



- Board of Directors  
*Finance and Insurance Committee*

2/11/2014 Board Meeting

**8-1**

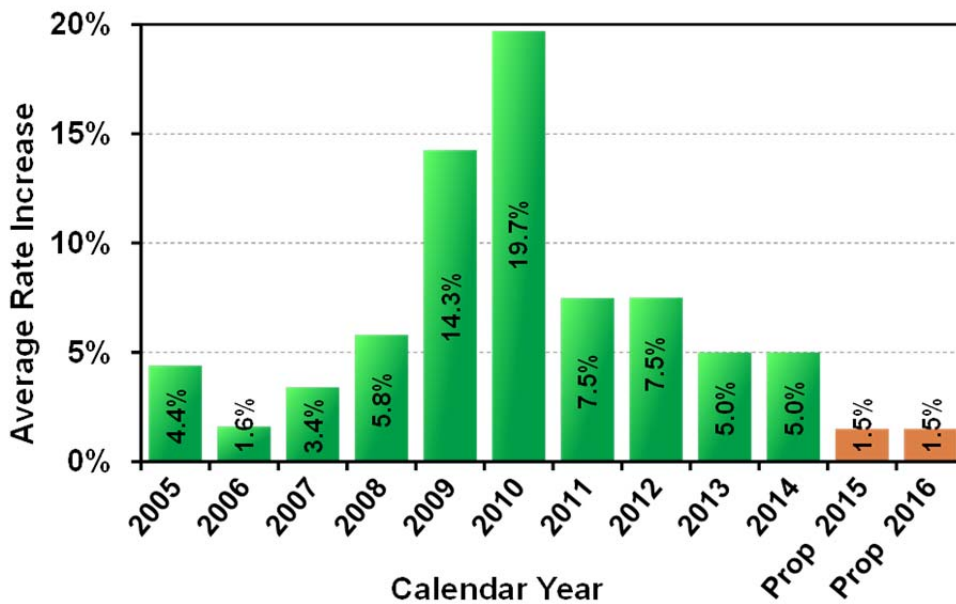
**Subject**

Proposed biennial budget and revenue requirements for fiscal years 2014/15 and 2015/16; proposed water rates and charges for calendar years 2015 and 2016; and setting public hearings

**Executive Summary**

This letter presents the proposed biennial budget and revenue requirements for fiscal years 2014/15 and 2015/16 (FY 2014/15 and FY 2015/16), proposed water rates and charges for calendar years 2015 and 2016, and a ten-year financial forecast. This budget and ten-year forecast provides funding for Metropolitan’s key priorities while meeting all financial policy guidelines, with proposed overall rate increases of 1.5 percent in each year of the proposed biennial budget, and overall rate increases in the range of 3 percent to 5 percent thereafter for the ten-year financial forecast. The proposed overall rate increases of 1.5 percent are at their lowest level in the past ten years. The proposed rates meet cost of service, as shown in the attached Cost-of-Service report for each fiscal year of the biennial budget.

**Figure 1: Historic and Projected Overall Rate Increases**



**Table 1: Full Service and Exchange Rates and Charges**

Rate Type	2014 Approved	2015 Proposed	% Increase (Decrease)	2016 Proposed	% Increase (Decrease)
Full Service Untreated Volumetric Cost (\$/AF)					
Tier 1	\$593	\$582	(1.9%)	\$594	2.1%
Tier 2	\$735	\$712	(3.1%)	\$729	2.4%
Full Service Treated Volumetric Cost (\$/AF)					
Tier 1	\$890	\$925	3.9%	\$946	2.3%
Tier 2	\$1,032	\$1,055	2.2%	\$1,081	2.5%
Untreated Exchange Cost (\$/AF)	\$445	\$422	(5.2%)	\$439	4.0%
Readiness-to-Serve Charge (\$M)	\$166	\$158	(4.8%)	\$152	(3.8%)
Capacity Charge (\$/cfs)	\$8,600	\$10,700	24.4%	\$10,300	(3.7%)

### Key Assumptions

The Governor of the state of California recently declared a drought emergency and has called for all Californians to reduce consumption by 20 percent, and there are indications that the State Water Project allocation for calendar year 2014 will remain at 5 percent or possibly even go lower in the near future. Metropolitan fully supports the Governor's declaration and will be working with our member agencies to achieve this goal. In addition, staff is recommending that the Metropolitan Board adopt a formal Water Supply Alert Resolution for Metropolitan's service area, which embraces the Governor's call on all Californians to voluntarily reduce water use by 20 percent. While it is certainly possible that weather conditions may improve in the months ahead and reduce the severity of the drought, it will be a difficult year.

Metropolitan is prepared to meet these challenges. Metropolitan is producing reliable water supplies to the region throughout a variety of hydrologic conditions. Metropolitan has a diversity of water supplies and has made substantial investments in storage programs to help meet customer demands if the next several years are dry. Past experience is that during drought periods, Metropolitan's water sales can vary widely. It is, therefore, reasonable for Metropolitan to base the proposed biennial budget and revenue requirement on more normal conditions as outlined below:

Water sales projection – Water sales are projected to be 1.75 million acre-feet (MAF) for both years of the biennial budget, the same estimate used in the previous biennial budget projections. These projections assume an average year hydrology. In addition, it assumes that the implementation of local projects, such as the San Diego County Water Authority Carlsbad desalination project and Orange County Groundwater Replenishment System expansion project, will become operational in 2016 and annually produce 50 thousand acre-feet (TAF) and 30 TAF, respectively.

State Water Project (SWP) – Assumes deliveries of 955 TAF for both years of the biennial budget, which is a 50-percent allocation.

Colorado River Aqueduct (CRA) – Assumes deliveries of approximately 880 TAF for both years of the biennial budget.

Potential impact of drought on water sales projections and water supplies – Water sales in the current year are trending towards 2 MAF due to increased demands by our customers. However, with the Governor's drought declaration, and working in concert with our member agencies, sales could decline in the near future to 1.6 to 1.8 MAF that is reasonably close to the 1.75 MAF used as projected water sales. Likewise, lower water deliveries from SWP can be made up in part by higher deliveries from the CRA, and drawdowns of water storage. Overall, any change in revenues or costs can be covered by financial reserves established for this purpose for the next biennial budget period.

Use of projected reserves over target – It is projected that the water rate stabilization reserves will be \$320 million over the target on June 30, 2014 due to higher water sales and lower costs in the current fiscal year. To help keep future rate increases low and provide reserves for funding our water storage and supply programs should the drought continue, it is proposed to use the \$320 million as follows:

- Deposit \$100M in the Replacement and Refurbishment (R&R) fund to make up for lower funding of the PAYGO in past budgets of approximately \$300 million. This will eliminate the need to issue new debt for the capital program for the next three years, and allows for lower rate increases in the future;
- Deposit \$100M into the Other Post Employment Benefit (OPEB) Trust. This would reduce the annual required contribution (ARC) by \$6.5 million annually beginning in FY 2015/16, make up for past underfunding of this benefit, improve the funded percentage from 13 percent to 43 percent, and reduce the need for water rate increases by \$6.5 million; and
- Deposit the balance of any amount over the reserve target, after the deposits to OPEB and PAYGO, (currently estimated at \$120 million) in a water transfer and management fund to cover future costs associated with replenishing storage and related drought response activities should the current drought conditions continue.

### **STEPS TAKEN TO KEEP RATES LOW**

The proposed rate increases of 1.5 percent in both years of the biennial budget are one-half the previous projections of 3 percent annually. The proposed biennial budget takes several steps to keep rates low for the next two years as well as within a 3-percent to 5-percent range over later years of the ten-year financial forecast. These steps include:

Greater reliance on PAYGO funding for Capital Program – The proposed biennial budget includes an increase to PAYGO funding from \$250 million (\$125 million each year) for the current biennial budget to \$466 million for the proposed biennial budget. For the years beyond the biennial budget, it is recommended that the Board establish a PAYGO target of 60 percent of the projected expenditures in the Capital Investment Plan (CIP). This level of PAYGO funding is appropriate given the significant portion of the capital program that is focused on replacement and refurbishment of capital facilities, and lessens the pressure on water rates from debt service payments in future years. In addition, it allows the amount of PAYGO to adjust to changes in the capital program over time. This higher level of PAYGO funding combined with withdrawals from the R&R Fund will cover 100 percent of the projected capital spending for the next three years, and reduce the need for rate increases in future years.

Improve funding of OPEB – The prior biennial budget began the process to fund Metropolitan's OPEB liability, which was then estimated at \$400 million. That budget incorporated a plan to phase in over a five-year period the additional \$25 million that was required to be set aside annually. The proposed biennial budget accelerates this time period by providing full funding of the annual required contribution to the OPEB Trust as determined by the actuary, three years earlier than the previous budget. This change along with the proposed deposit of \$100 million into the OPEB Trust at the end of the current fiscal year lowers future annual costs by \$6.5 million beginning in FY 2015/16, and improves the funded percentage from 13 percent to 43 percent.

Maintain the ad valorem tax rate at the current level – It is proposed that the Board continue to suspend the ad valorem tax limit pursuant to the MWD Act, as the Board did for the FY 2013/14 tax levy, to maintain the ad valorem tax rate at the current level of .0035 percent of assessed value. This is projected to generate ad valorem tax revenues of \$90.2 million in FY 2014/15 and \$92.2 million in FY 2015/16. Over the biennial budget period, maintaining the ad valorem tax rate at the current level will provide revenues that can be used to pay for growing state water contract costs, help to maintain a balance between fixed and variable revenues, and reduce the need for future water rate increases.

### **CONTINUED FUNDING OF KEY PRIORITIES**

#### **Management of Water Storage Accounts**

Metropolitan has made significant investments in the ability to store water, and as the past year has demonstrated, these investments have greatly increased the reliability of the water supply for the entire region Metropolitan

serves. At the end of FY 2013/14, approximately \$120 million are proposed to be transferred to a water transfer and management fund to offset costs of responding to drought conditions should they continue, and refilling our water storage once the drought is over.

The proposed biennial budget provides funding for continued use of storage in Metropolitan's service area, the Central Valley, and the Colorado River system. Supply programs are budgeted at \$69 million for FY 2014/15 and \$65 million for FY 2015/16.

### **Demand Management Incentives to Meet 20 Percent by 2020**

Funding for the conservation programs continues at the previously budgeted level of \$20 million annually to help ensure that our member agencies and retail water agencies meet the 20 percent by 2020 goal of reduced per capita water consumption. Local Resource Program (LRP) expenditures of approximately \$42 million in each fiscal year of the biennial budget continue to reflect incentives for LRP projects, existing and anticipated, which are eligible for incentives based on project costs.

### **Capital Investment Plan (CIP)**

The proposed capital spending over the biennial budget period totals \$513 million and would fund projects that are critical to maintaining water quality, reliability and safety. This is \$39 million less than the prior biennial budget projections. Projects have been evaluated and ranked and the most critical projects have been prioritized. The CIP continues to reflect the deferral of facility expansion and other projects that do not enhance reliability while focusing on necessary refurbishment and replacement of aging infrastructure.

### **Operations and Maintenance**

The FY 2014/15 budget includes \$422.8 million for Operations and Maintenance (O&M), including labor and benefits, water treatment chemicals, power, solids handling, professional services, and operating equipment purchases. This is \$32.3 million, or 8.3 percent, higher than the FY 2013/14 budget of \$390.5 million due primarily to:

- Increased benefit costs, including retirement-related benefits, and merit increases for qualified employees;
- Funding additional positions to assist with succession planning;
- Three new positions for Water System Operations to provide engineering support for wholesale power transactions and regulatory initiatives (1 position), and O&M technical assistance (2 positions); and
- Funding for two positions to provide additional interim support for the Bay-Delta initiative.

The FY 2015/16 budget includes \$427.2 million for O&M, an increase of \$4.4 million, or 1.0 percent, compared to the FY 2014/15 budget. This increase is due primarily to merit increases for qualified employees and an increase in the cost of retirement-related benefits and forecasted increases in chemical and power costs to operate the treatment plants.

A summary of Metropolitan's FY 2014/15 and FY 2015/16 biennial budget is presented in [Attachment 1](#). This summary discusses sources and uses of funds, including revenues and fund withdrawals and expenses and fund deposits.

### **REVENUE REQUIREMENTS**

To support Metropolitan's financial plan, biennial budget and ten-year forecast, the revenue requirements for FY 2014/15 and FY 2015/16 are estimated to be \$1.52 billion each year. As shown in Table 2, the revenue requirement for FY 2014/15 is about \$83 million more than the revenue requirement used to set rates for the current fiscal year. Expenditures are projected to increase from about \$1.56 billion in the FY 2013/14 revenue requirement to about \$1.66 billion in FY 2014/15. The main drivers for the increase are the increase in budgeted PAYGO to fund the CIP and increased O&M expenditures. Revenue offsets (ad valorem taxes, interest income, hydroelectric power sales, and miscellaneous income) are expected to generate about \$135.7 million, reducing the revenue requirement from water rates and charges in FY 2014/15 to about \$1.52 billion.

In FY 2015/16, expenditures are projected at \$1.67 billion, basically unchanged from FY 2014/15. Capital paid for with operating revenues (PAYGO) decreases by \$24.4 million, offset by higher costs for SWP and CRA power. With \$149.6 million in revenue offsets, the revenue requirement from water rates and charges is \$1.52 billion in FY 2015/16.

**Table 2: Revenue Requirements for FY 2014/15 and FY 2015/16**

	\$ Millions		
	2013/14 Adopted	2014/15 Proposed	2015/16 Proposed
Departmental and Other O&M	\$363.8	\$396.2	\$399.6
Variable Treatment	26.4	26.6	27.6
State Water Project (without Variable Power)	364.0	328.4	328.0
SWP Variable Power	200.0	167.3	187.0
CRA Power	24.9	29.2	36.5
Supply Programs	37.0	69.3	64.6
Demand Management	53.6	62.2	61.7
Debt Service	343.4	325.8	324.7
PAYGO	125.0	245.4	221.0
Change in Required Reserves	26.1	11.2	18.2
<b>Subtotal Expenditures</b>	<b>\$1,564.5</b>	<b>\$1,661.5</b>	<b>\$1,668.9</b>
Revenue Offsets	121.2	135.7	149.6
<b>Total Revenue Requirement</b>	<b>\$1,443.2</b>	<b>\$1,525.8</b>	<b>\$1,519.3</b>

#### **RATES AND CHARGES FOR 2015 AND 2016**

Pursuant to Metropolitan's Administrative Code (section 4304), the Finance and Insurance Committee and Board will set a public hearing in March to receive input on Metropolitan's rates and charges ahead of the adoption of the biennial budget and water rates by the Board at the regularly scheduled meeting in April. In addition to this action, the committee also reviews the General Manager's analysis of the revenue requirement for FY 2014/15 and FY 2015/16, and the rates and charges needed to meet the revenue requirement. The Cost of Service analysis detailed in [Attachment 2](#) and [Attachment 3](#) is consistent with the Cost of Service process used since the Board adopted the current rate structure in October 2001. This analysis shows that an overall rate increase of 1.5 percent in 2015 and 1.5 percent in 2016 is appropriate to achieve the Board direction of collecting the full cost of service in FY 2014/15 and FY 2015/16, continue to meet all financial policy guidelines, and maintain steady rates for the future.

