetric Cost (\$/AF)		
Tier 1	\$701	\$775
Tier 2	\$811	\$892
Treated Replenishment Water Rate (\$/AF)	\$558	\$632
Treated Interim Agricultural Water Program (\$/AF)	\$615	\$718
Readiness-to-Serve Charge (\$M)	\$114	\$135
Capacity Charge (\$/cfs)	\$7,200	\$7,200

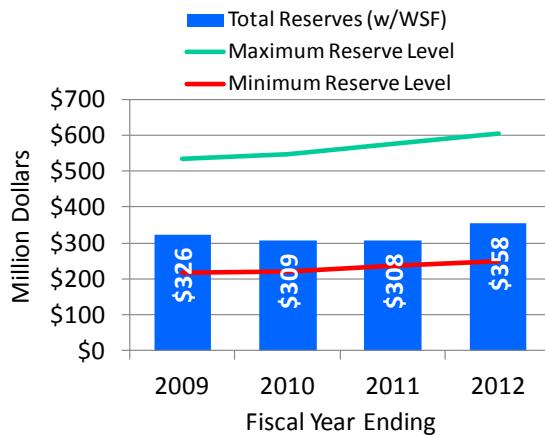
* Most rates effective Sept 1, 2009

- a. **Tier 1 Supply Rate and Delta Supply Surcharge.** Cost of service allocation would result in a reduction of \$7 per acre-foot in the combined Tier 1 Supply Rate and Delta Supply Surcharge from \$170 per acre-foot to \$163 per acre-foot. The Tier 1 Supply Rate recovers Metropolitan's supply costs that are not recovered by sales at the Tier 2 Supply Rate or reflected in the Delta Supply Surcharge, Replenishment or Agricultural rates. The Delta Supply Surcharge reflects the costs of the additional supply that Metropolitan needs to procure as a result of the pumping restrictions, a portion of SWP costs charged to Supply, and the cost of personnel and consultants working on Delta improvements. These costs are estimated to be around \$87 million in 2010/11, about \$30 million lower than the projection used to set the 2010 Delta Supply Surcharge. The reduced costs reflect lower supply program expenditures, largely due to reduced Drought Water Bank purchases based on actual experience in 2009. It is recommended that the Delta Supply Surcharge be decreased by \$18 per acre-foot to \$51 per acre-foot due to these lower costs. Partially offsetting the reduction in the Delta Supply Surcharge is an increase in the Tier 1 Supply Rate of \$11 per acre-foot. The Delta Supply Surcharge is included in all Tier 1 sales, IAWP, and Replenishment sales. The Tier 1 Supply Rate will be charged on a dollar per acre-foot basis for system supply delivered to meet firm demands that are less than the Tier 1 Annual Limit as shown in Schedule 12, [Attachment 1](#).
- b. **Tier 2 Supply Rate.** The Tier 2 Supply Rate is set at a level that reflects Metropolitan's cost of purchasing new supplies. Preliminary estimates indicate a Tier 2 Supply Rate of \$280 per acre-foot reflects the cost Metropolitan may pay for additional water transfers in fiscal year 2010/11. The Tier 2 Supply Rate will be charged on a dollar-per-acre-foot basis for system supply delivered to meet firm demands that are greater than the Tier 1 Annual Limit. This rate may change as more information about the cost of transfers becomes available.
- c. **System Access Rate.** In order for rates to recover the full cost of service in 2010/11 the System Access Rate would increase by \$63 per acre-foot. The magnitude of this increase reflects cost increases and the under-collection of the System Access Rate in 2009/10 based on the rates that were adopted for 2010.

The System Access Rate recovers a portion of the costs associated with the conveyance and distribution system, including capital and operations and maintenance costs. All users of the Metropolitan system pay the System Access Rate (including member agencies and third-party wheeling entities).

- d. **Water Stewardship Rate.** The Water Stewardship Rate would increase by \$2 per acre-foot to \$43 per acre-foot to recover the costs associated with Metropolitan's demand management programs. The Water Stewardship Rate is charged on a dollar-per-acre-foot basis to collect revenues to support Metropolitan's financial commitment to conservation, water recycling, groundwater recovery and other demand management programs approved by the Board. The Water Stewardship Rate is charged for every acre-foot of water conveyed by Metropolitan, and is used to fund Metropolitan's commitment to local resource and conservation investments in fiscal year 2010/11, including the departmental costs of administering the demand management programs.
- e. **System Power Rate.** The System Power Rate is estimated to increase by \$16 per acre-foot to \$135 per acre-foot. The increase is due to higher projected power unit costs for pumping water on the SWP and higher delivery volumes on the CRA. The System Power Rate will be charged on a dollar-per-acre-foot basis to recover the cost of power necessary to pump water from the State Water Project and Colorado River through the conveyance system. The System Power Rate will be charged for all Metropolitan supplies.
- f. **Treatment Surcharge.** The treatment surcharge would not change, remaining at \$217 per acre-foot. The Treatment Surcharge recovers the cost of providing treated water service, including allocated capital financing costs and operations and maintenance cost.
- g. **Capacity Charge.** The Capacity Charge would remain unchanged at \$7,200 per cubic-foot-second. The Capacity Charge is a fixed charge levied on the maximum summer day demand placed on the system between May 1 and September 30 for the three calendar-year period ending December 31, 2009. The Capacity Charge recovers the cost of providing peak capacity within the distribution system. Daily flow measured between May 1 and September 30 for purposes of billing the Capacity Charge will include all deliveries made by Metropolitan to a member agency or member agency customer including water transfers, exchanges and agricultural deliveries, but excluding replenishment service.
- h. **Readiness-to-Serve Charge.** The Readiness-to-Serve Charge would increase by \$21 million to \$135 million. This increase is due to increases in capital financing costs for conveyance. Metropolitan's Readiness-to-Serve Charge recovers costs associated with standby and peak conveyance capacity and system emergency storage capacity. The Readiness-to-Serve Charge is allocated among the member agencies on the basis of each agency's ten-year rolling average of firm demands (including water transfers and exchanges conveyed through system capacity). Revenues equal to the amount of Standby Charges will continue to be credited against the member agency's Readiness-to-Serve Charge obligation unless a change is requested by the member agency.
- i. **Replenishment Water Rate.** Consistent with past actions, the untreated replenishment water rate would increase from \$366 per acre-foot to \$440 per acre-foot reflecting the increase in full service rates. Treated replenishment water rates would also increase from \$558 per acre-foot to \$632 per acre-foot, for the same reason. Replenishment service has been curtailed since May 2007 and is not expected to be available through fiscal year 2010/11.
- j. **Agricultural Water Rate.** The untreated agricultural water rate would increase from \$416 per acre-foot to \$513 per acre-foot to reflect the increase in full service rates and the reduction in the IAWP discount as adopted by the Board during the IAWP phase out period. The treated agricultural water rate would also increase from \$615 per acre-foot to \$718 per acre-foot, for the same reasons.

Figure 1 shows the projected reserve levels under the estimated rates and charges. Reserve fund balances include the Revenue Remainder Fund, the Water Rate Stabilization Fund, the Water Treatment Surcharge Stabilization Fund, and the Water Stewardship Fund.

Figure 1. Reserve Fund Balances**REVENUE REQUIREMENTS**

The revenue requirements for 2010/11 are estimated to be \$1.39 billion. As shown in Table 2, this is about \$165 million more than the projected revenue requirements in the current fiscal year, and almost \$290 million higher than costs in 2008/09. Costs are projected to increase from about \$1.40 billion in 2009/10 to about \$1.55 billion in 2010/11. Taxes, interest income, power, and miscellaneous income are expected to generate about \$155 million, reducing the revenue requirement from rates and charges in 2010/11 to about \$1.39 billion.

Table 2. Revenue Requirements for FY 2010/11 compared to prior year costs

	\$ Millions			2010/11 Change from:	
	2008/09 Actuals	2009/10		2008/09	2009/10
		Projected	Year		
Departmental & Other O&M (w/o Variable Treatment)	\$ 316.2	\$ 310.7	\$ 311.5	\$ (4.8)	\$ 0.7
Chemicals, Sludge & Power for Treatment	28.4	29.5	26.5	(1.9)	(3.0)
State Water Project (without Variable Power)	338.0	356.3	401.2	63.3	45.0
SWP Variable Power	56.7	96.4	99.7	43.0	3.3
CRA Power	37.4	46.3	59.6	22.2	13.3
Supply Programs paid from O&M	76.3	101.7	103.2	26.9	1.4
Demand Management	75.6	76.9	58.2	(17.4)	(18.6)
Debt Service	281.2	305.0	348.1	66.9	43.1
PAYGO	30.1	36.7	95.0	64.9	58.3
Change in Required Reserves	28.8	37.5	42.2	13.4	4.7
Sub-total expenditures	1,268.8	1,397.0	1,545.3	276.5	148.3
Revenue Offsets	168.3	171.3	154.8	(13.4)	(16.5)
Total Revenue Requirement	\$ 1,100.5	\$ 1,225.7	\$ 1,390.4	\$ 289.9	\$ 164.8

Totals may not foot due to rounding

MAJOR ASSUMPTIONS - REVENUE REQUIREMENTS FOR FY 2010/11**Water Sales**

1.93 million acre-feet

Cash year water sales (including Tier 1, Tier 2, agricultural, and wheeling/exchange sales) are projected to be about 1.93 million acre-feet in fiscal year 2010/11. This forecast is based on expected demands under average weather conditions. If water sales are less than anticipated, rate stabilization reserves would be used to meet expenditures. Treated water sales are expected to be about 1.3 million acre-feet or 65 percent of total sales. About 1.66 million acre-feet are expected to be sold at the Tier 1 rate, 48 thousand acre-feet are expected to be sold at the higher Tier 2

rate, 62 thousand acre-feet are expected to be sold through the Interim Agricultural Water Program, and no water sales are projected at Replenishment rates.