The specific elements of the proposed rate increase effective January 1, 2015 and January 1, 2016, shown in Table 3, "Estimated Rates and Charges," were determined pursuant to the Cost of Service analysis shown in [Attachment 2](#) and [Attachment 3](#). The estimate of rates and charges for FY 2014/15 was based on a total revenue requirement of \$1.52 billion. The existing rates, which are effective through December 31, 2014, and the rates under a 1.5-percent increase, effective January 1, 2015, would generate combined revenue of \$1.49 billion based on total sales of 1.75 MAF, of which 910 TAF is treated and 181 TAF is untreated Exchange Water delivered pursuant to the 2003 Amended and Restated Exchange Agreement between Metropolitan and SDCWA.

The estimate of rates and charges for FY 2015/16 was determined on a total revenue requirement of \$1.52 billion. Projected revenues from rates and charges in FY 2015/16 are \$1.50 billion on total sales of 1.75 MAF, of which 898 TAF is treated and 179 TAF are untreated Exchange Water.

**Table 3: Estimated Rates and Charges**

<b>Effective January 1</b>	<b>2014 Approved</b>	<b>2015 Proposed</b>	<b>2016 Proposed</b>
Tier 1 Supply Rate (\$/AF)	\$148	\$160	\$155
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290
System Access Rate (\$/AF)	\$243	\$256	\$261
Water Stewardship Rate (\$/AF)	\$41	\$41	\$41
System Power Rate (\$/AF)	\$161	\$125	\$137
Full Service Untreated Volumetric Cost (\$/AF)			
Tier 1	\$593	\$582	\$594
Tier 2	\$735	\$712	\$729
Treatment Surcharge (\$/AF)	\$297	\$343	\$352
Full Service Treated Volumetric Cost (\$/AF)			
Tier 1	\$890	\$925	\$946
Tier 2	\$1,032	\$1,055	\$1,081
Readiness-to-Serve Charge (\$M)	\$166	\$158	\$152
Capacity Charge (\$/cfs)	\$8,600	\$10,700	\$10,300

Due to the decrease in projected power costs, the Tier 1, full service untreated water cost is forecasted to decrease to \$582 per AF effective January 1, 2015, a 1.9 percent decrease, and then rise to \$594 per AF effective January 1, 2016, a 2.1 percent increase, due to the increase in the System Access Rate and the System Power Rate. The increase in the System Power rate in FY 2015/16 reflects higher SWP and CRA power costs. The System Access Rate increases in FY 2015/16 due to higher CRA and SWP transportation costs.

The Tier 1 full service treated water cost is forecasted to increase to \$925 per AF effective January 1, 2015 and \$946 per AF effective January 1, 2016, an increase of 3.9 percent and 2.3 percent, respectively. The Treatment Surcharge reflects increasing treatment costs due to higher costs for chemicals, power and solids handling, labor and capital.

The Exchange Price under the terms of the MWD/SDCWA Exchange Agreement will decrease to \$422 per AF effective January 1, 2015, a 5.2 percent decrease, then rise to \$439 per AF effective January 1, 2016, a 4-percent increase. The Exchange Price is comprised of the System Access Rate, the Water Stewardship Rate and the System Power Rate.

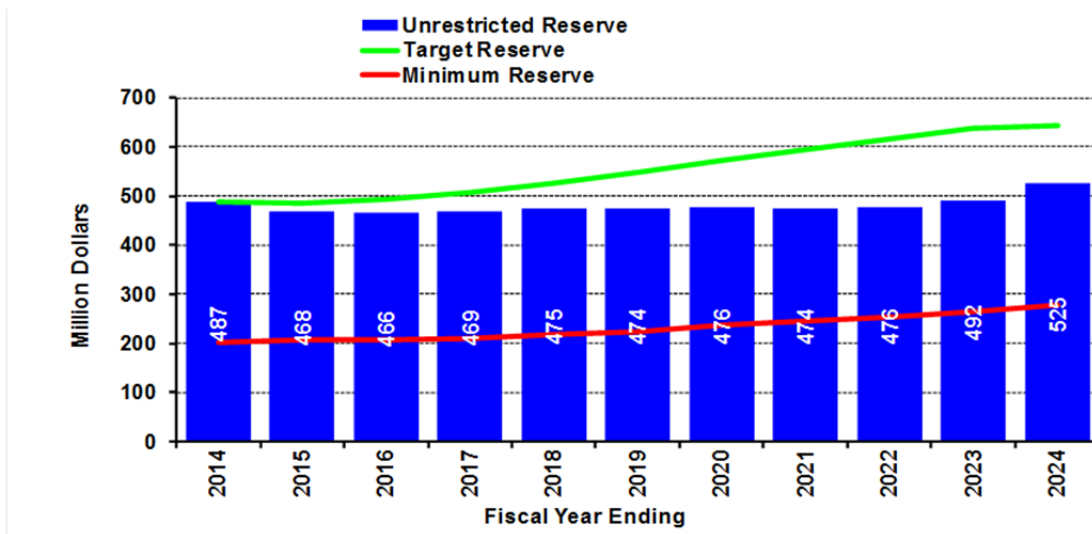
The Readiness-to-Serve (RTS) Charge decreases effective January 1, 2015 as more capital costs are associated with average and peak system use and less is allocated to standby service. Standby costs relate to Metropolitan's role in ensuring system reliability during emergencies and major facility outages. Standby costs include emergency storage capacity and standby capacity within the conveyance and distribution systems. Additionally, some costs recovered through the RTS were reclassified. The decrease in the RTS Charge effective January 1, 2016 reflects the impact of lower amounts of operating revenues used to fund the capital program (PAYGO).

The Capacity Charge recovers the cost of providing peaking capacity on Metropolitan's distribution system. The Capacity Charge increases effective January 1, 2015 as more capital costs are allocated to peak system use, reflecting member agency usage of the distribution system to meet summer season demands. In FY 2014/15, operating revenues used to fund the capital program (PAYGO) rise to \$245 million, and this increase is reflected in the allocation of costs to the Capacity Charge. The decrease effective January 1, 2016 reflects the impact of lower amounts of operating revenues used to fund the capital program (PAYGO).

**TEN-YEAR FORECAST**

The proposed biennial budget sets the foundation for consistent, reasonable rate increases over the ten-year planning period. Investments to address underfunded liabilities in FY 2013/14 will result in lower costs in the out years of the forecast, and combined with maintaining the ad valorem tax rate at its current level throughout the ten-year period, help offset Metropolitan’s share of the cost of the Bay Delta Conservation Plan (BDCP) should that project move forward. Rate increases from FY 2016/17 to FY 2023/24 are projected to be 3 percent to 5 percent each year. The ten-year forecast is presented in [Attachment 4](#).

**Figure 2: Projected Rate Increases, Reserves and Financial Indicators**



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Ave Rate Increase</b>	5.0%	1.5%	1.5%	3.0%	3.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%
<b>Sales, MAF</b>	1.97	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
<b>CIP, \$M</b>	200	245	268	275	281	284	293	304	312	317	313
<b>PAYGO, \$M</b>	125	245	221	200	204	201	176	182	187	190	188
<b>Rev. Bond Cvg</b>	2.7	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.6	2.7	2.9
<b>Fixed Chg Cvg</b>	2.0	1.6	1.6	1.6	1.5	1.6	1.5	1.5	1.5	1.4	1.4
<b>Inflation</b>	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
<b>AV Taxes, \$M</b>	81	90	92	94	96	99	101	103	105	108	110
<b>BDCP, \$M</b>				15	24	46	91	148	204	259	302

**NEXT STEPS**

The following sets forth the proposed schedule for the biennial budget and revenue requirements for fiscal years 2014/15 and 2015/16, and proposed water rates and charges for calendar years 2015 and 2016.

- February 10, 2014 F&I Committee, Biennial Budget and Rates presentation
- February 11, 2014 Board action to set public hearing
- February 25, 2014 Workshop, Budget and Rates
- February 28, 2014 Notice to Legislature
- March 10, 2014 Additional Workshop, if needed
- March 11, 2014 Public Hearing on proposed water rates and charges and suspension of the tax limit pursuant to Section 124.5 of the MWD Act
- March 25, 2014 Additional Workshop, if needed
- April 7, 2014 F&I Committee, Approve Biennial Budget and Calendar Year rates
- April 8, 2014 Board action, Approve Biennial Budget and Calendar Year rates

## RECOMMENDATION

This letter requests that the Board set a public hearing for the March 2014 meeting of the Board at which interested parties may provide input regarding Metropolitan's rates and charges to be effective January 1, 2015 and January 1, 2016, and input regarding action on ad valorem tax rates pursuant to Section 124.5 of the MWD Act.

## Policy

---

Metropolitan Water District Act Section 124.5

Metropolitan Water District Administrative Code Sections 4304 and 5107: Apportionment of Revenues and Setting of Water Rates, and Biennial Budget Process

## California Environmental Quality Act (CEQA)

---

CEQA determination for Options #1 and #2:

The proposed action is not defined as a project under CEQA, because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not subject to CEQA because it involves 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). For those anticipated projects listed in the budget that may require subsequent board approval, a CEQA review will be carried out and, if appropriate, environmental documentation for such projects will be prepared and processed in accordance with CEQA and the State CEQA Guidelines.

The CEQA determination is: Determine that the proposed action is 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 that the proposed action is not subject to CEQA and set a public hearing for the March 2014 meeting of the Board at which interested parties may provide input regarding Metropolitan's rates and charges to be effective January 1, 2015 and January 1, 2016, and input regarding action on ad valorem tax rates pursuant to Section 124.5 of the MWD Act.

**Fiscal Impact:** None

### Option #2

Adopt the CEQA determination that the proposed action is not subject to CEQA and set a public hearing for another date.


**Fiscal Impact:** None



**Staff Recommendation**

---

Option #1

  
\_\_\_\_\_  
Gary Breaux  
Chief Financial Officer

1/30/2014

*Date*

  
\_\_\_\_\_  
Jeffrey Knightlinger  
General Manager

1/30/2014

*Date*

**Attachment 1 – Biennial FY 2014/15 and FY 2015/16 Budget Summary**

**Attachment 2 – Metropolitan Water District of Southern California, FY 2014/15 Cost of Service**

**Attachment 3 – Metropolitan Water District of Southern California, FY 2015/16 Cost of Service**

**Attachment 4 – Ten-Year Financial Forecast**

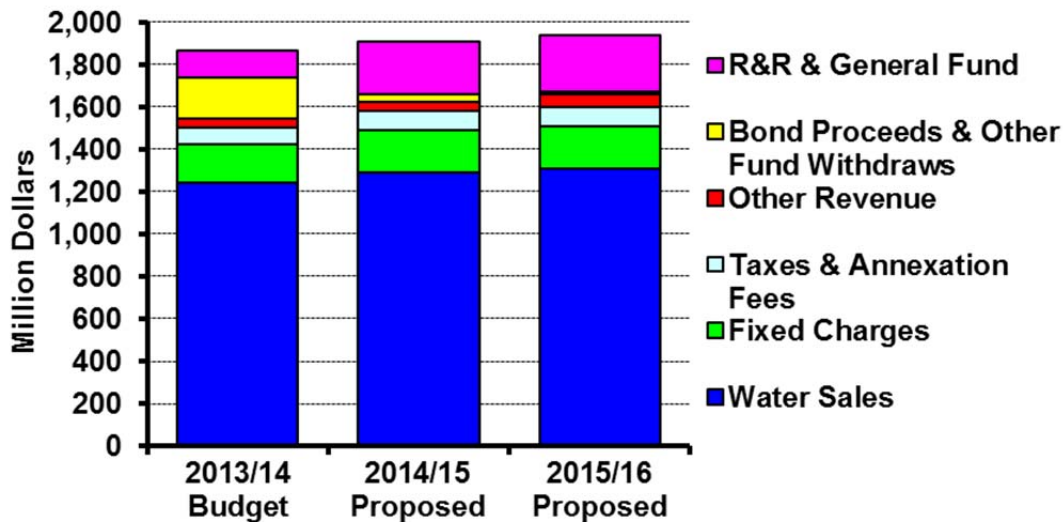
Ref# cfo12628922

**Biennial Budget Summary  
FY 2014/15 & 2015/16**

The proposed biennial budget for fiscal years 2014/15 and 2015/16 ( FY 2014/15 and FY 2015/16) provides funding for Metropolitan’s key priorities while meeting or exceeding all financial policy guidelines, with proposed overall rate increases of 1.5 percent in each year of the proposed biennial budget. The proposed overall rate increases of 1.5 percent are at their lowest level in the past ten years.

The biennial budget presents the sources and uses of funds. The budget is developed and monitored on a modified accrual basis. Revenues and expenses are recognized in the period they are earned and incurred. Depreciation and amortization are not included; payment of debt service is included. The modified-accrual basis of accounting provides a better match of revenues and expenses for budgeting and reporting.

**Figure 1. Sources of Funds**



**SOURCES OF FUNDS**

Estimated revenues from water sales, fixed charges (readiness-to-serve charge and capacity charge), taxes and annexation fees, and other miscellaneous income (interest income, power recovery, etc.) are projected to be \$1.63 billion for FY 2014/15 and \$1.66 billion for FY 2015/16. For FY 2014/15, this is \$80.1 million more than the FY 2013/14 budget, and for FY 2015/16, this is \$31.9 million more

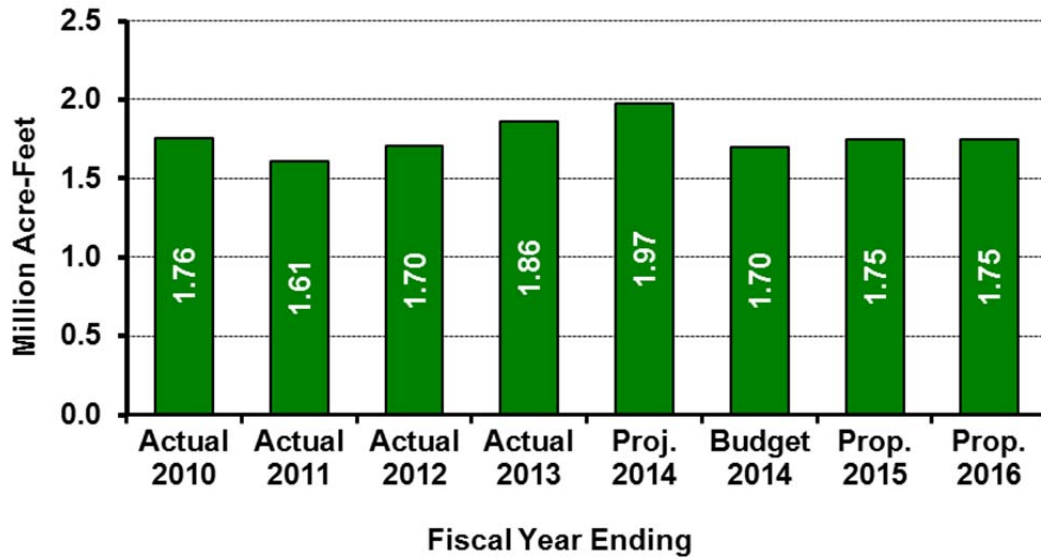
than FY 2014/15. The increase in revenues is due to increases in water rates and charges in calendar year 2015 and calendar year 2016 and maintaining the ad valorem tax rate at .0035 percent of assessed valuations. Figure 1 shows the major sources of funds. Summaries of sources and uses of funds are shown in Tables 6, 7 and 8 at the end of this section. A description of each revenue source is included in the Glossary of Terms.

**Water Sales**

Revenues from water sales are budgeted at \$1,290.6 million in FY 2014/15 and \$1,310.8 million in FY2015/16, and are based on rates and charges adopted by the Board for January 1, 2014. In addition, water rates and charges are proposed to increase by 1.5 percent

overall effective January 1, 2015 and 1.5 percent overall effective January 1, 2016. Water sales for both 2014/15 and 2015/16 are estimated to be 1.75 million acre-feet (MAF), an increase of 50 thousand acre-fee (TAF) from the FY 2013/14 budget.

**Figure 2. Water Sales Trend**



The FY 2014/15 water sales include 1.57 MAF of firm sales and 181 TAF of Exchange Water. Treated sales are estimated to be 910 TAF, or 52 percent of total sales in FY 2014/15. The FY 2015/16 water sales include 1.57 MAF of firm sales and 179 TAF of Exchange Water. Treated sales are estimated to be 898 TAF, or 51 percent of total sales in FY 2015/16. Figure 2 shows the trend of water sales.

**Taxes and Annexation Fees**

Revenues from taxes and annexation fees, which will be used to pay voter-approved debt service on general obligation bonds and a portion of the capital costs of the State Water Project (SWP), are estimated to be \$90.2 million in FY 2014/15 and \$92.2 million in FY 2015/16. The ad valorem tax rate is assumed to remain at the current level of .0035 percent of assessed value; assessed

valuations are projected to increase by 2.5 percent each fiscal year.

**Fixed Charges**

Fixed charges include the Capacity Charge and Readiness-to-Serve Charge. In FY 2014/15, these charges are estimated to generate \$36.7 million and \$162.0 million, respectively. In FY 2015/16, these charges are estimated to generate \$41.3 million and \$155.0 million, respectively. In total this represents a \$16.6-million increase from the FY 2013/14 to FY 2014/15, and a \$2.4-million decrease from the FY 2014/15 to the FY 2015/16 budget.

**Other Revenue**

Interest earnings are estimated to total \$16.1 million and \$27.6 million for FY 2014/15 and FY 2015/16, respectively (including trust accounts and construction funds), primarily due to higher assumed interest rates.

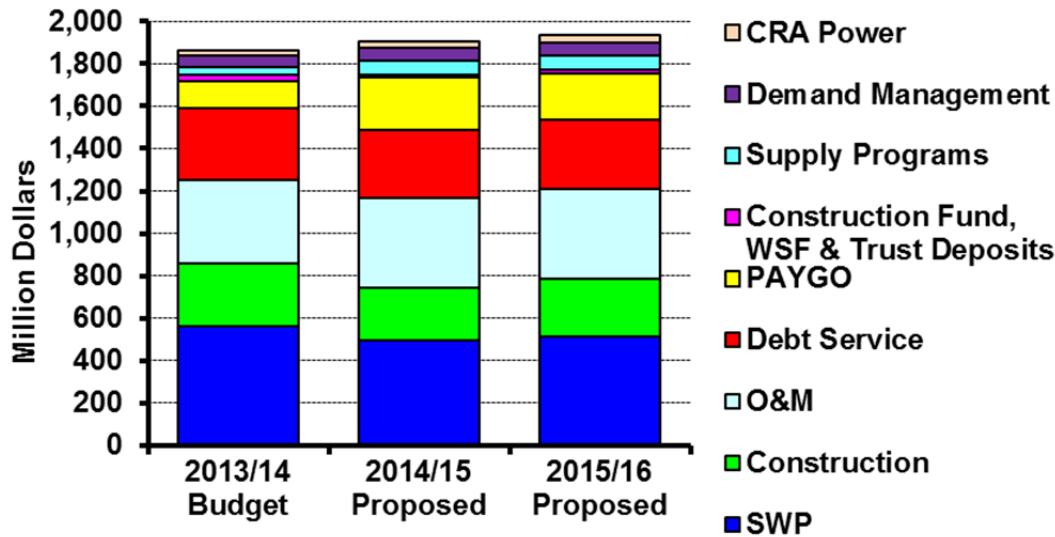
Receipts from hydroelectric and Colorado River Aqueduct (CRA) power sales are estimated to be \$19.3 million for FY 2014/15 and \$18.9 million for FY 2015/16.

**Other Sources**

For FY 2014/15 and FY 2015/16 Metropolitan does not plan to issue any new debt. The

funding requirements of the CIP will be met from current operating revenues (i.e., budgeted PAYGO) and by drawing down the R&R fund balance. In FY 2014/15, a total of \$1.91 billion will be available for expenditures and other obligations and in FY 2015/16 this figure will increase to \$1.94 billion.

**Figure 3. Uses of Funds**



**USES OF FUNDS**

Total uses of funds are \$1.91 billion for FY 2014/15 and \$1.94 billion for FY 2015/16. Figure 3 shows the breakdown of expenditures and other obligations that make up the Uses of Funds.

**Colorado River Aqueduct Power**

CRA power costs are projected to be \$29.2 million in FY 2014/15 and \$36.5 million in FY 2015/16 based on pumping 882 TAF and 876 TAF, respectively, through the CRA. FY 2015/16 is \$7.3 million higher despite similar pumping as a result of the need to purchase supplemental energy.

**State Water Project**

State Water Project (SWP) expenditures are budgeted at \$495.7 million for FY 2014/15 and \$515.0 million in FY 2015/16. This is based on total deliveries of 1.03 MAF for FY 2014/15, of which 94 TAF are received via

exchange, and 1.02 TAF for FY 2015/16, of which 94 TAF are received via exchange.

SWP power costs are expected to be \$183.8 million for FY 2014/15 and \$194.0 million for FY 2015/16 and include the cost of pumping 912 TAF and 907 TAF, respectively.

For FY 2014/15, the average total unit cost of SWP power is expected to be about \$202 per acre-foot, which includes \$18 per acre-foot for fixed power costs and \$183 per acre-foot for variable pumping costs. For FY 2015/16, the average total unit cost of SWP power is expected to be about \$214 per acre-foot, primarily for variable pumping costs.

SWP minimum operations, maintenance, power, and replacement charges are estimated to be about \$183.4 million in both FY 2014/15 and FY 2015/16. FY 2014/15 capital charges are expected to decrease \$19.5 million from

the FY 2013/14 budget but then increase \$6.7 million in FY 2015/16. The initial decrease reflects incorporation of rate management credits into the forecast of SWP costs. Rate management credits result from a provision of the State Water Contract that provides for the reduction of capital charges based on differences between the Department of Water Resources' collections from the SWP contractors and the actual amounts paid for capital-related charges.

### **Demand Management Costs**

Metropolitan provides financial assistance to its member agencies for the development of local water recycling and groundwater recovery projects through the Local Resource Program (LRP). Metropolitan also provides financial assistance for the development of conservation programs through the Conservation Credits Program (CCP).

As part of the LRP, Metropolitan entered into agreements to provide financial assistance to water-recycling projects, principally for landscape irrigation, groundwater recharge, and industrial uses. Metropolitan expects to spend about \$30 million annually for the production of about 187 TAF of recycled water in FY 2014/15 and FY 2015/16.

Metropolitan also entered into agreements to provide financial assistance to projects to treat contaminated groundwater for potable uses. Metropolitan expects to spend about \$9 million annually for the production of about 77 TAF of recovered groundwater in FY 2014/15 and FY 2015/16.

The CCP provides financial assistance to customers in Metropolitan's service area for water conservation programs. The budget for CCP provides rebate funding for residential, commercial, industrial, and landscape conservation activities. The FY 2014/15 and FY 2015/16 funding for CCP is budgeted at \$20 million per year.

### **OPERATIONS AND MAINTENANCE**

The FY 2013/14 operations and maintenance (O&M) budget has been restated to reflect the redistribution of a portion of the \$10 million in OPEB funding in FY 2013/14 to salaries and benefits in the same manner that retirement-related expenses are reflected in the FY 2014/15 and FY 2015/16 budgets. The O&M portion, or \$8.4 million of the \$10 million OPEB funding, was redistributed to the Department budgets with \$1.6 million remaining in Other O&M. The FY 2013/14 Restated budget also includes an additional \$0.2M of Ethics department expenses authorized by the Board in August 2013.

The FY 2014/15 O&M budget, including operating equipment purchases, is \$422.8 million. This is \$32.3 million, or 8.3 percent, higher than the FY 2013/14 restated budget of \$390.5 million. The FY 2015/16 O&M budget is \$427.2 million, an increase of \$4.4 million, or 1.0 percent. Table 1 summarizes the O&M budget by expenditure type. A more detailed discussion of significant factors impacting the O&M budget follows Table 1.

**Table 1. 2014/15 Operations & Maintenance Annual Budget (dollars) by Expenditure Type**

	2013/14 Restated Budget	2014/15 Proposed	2015/16 Proposed	2013/14 Restated Budget vs. 2014/15 Proposed	2014/15 Proposed vs. 2015/16 Proposed
Salaries & Benefits (1)	244,650.8	273,746.1	277,020.1	29,095.3	3,274.0
Chemicals, Solids, and Power (2)	25,413.4	26,565.7	27,644.2	1,152.3	1,078.5
Outside Services	41,232.5	43,426.4	43,814.2	2,193.9	387.8
Materials & Supplies (3)	24,807.5	25,379.9	25,767.7	572.4	387.8
Other	47,234.5	46,004.0	44,760.4	(1,230.5)	(1,243.6)
Operating Equipment	7,124.6	7,640.9	8,190.3	516.3	549.4
<b>Total</b>	<b>390,463.3</b>	<b>422,763.1</b>	<b>427,196.9</b>	<b>32,299.7</b>	<b>4,433.8</b>

Totals may not foot due to rounding

(1) Includes overhead credit for construction and savings from liability reduction

(2) Costs associated with treatment only.

(3) Without chemicals associated with treatment plants.

### FY 2014/15 O&M Budget

The proposed FY 2014/15 O&M budget includes \$422.8 million for labor and benefits, water treatment chemicals, power, and solids handling, materials and supplies, professional services, and operating equipment purchases. This is \$32.3 million, or 8.3 percent, higher than the FY 2013/14 restated budget of \$390.5 million due primarily to an increase in retirement-related benefit costs and merit increases for qualified employees, variable treatment costs, and outside services.

**Salaries and Benefits** – Labor costs, not including those charged to construction, are \$273.7 million. This is \$29.1 million, or 12 percent, higher than the FY 2013/14 restated budget of \$244.6 million. This increase is primarily the result of an increase in retirement-related benefit costs and merit increases for qualified employees; three additional positions for Water Systems Operations, funding of two additional positions in the Bay-Delta program and funding additional positions to assist with succession planning.

Salaries not including fringe benefits or the overhead credit are 4 percent higher than the FY 2013/14 restated budget. Fringe benefits are \$19.7 million, or 21 percent higher, than the FY 2013/14 restated budget primarily as a

result of full funding of the annual actuarial required contribution (ARC) for Metropolitan's Other Post-Employment Benefits (OPEB) liability. Future annual ARC amounts are mitigated by a proposed additional deposit to the OPEB Trust of \$100 million in FY 2013/14. The FY 2015/16 budget reflects \$6.5 million reduction in the anticipated ARC due to this deposit.

The total personnel complement for the FY 2014/15 budget is 1,905 authorized positions, including 19 agency and district temporary full-time equivalents (FTEs), and reflects an increase of 2 net positions from the FY 2013/14 budget. Total regular authorized employee positions are 137 positions below the FY 2008/09 budget. The proposed FY 2014/15 budget assumes a vacancy rate of approximately 3.2 percent and 3 regular employee positions remain unfunded.

**Other O&M** – Outside services are anticipated to increase \$2.2 million in FY 2014/15 primarily as a result of an increase for security equipment maintenance and Emergency Maintenance System (EMS) storage costs.

Chemicals, solids, and power reflect the cost of the water treatment process and are anticipated to increase by \$1.1 million in FY 2014/15, driven by an overall increase in chemical unit commodity prices and higher electricity rates.

**FY 2015/16 O&M Budget**

The proposed FY 2015/16 O&M budget is \$427.2 million, an increase of \$4.4 million, or 1 percent, compared to the FY 2014/15 budget. This increase is primarily due to merit increases for qualified employees, increase in fringe benefit costs, and forecasted increases in chemical and power costs to operate the treatment plants.

**Salaries and Benefits** – The FY 2015/16 O&M labor budget includes \$6.5 million of anticipated savings on retirement-related benefit costs as a result of the proposed \$100 million deposit to the OPEB Trust in FY 2013/14.

The FY 2015/16 O&M labor budget is about \$3.3 million higher than the FY 2014/15 budget driven primarily by an increase in overall fringe benefit costs and merit increases for qualified employees offset by savings on retirement-related benefits costs.