State Water Project (including SWP power)**\$500.9 million**

Total costs for 2010/11 under the State Water Project are estimated to be approximately \$500.9 million, including about \$100 million for variable power costs, net of projected credits. Costs for OMP&R and capital are expected to be \$45 million higher than in 2009/10. Much of this increase is due to the fact that 2009/10 expenditures will be reduced by a large, one-time refund that will be distributed from DWR back to the contractors. Metropolitan's share of this refund will be approximately \$23 million. State Water Project costs in 2010/11 will not benefit from this refund. Variable power costs for the State Water Project are expected to be \$3.3 million higher than in 2009/10, due to a higher projected power rate on the State Water Project. Costs of off-aqueduct power facilities are also projected to increase by more than \$8 million. SWP cost estimates are based on projected water deliveries of about 0.92 million acre-feet in 2010/11 and estimates provided by DWR.

Colorado River Power Costs**\$59.6 million**

The revenue requirement incorporates costs associated with pumping approximately 1.18 million acre-feet from the Colorado River in 2010/11. Power from Metropolitan's share of Hoover and Parker, plus energy under the contract with Southern California Edison will not be sufficient to move these supplies. Total costs for pumping are estimated to be about \$59.6 million, which includes about \$39 million to procure power on the open market in 2010/11.

Supply and Storage Programs**\$103.2 million**

Total expenditures for water transfer and storage programs are estimated to be about \$103.2 million in 2010/11. Colorado River Supply Program expenditures total \$54.2 million and include \$17.3 million for the Palo Verde Irrigation District (PVID) Program, \$10.1 million for the Imperial Irrigation District/Metropolitan Conservation Program, new agricultural water transfers of \$13.7 million, and \$13.1 million for various other Colorado River-based supply programs. Supply program costs along the State Water Project total \$39.2 million and include approximately \$30.3 million in Drought Water Bank purchases, \$4.2 million for the Arvin-Edison Water Storage Program, \$2.1 million for the Yuba Accord Program, and \$2.6 million for the Semitropic Water Storage Program. An additional \$9.8 million will be used to fund ongoing operating costs for in-basin supply projects including conjunctive use programs within Metropolitan's service area. Drought Water Bank costs reflect expenditures for transfers that will be delivered in calendar year 2011. It is anticipated that 100 thousand acre-feet of transfer water will be purchased through the Drought Water Bank for calendar year 2011.

Demand Management Programs**\$58.2 million**

Demand management program payments made to the member agencies in support of local resources development and active conservation efforts are expected to total \$58.2 million in 2010/11. This reflects incentive payments for conservation of \$19.1 million and local resources development of \$39.1 million. These incentives do not reflect other costs associated with these programs, including labor, administration, and public information and outreach costs of almost \$19.3 million that are included in Metropolitan's departmental O&M estimates. Recycling and groundwater recovery projects supported by Metropolitan are expected to increase annual production by about 27 thousand acre-feet over current year estimates, to a total of 250 thousand acre-feet in 2010/11. Projected expenditures reflect Metropolitan's ongoing commitment to water conservation, local recycling, and groundwater cleanup. These estimates are consistent with efforts to develop local water supplies in cooperation with the member agencies and other local agencies based on the Integrated Resources Plan.

Capital Financing Program**\$443.1 million**

Capital Financing Program costs include \$294 million of water revenue bond debt service payments on approximately \$4.6 billion of outstanding Water Revenue Bond debt as of December 31, 2009. This represents an increase of approximately \$43 million above 2009/10 projected debt service payments, due in part to the issuance of water revenue bonds in 2009/10 and 2010/11 to finance the ongoing CIP. These costs also reflect debt service increases that are the result of higher interest payments for taxable Build America Bonds (BABs). As part of the Federal American Recovery and Reinvestment Act, the Federal government will provide a subsidy to public entities like Metropolitan that issue taxable bonds. While the interest payments on these bonds are higher than tax-exempt bonds, Metropolitan will receive a subsidy from the Federal government equal to 35 percent of the interest payment, making these bonds an attractive funding option for the capital program. The subsidy does not show up in Metropolitan's debt service,

rather it increases Metropolitan's revenue offsets, which reduce the revenue requirement to be generated from rates and charges. Additional capital financing costs include \$39 million of general obligation bond debt service which are paid by ad valorem property taxes, and \$15.1 million for debt administration expenses for remarketing, liquidity support, and administrative costs associated with Metropolitan's variable rate debt program, and State Revolving Fund Loan payments.

In addition to debt service, Metropolitan's capital financing costs include \$95 million of capital expenditures funded from revenues or reserves, also referred to as PAYGO funding. By way of comparison, more than \$170 million of the proposed Capital Improvement Program in 2010/11 is for replacement and refurbishment (R&R). R&R expenditures are reflective of the ongoing cost to maintain Metropolitan's facilities due to the current and previous use of the system. Under prior board policy and direction, \$95 million of these costs would be paid by current users of the system, as opposed to debt-financed. This policy was included in the Long Range Finance Plan, and reflected a compromise between funding all repair and replacement capital costs through revenues and mitigating rate impacts in the near term. As such, it is appropriate for PAYGO levels to be increased from the \$36.7 million in the 2009/10 budget to \$95 million in 2010/11. By restoring PAYGO funding to \$95 million from rates and charges in 2010/11 and beyond, Metropolitan's revenue bond coverage will come closer to meeting the board-adopted target of 2 times debt service coverage. In the future, funding PAYGO through rates at or above \$100 million per year will be an important part of Metropolitan's strategy to maintain its high bond ratings and mitigate long-term debt service costs.

Operations and Maintenance

\$338 million

The revenue requirement includes \$338 million for operations and maintenance, including labor and benefits, professional services, operating equipment purchases and water treatment chemicals, power, and solids handling. This estimate is \$2.3 million or about one percent lower than projected 2009/10 costs. A detailed breakdown of departmental budgets is provided in the 2010/11 proposed budget.

Adjustments in Reserves

\$42.2 million

Required reserve balances are estimated to increase by \$42.2 million from June 30, 2010 to June 30, 2011, in accordance with board policies contained in Metropolitan's Administrative Code for the State Water Contract Fund, and Revenue Remainder Fund, and in accordance with bond covenants for the Operations and Maintenance Fund and Revenue Bond Reserve Funds. About \$15.3 million of this portion of the revenue requirement is for the increase in the board-adopted minimum reserve levels for rate stabilization purposes. This portion is subtracted from the revenue requirement for the purposes of calculating the necessary rate increases.

Other Revenues

\$154.8 million

To determine the rates and charges revenue requirement, the total estimated obligations of \$1.54 billion are reduced by revenue from ad valorem property taxes, interest income, hydropower revenues, CRA power sales, Federal BAB subsidies, and miscellaneous revenues. Ad valorem property taxes levied at the current tax rate of 0.0043 percent of assessed valuations are estimated to be \$80.8 million. Annexation charges are expected to provide \$1 million. BAB subsidies are expected to generate \$10.4 million in 2010/11. Power recoveries, interest on investments and miscellaneous revenue are expected to produce \$62.6 million in 2010/11. Based on the projected expenditure estimates described above, total revenues required from rates and charges in 2010/11 are projected to be \$1.39 billion.

OTHER CONSIDERATIONS

It is important for Metropolitan's rates and charges to cover the full cost of service without relying on continued draws from financial reserves. It is also important however, to acknowledge the challenging economic circumstances that face Metropolitan's member agencies and retail customers throughout the service area. Metropolitan's financial reserves are in better condition than was forecasted a year ago. While a 12.6 percent increase in 2011 would allow Metropolitan to cover costs in fiscal year 2010/11, there may be other alternatives that result in reasonable financial stability for Metropolitan while reducing the immediate strain on ratepayers. A 12.6 percent increase in 2011 would need to be followed by a minor increase in 2012 to continue covering Metropolitan's costs. The Board may consider a two-year rate increase that would lock in rates for 2011 and 2012. This two-year rate increase could smooth out the impact of increases by adopting two successive single digit increases. This approach would likely require a draw from reserves in 2010/11, but rates would cover the

full cost of service during the 2011 calendar year and fiscal year 2011/12. Under this two-year approach, financial ratios would be lower in the first year than with a single 12.6 percent increase, but the second year would achieve revenue bond coverage targets. Staff also believes that a board action to adopt two successive rate increases at one time will demonstrate a commitment to restore revenue bond and fixed charge coverage ratios. Staff will work with the Board in coming weeks to better understand options for a two-year rate increase.

RECOMMENDATION

This letter requests that the Board set a public hearing at which interested parties may provide input regarding Metropolitan's rates and charges to be effective January 1, 2011, for the February meeting of the Business and Finance Committee.