Salaries not including fringe benefits or the overhead credit are 2 percent higher than the FY 2014/15 budget. Fringe benefits are only .2 percent higher than the FY 2014/15 budget as a result of the \$6.5 million in anticipated savings on retirement-related benefit costs.

The total budgeted personnel complement for FY 2015/16 is reduced by 1 position to 1,904 positions, including 19 agency and district temporary FTEs. The proposed FY 2015/16 budget assumes a vacancy rate of approximately 3.2 percent and 3 regular employee positions remain unfunded.

**Other O&M** –The cost of chemicals, power, and sludge disposal incurred in the water treatment process is anticipated to increase by \$1.1 million in FY 2015/16 driven primarily by modest inflationary pressure on chemical commodity prices and electricity rates.

**Figure 4. Departmental Budget by Expenditure Type**

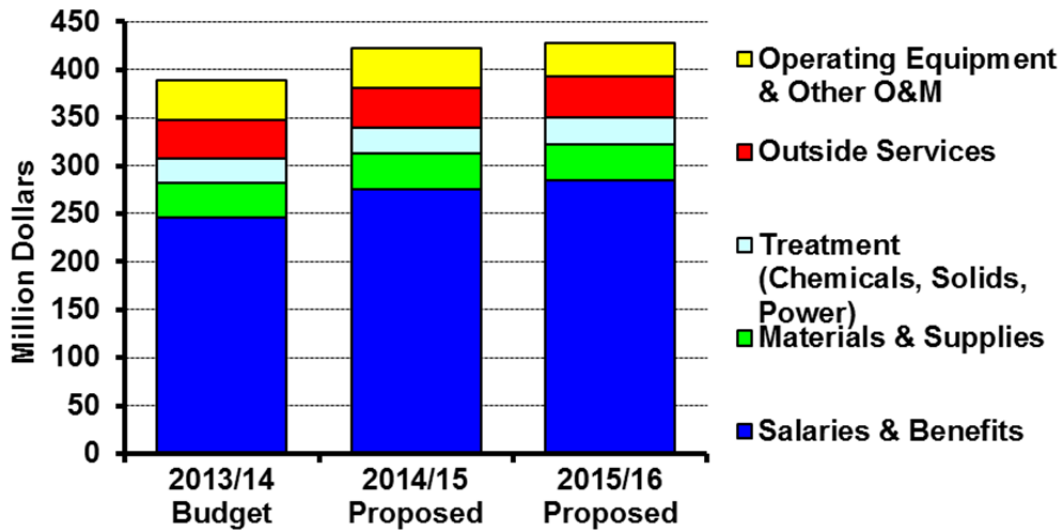
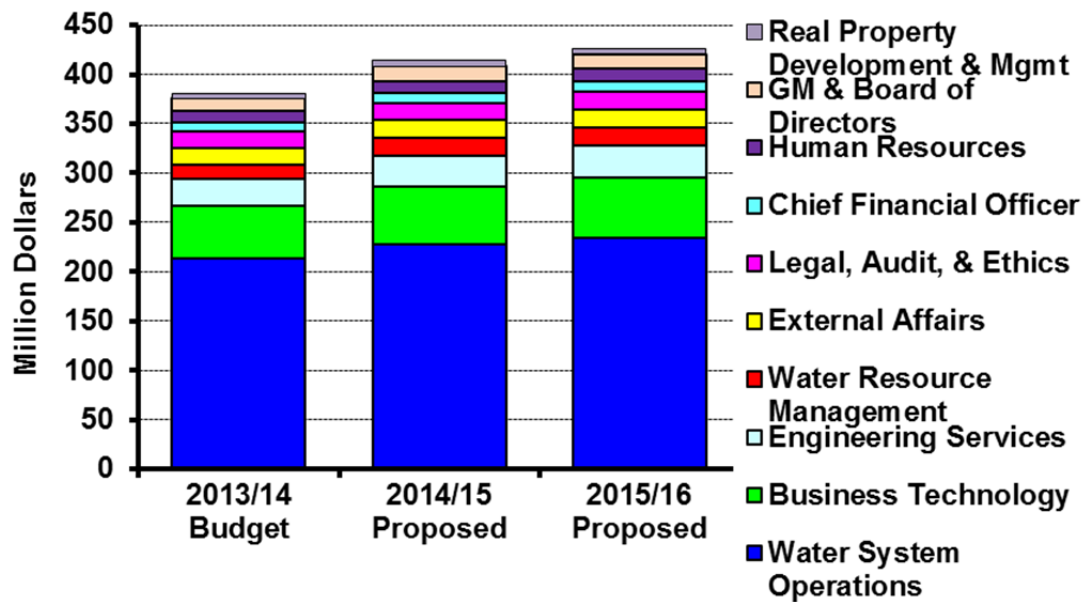


Figure 4 summarizes the total departmental O&M budget by expenditure type, of which 66 percent is for salaries and benefits.

Figure 5 depicts the distribution of the departmental O&M by organization without other O&M, the overhead credit, and operating equipment. Including treatment

costs, the Water System Operations (WSO) Group accounts for 55 percent of the total departmental budget for both FY 2014/15 and FY 2015/16. A summary of the O&M budget by organization is shown in Table 2.

**Figure 5. Departmental Budget by Organization  
(without Other O&M, operating equipment, and overhead credit)**



**Table 2. Operations & Maintenance Budget by Organization**

Departmental Units	2013/14 Restated Budget	2014/15 Proposed	2015/16 Proposed	2013/14 Restated Budget vs. 2014/15 Proposed	%	2014/15 Proposed vs. 2015/16 Proposed	%
Office of the General Manager	\$ 12,854.2	\$ 14,807.5	\$ 15,255.7	\$ 1,953.3	15.2%	\$ 448.2	3.0%
Water System Operations w/o Variable Treatment	188,578.0	201,227.8	207,027.9	12,649.9	6.7%	5,800.1	2.9%
Water Resource Management	15,272.8	17,580.7	17,970.6	2,308.0	15.1%	389.9	2.2%
Engineering Services	26,289.7	31,998.9	33,008.3	5,709.2	21.7%	1,009.4	3.2%
Business Technology	53,167.8	58,224.2	60,216.6	5,056.4	9.5%	1,992.4	3.4%
Real Property Development & Mgmt	4,797.5	5,703.3	5,801.3	905.8	18.9%	98.1	1.7%
Human Resources	11,865.2	12,633.5	12,856.2	768.3	6.5%	222.7	1.8%
Office of the Chief Financial Officer	8,901.4	9,660.5	10,133.7	759.1	8.5%	473.1	4.9%
External Affairs	16,456.4	18,207.7	18,628.9	1,751.3	10.6%	421.2	2.3%
<b>Subtotal - General Manager's Dep.</b>	<b>338,182.9</b>	<b>370,044.2</b>	<b>380,899.2</b>	<b>31,861.3</b>	<b>9.4%</b>	<b>10,855.0</b>	<b>2.9%</b>
General Counsel	13,355.0	13,262.3	13,748.9	(92.6)	(0.7%)	486.6	3.7%
General Auditor	2,811.7	3,101.9	3,224.9	290.3	10.3%	122.9	4.0%
Ethics Office	846.4	1,070.1	1,092.6	223.8	26.4%	22.5	2.1%
Overhead Credit from Construction	(20,807.0)	(18,744.3)	(19,547.7)	2,062.7	(9.9%)	(803.5)	4.3%
<b>Total Departmental Budget</b>	<b>334,388.9</b>	<b>368,734.4</b>	<b>379,417.9</b>	<b>34,345.4</b>	<b>10.3%</b>	<b>10,683.5</b>	<b>2.9%</b>
<b>Other O&amp;M</b>							
PC Replacement	3,525.0	-	-	(3,525.0)	(100.0%)	-	NA
CCP Vendor Administration	1,589.1	1,550.0	1,550.0	(39.1)	(2.5%)	-	NA
Performance Programs	673.0	673.0	673.0	-	NA	-	NA
Association Dues	4,981.0	5,065.9	5,184.8	84.9	1.7%	118.9	2.3%
Contingency	2,057.1	-	-	(2,057.1)	(100.0%)	-	NA
Insurance	9,566.6	11,344.0	9,800.0	1,777.4	18.6%	(1,544.0)	(13.6%)
Leases	532.6	565.0	600.0	32.4	6.1%	35.0	6.2%
Property Taxes	612.0	624.2	636.7	12.2	2.0%	12.5	2.0%
<b>Subtotal - Other</b>	<b>23,536.4</b>	<b>19,822.1</b>	<b>18,444.5</b>	<b>(3,714.3)</b>	<b>(15.8%)</b>	<b>(1,377.6)</b>	<b>(6.9%)</b>
<b>TOTAL OPERATIONS &amp; MAINTENANCE</b>	<b>357,925.3</b>	<b>388,556.5</b>	<b>397,862.4</b>	<b>30,631.1</b>	<b>8.6%</b>	<b>9,305.9</b>	<b>2.4%</b>
Operating Equipment	7,124.6	7,640.9	8,190.3	516.3	7.2%	549.4	7.2%
Variable Treatment	25,413.4	26,565.7	27,644.2	1,152.3	4.5%	1,078.5	4.1%
Savings from Liability Reduction	-	-	(6,500.0)	-	NA	(6,500.0)	NA
<b>GRAND TOTAL</b>	<b>\$ 390,463.3</b>	<b>\$ 422,763.1</b>	<b>\$ 427,196.9</b>	<b>\$ 32,299.7</b>	<b>8.3%</b>	<b>\$ 4,433.8</b>	<b>1.0%</b>

Totals may not foot due to rounding



**LABOR**

Total authorized positions (including temporary workers) for FY 2014/15 and FY 2015/16 are 1,905 and 1,904 positions, respectively. Total O&M personnel are up by 2 district temporary positions (rounded) to 1,905 in 2014/15 and drop 1 regular full time position to a total of 1,904 in FY 2015/16. Positions dedicated to capital work are expected to decrease slightly during the biennium while positions dedicated to O&M

will increase slightly. The proposed FY 2014/15 and FY 2015/16 budget assumes a vacancy rate of approximately 3.2 percent and 3 positions remain unfunded in each budget year. Therefore, funded positions are lower than the authorized complement.

The personnel complement is broken down on Tables 3 and 4.

**Table 3. Regular and Temporary Positions**

	2012/13 Budget	2013/14 Budget	2014/15 Proposed	2015/16 Proposed	2013/14 Budget vs. 2014/15 Proposed	2014/15 Proposed vs. 2015/16 Proposed
Regular Full Time Positions	1,883	1,881	1,886	1,885	5	-1
District Temporary Positions	19	18	19	19	2	0
Agency Temporary Positions	6	5	-	-	-5	0
<b>Total</b>	<b>1,908</b>	<b>1,904</b>	<b>1,905</b>	<b>1,904</b>	<b>2</b>	<b>-1</b>

Totals may not foot due to rounding.

**Table 4. O&M and Capital Staffing Levels**

	2013/14 Budget	2014/15 Proposed	2015/16 Proposed
<b>O&amp;M Positions</b>			
Regular Full Time Positions	1,598	1,608	1,604
District & Agency Temporary Positions	20	19	19
<b>Total O&amp;M</b>	<b>1,618</b>	<b>1,627</b>	<b>1,623</b>
<b>Capital Positions</b>			
Regular Full Time Positions	283	278	281
District & Agency Temporary Positions	3	-	-
<b>Total Capital</b>	<b>286</b>	<b>278</b>	<b>281</b>
<b>GRAND TOTAL</b>	<b>1,904</b>	<b>1,905</b>	<b>1,904</b>

Totals may not foot due to rounding.

## Supply Programs

Major supply program expenditures for FY 2014/15 and FY 2015/16 are estimated to be \$69.3 million and \$64.6 million, respectively, and include (may not foot due to rounding):

- \$12.2 million in FY 2014/15 and \$12.6 million in FY 2015/16 for operating and maintaining the IID/MWD conservation agreement;
- \$27.2 million in FY 2014/15 and \$21.1 million in FY 2015/16 for Colorado Programs;
- \$18.0 million in FY 2014/15 and \$18.3 million in FY 2015/16 for Central Valley Storage Programs;
- \$8.6 million in FY 2014/15 and \$9.4 million in FY 2015/16 for the Palo Verde Irrigation District (PVID) Land Management Program;
- \$1.9 million in FY 2014/15 and \$1.9 million in FY 2015/16 for State Water Project Transfer Programs; and
- \$1.3 million in FY 2014/15 and \$1.3 million in FY 2015/16 for In-Basin Programs.

## ANNUAL CAPITAL INVESTMENT PLAN

The CIP budget for FY 2014/15 and FY 2015/16 is estimated to be \$245.4 million and \$267.9 million, respectively. It is proposed to be funded by current operating revenues (i.e., budgeted PAYGO) and by drawing down the R&R fund balance. The FY 2014/15 capital budget is \$49.2 million lower than the FY 2013/14 budget and the FY 2015/16 capital budget is \$22.5 million higher than the FY 2014/15 budget.

The two largest areas of expenditures in the FY 2014/15 and FY 2015/16 CIP are Infrastructure Reliability and Water Quality. It is currently anticipated that infrastructure expenditures will continue to grow as more facilities reach the end of their service life.

## Cash Funded Capital

The CIP is proposed to be funded by current operating revenues (budgeted PAYGO) and by drawing down the R&R fund balance. The PAYGO funding for FY 2014/15 has been budgeted at \$245 million. In FY 2015/16, PAYGO funding has been budgeted at \$221 million and in addition to a \$47-million draw from the R&R fund will fund the \$268 million CIP.

## Debt Service

For FY 2014/15 and FY 2015/16 Metropolitan does not plan to issue any new debt. Debt service payments in FY 2014/15 are budgeted to be \$325.8 million and include \$23.2 million in G.O. bond debt service, \$297.5 million in revenue bond debt service, \$3.9 million in variable rate debt administration costs (liquidity, remarketing fees, and broker-dealer fees), and \$1.3 million for State Revolving Fund Loan payments. Total debt service costs in FY 2014/15 are expected to be \$17.6 million less than the FY 2013/14 budget.

Debt service payments in FY 2015/16 are budgeted to be \$324.7 million and include \$23.3 million in G.O. bond debt service, \$296.4 million in revenue bond debt service, \$3.7 million in variable rate debt administration costs (liquidity, remarketing fees, and broker-dealer fees), and \$1.3 million for State Revolving Fund Loan payments. Total debt service costs in FY 2015/16 are expected to be \$1.1 million less than the FY 2014/15 budget.

Metropolitan currently has \$4.5 billion in outstanding debt. Of this amount, \$4.3 billion is revenue bond debt, of which 9 percent is in an unhedged variable rate mode.

## Reserve Transfers

The FY 2014/15 budget forecasts an \$18.4-million decrease in reserves by June 30, 2015 and includes the Water Rate Stabilization Fund (WRSF) and the Revenue Remainder Fund. In addition, the Treatment Surcharge Stabilization Fund (TSSF) is expected to decrease \$4.4 million and the Water Stewardship Fund (WSF) is expected to decrease by \$9.8 million.

The FY 2015/16 budget forecasts a \$2.5-million decrease in reserves by June 30, 2016 and includes the Water Rate Stabilization Fund (WRSF) and the Revenue Remainder Fund. In addition the Treatment Surcharge Stabilization Fund (TSSF) is expected to remain at zero and the Water Stewardship Fund (WSF) is expected to decrease by \$9.2 million.

### **FUND BALANCES AND RESERVE LEVELS**

Metropolitan operates as a single enterprise fund for financial statements and budgeting purposes. Through its administrative code, Metropolitan identifies a number of accounts, which are referred to as funds, to separately track uses of monies for specific purposes as summarized in Table 5. Figure 6 shows the distribution of these funds by type.

Fund balances are budgeted to be \$1.51 billion at June 30, 2015. Of that total, \$836.5 million are restricted by bond covenants, contracts, or board policy, and \$668.5 million are

unrestricted. In addition, fund balances are budgeted to be \$1.46 billion at June 30, 2016. Of that total, \$854.7 million are restricted by bond covenants, contracts, or board policy, and \$609.9 million are unrestricted.

On June 30, 2015, the minimum and target reserve fund targets are estimated to be \$206.0 million and \$484.7 million, respectively. Based on projected revenues and expenditures, it is estimated that the balance in the WRSF and Revenue Remainder Fund will total about \$468.3 million, about \$16.4 million under the target.

On June 30, 2016, the minimum and target reserve fund targets are estimated to be \$206.4 million and \$492.6 million, respectively. Based on projected revenues and expenditures, it is estimated that the balance in the WRSF and Revenue Remainder Fund will total about \$465.8 million, about \$26.8 million under the target.

**Table 5. Projected Fund Balances (dollars in millions)**

	Restricted		Unrestricted		Total
	Contractual	Board	Designated	Undesignated	
<b>2014/15 Proposed</b>					
Operating Funds	175.7	216.4	-	-	392.1
Debt Service Funds	309.0	-	-	-	309.0
Construction Funds	18.4	-	153.5	-	171.9
Reserve Funds*	-	-	-	475.5	475.5
Rate Stabilization Funds**	-	-	38.4	-	38.4
Trust and Other Funds	67.0	50.1	-	0.9	118.0
<b>Total June 30, 2015</b>	<b>570.0</b>	<b>266.5</b>	<b>192.0</b>	<b>476.5</b>	<b>1,505.0</b>
<b>2015/16 Proposed</b>					
Operating Funds	181.5	222.4	-	-	403.9
Debt Service Funds	314.8	-	-	-	314.8
Construction Funds	18.9	-	106.7	-	125.6
Reserve Funds*	-	-	-	473.1	473.1
Rate Stabilization Funds**	-	-	29.2	-	29.2
Trust and Other Funds	67.0	50.1	-	0.9	118.0
<b>Total June 30, 2016</b>	<b>582.2</b>	<b>272.5</b>	<b>135.9</b>	<b>474.0</b>	<b>1,464.6</b>

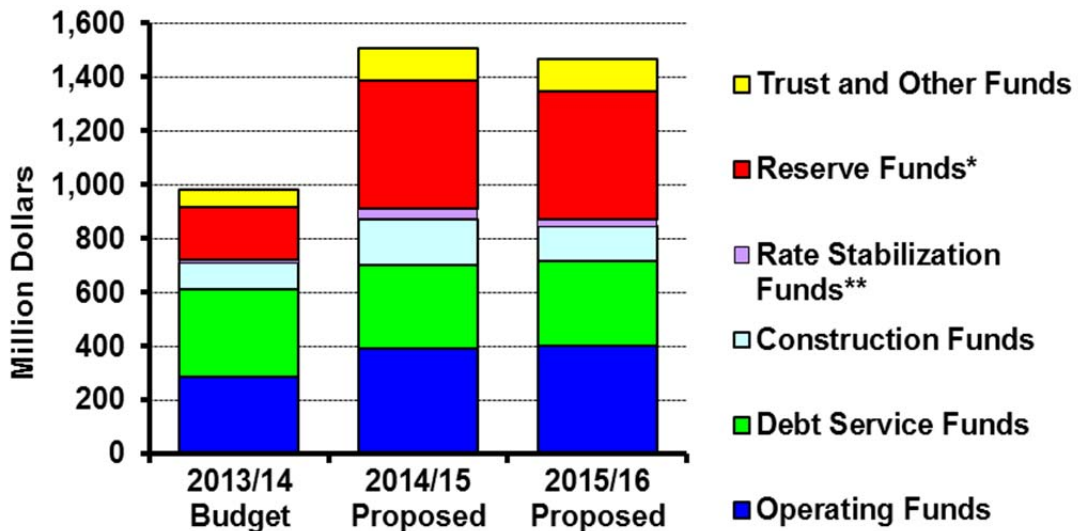
Based on modified accrual accounting.

Totals may not foot due to rounding.

\* includes Water Rate Stabilization Fund and Revenue Remainder Fund.

\*\* includes Water Stewardship Fund and Treatment Surcharge Stabilization Fund

**Figure 6. Fund Distribution by Type**



\* includes Water Rate Stabilization Fund and Revenue Remainder Fund.

\*\* includes Water Stewardship Fund and Treatment Surcharge Stabilization Fund

**Table 6. Sources and Uses of Funds (dollars in millions)**

	2013/14 Budget	2013/14 Projected	2014/15 Proposed	2015/16 Proposed	2014/15	2015/16
					Proposed Compared to 2013/14 Budget	Proposed Compared to 2014/15 Proposed
<b>USES OF FUNDS</b>						
<b>Expenses</b>						
State Water Contract	\$ 564.0	\$ 426.0	\$ 495.7	\$ 515.0	\$ (68.3)	\$ 19.3
Supply Programs	37.0	76.5	69.3	64.6	32.2	(4.7)
Colorado River Power	24.9	24.9	29.2	36.5	4.3	7.3
Debt Service	343.4	369.0	325.8	324.7	(17.6)	(1.1)
Demand Management	53.6	53.6	62.2	61.7	8.5	(0.5)
Departmental O&M	326.3	336.1	368.7	379.4	42.4	10.7
Treatment Chemicals, Solids & Power	26.4	26.4	26.6	27.6	0.2	1.1
Other O&M	37.5	128.0	27.5	20.1	(10.0)	(7.3)
<b>Sub-total Expenses</b>	<b>1,413.3</b>	<b>1,440.6</b>	<b>1,404.9</b>	<b>1,429.7</b>	<b>(8.3)</b>	<b>24.7</b>
<b>Capital Investment Plan</b>	<b>294.6</b>	<b>200.0</b>	<b>245.4</b>	<b>267.9</b>	<b>(49.2)</b>	<b>22.5</b>
<b>Fund Deposits</b>						
Water Transfer Fund	-	95.0	-	-	-	-
R&R and General Fund	125.0	225.0	245.4	221.0	120.4	(24.4)
Revenue Bond Construction	2.9	-	-	-	(2.9)	-
Water Stewardship Fund	0.3	14.1	-	-	(0.3)	-
Treatment Surcharge Stabilization Fund	-	-	-	-	-	-
Interest for Construction & Trust Funds	0.9	0.2	0.1	0.4	(0.8)	0.3
Increase in Required Reserves	28.2	10.7	11.2	18.2	(17.0)	7.0
Increase in Water Rate Stabilization Fund	-	-	-	-	-	-
Other Fund Activity	-	-	-	-	-	-
<b>Sub-total Fund Deposits</b>	<b>157.3</b>	<b>345.0</b>	<b>256.8</b>	<b>239.6</b>	<b>99.4</b>	<b>(17.2)</b>
<b>Member Agency Credit</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL USES OF FUNDS</b>	<b>\$ 1,865.2</b>	<b>\$ 1,985.6</b>	<b>\$ 1,907.1</b>	<b>\$ 1,937.1</b>	<b>\$ 41.9</b>	<b>\$ 30.0</b>
<b>SOURCES OF FUNDS</b>						
<b>Revenues</b>						
Taxes	\$ 80.1	\$ 81.1	\$ 90.2	\$ 92.2	\$ 10.1	\$ 2.0
Annexations	1.0	-	-	-	(1.0)	-
Interest Income	14.1	7.7	16.1	27.6	2.1	11.4
Hydro Power	20.9	17.0	19.3	18.9	(1.7)	(0.4)
Fixed Charges (RTS & Capacity Charge)	182.1	182.1	198.7	196.3	16.6	(2.4)
Water Sales Revenue	1,240.7	1,437.5	1,290.6	1,310.8	49.9	20.2
Miscellaneous Revenue	6.1	6.1	10.2	11.3	4.1	1.1
Bond Proceeds and Reimbursements	178.6	-	-	-	(178.6)	-
<b>Sub-total Revenues</b>	<b>1,723.7</b>	<b>1,731.7</b>	<b>1,625.2</b>	<b>1,657.1</b>	<b>(98.6)</b>	<b>31.9</b>
<b>Fund Withdrawals</b>						
R&R and General Fund	125.0	130.0	245.4	267.9	120.4	22.5
Bond Funds for Construction	-	70.0	-	-	-	-
Water Stewardship Fund	-	-	9.8	9.2	9.8	(0.6)
Treatment Surcharge Stabilization Fund	-	0.5	4.4	-	4.4	(4.4)
Decrease in Required Reserves	1.5	-	-	-	(1.5)	-
Decrease in Water Rate Stabilization Fund	14.9	53.4	22.3	2.9	7.4	(19.4)
<b>Sub-total Fund Withdrawals</b>	<b>141.5</b>	<b>253.9</b>	<b>281.9</b>	<b>280.0</b>	<b>140.4</b>	<b>(1.9)</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>\$ 1,865.2</b>	<b>\$ 1,985.6</b>	<b>\$ 1,907.1</b>	<b>\$ 1,937.1</b>	<b>\$ 41.9</b>	<b>\$ 30.0</b>

Totals may not foot due to rounding.

**Table 7. June 30, 2015 Sources and Uses by Fund (dollars in millions)**

Fiscal Year Ending June 30th, 2015 (\$ in Millions)	All Funds	Operating Funds							Debt Service Funds	Stabilization Funds		Reserve Funds (1)	Construction Funds		Trust & Other Funds
		General	Water Revenue	O&M	Water Standby	Water Transfer	Self-Insured Retention	State Contract		Water Stewardship	Water Treatment Surcharge Stab.		R&R	Revenue Bond Construction	
<b>Beginning of Year Balance</b>	<b>1,530.1</b>	<b>117.0</b>	<b>-</b>	<b>171.3</b>	<b>0.6</b>	<b>119.9</b>	<b>24.9</b>	<b>68.2</b>	<b>323.1</b>	<b>48.2</b>	<b>4.4</b>	<b>494.0</b>	<b>153.5</b>	<b>4.0</b>	<b>0.9</b>
<b>USES OF FUNDS</b>															
<b>Expenses</b>															
State Water Contract	495.7	-	-	360.8	-	-	-	134.9	-	-	-	-	-	-	-
Supply Programs	69.3	-	-	69.3	-	-	-	-	-	-	-	-	-	-	-
Colorado River Power	29.2	-	-	29.2	-	-	-	-	-	-	-	-	-	-	-
Debt Service	325.8	1.3	-	3.9	-	-	-	-	320.7	-	-	-	-	-	-
Demand Management	62.2	-	-	62.2	-	-	-	-	-	-	-	-	-	-	-
Departmental O&M	368.7	-	-	368.7	-	-	-	-	-	-	-	-	-	-	-
Treatment Chemicals, Sludge & Power	26.6	-	-	26.6	-	-	-	-	-	-	-	-	-	-	-
Other O&M	27.5	7.6	-	19.8	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total Expenses</b>	<b>1,404.9</b>	<b>8.9</b>	<b>-</b>	<b>940.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>134.9</b>	<b>320.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Capital Investment Plan</b>	<b>245.4</b>	<b>15.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>229.8</b>	<b>-</b>	<b>-</b>
<b>Fund Deposits</b>															
R&R and General Fund	245.4	15.7	-	-	-	-	-	-	-	-	-	-	229.8	-	-
Revenue Bond Construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Stewardship Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Treatment Surcharge Stabilization Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest for Construction & Trust Funds	0.1	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.0
Increase in Required Reserves	11.2	-	-	4.4	-	-	-	2.8	0.1	-	-	3.9	-	-	-
Increase in Rate Stabilization Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total Fund Deposits</b>	<b>256.8</b>	<b>15.7</b>	<b>-</b>	<b>4.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.8</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>3.9</b>	<b>229.8</b>	<b>0.1</b>	<b>0.0</b>
<b>TOTAL USES OF FUNDS</b>	<b>1,907.1</b>	<b>40.2</b>	<b>-</b>	<b>944.8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>137.7</b>	<b>320.8</b>	<b>-</b>	<b>-</b>	<b>3.9</b>	<b>459.5</b>	<b>0.1</b>	<b>0.0</b>
<b>SOURCES OF FUNDS</b>															
<b>Revenues</b>															
Taxes	90.2	-	-	-	-	-	-	67.0	23.2	-	-	-	-	-	-
Annexations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Income	16.1	1.3	-	2.0	0.0	1.4	0.3	0.8	3.6	0.5	0.0	4.3	1.8	0.1	0.0
Hydro Power	19.3	-	19.3	-	-	-	-	-	-	-	-	-	-	-	-
Fixed Charges (RTS & Capacity Charge)	198.7	-	198.7	-	-	-	-	-	-	-	-	-	-	-	-
Water Sales Revenue	1,290.6	-	1,290.6	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Revenue	10.2	10.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total Revenues</b>	<b>1,625.2</b>	<b>11.6</b>	<b>1,508.6</b>	<b>2.0</b>	<b>0.0</b>	<b>1.4</b>	<b>0.3</b>	<b>67.8</b>	<b>26.7</b>	<b>0.5</b>	<b>0.0</b>	<b>4.3</b>	<b>1.8</b>	<b>0.1</b>	<b>0.0</b>
<b>Fund Withdrawals</b>															
Transfer Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R&R and General Fund	245.4	15.7	-	-	-	-	-	-	-	-	-	-	229.8	-	-
Bond Funds for Construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Stewardship Fund	9.8	-	-	-	-	-	-	-	-	9.8	-	-	-	-	-
Treatment Surcharge Stabilization Fund	4.4	-	-	-	-	-	-	-	-	-	4.4	-	-	-	-
Decrease in Required Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Decrease in Rate Stabilization Fund	22.3	-	-	-	-	-	-	-	-	-	-	22.3	-	-	-
<b>Sub-total Fund Withdrawals</b>	<b>281.9</b>	<b>15.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9.8</b>	<b>4.4</b>	<b>22.3</b>	<b>229.8</b>	<b>-</b>	<b>-</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>1,907.1</b>	<b>27.2</b>	<b>1,508.6</b>	<b>2.0</b>	<b>0.0</b>	<b>1.4</b>	<b>0.3</b>	<b>67.8</b>	<b>26.7</b>	<b>10.3</b>	<b>4.4</b>	<b>26.6</b>	<b>231.5</b>	<b>0.1</b>	<b>0.0</b>
<b>Inter-Fund Transfers</b>	<b>-</b>	<b>13.0</b>	<b>(1,508.6)</b>	<b>942.8</b>	<b>(0.0)</b>	<b>(1.4)</b>	<b>(0.3)</b>	<b>69.9</b>	<b>279.8</b>	<b>(10.3)</b>	<b>(4.4)</b>	<b>(22.7)</b>	<b>228.0</b>	<b>14.2</b>	<b>-</b>
<b>End of Year Balance</b>	<b>1,505.0</b>	<b>117.0</b>	<b>-</b>	<b>175.7</b>	<b>0.6</b>	<b>119.9</b>	<b>24.9</b>	<b>71.0</b>	<b>309.0</b>	<b>38.4</b>	<b>0.0</b>	<b>475.5</b>	<b>153.5</b>	<b>18.4</b>	<b>0.9</b>