Policy

Metropolitan Water District Administrative Code Section 4304: Apportionment of Revenues and Setting of Water Rates and Charges to Raise Firm Revenues

California Environmental Quality Act (CEQA)

CEQA determination for Options #1 and #2:

The proposed actions are not defined as a project under CEQA, because they involve continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed actions are not subject to CEQA because they involve the creation of government funding mechanisms or other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed actions are not subject to CEQA pursuant to Sections 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines.

Board Options

Option #1

Adopt the CEQA determination and set a public hearing at which interested parties may provide input regarding Metropolitan's rates and charges to be effective January 1, 2011, for the February meeting of the Business and Finance Committee.

Fiscal Impact: None

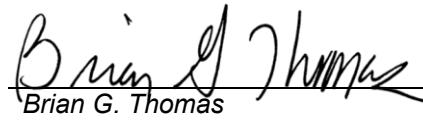
Option #2

Take no action.

Fiscal Impact: None

Staff Recommendation

Option #1



Brian G. Thomas
Chief Financial Officer

12/29/2009
Date



Jeffrey Rightlinger
General Manager

12/29/2009
Date

Attachment 1 – Metropolitan Water District of Southern California, FY 2010/11 Cost of Service

Reference Number cfo12602747

Metropolitan Water District of Southern California

Fiscal Year 2010/11 Cost of Service

December 2009

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1 Cost of Service

Prior to discussing the specific rates and charges that make up the rate structure, it is important to understand the cost of service process that supports the rates and charges. The purpose of the cost of service process is to: (1) identify which costs should be recovered through rates and charges; (2) organize Metropolitan's costs into service functions; and (3) classify service function costs on the basis for which the cost was incurred. The purpose of sorting Metropolitan's costs in a manner that reflects the type of service provided (e.g. supply vs. conveyance), the characteristics of the cost (e.g. fixed or variable) and the reason why the cost was incurred (e.g. to meet peak or average demand) is to create logical cost of service "building blocks". The building blocks can then be arranged to design rates and charges with a reasonable nexus between costs and benefits.

1.1 Cost of Service Process

The general cost of service process involves the four basic steps outlined below.

Step 1 - Development Of Revenue Requirements

In the revenue requirement step, the costs that Metropolitan must recover through rates and charges, after consideration of revenue offsets, are identified. The cash needs approach, an accepted industry practice for government-owned utilities, has historically been used in identifying Metropolitan's revenue requirements and was applied for the purposes of this study. Under the cash needs approach, revenue requirements include operating costs and annual requirements for meeting financed capital items (debt service, funding of replacement and refurbishment from operating revenues, etc.).

Step 2 – Identification of Service Function Costs

In the functional allocation step, revenue requirements are allocated to different categories based on the operational functions served by each cost. The functional categories are identified in such a way as to allow the development of logical allocation bases. The functional categories used in the cost of service process include:

- Supply
- Conveyance and Aqueduct
- Storage
- Treatment
- Distribution
- Demand Management
- Administrative and General
- Hydroelectric

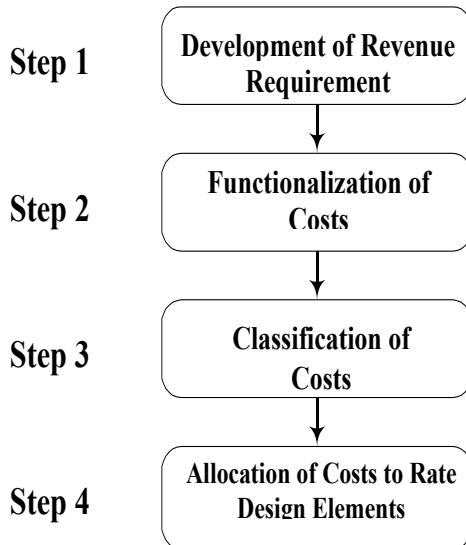
In order to provide more finite functional allocation, many of these functional categories are subdivided into more detailed sub-functions in the cost of service process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions State Water Project (SWP), Colorado River Aqueduct (CRA), and Other. Similarly, costs in the Storage function are broken down into the sub-functions Emergency Storage, Drought Carryover Storage, and Regulatory Storage.

Step 3 - Classification Of Costs

In the cost classification step, functionalized costs are separated into categories according to their causes and behavioral characteristics. Proper cost classification is critical in developing a rate structure that recovers costs in a manner consistent with the causes and behaviors of those costs. Under American Water Works Association (AWWA) guidelines, cost classification may be done using either the Base/Extra-Capacity approach or the Commodity/Demand approach. In the simplest sense, these approaches offer alternative means of distinguishing between utility costs incurred to meet average or base demands and costs incurred to meet peak demands. The Commodity/Demand approach was modified for its application to Metropolitan's rate structure by adding a separate cost classification for costs related to providing standby service. Analysis of system operating data indicated that a modified Commodity/Demand approach was most appropriate for developing Metropolitan's cost of service classification bases.

Step 4 - Allocation Of Costs To Rate Design Elements

The allocation of costs to the rate design elements depends on the purpose for which the cost was incurred and the manner in which the member agencies use the Metropolitan system. For example, costs incurred to meet average system demands are typically recovered by dollar per acre-foot rates and are allocated based on the volume of water purchased by each agency. Rates that are levied on the amount or volume of water delivered are commonly referred to as volumetric rates as the customer's costs vary with the volume of water purchased. Costs incurred to meet peak demands (referred to in this report as demand costs) are recovered through a peaking charge (the Capacity Charge) and are allocated to agencies based on their peak demand behavior. Costs incurred to provide standby service in the event of an emergency are referred to here as standby costs. Differentiating between costs for average usage and peak usage is just one example of how the cost of service process allows for the design of rates and charges that improves overall customer equity and efficiency. Figure 1 summarizes the cost of service process.

Figure 1. The Cost of Service Process

1.2 Revenue Requirements

The estimated revenue requirements presented in this report are for FY 2010/11. Throughout the report, FY 2010/11 is used as the “test year” to demonstrate the application of the cost of service process. Schedule 1 summarizes the FY 2010/11 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 \$1.55 billion in FY 2010/11.

The rates and charges do not have to cover this entire amount. Metropolitan generates a significant amount of revenue from interest income, hydroelectric power sales and miscellaneous income. These internally generated revenues are referred to as revenue offsets and are expected to generate about \$73 million in FY 2010/11. It is expected that Metropolitan will also generate about \$81.8 million in ad valorem property tax revenues and annexation charges. Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, and a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the State Water Project. The total revenue offsets for FY 2010/11 are estimated to be around \$154.8 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or \$1.39 billion. No withdrawals from the Water Rate Stabilization Fund will be used to fund Metropolitan’s expenditures during 2010/11. Given an effective date of January 1, 2011, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2010 will generate a total of \$1.37 billion in 2010/11.

All of Metropolitan’s costs fall under the broad categories of Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific organizational

groups. General District Requirements consist of requirements associated with the Colorado River Aqueduct, State Water Project, the capital financing costs associated with the Capital Investment Program (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 72 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to SWP expenditures, which make up approximately 29 percent of Metropolitan's FY 2010/11 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 of in any given year. Metropolitan's capital financing program is the second largest component of the revenue requirement, constituting approximately 26 percent of the revenue requirement.

Departmental O&M costs make up 19 percent of the total revenue requirement in FY 2010/11. Water System Operations is the largest single component of the Departmental Costs and accounts for 11 percent of the revenue requirements. Water System Operations responsibilities include operating and maintaining Metropolitan's pumping, storage, treatment, and hydroelectric facilities, as well as the Colorado River Aqueduct and other conveyance and supply facilities.

Schedule 1. Revenue Requirements (by budget line item)

	Fiscal Year Ending 2011	% of Revenue Requirements (1)
Departmental Operations & Maintenance		
Office of the General Manager & Human Resources	\$ 15,298,500	0.9%
External Affairs	15,939,600	0.9%
Water System Operations	190,461,300	11.2%
Chief Financial Officer	5,818,100	0.3%
Corporate Resources	55,097,300	3.2%
Real Property Development & Mgmt	11,778,000	0.7%
Water Resource Management	17,520,400	1.0%
Ethics Department	461,800	0.0%
General Counsel	7,679,700	0.5%
Audit Department	1,973,900	0.1%
Total	322,028,600	18.9%
General District Requirements		
State Water Project	500,978,905	29.5%
Colorado River Aqueduct	59,599,167	3.5%
Supply Program Costs paid from operating revenues	103,165,940	6.1%
Water Management Programs	58,236,726	3.4%
Capital Financing Program	443,120,428	26.1%
Other O&M	15,936,100	0.9%
Increase (Decrease) in Required Reserves	42,200,000	2.5%
Total	1,223,237,266	72.0%
Revenue Offsets	(154,831,151)	9.1%
Net Revenue Requirements	\$ 1,390,434,716	100.0%

(1) Given as a percentage of the absolute values of total dollars allocated.

Totals may not foot due to rounding

1.3 Service Function Costs

Several major service functions result in the delivery of water to Metropolitan's member agencies. These include the supply itself, the conveyance capacity and energy used to move the supply, storage of water, distribution of supplies within Metropolitan's system, and treatment of these supplies. Metropolitan's rate structure recovers the majority of the cost of providing these functions through rates and charges.