Totals may not foot due to rounding

(1) Includes Water Rate Stabilization Fund and Revenue Remainder Fund

**Table 8. June 30, 2016 Sources and Uses by Fund (dollars in millions)**

Fiscal Year Ending June 30th, 2016 (\$ in Millions)	All Funds	Operating Funds							Debt Service Funds	Stabilization Funds		Reserve Funds (1)	Construction Funds		Trust & Other Funds
		General	Water Revenue	O&M	Water Standby	Water Transfer	Self-Insured Retention	State Contract		Water Stewardship	Water Treatment Surcharge Stab.		R&R	Revenue Bond Construction	
<b>Beginning of Year Balance</b>	<b>1,505.0</b>	<b>117.0</b>	<b>-</b>	<b>175.7</b>	<b>0.6</b>	<b>119.9</b>	<b>24.9</b>	<b>71.0</b>	<b>309.0</b>	<b>38.4</b>	<b>0.0</b>	<b>475.5</b>	<b>153.5</b>	<b>18.4</b>	<b>0.9</b>
<b>USES OF FUNDS</b>															
<b>Expenses</b>															
State Water Contract	515.0	-	-	373.7	-	-	-	141.3	-	-	-	-	-	-	-
Supply Programs	64.6	-	-	64.6	-	-	-	-	-	-	-	-	-	-	-
Colorado River Power	36.5	-	-	36.5	-	-	-	-	-	-	-	-	-	-	-
Debt Service	324.7	1.3	-	3.7	-	-	-	-	319.7	-	-	-	-	-	-
Demand Management	61.7	-	-	61.7	-	-	-	-	-	-	-	-	-	-	-
Departmental O&M	379.4	-	-	379.4	-	-	-	-	-	-	-	-	-	-	-
Treatment Chemicals, Sludge & Power	27.6	-	-	27.6	-	-	-	-	-	-	-	-	-	-	-
Other O&M	20.1	1.7	-	18.4	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total Expenses</b>	<b>1,429.7</b>	<b>3.0</b>	<b>-</b>	<b>965.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>141.3</b>	<b>319.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Capital Investment Plan</b>	<b>267.9</b>	<b>12.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>255.3</b>	<b>-</b>	<b>-</b>
<b>Fund Deposits</b>															
R&R and General Fund	221.0	12.5	-	-	-	-	-	-	-	-	-	-	208.5	-	-
Revenue Bond Construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Stewardship Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Treatment Surcharge Stabilization Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest for Construction & Trust Funds	0.4	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.0
Increase in Required Reserves	18.2	-	-	5.8	-	-	-	6.0	6.0	-	-	0.4	-	-	-
Increase in Rate Stabilization Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total Fund Deposits</b>	<b>239.6</b>	<b>12.5</b>	<b>-</b>	<b>5.8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6.0</b>	<b>6.0</b>	<b>-</b>	<b>-</b>	<b>0.4</b>	<b>208.5</b>	<b>0.4</b>	<b>0.0</b>
<b>TOTAL USES OF FUNDS</b>	<b>1,937.1</b>	<b>28.0</b>	<b>-</b>	<b>971.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>147.3</b>	<b>325.7</b>	<b>-</b>	<b>-</b>	<b>0.4</b>	<b>463.8</b>	<b>0.4</b>	<b>0.0</b>
<b>SOURCES OF FUNDS</b>															
<b>Revenues</b>															
Taxes	92.2	-	-	-	-	-	-	68.9	23.3	-	-	-	-	-	-
Annexations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Income	27.6	2.4	-	3.6	0.0	2.4	0.5	1.5	6.2	0.7	-	7.3	2.6	0.4	0.0
Hydro Power	18.9	-	18.9	-	-	-	-	-	-	-	-	-	-	-	-
Fixed Charges (RTS & Capacity Charge)	196.3	-	196.3	-	-	-	-	-	-	-	-	-	-	-	-
Water Sales Revenue	1,310.8	-	1,310.8	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Revenue	11.3	11.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total Revenues</b>	<b>1,657.1</b>	<b>13.6</b>	<b>1,526.0</b>	<b>3.6</b>	<b>0.0</b>	<b>2.4</b>	<b>0.5</b>	<b>70.4</b>	<b>29.5</b>	<b>0.7</b>	<b>-</b>	<b>7.3</b>	<b>2.6</b>	<b>0.4</b>	<b>0.0</b>
<b>Fund Withdrawals</b>															
Transfer Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R&R and General Fund	267.9	12.5	-	-	-	-	-	-	-	-	-	-	255.3	-	-
Bond Funds for Construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Stewardship Fund	9.2	-	-	-	-	-	-	-	-	9.2	-	-	-	-	-
Treatment Surcharge Stabilization Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Decrease in Required Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Decrease in Rate Stabilization Fund	2.9	-	-	-	-	-	-	-	-	-	-	2.9	-	-	-
<b>Sub-total Fund Withdrawals</b>	<b>280.0</b>	<b>12.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9.2</b>	<b>-</b>	<b>2.9</b>	<b>255.3</b>	<b>-</b>	<b>-</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>1,937.1</b>	<b>26.2</b>	<b>1,526.0</b>	<b>3.6</b>	<b>0.0</b>	<b>2.4</b>	<b>0.5</b>	<b>70.4</b>	<b>29.5</b>	<b>9.9</b>	<b>-</b>	<b>10.2</b>	<b>258.0</b>	<b>0.4</b>	<b>0.0</b>
<b>Inter-Fund Transfers</b>	<b>-</b>	<b>1.8</b>	<b>(1,526.0)</b>	<b>967.8</b>	<b>(0.0)</b>	<b>(2.4)</b>	<b>(0.5)</b>	<b>76.9</b>	<b>296.1</b>	<b>(9.9)</b>	<b>-</b>	<b>(9.8)</b>	<b>205.8</b>	<b>0.2</b>	<b>-</b>
<b>End of Year Balance</b>	<b>1,464.6</b>	<b>117.0</b>	<b>-</b>	<b>181.5</b>	<b>0.6</b>	<b>119.9</b>	<b>24.9</b>	<b>77.0</b>	<b>314.8</b>	<b>29.2</b>	<b>0.0</b>	<b>473.0</b>	<b>106.7</b>	<b>18.9</b>	<b>1.0</b>

Totals may not foot due to rounding

(1) Includes Water Rate Stabilization Fund and Revenue Remainder Fund

Metropolitan Water District of Southern California  
**Fiscal Year 2014/15 Cost of Service**

February 2014



**Table of Contents**

<b>1</b>	<b>Cost of Service</b> .....	<b>4</b>
1.1	Cost of Service Process.....	4
1.2	Revenue Requirements .....	6
1.3	Service Function Costs .....	9
	<b>1.3.1 Functional Allocation Bases</b> .....	<b>10</b>
	(a) Direct assignment .....	12
	(b) Work-In-Progress; Net Book Value Plus Work-In-Progress .....	12
	(c) Prorating in proportion to other allocations.....	13
	(d) Manager analyses .....	14
	(e) Prior year results.....	14
1.4	Classified Costs.....	17
<b>2</b>	<b>Rates and Charges</b> .....	<b>23</b>
2.1	System Access Rate (SAR).....	26
2.2	Water Stewardship Rate (WSR) .....	26
2.3	System Power Rate (SPR) .....	26
2.4	Treatment Surcharge.....	27
2.5	Capacity Charge.....	27
2.6	Readiness-to-Serve Charge.....	28
2.7	Purchase Order.....	29
2.8	Tier 2 supply rate .....	29
2.9	Tier 1 supply rate .....	30
<b>3</b>	<b>Sales</b> .....	<b>30</b>
<b>4</b>	<b>Proof of Revenue</b> .....	<b>30</b>

List of Schedules and Tables

<b>Schedule 1.</b>	<b>Revenue Requirements (by budget line item)</b>	<b>8</b>
<b>Schedule 2.</b>	<b>Summary of Functional Allocations by Type of Allocation Basis</b>	<b>11</b>
<b>Schedule 3.</b>	<b>Net Book Value and Work in Progress Allocation Base</b>	<b>13</b>
<b>Schedule 4.</b>	<b>Revenue Requirement (by service function)</b>	<b>15</b>
<b>Schedule 5.</b>	<b>Service Function Revenue Requirements (by budget line item)</b>	<b>16</b>
<b>Schedule 6.</b>	<b>Classification Percentages</b>	<b>20</b>
<b>Schedule 7.</b>	<b>Service Function Revenue Requirements (by classification category)</b>	<b>22</b>
<b>Schedule 8.</b>	<b>Classified Service Function Revenue Requirements (by rate design element)</b>	<b>24</b>
<b>Schedule 9.</b>	<b>Rates and Charges Summary</b>	<b>25</b>
<b>Schedule 10.</b>	<b>Capacity Charge (by member agency)</b>	<b>28</b>
<b>Schedule 11.</b>	<b>Readiness-to-Serve Charge (by member agency)</b>	<b>29</b>
<b>Schedule 12.</b>	<b>FY 2014/15 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)</b>	<b>31</b>
<b>Schedule 13.</b>	<b>FY 2014/15 Proof of Revenue if Rates Effective January 1 (\$ millions)</b>	<b>31</b>

## **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; (3) classify service function costs on the basis for which the cost was incurred; and (4) allocate costs to rate elements. 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

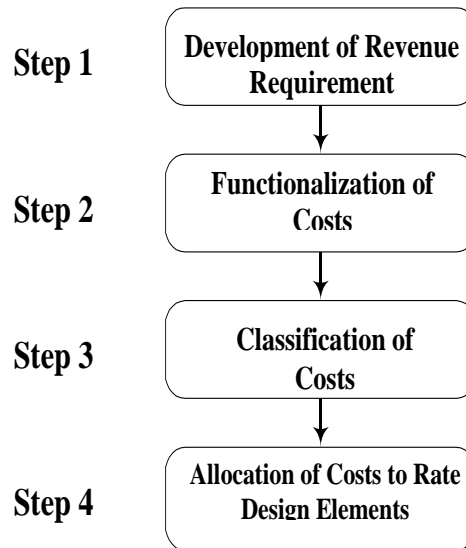
In order to provide more finite functional allocation, many of these functional categories are subdivided into more detailed sub-functions in the cost of service process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions State Water Project (SWP), Colorado River Aqueduct (CRA), and Other. Similarly, costs in the Storage function are broken down into the subfunctions 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 distribution 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 summer 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 2014/15. Throughout the report, FY 2014/15 is used as the “test year” to demonstrate the application of the cost of service process. Schedule 1 summarizes the FY 2014/15 revenue requirement by the major budget line items used in Metropolitan’s budgeting process. Current estimates indicate Metropolitan’s annual expenditures (including capital financing costs, but not construction outlays financed with bond proceeds, if any) will total approximately \$1.66 billion in FY 2014/15.

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 \$46 million in FY 2014/15. It is expected that Metropolitan will also generate about \$90 million in ad valorem property tax revenues (assuming that ad valorem tax rates are maintained at 0.0035 percent of assessed valuation). 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 (SWP), and other SWP costs. The total revenue offsets for FY 2014/15 are estimated to be around \$136 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or \$1.525 billion. Given an effective date of January 1, 2015, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2014 will generate a total of \$1.489 billion in 2014/15.

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 (CRA), SWP, the capital financing costs associated with the Capital Investment Plan (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 70 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to the capital financing program at \$571 million, which makes up approximately 30 percent of Metropolitan's FY 2015/16 revenue requirements. Capital financing costs include pay-as-you-go funding of the CIP at \$245 million. Metropolitan's SWP costs are the second largest component of the revenue requirement at \$496 million, constituting approximately 28 percent of the revenue requirement. 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. Departmental O&M costs at \$395 million make up 22 percent of the total revenue requirement in FY 2015/16. Water System Operations is the largest single component of the Departmental Costs and accounts for 12 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 CRA and other conveyance and supply facilities.