The functional categories developed for Metropolitan's cost of service process are consistent with the American Water Works Association rate setting guidelines, a standard chart of accounts for utilities developed by the National Association of Regulatory Commissioners (NARUC), and the National Council of Governmental Accounting. Because all water utilities are not identical, the rate structure reflects Metropolitan's unique physical, financial, and institutional characteristics.

A key goal of functional allocation is to maximize the degree to which rates and charges reflect the costs of providing different types of service. For functional allocation to be of maximum benefit, two criteria must be kept in mind when establishing functional categories.

- The categories should correlate charges for different types of service with the costs of providing those different types of service; and
- Each function should include reasonable allocation bases by which costs may be allocated.

Each of the functions developed for the cost of service process is described below.

- *Supply*. This function includes costs for those SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the member agencies' demands. For example, Metropolitan's supply related costs include investments in the Conservation Agreement with the Imperial Irrigation District and the Palo Verde Irrigation District (PVID) Program from the Colorado River supply programs. The SWP programs include the Drought Water Bank purchases, and transfer programs such as Semitropic Water Storage Program, Yuba Accord Program, and the Arvin-Edison Water Storage Program. Costs for groundwater conjunctive use programs within Metropolitan's service area, such as the North Las Posas Groundwater Basin Conjunctive Use Agreement are also included.
- *Conveyance and Aqueduct*. This function includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water through Metropolitan's internal distribution system. Variable power costs for the SWP and CRA are also considered to be Conveyance and Aqueduct costs but are separately reported under a "power" sub-function. Conveyance and Aqueduct facilities can be distinguished from Metropolitan's other facilities primarily by the fact that they do not typically include direct connections to the member agencies. For purposes of this study, the Inland Feeder Project functions as an extension of the SWP East Branch and is therefore considered a Conveyance and Aqueduct facility as well.
- *Storage*. Storage costs include the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs within the distribution system. Metropolitan's larger storage facilities are operated to provide (1) emergency storage in the event of an earthquake or similar system outage; (2) drought storage that produces additional supplies during times of shortage; and (3) regulatory storage to balance system demands and supplies and provide for operating

flexibility. To reasonably allocate the costs of storage capacity among member agencies, the storage service function is categorized into sub-functions of emergency, drought, and regulatory storage.

- *Treatment.* This function includes capital financing, operating, maintenance, and overhead costs for Metropolitan's five treatment plants and is considered separately from other costs so that treated water service may be priced separately.
- *Distribution.* This function includes capital financing, operating, maintenance, and overhead costs for the "in-basin" feeders, canals, pipelines, laterals, and other appurtenant works. The "in-basin" facilities are distinguished from Conveyance and Aqueduct facilities at the point of connection to the SWP, Lake Mathews, and other major turnouts along the CRA facilities.
- *Demand Management.* A separate demand management service function has been used to clearly identify the cost of Metropolitan's investments in local resources like conservation, recycling, and desalination.
- *Administrative and General (A&G).* These costs occur in each of the Groups' departmental budgets and reflect overhead costs that cannot be directly functionalized. The cost-of-service process allocates A&G costs to the service functions based on the labor costs of non-A&G dollars allocated to each function.
- *Hydroelectric.* Hydroelectric costs include the capital financing, operating, maintenance, and overhead costs incurred to operate the 16 small hydroelectric plants located throughout the water distribution system.

1.3.1 Functional Allocation Bases

The functional allocation bases are used to allocate a cost to the various service functions. The primary functional allocation bases used in the cost-of-service process are listed below.

- Direct assignment
- Work-In-Progress or Net Book Value plus Work-In-Progress
- Prorating in proportion to other allocations
- Manager analysis

Schedule 2 summarizes the amounts of total cost allocated using each of the above types of allocation bases.

Schedule 2. Summary of Functional Allocations by Type of Allocation Basis

Primary Functional Allocation Bases	Estimated for FY 2011	% of Allocated Dollars
Direct Assignment	\$ 1,008,282,656	59.3%
Work in Progress/Net Book Value	484,302,292	28.5%
Prorating	76,893,018	4.5%
Manager Analysis	27,653,100	1.6%
Other	\$ 103,165,940	6.1%
Total Dollars Allocated	\$ 1,700,297,007	100.0%
Portion of Above Allocations Relating to:		
Revenue Requirements before Offsets	1,545,465,866	
Revenue Offsets	154,831,140	
Total Dollars Allocated	\$ 1,700,297,007	

Totals may not foot due to rounding

Each of the primary allocation bases is discussed in detail in the remainder of this section. Discussion of each allocation basis includes examples of costs allocated using that particular basis.

(a) Direct assignment

Direct assignment makes use of a clear and direct connection between a revenue requirement and the function being served by that revenue requirement. Directly assigned costs typically include: costs associated with specific treatment plants, purely administrative costs, and certain distribution and conveyance departmental costs. Examples of costs that are directly assigned to specific functional categories are given below.

- * Water System Operations Group departmental costs for treatment plants are directly assigned to treatment.
- * Transmission charges for State Water Contract are directly assigned to conveyance SWP.

(b) Work-In-Progress; Net Book Value Plus Work-In-Progress

Capital financing costs, including debt service and funding replacements and refurbishments from operating revenues, comprise about 26 percent of Metropolitan's annual revenue requirements. One approach would be to allocate payments on each debt issue in direct proportion to specific project expenditures made using bond proceeds. But, this approach would result in a high degree of volatility in relative capital cost allocations from year to year. The approach used in this analysis is one widely used in water industry cost of service studies. Capital and debt-related costs (including repair and replacement costs paid from current revenues) are allocated on the basis of the relative net book values of fixed assets within each functional category. This approach produces capital cost allocations that are consistent with the functional distribution of assets. Also, since the allocation basis is tied to fixed asset records rather than debt payment records, the resulting allocations are more reflective of the true useful lives of assets. Use of net book values as an allocation basis provides an improved matching of functional costs with asset lives. A listing of fixed asset net book values summarized by asset function is shown in Schedule 3.

Schedule 3. Net Book Value and Work in Progress Allocation Base

Functional Categories	NBV for FY 2011	% of Total NBV
Source of Supply	\$ 34,910,760	0.4%
Conveyance & Aqueduct	1,451,574,789	18.3%
Storage	2,289,080,169	28.9%
Treatment	2,615,926,731	33.0%
Distribution	1,157,166,004	14.6%
Administrative & General	273,732,097	3.5%
Hydroelectric	111,873,118	1.4%
Total Fixed Assets Net Book Value	\$ 7,934,263,668	100.0%

Totals may not foot due to rounding

In most instances, the cost-of-service process uses net book value *plus* work-in-progress to develop allocation bases for debt and capital costs. For organizational units handling current construction activity, however, allocations are based on work-in-progress alone. For these organizational units, exclusion of net book value from the allocation basis is done because the costs being allocated relate directly to work in progress not yet reflected in the completed assets records.

Examples of revenue requirements allocated using these net book value and work-in-progress allocations are shown below.

- * General Obligation and Revenue Bond Debt Service: *allocated using Work In Progress plus Net Book Value.*
- * Annual deposit of operating revenue to replacement and refurbishment fund: *allocated using Work In Progress plus Net Book Value.*

To calculate the relative percentage of fixed assets in each functional category, Metropolitan staff conducted a detailed analysis of historical accounting records and built a database of fixed asset accounts that contains records for all facilities currently in service and under construction. Each facility was sorted into the major service function that best represented the facilities primary purpose and was then further categorized into the appropriate sub-functions described earlier.

(c) Prorating in proportion to other allocations

Utility cost of service studies frequently contain line items for which it would be difficult to identify an allocation basis specific to that line item. In these cases, the most logical allocation basis is often a prorata blend of allocation results calculated for other revenue requirements in the same departmental group, or general category. Reasonable prorata allocations are based on a logical nexus between a cost and the purpose which it serves. For example: Human Resources Section costs are allocated using all labor costs, since Human Resources spends its time and resources attending to the labor force.

(d) Manager analyses

The functional interrelationships of some organizational units are so complex and/or dynamic that reliable allocation bases can only be developed with extensive input from the organization's managers. In these cases, managers use their first-hand knowledge of the organization's internal operations to generate a functional analysis of departmental costs. An example of revenue requirements allocated based on manager analyses is: Water System Operations Group: Operations Planning Unit.

A summary of the functional allocation results is shown in Schedules 4 and 5. Schedule 4 provides a breakdown of the revenue requirement for FY 2010/11 into the major service functions and sub-functions prior to the re-distribution of administrative and general costs. Schedule 5 serves as a cross-reference summarizing how the budget line items are distributed among the service functions. The largest functional component of Metropolitan's revenue requirement is the Conveyance and Aqueduct function, which constitutes approximately 39 percent of the allocated revenue requirement.