**Schedule 1. Revenue Requirements (by budget line item)**

	<b>Fiscal Year Ending 2015</b>	<b>% of Revenue Requirements (1)</b>
<b>Departmental Operations &amp; Maintenance</b>		
Office of the General Manager & Human Resources	\$ 26,198,811	1.5%
External Affairs	17,383,319	1.0%
Water System Operations	217,480,957	12.1%
Chief Financial Officer	9,223,229	0.5%
Business Technology & Engineering Services	86,138,622	4.8%
Real Property Development & Mgmt	5,445,060	0.3%
Water Resource Management	16,784,844	0.9%
Ethics Department	1,021,746	0.1%
General Counsel	12,661,932	0.7%
Audit Department	2,961,545	0.2%
<b>Total</b>	<b>395,300,066</b>	<b>22.0%</b>
<b>General District Requirements</b>		
State Water Project	495,708,877	27.6%
Colorado River Aqueduct Power	29,178,396	1.6%
Supply Programs	69,269,620	3.9%
Demand Management	62,160,118	3.5%
Capital Financing Program	571,258,865	31.8%
Operating Equipment and Leases	27,462,998	1.5%
Increase (Decrease) in Required Reserves	11,200,000	0.6%
<b>Total</b>	<b>1,266,238,874</b>	<b>70.5%</b>
<b>Revenue Offsets</b>	<b>(135,715,425)</b>	<b>7.6%</b>
<b>Net Revenue Requirements</b>	<b>\$ 1,525,823,515</b>	<b>100.0%</b>
(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 AWWA rate setting guidelines, a standard chart of accounts for utilities developed by the National Association of Regulatory Utility 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, as permitted under the AWWA guidelines.

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 transfer programs such as Kern Delta Program, Semitropic Water Storage Program, Yuba Accord Program, and the Arvin-Edison Water Storage Program. Costs for in-basin programs within Metropolitan's service area, such as Conjunctive Use Programs, 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" subfunction. 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 subfunctions 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 costs to the various service functions. The primary functional allocation bases used in the cost of service process are listed below.

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

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**

<b>Primary Functional Allocation Bases</b>	<b>Estimated for FY 2015</b>	<b>% of Allocated Dollars</b>
Direct Assignment	\$ 920,757,899	51.2%
Net Book Value/Work in Progress	617,134,456	34.3%
Prorating	77,159,174	4.3%
Manager Analysis	35,849,553	2.0%
Prior-Year Results	77,083,662	4.3%
Other	\$ 69,269,620	3.9%
<b>Total Dollars Allocated</b>	<b>\$ 1,797,254,365</b>	<b>100.0%</b>
<b>Portion of Above Allocations Relating to:</b>		
Revenue Requirements before Offsets	1,661,538,940	
Revenue Offsets	135,715,425	
<b>Total Dollars Allocated</b>	<b>\$ 1,797,254,365</b>	

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) Net Book Value Plus Work-In-Progress**

Capital financing costs, including debt service and funding replacements and refurbishments from operating revenues, comprise about 32 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 plus work in progress for assets under construction 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**

<b>Functional Categories</b>	<b>NBV for FY 2015</b>	<b>% of Total NBV</b>
Source of Supply	\$ 31,174,564	0.4%
Conveyance & Aqueduct	1,815,754,805	21.6%
Storage	2,160,895,794	25.6%
Treatment	2,634,671,935	31.3%
Distribution	1,332,293,392	15.8%
Administrative & General	317,643,530	3.8%
Hydroelectric	133,123,814	1.6%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 8,425,557,835</b>	<b>100.0%</b>

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

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

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 subfunctions 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 firsthand knowledge of the organization's internal operations to generate a functional analysis of departmental costs. For example, Fleet Services Unit costs are allocated to treatment, storage, conveyance and distribution based on vehicle count by location.

**(e) Prior year results**

If available, accounting data for the prior fiscal year by appropriation are used to functionalize Departmental O&M costs for several units or sections. Many of the appropriations parallel the service functions used in the cost of service. For example, Conveyance and Distribution Section costs are allocated to distribution, hydroelectric, and conveyance functions based on the prior year accounting data by appropriation.

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 2014/15 into the major service functions and sub-functions prior to the redistribution 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 36 percent of the allocated revenue requirement.

**Schedule 4. Revenue Requirement (by service function)**

<b>Functional Categories</b>	<b>Fiscal Year Ending 2015</b>	<b>% of Allocated Dollars (1)</b>
<b>Source of Supply</b>		
CRA	\$ 47,377,701	3.1%
SWP	105,108,366	6.9%
Other Supply	12,055,222	0.8%
<b>Total</b>	<b>164,541,289</b>	<b>10.7%</b>
<b>Conveyance &amp; Aqueduct</b>		
CRA		
<i>CRA Power (net of sales)</i>	43,194,843	2.8%
<i>CRA All Other</i>	53,652,187	3.5%
SWP		
<i>SWP Power</i>	184,433,288	12.0%
<i>SWP All Other</i>	176,013,543	11.5%
Other Conveyance & Aqueduct	99,380,427	6.5%
<b>Total</b>	<b>556,674,288</b>	<b>36.3%</b>
<b>Storage</b>		
Storage Costs Other Than Power		
<i>Emergency</i>	75,761,648	4.9%
<i>Drought</i>	63,925,564	4.2%
<i>Regulatory</i>	18,994,658	1.2%
Wadsworth plant pumping/generation	(1,425,574)	0.1%
<b>Total</b>	<b>157,256,296</b>	<b>10.4%</b>
<b>Treatment</b>		
Jensen	61,305,606	4.0%
Weymouth	57,442,321	3.7%
Diemer	68,361,966	4.5%
Mills	33,398,107	2.2%
Skinner	71,064,911	4.6%
<b>Total</b>	<b>291,572,911</b>	<b>19.0%</b>
<b>Distribution</b>	159,469,982	10.4%
<b>Demand Management</b>	72,878,263	4.8%
<b>Hydroelectric</b>	(2,372,438)	0.2%
<b>Administrative &amp; General</b>	125,802,923	8.2%
<b>Total Functional Allocations:</b>	<b>\$ 1,525,823,515</b>	<b>100.0%</b>

(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)**

<b>Fiscal Year Ending 2015</b>	<b>Source of Supply</b>	<b>Conveyance &amp; Aqueduct</b>	<b>Storage</b>	<b>Water Quality</b>	<b>Treatment</b>	<b>Distribution</b>	<b>Demand Management</b>	<b>Hydro Electric</b>	<b>Administrative &amp; General</b>	<b>Total \$ Allocated</b>
<b>Departmental Operations &amp; Maintenance</b>										
Office of the General Manager & Human Resources	\$ 1,238,624	\$ 9,088,453	\$ 829,484	\$ -	\$ 4,520,304	\$ 3,077,564	\$ 381,388	\$ 301,217	\$ 6,761,777	\$ 26,198,811
External Affairs	-	-	-	-	-	-	2,937,192	-	14,446,127	17,383,319
Water System Operations	12,735,809	38,811,780	3,543,397	-	97,971,519	57,984,157	8,327	5,476,274	949,695	217,480,957
Chief Financial Officer	-	-	-	-	-	-	-	-	9,223,229	9,223,229
Business Technology & Engineering Services	2,520,913	10,983,144	9,447,720	-	18,340,520	10,813,538	741,415	1,068,259	32,223,112	86,138,622
Real Property Development & Mgmt	-	-	5,445,060	-	-	-	-	-	-	5,445,060
Water Resource Management	9,637,903	-	-	-	132,579	1,186,203	5,629,502	-	198,656	16,784,844
Ethics Department	-	-	-	-	-	-	-	-	1,021,746	1,021,746
General Counsel	-	-	-	-	-	-	-	-	12,661,932	12,661,932
Audit Department	-	-	-	-	-	-	-	-	2,961,545	2,961,545
<b>Total Departmental O&amp;M</b>	<b>26,133,248</b>	<b>58,883,377</b>	<b>19,265,661</b>	<b>-</b>	<b>120,964,923</b>	<b>73,061,462</b>	<b>9,697,824</b>	<b>6,845,750</b>	<b>80,447,820</b>	<b>395,300,066</b>
<b>General District Requirements</b>										
State Water Project	78,539,665	417,169,212	-	-	-	-	-	-	-	495,708,877
Colorado River Aqueduct Power	-	29,178,396	-	-	-	-	-	-	-	29,178,396
Supply Programs	69,269,620	-	-	-	-	-	-	-	-	69,269,620
Demand Management	-	-	-	-	-	-	62,160,118	-	-	62,160,118
Capital Financing Program	2,027,958	118,117,937	140,569,946	-	178,632,647	102,587,194	-	8,659,930	20,663,252	571,258,865
Other Operating Costs	582,286	1,182,759	389,946	-	2,125,028	1,446,785	1,729,293	141,604	19,865,297	27,462,998
Increase (Decrease) in Required Reserves	-	-	-	-	-	-	-	-	11,200,000	11,200,000
<b>Total General District Requirements</b>	<b>150,419,529</b>	<b>565,648,305</b>	<b>140,959,892</b>	<b>-</b>	<b>180,757,675</b>	<b>104,033,979</b>	<b>63,889,411</b>	<b>8,801,535</b>	<b>51,728,549</b>	<b>1,266,238,874</b>
<b>Revenue Offsets</b>	<b>(12,011,489)</b>	<b>(67,857,394)</b>	<b>(2,969,258)</b>	<b>-</b>	<b>(10,149,686)</b>	<b>(17,625,459)</b>	<b>(708,972)</b>	<b>(18,019,723)</b>	<b>(6,373,445)</b>	<b>(135,715,425)</b>
<b>Net Revenue Requirements</b>	<b>\$ 164,541,289</b>	<b>\$ 556,674,288</b>	<b>\$ 157,256,296</b>	<b>\$ -</b>	<b>\$ 291,572,911</b>	<b>\$ 159,469,982</b>	<b>\$ 72,878,263</b>	<b>\$ (2,372,438)</b>	<b>\$ 125,802,923</b>	<b>\$ 1,525,823,515</b>

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.

Two methods are 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.

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 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 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.

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 costs that tend to vary with the amount of water produced. 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 standby costs identified include the emergency storage capacity within the system, and the standby capacity within the conveyance and distribution systems.



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 test year was used to determine that 54 percent of the available conveyance capacity varies with the quantity of water produced. A system peak factor<sup>1</sup> of 1.4 was applied to the annual usage to determine that 24 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 22 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct subfunctions. 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 flow requirements, essentially increasing the physical distribution capacity. Therefore, regulatory storage is classified in the same manner as distribution costs.

---

<sup>1</sup> Peak monthly deliveries to the member agencies average about 44 percent more than the average monthly deliveries.

Distribution service function costs were classified as fixed commodity by using projected sales data for the test year. During this period, 44 percent of the system distribution capacity varies with the quantity of water produced. Distribution service function costs were classified as fixed demand by using three years of recorded non-coincident peaks. The difference between the three-year average noncoincident peak and the fixed commodity flows divided by the system capacity, or 39 percent of the distribution capacity, was used to meet peak day demands. Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the historical peak noncoincident<sup>2</sup> 24-hour daily flow of all the member agencies. The remaining 17 percent of distribution capacity is associated with standby service.

Treatment service function costs were also classified as fixed commodity by using projected treated deliveries to the member agencies for the test year. Treatment fixed demand percentage calculation uses system noncoincident peak factor applied to the test year usage; the remaining capacity is associated with standby service. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. 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.

---

<sup>2</sup> The term “noncoincident” means that the peak day flow for each agency may or may not coincide with the peak day system flow. Both noncoincident and coincident approaches to measuring peak demands are used in rate design approaches. A noncoincident 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 noncoincident demands due to each member agencies unique operating characteristics).

**Schedule 6. Classification Percentages**

Function	Classification Percentages			Total % Classified	Comments
	Fixed	Fixed	Fixed		
	Commodity	Demand	Standby		
<b>Source of Supply</b>					
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs classified as fixed commodity
State Water Project	100%	0%	0%	100%	Supply costs classified as fixed commodity
<b>Conveyance &amp; Aqueduct</b>					
Colorado River Aqueduct	54%	24%	22%	100%	Demand percentage represents amount of system conveyance capacity used to meet peak demands. Commodity percentage represents amount of capacity that is a function of the amount of water delivered. Standby percentage is the remaining conveyance capacity. SWP, CRA, and Other are treated the same due to the use of a uniform system-wide System Access Rate.
State Water Project	54%	24%	22%	100%	
Other	54%	24%	22%	100%	
<b>Storage</b>					
Emergency	0%	0%	100%	100%	Classifies as Standby (recovered by RTS)
Drought	100%	0%	0%	100%	Classified as fixed commodity (recovered by Supply Rates)
Regulatory	44%	39%	17%	100%	Classified the same way as distribution.
<b>Treatment</b>					
	30%	30%	40%	100%	Demand percentage represents amount of system treatment capacity used to meet peak demands. Commodity percentage represents amount of capacity that is a function of the amount of treated water delivered. Standby percentage is the remaining treatment capacity. The same classification is applied to all five treatment plants due to the use of a uniform system-wide Treatment Surcharge.
<b>Distribution</b>					
	44%	39%	17%	100%	Demand percentage represents amount of system distribution capacity used to meet peak demands. Commodity percentage represents amount of capacity that is a function of the amount of water delivered. Standby percentage is the remaining distribution capacity. The same classification is applied to all distribution facilities due to the use of a uniform system-wide 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 9 percent, or \$133 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 is used to pay for the general obligation bond debt service allocated to the C&A costs, and other SWP costs. This revenue offsets the amount that needs to be recovered through rates.

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

Fiscal year ending 2015 Functional categories (by sub-Fuction)	Fixed Demand	Fixed Commodity	Fixed Standby	Variable Commodity	Hydroelectric	Total Classified
<b>Source of Supply</b>						
CRA	\$ -	\$ 53,029,092	\$ -	\$ -	\$ -	\$ 53,029,092
SWP	-	117,646,088	-	-	-	117,646,088
Other Supply	-	13,493,214	-	-	-	13,493,214
<b>Subtotal: Source of Supply</b>	-	184,168,393	-	-	-	<b>184,168,393</b>
<b>Conveyance &amp; Aqueduct</b>						
CRA						
<i>CRA Power</i>	-	16,158,712	-	29,740,921	-	45,899,633
<i>CRA All Other</i>	3,677,565	52,409,507	3,454,099	-	-	59,541,171
SWP						
<i>SWP Power</i>	-	-	-	190,735,787	-	190,735,787
<i>SWP All Other</i>	10,634,731	174,908,586	9,988,514	-	-	195,531,831
Other Conveyance & Aqueduct	22,022,885	64,450,334	21,633,748	-	-	108,106,967
<b>Subtotal: Conveyance &amp; Aqueduct</b>	36,335,181	307,927,139	35,076,362	220,476,708	-	<b>599,815,390</b>
<b>Storage</b>						
Storage Costs Other Than Power						
<i>Emergency</i>	-	10,200,155	69,561,022	-	-	79,761,177
<i>Drought</i>	-	71,550,846	-	-	-	71,550,846
<i>Regulatory</i>	6,925,450	10,630,057	2,996,918	-	-	20,552,426
Storage Power	-	-	-	(1,474,290)	-	(1,474,290)
<b>Subtotal: Storage</b>	6,925,450	92,381,058	72,557,941	(1,474,290)	-	<b>170,390,159</b>
<b>Water Quality</b>						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
<b>Subtotal: Water Quality</b>	-	-	-	-	-	-
<b>Treatment</b>	54,373,087	163,994,978	66,705,982	30,114,957	-	<b>315,189,004</b>
<b>Distribution</b>	35,473,943	124,040,742	15,350,989	-	-	<b>174,865,674</b>
<b>Demand Management</b>	-	81,571,457	-	-	-	<b>81,571,457</b>
<b>Hydroelectric</b>	-	-	-	-	(176,563)	<b>(176,563)</b>
<b>Total Costs Classified</b>	<b>\$ 133,107,661</b>	<b>\$ 954,083,768</b>	<b>\$ 189,691,274</b>	<b>\$ 249,117,376</b>	<b>\$ (176,563)</b>	<b>\$ 1,525,823,515</b>

Totals may not foot due to rounding

About 62 percent of the revenue requirement (\$954 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 \$190 million and account for about 12 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 \$249 million, and account for about 16 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, 2015 using the assumptions and methodology of this report. 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 and Tier 2 purchases.