Schedule 4. Revenue Requirement (by service function)

Functional Categories	Fiscal Year Ending 2011	% of Allocated Dollars (1)
Source of Supply		
CRA	\$ 58,814,429	4.2%
SWP	118,436,689	8.4%
Other Supply	18,509,769	1.3%
Total	195,760,887	13.8%
Conveyance & Aqueduct		
CRA		
<i>CRA Power (net of sales)</i>	65,317,643	4.6%
<i>CRA All Other</i>	40,850,005	2.9%
SWP		
<i>SWP Power</i>	173,077,306	12.2%
<i>SWP All Other</i>	204,777,169	14.5%
Other Conveyance & Aqueduct	61,425,374	4.3%
Total	545,447,498	38.5%
Storage		
Storage Costs Other Than Power		
<i>Emergency</i>	66,573,919	4.7%
<i>Drought</i>	54,430,889	3.8%
<i>Regulatory</i>	13,320,261	0.9%
Wadsworth plant pumping/generation	(1,349,650)	0.1%
Total	132,975,419	9.6%
Treatment		
Jensen	42,557,210	3.0%
Weymouth	40,093,345	2.8%
Diemer	51,064,031	3.6%
Mills	36,051,069	2.5%
Skinner	63,280,340	4.5%
Total	233,045,994	16.5%
Distribution	114,518,991	8.1%
Demand Management	70,487,053	5.0%
Hydroelectric	(11,637,414)	0.8%
Administrative & General	109,836,287	7.8%
Total Functional Allocations:	\$ 1,390,434,716	100.0%

(1) Given as a percentage of the absolute values of total dollars allocated.

Totals may not foot due to rounding

Schedule 5. Service Function Revenue Requirements (by budget line item)

	Source of Supply	Conveyance & Aqueduct	Storage	Treatment	Distribution	Demand Management	Hydro Electric	Administrative & General	Total \$ Allocated
Departmental Operations & Maintenance									
Office of the General Manager & Human Resources	\$ 1,039,366	\$ 1,522,052	\$ 793,199	\$ 3,475,803	\$ 2,272,998	\$ 415,249	\$ 157,709	\$ 5,622,125	\$ 15,298,500
External Affairs	-	-	-	-	-	3,919,104	-	12,020,496	15,939,600
Water System Operations	11,626,793	31,125,237	3,404,175	90,980,431	48,877,307	7,863	3,254,385	1,185,108	190,461,300
Chief Financial Officer	-	-	-	-	-	-	-	5,818,100	5,818,100
Corporate Resources	1,970,988	6,760,242	7,762,510	13,504,506	7,300,124	748,870	593,879	16,456,181	55,097,300
Real Property Development & Mgmt	-	-	11,778,000	-	-	-	-	-	11,778,000
Water Resource Management	9,672,179	7,216	-	-	974,163	6,825,624	-	41,218	17,520,400
Ethics Department	-	-	-	-	-	-	-	461,800	461,800
General Counsel	-	-	-	-	-	-	-	7,679,700	7,679,700
Audit Department	-	-	-	-	-	-	-	1,973,900	1,973,900
Total Departmental O&M	24,309,327	39,414,747	23,737,883	107,960,740	59,424,592	11,916,711	4,005,973	51,258,628	322,028,600
General District Requirements									
State Water Project	72,004,849	428,974,056	-	-	-	-	-	-	500,978,905
Colorado River Aqueduct	-	59,599,167	-	-	-	-	-	-	59,599,167
Water Transfers and Storage Programs	103,165,940	-	-	-	-	-	-	-	103,165,940
Demand Management	-	-	-	-	-	58,236,726	-	-	58,236,726
Capital Financing Program	1,778,008	73,928,820	116,583,036	146,096,805	85,094,855	-	5,697,707	13,941,198	443,120,428
Other Operating Costs	178,832	261,883	136,477	598,044	391,090	1,800,047	27,135	12,542,591	15,936,100
Increase (Decrease) in Required Reserves	-	-	-	-	-	-	-	42,200,000	42,200,000
Total General District Requirements	177,127,629	562,763,926	116,719,513	146,694,849	85,485,945	60,036,774	5,724,842	68,683,789	1,223,237,266
Revenue Offsets	(5,676,069)	(56,731,175)	(7,481,977)	(21,609,594)	(30,391,546)	(1,466,431)	(21,368,229)	(10,106,129)	(154,831,151)
Net Revenue Requirements	\$ 195,760,887	\$ 545,447,498	\$ 132,975,419	\$ 233,045,994	\$ 114,518,991	\$ 70,487,053	\$ (11,637,414)	\$ 109,836,287	\$ 1,390,434,716

Totals may not foot due to rounding

1.4 Classified Costs

In the cost classification step, functionalized costs are further categorized based on the causes and behavioral characteristics of these costs. An important part of the classification process is identifying which costs are incurred to meet average demands vs. peak demands and which costs are incurred to provide standby service. As with the functional allocation process, the proposed classification process is consistent with AWWA guidelines, but has been tailored to meet Metropolitan's specific operational structure and service environment.

In the cost of service process, cost classification is done using a hybrid of two methods discussed in the AWWA M1 Manual, Principles of Water Rates, Fees and Charges. These two methods are the Commodity/Demand method and the Base/Extra Capacity method.

The Commodity/Demand method allocates costs that vary with the amount of water produced to the commodity category with all other costs associated with water production allocated to the demand category. In the Base/Extra Capacity method costs related to average demand conditions are allocated to the base category and capacity costs associated with meeting above average demand conditions are allocated to the extra capacity category.

The approach used to classify Metropolitan's costs differs from the Base/Extra Capacity method by the fact that costs are separated into a variable category and a fixed category. The Base/Extra Capacity method does not separate these costs into two categories but rather combines them into one category referred to as base costs. The approach used to classify Metropolitan's costs differs from the Commodity/Demand method in the fact that demand costs are separated into fixed commodity and fixed demand costs. The Commodity/Demand method would not make this distinction, but would combine these costs into the demand category. By using the hybrid method, costs are disaggregated to a lower level of detail, providing greater visibility to costs. Under the hybrid classification method, functional cost categories are reallocated into demand, commodity, or standby categories, which are discussed below. Classification of costs into these categories depends on an analysis of system capacity as well as actual system operating data.

Classification categories used in the analysis include:

- Fixed demand costs
- Fixed commodity costs
- Fixed standby costs
- Variable commodity costs
- Hydroelectric costs

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 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.

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.

An additional component used in Metropolitan's cost classification process is the hydroelectric component. While not a part of most water utilities' cost classification procedures, the hydroelectric classification component is necessary to segregate revenue requirements carried from the hydroelectric function established in the functional allocation process. Hydroelectric revenue requirements are later embedded in the distribution function. Any net revenues generated by the hydroelectric operations offset the distribution costs and reduce the System Access Rate. All users of the distribution system benefit proportionately from the revenue offset provided by the sale of hydroelectric energy.

Schedule 6 provides the classification percentages used to distribute the service function costs into demand, commodity and standby service classification categories. All of the supply costs are classified as fixed commodity costs. Because these particular supply costs have been incurred to provide an amount of annual reliable system yield and not to provide peak demand delivery capability or standby service they are reasonably treated as fixed commodity costs.

Costs for the Conveyance and Aqueduct (C&A) service function are classified into demand, commodity, and standby categories. Because the capital costs for C&A were incurred to meet all three classification categories, an analysis of C&A capacity usage for the three years ending June 2011 was used to determine that 62 percent of the available conveyance capacity has been used to meet member agency demands on an average annual basis. A system peak factor¹ of 1.5 was applied to the average annual usage to determine that 30 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 8 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct sub-functions. The classification shares reflect the system average use of conveyance capacity and not the usage of individual facilities. All of the Conveyance and Aqueduct energy costs for pumping water to Southern California are classified as variable commodity costs and, therefore, are not shown in Schedule 6 because they carry through the classification step.

Storage service function costs for emergency, drought and regulatory storage are also distributed to the classification categories based on the type of service provided. Emergency storage costs are classified as 100 percent standby related. Emergency storage is a prime example of a cost Metropolitan incurs to ensure the reliability of deliveries to the member agencies. In effect, through the emergency storage capacity in the system, Metropolitan is "standing by" to provide service in the event of a catastrophe such as a major earthquake that disrupts regional conveyance capacity for an extended period of time. Drought carryover storage serves to provide reliable supplies by carrying over surplus supplies from periods of above normal precipitation and snow pack to drought periods when supplies decrease. Drought storage creates supply and is one component of the portfolio of resources that result in a reliable amount of annual system supplies. As a result, drought storage is classified as a fixed commodity cost, in the same manner as Metropolitan's supply costs. Regulatory storage within the Metropolitan system provides operational flexibility in meeting peak demands and

¹ Peak monthly deliveries to the member agencies average about 50 percent more than the average monthly deliveries.

flow requirements, essentially increasing the physical distribution capacity. Therefore, regulatory storage is classified in the same manner as distribution costs.

Distribution service function costs were classified using daily flow data for the three calendar years ending December 2008. During this period, the average annual volume of deliveries to the member agencies used 58 percent of the peak distribution capacity. The difference between the average flow and system capacity, or 42 percent of the distribution capacity, was used to meet peak day demands in excess of average annual flows. Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the peak non-coincident² 24-hour daily flow of all the member agencies.

As presented in Schedule 6, treatment service function costs were also classified using daily flow data of deliveries to the member agencies for the ten years ending December 2010. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. Schedule 7 summarizes the service function revenue requirements by classification category. Administrative and general costs have been allocated to the classification categories by service function based on the ratio of classified non-A&G service function costs to total non-A&G service function costs.

² The term “non-coincident” means that the peak day flow for each agency may or may not coincide with the peak day system flow. Both non-coincident and coincident approaches to measuring peak demands are used in rate design approaches. A non-coincident approach is used in the rate design to capture the different operating characteristics of the member agencies (e.g., the distribution system is designed to meet peak demands in different load areas within the System that have non-coincident demands due to each member agencies unique operating characteristics).

Schedule 6. Classification Percentages

Function	Classification Percentages			Total % Classified	Comments		
	Fixed						
	Commodity	Demand	Standby				
Source of Supply							
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs classified as commodity		
State Water Project	100%	0%	0%	100%	Supply costs classified as commodity		
Conveyance & Aqueduct							
Colorado River Aqueduct	62%	30%	8%	100%	Demand (peaking) percentage represents application of system monthly peak factor of 1.5 to average monthly flow. Commodity percentage represents average flows. Remainder of capacity is for standby (expected growth). SWP and CRA are treated the same due to application of system wide uniform price.		
State Water Project	62%	30%	8%	100%			
Other	62%	30%	8%	100%			
Storage							
Emergency	0%	0%	100%	100%	Standby service (recovered by RTS)		
Drought	100%	0%	0%	100%	Recovered by Supply Rates		
Regulatory	58%	42%	0%	100%	See distribution (below)		
Treatment							
	45%	55%	0%	100%	Demand percentage represents amount of system treatment capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total capacity. The same classification is applied to all five treatment plants due to the use of a uniform system wide treatment surcharge.		
Distribution							
	58%	42%	0%	100%	Demand percentage represents amount of system distribution capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total system capacity. The same classification is applied to all distribution facilities due to the use of a system wide uniform system access rate.		

Totals may not foot due to rounding

A summary of cost classification results is shown in Schedule 7. The classification of the service function costs results in about 10 percent, or \$141 million of the total revenue requirements, being allocated to the demand classification category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan's property tax revenue is allocated to C&A fixed demand costs and offsets the amount that is recovered through rates. The taxes are used to pay for the general obligation bond debt service allocated to the C&A costs.

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	\$ -	\$ 64,635,761	\$ -	\$ -	\$ -	\$ 64,635,761
SWP	-	130,159,311	-	-	-	130,159,311
Other Supply	-	20,341,829	-	-	-	20,341,829
Subtotal: Source of Supply	-	215,136,901	-	-	-	215,136,901
Conveyance & Aqueduct						
CRA						
CRA Power	-	7,780,481	-	60,986,538	-	68,767,019
CRA All Other	2,901,077	41,160,931	735,645	-	-	44,797,653
SWP						
SWP Power	-	-	-	181,245,987	-	181,245,987
SWP All Other	22,640,653	195,917,707	5,741,134	-	-	224,299,494
Other Conveyance & Aqueduct	17,202,163	45,009,787	4,718,201	-	-	66,930,151
Subtotal: Conveyance & Aqueduct	42,743,893	289,868,906	11,194,980	242,232,525	-	586,040,304
Storage						
Storage Costs Other Than Power						
Emergency	-	-	71,536,643	-	-	71,536,643
Drought	-	59,818,348	-	-	-	59,818,348
Regulatory	5,128,642	9,370,593	-	-	-	14,499,234
Storage Power	-	-	-	(1,413,349)	-	(1,413,349)
Subtotal: Storage	5,128,642	69,188,940	71,536,643	(1,413,349)	-	144,440,876
Water Quality						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
Subtotal: Water Quality	-	-	-	-	-	-
Treatment	67,201,674	154,023,639	-	31,502,295	-	252,727,608
Distribution	25,790,110	99,362,551	-	-	-	125,152,660
Demand Management	-	77,463,718	-	-	-	77,463,718
Hydroelectric	-	-	-	(10,527,353)	-	(10,527,353)
Total Costs Classified	\$ 140,864,319	\$ 905,044,655	\$ 82,731,623	\$ 272,321,472	\$ (10,527,353)	\$ 1,390,434,716

Totals may not foot due to rounding

About 65 percent of the revenue requirement (\$905 million) is classified as “fixed commodity”. These fixed capital and operating costs are incurred by Metropolitan to meet annual average service needs and are typically recovered by a combination of fixed charges and volumetric rates. Fixed capital costs classified to the “Standby” category total about \$83 million and account for about 6 percent of the revenue requirements. Standby service costs are commonly recovered by a fixed charge allocated on a reasonable representation of a customer’s need for standby service. The variable commodity costs for power on the conveyance and aqueduct systems, and power, chemicals and solids handling at the treatment plants change with the amount of water delivered to the member agencies. These costs are classified as variable commodity costs, total about \$272 million, and account for about 20 percent of the total revenue requirement. Because of the variable nature of these costs, it is appropriate to recover them through volumetric rates.

2 Rates and Charges

Schedule 8 provides a cross-reference between the classified service function costs and their allocation to the rate design elements. The specifics of each rate design element are discussed in detail in the following section. Schedule 9 summarizes the rates and charges that would be effective on January 1, 2011 in order to collect all costs from rates and charges in fiscal year 2010/11, without the use of draws from reserve funds. Average costs by member agency will vary depending upon an agency’s RTS allocation, capacity charge and relative proportions of treated and untreated Tier 1, Tier 2, Replenishment, and Interim Agricultural Water Program purchases.

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

Service Function by Classification Category	Rate Design Elements							Total Costs Allocated
	Supply Rates	System Access Rate	Water Stewardship Rate	System Power Rate	Capacity Charge	Readiness-to-Serve Charge	Treatment Surcharge	
Supply								
Fixed Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fixed Commodity	215,136,901	-	-	-	-	-	-	215,136,901
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
Subtotal: Supply	215,136,901	-	-	-	-	-	-	215,136,901
Conveyance and Aqueduct								
Fixed Demand	-	-	-	-	-	42,743,893	-	42,743,893
Fixed Commodity	-	289,868,906	-	-	-	-	-	289,868,906
Fixed Standby	-	-	-	-	-	11,194,980	-	11,194,980
Variable Commodity	-	-	-	242,232,525	-	-	-	242,232,525
Hydroelectric	-	-	-	-	-	-	-	-
Subtotal: Conveyance and Aqueduct	-	289,868,906	-	242,232,525	-	53,938,873	-	586,040,304
Storage								
Fixed Demand	-	-	-	-	5,128,642	-	-	5,128,642
Fixed Commodity	59,818,348	9,370,593	-	-	-	-	-	69,188,940
Fixed Standby	-	-	-	-	-	71,536,643	-	71,536,643
Variable Commodity	(1,413,349)	-	-	-	-	-	-	(1,413,349)
Subtotal: Storage	58,404,999	9,370,593	-	-	5,128,642	71,536,643	-	144,440,876
Treatment								
Fixed Demand	-	-	-	-	-	-	67,201,674	67,201,674
Fixed Commodity	-	-	-	-	-	-	154,023,639	154,023,639
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	31,502,295	31,502,295
Hydroelectric	-	-	-	-	-	-	-	-
Subtotal: Treatment	-	-	-	-	-	-	252,727,608	252,727,608
Distribution								
Fixed Demand	-	-	-	-	25,790,110	-	-	25,790,110
Fixed Commodity	-	99,362,551	-	-	-	-	-	99,362,551
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	(10,527,353)	-	-	-	-	-	(10,527,353)
Subtotal: Distribution	-	88,835,198	-	-	25,790,110	-	-	114,625,308
Demand Management								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	77,463,718	-	-	-	-	77,463,718
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
Subtotal: Demand Management	-	-	77,463,718	-	-	-	-	77,463,718
Total								
Fixed Demand	-	-	-	-	30,918,752	42,743,893	67,201,674	140,864,319
Fixed Commodity	274,955,249	398,602,049	77,463,718	-	-	-	154,023,639	905,044,655
Fixed Standby	-	-	-	-	-	82,731,623	-	82,731,623
Variable Commodity	(1,413,349)	-	-	242,232,525	-	-	31,502,295	272,321,472
Hydroelectric	-	(10,527,353)	-	-	-	-	-	(10,527,353)
Total	\$ 273,541,900	\$ 388,074,696	\$ 77,463,718	\$ 242,232,525	\$ 30,918,752	\$ 125,475,516	\$ 252,727,608	\$ 1,390,434,716

Totals may not foot due to rounding

Schedule 9. Rates and Charges Summary

	Effective Jan 1, 2010*	Effective Jan. 1, 2011**
Tier 1 Supply Rate (\$/AF)	\$101	\$94
Delta Supply Surcharge (\$/AF)	\$69	\$69
Tier 2 Supply Rate (\$/AF)	\$280	\$280
System Access Rate (\$/AF)	\$154	\$217
Water Stewardship Rate (\$/AF)	\$41	\$43
System Power Rate (\$/AF)	\$119	\$135
Full Service Untreated Volumetric Cost (\$/AF)		
Tier 1	\$484	\$558
Tier 2	\$594	\$675
Replenishment Water Rate Untreated (\$/AF)	\$366	\$440
Interim Agricultural Water Program Untreated (\$/AF)	\$416	\$513
Treatment Surcharge (\$/AF)	\$217	\$217
Full Service Treated Volumetric Cost (\$/AF)		
Tier 1	\$701	\$775
Tier 2	\$811	\$892
Treated Replenishment Water Rate (\$/AF)	\$558	\$632
Treated Interim Agricultural Water Program (\$/AF)	\$615	\$718
Readiness-to-Serve Charge (\$M)	\$114	\$135
Capacity Charge (\$/cfs)	\$7,200	\$7,200

* Most rates effective Sept 1, 2009

** Rates and charges necessary to collect sufficient revenues when combined with rates effective through 2010 to cover expenditures incurred in fiscal year 2010/11. Note that rates effective in 2011 provide only four months of revenue in 2010/11

2.1 System Access Rate (SAR)

The SAR is a volumetric³ system-wide rate levied on each acre-foot of water that moves through the MWD system. All system users (member agency or third party) pay the SAR to use Metropolitan's conveyance and distribution system. To meet the board stated objective to collect all costs in 2010/11 the SAR would increase from its current level of \$154 per acre-foot to \$217 per acre-foot. The SAR recovers the cost of providing conveyance and distribution capacity to meet average annual demands. Current estimates indicate that the SAR revenue requirement will be about \$388 million in FY 2010/11, or 28 percent of the total revenue requirement.

2.2 Water Stewardship Rate (WSR)

Under the board's guidelines, the WSR would increase from its current level of \$41 per acre-foot to \$43 per acre-foot. The WSR recovers the costs of providing financial incentives for existing and future investments in local resources including conservation and recycled water. These investments or incentive payments are identified as the "demand management" service function in the cost of service process. Demand management costs are classified as 100 percent fixed commodity costs and are estimated to be about \$77 million in FY 2010/11, about 6 percent of the revenue requirement. The WSR is a volumetric rate levied on each 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.

2.3 System Power Rate (SPR)

SPR would increase from \$119 per acre-foot to \$135 per acre-foot in 2011. The SPR is a volumetric rate that recovers the costs of pumping water to Southern California. The SPR recovers the cost of power for both the SWP and CRA. In FY 2010/11 the revenue requirement for the SPR is estimated to be about \$242 million, about 17 percent of the total revenue requirement.

2.4 Treatment Surcharge

The treatment surcharge would remain unchanged at its current level of \$217 per acre-foot to collect all treatment costs in 2010/11. The treatment surcharge is a system-wide volumetric rate set to recover the cost of providing treated water service. The treatment surcharge revenue requirement is expected to be about \$253 million in FY 2010/11, almost 18 percent of the total revenue requirement. The treatment surcharge recovers all costs associated with providing treated water service, including commodity, demand and standby related costs. Significant capital improvements at Metropolitan's five treatment plants, such as the Ozone Retrofit Program, Skinner Filtration Plant Expansion Project, and improvement programs at all five treatment plants result in additional capital financing costs being allocated to the treatment surcharge.

2.5 Capacity Charge

The Capacity Charge would remain at its current level of \$7,200 per cubic-foot-second of capacity during 2011. The capacity charge is levied on the maximum summer day demand placed on the

³ A volumetric rate is a charge applied to the actual amount of water delivered.

system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2009 is used to levy the capacity charge effective January 1, 2011 through December 31, 2011. Demands measured for the purposes of billing the capacity charge include all firm demand and agricultural demand, including wheeling service and exchanges. Replenishment service is not included in the measurement of peak day demand for purposes of billing the capacity charge.

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan's system, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods particularly October through April. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total capacity charge. The estimated capacity charge to be paid by each member agency in calendar year 2011 (as of December 2009) is included in Schedule 10.

Schedule 10. Capacity Charge (by member agency)

AGENCY	Peak Day Demand (cfs)				Calendar Year 2011 Capacity Charge (\$7,200/cfs)	
	(May 1 through September 30) Calendar Year					
	2007	2008	2009	3-Year Peak		
Anaheim	37.9	36.1	40.7	40.7	\$ 293,040	
Beverly Hills	33.9	32.9	31.0	33.9	244,080	
Burbank	33.7	34.2	21.6	34.2	246,240	
Calleguas	260.8	250.0	192.8	260.8	1,877,760	
Central Basin	125.9	102.7	94.7	125.9	906,480	
Compton	7.1	4.9	5.9	7.1	51,120	
Eastern	303.8	263.1	227.8	303.8	2,187,360	
Foothill	25.4	21.5	24.3	25.4	182,880	
Fullerton	36.9	27.1	37.4	37.4	269,280	
Glendale	54.6	55.7	56.0	56.0	403,200	
Inland Empire	176.2	125.8	106.1	176.2	1,268,640	
Las Virgenes	45.3	45.3	42.7	45.3	326,160	
Long Beach	61.3	68.1	67.2	68.1	490,320	
Los Angeles	768.5	821.9	698.2	821.9	5,917,680	
MWDOC	469.2	453.7	630.4	630.4	4,538,880	
Pasadena	58.5	55.6	50.2	58.5	421,200	
San Diego	1,278.4	1,039.9	1,055.3	1278.4	9,204,480	
San Fernando	6.5	0.1	0.0	6.5	46,800	
San Marino	5.2	5.2	3.5	5.2	37,440	
Santa Ana	29.7	14.5	16.4	29.7	213,840	
Santa Monica	27.6	26.2	25.0	27.6	198,720	
Three Valleys	171.4	168.1	132.7	171.4	1,234,080	
Torrance	41.6	35.5	39.3	41.6	299,520	
Upper San Gabriel	63.8	36.9	27.6	63.8	459,360	
West Basin	262.3	243.3	221.3	262.3	1,888,560	
Western	289.2	271.4	219.9	289.2	2,082,240	
Total	4,674.7	4,239.7	4,068.0	4,901.3	\$ 35,289,360	

Totals may not foot due to rounding

2.6 Readiness-to-Serve Charge

The costs of providing standby service, such as emergency storage, are recovered by the RTS. Metropolitan's cost for providing emergency storage capacity within the system are estimated to be about \$71 million in FY 2010/11. In addition, to simplify the rate design by reducing the number of separate charges, the demand and standby related costs identified for the conveyance and aqueduct service function are also allocated to the RTS. These costs are estimated to be about \$43 million in FY 2010/11. Currently the RTS recovers \$114 million, an amount that represents a portion of the capital financing costs for facilities that serve existing users. The RTS would increase to \$135 million in calendar year 2011 to recover the additional costs associated with conveyance.

The RTS is allocated to the member agencies based on each agency's proportional share of a ten-year rolling average of all firm deliveries (including water transfers and exchanges that use Metropolitan system capacity). The ten-year rolling average will not include replenishment service and interim agricultural deliveries because these deliveries will be the first to be curtailed in the event of an

emergency. A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency's potential long-term need for standby service under different demand conditions. Member agencies that so choose may have a portion of their total RTS obligation offset by standby charge collections levied by Metropolitan on behalf of the member agency. Schedule 11 provides an estimate as of December 2009 of each agency's total RTS obligation for calendar year 2011.

Schedule 11. Readiness-to-Serve Charge (by member agency)

Member Agency	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY199/00 - FY2008/09	RTS Share	12 months @ \$135 million per year (1/11-12/11)
Anaheim	20,966	1.10%	\$ 1,491,046
Beverly Hills	12,737	0.67%	905,867
Burbank	12,908	0.68%	918,000
Calleguas MWD	113,610	5.99%	8,079,801
Central Basin MWD	63,256	3.33%	4,498,698
Compton	3,146	0.17%	223,754
Eastern MWD	92,112	4.85%	6,550,892
Foothill MWD	11,478	0.60%	816,307
Fullerton	9,694	0.51%	689,453
Glendale	24,150	1.27%	1,717,481
Inland Empire Utilities Agency	61,205	3.22%	4,352,805
Las Virgenes MWD	23,282	1.23%	1,655,771
Long Beach	37,013	1.95%	2,632,337
Los Angeles	314,757	16.58%	22,385,077
Municipal Water District of Orange County	231,692	12.21%	16,477,603
Pasadena	23,397	1.23%	1,663,985
San Diego County Water Authority	493,281	25.99%	35,081,498
San Fernando	119	0.01%	8,435
San Marino	1,001	0.05%	71,161
Santa Ana	12,743	0.67%	906,230
Santa Monica	12,794	0.67%	909,900
Three Valleys MWD	73,095	3.85%	5,198,435
Torrance	20,742	1.09%	1,475,165
Upper San Gabriel Valley MWD	15,631	0.82%	1,111,656
West Basin MWD	141,522	7.46%	10,064,866
Western MWD	71,905	3.79%	5,113,775
MWD Total	1,898,235	100.00%	\$ 135,000,000

Totals may not foot due to rounding

2.7 Purchase Order

The rate structure relies on a Purchase Order to establish a financial commitment from the member agency to Metropolitan. In return for providing a financial commitment to Metropolitan the member agency may purchase more of its supply at the lower Tier 1 Supply Rate than had it not provided the commitment.

The Purchase Order is voluntarily submitted by the member agency to Metropolitan. Through the Purchase Order the member agency commits to purchase a fixed amount of supply from Metropolitan (the Purchase Order Commitment). The Purchase Order Commitment is determined as a portion of the member agency's historical demands on the Metropolitan system and the term of the Purchase Order.

Term

The Purchase Order is for a ten-year term beginning January 1, 2003. Ten years was chosen as a balance between the long-term investments Metropolitan makes to secure water supply (many of the supply development agreements Metropolitan commits to are for 20 years or more) and a shorter period that would require less of a commitment from the member agencies. In addition, a ten-year period will most likely allow sufficient time for high and low demand years to average, reducing the likelihood that a member agency will pay for unused water.

Initial base demand

The maximum annual firm demands since FY 1989/90 through June 30, 2002 are used to establish each member agency's "initial base demand". Firm demands are defined as all deliveries through the Metropolitan system to a member agency excluding replenishment service, interim agricultural service, deliveries made under the interruptible service program and deliveries made to cooperative and cyclic storage accounts at the time water was put into the accounts.

Purchase Order Commitment

The Purchase Order Commitment is limited to a portion of a member agency's initial base demand. The Purchase Order Commitment is defined as ten times 60 percent of the member agency's initial base demand. The ten times reflects the ten-year term of the Purchase Order and the 60 percent was chosen to balance risk transferred to the member agencies with the need for a financial commitment to Metropolitan.

Two factors influenced the use of the 60 percent demand level. First, there is substantial fluctuation in demands as a result of weather. During cool, wet weather, member agencies use less imported supply from Metropolitan's system. As a result, the Purchase Order Commitment was set at a level that would accommodate these annual fluctuations in weather driven demands, while helping to ensure that member agencies would have a reasonable opportunity to utilize all of the water during the ten-year Purchase Order term. Second, the 60 percent level was selected in consultation with member agency representatives and represents a sufficient incentive to utilize Metropolitan's supplies and provide a base financial commitment to the regional system. Since the Purchase Order Commitment is voluntary, no member agency is required to commit to the minimum level. But, in exchange for the commitment, the member agency may purchase more Metropolitan water supply (up to 90 percent of its Base Demand) at the lower Tier 1 Supply Rate. The Purchase Order Commitment quantity and the Tier 1 Annual Limit for all member agencies are shown in Schedule 12.

Schedule 12. Purchase Order Commitment Quantities (acre-feet)

	2011 Tier 1 limit with Opt-outs *	Purchase Order Commitment (acre-feet)
Anaheim	22,240	148,268
Beverly Hills	13,380	89,202
Burbank	16,336	108,910
Calleguas	110,249	692,003
Central Basin	72,361	482,405
Compton	5,058	33,721
Eastern	87,830	504,664
Foothill	10,997	73,312
Fullerton	11,298	75,322
Glendale	26,221	174,809
Inland Empire	59,792	398,348
Las Virgenes	21,087	137,103
Long Beach	39,471	263,143
Los Angeles	304,970	2,033,132
MWDOC	228,130	1,486,161
Pasadena	21,180	141,197
San Diego	543,778	3,342,571
San Fernando	630	-
San Marino	1,199	-
Santa Ana	12,129	80,858
Santa Monica	11,515	74,062
Three Valleys	70,474	469,331
Torrance	20,967	139,780
Upper San Gabriel	16,512	110,077
West Basin	156,874	1,045,825
Western	68,929	391,791
Total	1,953,605	12,495,995

Totals may not foot due to rounding

*To be updated by April 2010 for the IAWP opt-outs received

2.8 *Tier 2 supply rate*

The Tier 2 Supply Rate reflects Metropolitan's cost of developing long-term firm supplies. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. The Tier 2 Supply Rate also recovers a greater proportion of the cost of developing additional supplies from member agencies that have increasing demands on the Metropolitan system. Because of the uncertainty about supply and critically dry conditions, Metropolitan will have to purchase water transfers in 2010/11, at a cost of as much as or more than \$280 per acre-foot. The Tier 2 Supply Rate may remain at its current level of \$280 per acre-foot depending on the cost of additional supplies.

The total revenue requirement for the supply service function is about \$274 million in FY 2010/11. At an expected average sales level of 1.93 million acre-feet it is estimated that about 48 thousand acre-feet will be sold at the Tier 2 Supply Rate, resulting in about \$13 million in revenues at the \$280 per acre-foot rate in effect during 2010/11. The remaining supply costs are recovered by the Tier 1 Supply Rate and by the replenishment rate and agricultural water rate discussed below.

The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. The initial base demand (IBD) is defined as the maximum annual firm demands on the Metropolitan system for the 13 years ending June 30, 2002. Firm demands are defined as all deliveries through the Metropolitan system to a member agency excluding: (1) replenishment service; (2) interim agricultural service; (3) deliveries made under the interruptible service program and (4) deliveries made from cooperative, cyclic and conjunctive use storage accounts not certified under the replenishment program.

Member agencies that submitted a Purchase Order may purchase up to 90 percent of the IBD at the lower Tier 1 Supply Rate. For supply purchases in excess of 90 percent of the IBD the member agency will be charged the higher Tier 2 Supply Rate. Member agencies that do not submit a Purchase Order are charged the higher Tier 2 Supply Rate for supplies that exceed 60 percent of the IBD. Over time the IBD will be compared to a rolling ten-year average of firm demands (not including water transfers and exchanges). The greater of the IBD and the rolling ten-year average of firm demands will be used to set the breakpoint between supply purchases made at the Tier 1 and Tier 2 Supply Rates.

2.9 *Tier 1 supply rate*

The Tier 1 Supply Rate, including the Delta Supply Surcharge would be reduced from its current level of \$170 per acre-foot to \$163 per acre-foot. The Tier 1 Supply rate includes a Delta Supply Surcharge of \$51 per acre-foot. This surcharge reflects the impact on Metropolitan's water rates of lower supplies from the State Water Project due to pumping restrictions associated with U. S. Fish & Wildlife's biological opinion on Delta Smelt and other actions to protect endangered fish species, as well as the ongoing drought conditions. The Delta Surcharge would remain in effect until a long-term solution for the delta was achieved or interim facility improvements are made to restore yield on the State Water Project. The Tier 1 Supply Rate recovers the majority of the supply revenue requirement. The Tier 1 Supply Rate is simply calculated as the amount of the total supply revenue requirement that is not recovered by the Tier 2 Supply Rate and a portion of the revenues from the replenishment

water rate and agricultural water rate divided by the estimated amount of Tier 1 water sales. At an expected demand level of about 1.93 million acre-feet it is estimated that Metropolitan will sell about 1.66 million acre-feet at the Tier 1 Supply Rate in 2010/11.

2.10 Replenishment and agricultural water rates

Metropolitan currently provides interruptible service for long-term replenishment operations and agricultural deliveries through the replenishment program and the interim agricultural water program (IAWP). Because of the critically dry conditions and uncertainty about supply, replenishment deliveries will remain curtailed in 2010/11. In October 2008, the Board approved a five-year phase out of the IAWP. In 2010/11 certified agricultural deliveries are expected to be about 62 thousand acre-feet. However, if water supply conditions improve and surplus water becomes available, Metropolitan could make Replenishment service available to its member agencies at the rates of \$440 per acre-foot for untreated, and \$632 per acre-foot for treated water.

3 Sales

Staff estimates of water sales used for developing the rate recommendation were based on current member agency demands and information and an expectation that demands will trend to levels expected under normal weather conditions. Since 1989/90, total sales have averaged about 2.00 million acre-feet per year, ranging from a high of around 2.5 million acre-feet in 1989/90 to a low of about 1.5 million acre-feet in 1997/98. In 2009/10 water sales are projected to be around 1.94 million acre-feet. Water sales in 2010/11 are expected to be about 1.93 million acre-feet.

4 Proof of Revenue

Based on expected sales of 1.93 MAF the expected revenues would be about \$101 million higher than the total revenue requirement, if the rates and charges were in effect the entire test year period. The cost-of-service allocation assuming a full twelve months of revenue is used to allocate costs among the various rate elements, but should not be interpreted as over- or under-collection during a given fiscal year. However, because the recommended rates do not take effect until January 1, 2011, the expected revenues for 2010/11 will be about \$15.4 million (one percent) less than the total revenue requirement in 2010/11. The total revenue requirement includes a \$15.3 million increase in the required reserves for the Revenue Remainder Fund. Accounting for this adjustment, the required draw from reserves is almost zero in 2010/11, consistent with full cost-of-service in the fiscal year.

Schedule 13. FY 2010/11 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)

	Revenues if Rates Effective May 1	Revenue Requirements	Difference	% Over (Under) Collected
Supply	293.6	273.5	20.0	7%
System Access Rate	416.4	388.1	28.3	7%
Water Stewardship Rate	82.5	77.5	5.1	7%
System Power Rate	259.1	242.2	16.8	7%
Treatment Surcharge	270.2	252.7	17.5	7%
Readiness-to-serve Charge	135.0	125.5	9.5	8%
Capacity Charge	35.3	30.9	4.4	14%
Total	1,492.1	1,390.4	101.6	7%

Totals may not foot due to rounding

Schedule 14. FY 2010/11 Proof of Revenue if Rates Effective January 1 (\$ millions)

	Revenues if Rates Effective Sep 1	Revenue Requirements	Difference	% Over (Under) Collected
Supply	301.8	273.5	28.2	10%
System Access Rate	327.9	388.1	(60.2)	-16%
Water Stewardship Rate	79.6	77.5	2.1	3%
System Power Rate	236.3	242.2	(5.9)	-2%
Treatment Surcharge	270.0	252.7	17.2	7%
Readiness-to-serve Charge	124.5	125.5	(1.0)	-1%
Capacity Charge	34.9	30.9	4.0	13%
Total	1,375.0	1,390.4	(15.4)	-1%

Totals may not foot due to rounding