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

Fiscal year ending 2015 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	
<b>Supply</b>								
Fixed Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fixed Commodity	184,168,393	-	-	-	-	-	-	184,168,393
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Supply</b>	184,168,393	-	-	-	-	-	-	184,168,393
<b>Conveyance and Aqueduct</b>								
Fixed Demand	-	-	-	-	-	36,335,181	-	36,335,181
Fixed Commodity	-	307,927,139	-	-	-	-	-	307,927,139
Fixed Standby	-	-	-	-	-	35,076,362	-	35,076,362
Variable Commodity	-	-	-	220,476,708	-	-	-	220,476,708
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Conveyance and Aqueduct</b>	-	307,927,139	-	220,476,708	-	71,411,543	-	599,815,390
<b>Storage</b>								
Fixed Demand	-	-	-	-	6,925,450	-	-	6,925,450
Fixed Commodity	71,550,846	20,830,212	-	-	-	-	-	92,381,058
Fixed Standby	-	-	-	-	-	72,557,941	-	72,557,941
Variable Commodity	(1,474,290)	-	-	-	-	-	-	(1,474,290)
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Storage</b>	70,076,557	20,830,212	-	-	6,925,450	72,557,941	-	170,390,159
<b>Treatment</b>								
Fixed Demand	-	-	-	-	-	-	54,373,087	54,373,087
Fixed Commodity	-	-	-	-	-	-	163,994,978	163,994,978
Fixed Standby	-	-	-	-	-	-	66,705,982	66,705,982
Variable Commodity	-	-	-	-	-	-	30,114,957	30,114,957
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Treatment</b>	-	-	-	-	-	-	315,189,004	315,189,004
<b>Distribution</b>								
Fixed Demand	-	-	-	-	35,473,943	-	-	35,473,943
Fixed Commodity	-	124,040,742	-	-	-	-	-	124,040,742
Fixed Standby	-	-	-	-	-	15,350,989	-	15,350,989
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	(176,563)	-	-	-	-	-	(176,563)
<b>Subtotal: Distribution</b>	-	123,864,179	-	-	35,473,943	15,350,989	-	174,689,111
<b>Demand Management</b>								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	81,571,457	-	-	-	-	81,571,457
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Demand Management</b>	-	-	81,571,457	-	-	-	-	81,571,457
<b>Total</b>								
Fixed Demand	-	-	-	-	42,399,393	36,335,181	54,373,087	133,107,661
Fixed Commodity	255,719,240	452,798,093	81,571,457	-	-	-	163,994,978	954,083,768
Fixed Standby	-	-	-	-	-	122,985,292	66,705,982	189,691,274
Variable Commodity	(1,474,290)	-	-	220,476,708	-	-	30,114,957	249,117,376
Hydroelectric	-	(176,563)	-	-	-	-	-	(176,563)
<b>Total</b>	\$ 254,244,950	\$ 452,621,530	\$ 81,571,457	\$ 220,476,708	\$ 42,399,393	\$ 159,320,473	\$ 315,189,004	\$ 1,525,823,515

Totals may not foot due to rounding

**Schedule 9. Rates and Charges Summary**

<b>Effective January 1st</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Tier 1 Supply Rate (\$/AF)	\$148	\$160	\$155
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290
System Access Rate (\$/AF)	\$243	\$256	\$261
Water Stewardship Rate (\$/AF)	\$41	\$41	\$41
System Power Rate (\$/AF)	\$161	\$125	\$137
Full Service Untreated Volumetric Cost (\$/AF)			
Tier 1	\$593	\$582	\$594
Tier 2	\$735	\$712	\$729
Treatment Surcharge (\$/AF)	\$297	\$343	\$352
Full Service Treated Volumetric Cost (\$/AF)			
Tier 1	\$890	\$925	\$946
Tier 2	\$1,032	\$1,055	\$1,081
Readiness-to-Serve Charge (\$M)	\$166	\$158	\$152
Capacity Charge (\$/cfs)	\$8,600	\$10,700	\$10,300



### **2.1 System Access Rate (SAR)**

The SAR is a volumetric<sup>3</sup> system-wide rate levied on each acre-foot of water that moves through the MWD system. The MWD system includes MWD's right to use SWP facilities for transportation of SWP and non-SWP water. All system users (member agency or third party) pay the SAR to use Metropolitan's conveyance and distribution system. To meet the boardstated objective to collect all costs in 2014/15, the SAR would increase to \$256 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 \$453 million in FY 2014/15, or 27 percent of the total revenue requirement.

### **2.2 Water Stewardship Rate (WSR)**

The WSR would remain unchanged at \$41 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 \$81 million in FY 2014/15, about 5 percent of the revenue requirement. The WSR is a volumetric rate paid by 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.

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

The benefits of demand management programs are recognized by section 130.5 of the MWD Act, enacted by S.B. 60 (Stats. 1999, Ch. 414), which requires Metropolitan to "place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures." Because Metropolitan is mandated under S.B. 60 to fund water supply programs like conservation and recycling, it is appropriate to recover the costs of supporting these programs on all water moved through the system.

### **2.3 System Power Rate (SPR)**

SPR would decrease to \$125 per acre-foot in 2014. 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 2014/15 the revenue requirement for the SPR is estimated to be about \$220 million, about 14 percent of the total revenue requirement.

---

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

#### ***2.4 Treatment Surcharge***

The treatment surcharge would increase to \$343 per acre-foot to collect all treatment costs in 2014/15. 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 \$315 million in FY 2014/15, almost 21 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 at Weymouth, as well as refurbishments 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 increase to \$10,700 per cubic-foot-second of capacity during calendar year 2015. The increase is due to the increase in pay-as-you-go funding of the CIP, and the increase in the fixed demand classification factor. The capacity charge is levied on the maximum summer day demand placed on the distribution system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2013 is used to levy the capacity charge effective January 1, 2015 through December 31, 2015. Demands measured for the purposes of billing the capacity charge include all firm demand including wheeling service and exchanges.

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan's distribution 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 2015 is included in Schedule 10.

**Schedule 10. Capacity Charge (by member agency)**

AGENCY	Peak Day Demand (cfs) (May 1 through September 30)				Rate (\$/cfs): \$10,700
	Calendar Year				Calendar Year 2015 Capacity Charge
	2011	2012	2013	3-Year Peak	
Anaheim	39.3	38.3	31.3	39.3	\$420,510
Beverly Hills	31.5	32.7	30.8	32.7	\$349,890
Burbank	21.4	20.9	19.7	21.4	\$228,980
Calleguas	210.1	224.0	228.7	228.7	\$2,447,090
Central Basin	79.2	74.5	73.6	79.2	\$847,440
Compton	2.4	2.3	2.9	2.9	\$31,030
Eastern	190.9	238.1	267.4	267.4	\$2,861,180
Foothill	19.0	17.6	18.9	19.0	\$203,300
Fullerton	27.4	24.4	20.0	27.4	\$293,180
Glendale	49.0	41.5	44.9	49.0	\$524,300
Inland Empire	138.0	126.7	153.9	153.9	\$1,646,730
Las Virgenes	43.4	41.9	43.2	43.4	\$464,380
Long Beach	59.9	60.4	66.9	66.9	\$715,830
Los Angeles	329.0	512.9	767.1	767.1	\$8,207,970
MWDOC	390.1	401.1	381.9	401.1	\$4,291,770
Pasadena	50.6	52.1	52.5	52.5	\$561,750
San Diego CWA	760.7	961.5	967.4	967.4	\$10,351,180
San Fernando	1.6	2.8	4.9	4.9	\$52,430
San Marino	1.3	5.3	6.1	6.1	\$65,270
Santa Ana	20.0	19.2	19.6	20.0	\$214,000
Santa Monica	21.1	19.7	22.7	22.7	\$242,890
Three Valleys	122.7	133.0	178.6	178.6	\$1,911,020
Torrance	35.5	36.2	34.1	36.2	\$387,340
Upper San Gabriel	20.4	15.2	16.1	20.4	\$218,280
West Basin	214.6	222.6	230.2	230.2	\$2,463,140
Western MWD	179.3	193.5	198.6	198.6	\$2,125,020
<b>Total</b>	<b>3,058.4</b>	<b>3,518.5</b>	<b>3,882.0</b>	<b>3,937.0</b>	<b>\$42,125,900</b>

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 costs for providing emergency storage capacity within the system are estimated to be about \$72 million in FY 2014/15. 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, and standby costs for the distribution function, are also allocated to the RTS. These costs are estimated to be about \$87 million in FY 2014/15. The RTS would decrease to \$158 million in calendar year 2015. The decrease is due to the decrease in the standby classification factor which outweighs the increase in pay-as-you go funding of the CIP.

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). 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. The estimated RTS for each member agency for calendar year 2015 is shown in Schedule 11.

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

<b>Water rate \$91.13/acre-foot</b>			
<b>Member Agency</b>	<b>Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2003/04 - FY2012/13</b>	<b>RTS Share</b>	<b>12 months @ \$158 million per year (1/15- 12/15)</b>
Anaheim	22,572	1.30%	\$ 2,057,046
Beverly Hills	11,524	0.66%	1,050,227
Burbank	12,642	0.73%	1,152,106
Calleguas MWD	109,981	6.34%	10,023,082
Central Basin MWD	56,302	3.25%	5,131,055
Compton	2,538	0.15%	231,327
Eastern MWD	97,942	5.65%	8,925,930
Foothill MWD	10,373	0.60%	945,331
Fullerton	10,147	0.59%	924,716
Glendale	20,503	1.18%	1,868,534
Inland Empire Utilities Agency	60,010	3.46%	5,468,946
Las Virgenes MWD	22,797	1.31%	2,077,570
Long Beach	34,315	1.98%	3,127,268
Los Angeles	289,350	16.69%	26,369,853
Municipal Water District of Orange County	222,281	12.82%	20,257,478
Pasadena	21,669	1.25%	1,974,761
San Diego County Water Authority	393,731	22.71%	35,882,571
San Fernando	138	0.01%	12,558
San Marino	1,002	0.06%	91,299
Santa Ana	13,509	0.78%	1,231,129
Santa Monica	11,001	0.63%	1,002,536
Three Valleys MWD	68,167	3.93%	6,212,368
Torrance	18,845	1.09%	1,717,424
Upper San Gabriel Valley MWD	17,081	0.99%	1,556,689
West Basin MWD	131,114	7.56%	11,949,067
Western MWD	74,166	4.28%	6,759,130
<b>MWD Total</b>	<b>1,733,698</b>	<b>100.00%</b>	<b>\$ 158,000,000</b>

Totals may not foot due to rounding

**2.7 Purchase Order**

The Purchase Order determines the amount of water that can be purchased at the Tier 1 rate. The existing Amended and Restated Purchase Order agreements presently in effect expire December 31, 2014. The Purchase Order will be addressed in the second half of 2014.

**2.8 Tier 2 supply rate**

The Tier 2 Supply Rate reflects Metropolitan's cost of purchasing water transfers north of the Delta. 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 would remain at its current level of \$290 per acre-foot. At an expected average sales level of 1.75 million acre-feet, it is estimated that no acre-feet will be sold at the Tier 2 Supply Rate.

## **2.9 Tier 1 supply rate**

The total revenue requirement for the supply service function is about \$253 million in FY 2014/15. The Tier 1 Supply Rate would be increased to \$160 per acre-foot in 2015. 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 divided by the estimated amount of Tier 1 water sales. At an expected demand level of about 1.75 MAF, it is estimated that Metropolitan will sell 1.57 MAF at the Tier 1 Supply Rate in 2014/15. The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. The 2015 Tier 1 Annual Limit for all member agencies will be provided to the Board later in 2014.

## **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 MAF per year, ranging from a high of around 2.5 MAF in 1989/90 to a low of about 1.5 MAF in 1997/98. In 2014/15, water sales are projected to be 1.75 MAF. Treated water sales are projected to be 910 TAF in 2014/15 and Exchanges 181 TAF.

## **4 Proof of Revenue**

Based on expected sales of 1.75 MAF the expected revenues would be about \$24 million lower 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, 2015, the expected revenues for 2014/15 will be about \$36.5 million lower than the total revenue requirement in 2014/15. The total revenue requirement includes a \$3.9-million increase in the required reserves for the Revenue Remainder Fund. Draws from the Water Stewardship Fund and Treatment Surcharge Stabilization Fund are \$9.8 million and \$4.4 million, respectively, in 2014/15. Accounting for these adjustments, the required draw from reserves is almost \$18.4 million in 2014/15.

**Schedule 12. FY 2014/15 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)**

	Revenues if Rates Effective July 1st	Revenue Requirements	Difference	% Over (Under) Collected
Supply	251.0	253.5	(2.5)	-1%
System Access Rate	448.0	453.5	(5.5)	-1%
Water Stewardship Rate	71.8	81.6	(9.8)	-12%
System Power Rate	218.8	220.5	(1.7)	-1%
Treatment Surcharge	312.2	315.0	(2.8)	-1%
Readiness-to-serve Charge	158.0	159.3	(1.3)	-1%
Capacity Charge	42.1	42.4	(0.3)	-1%
<b>Total</b>	<b>1,501.8</b>	<b>1,525.8</b>	<b>(24.0)</b>	<b>-2%</b>

Totals may not foot due to rounding

**Schedule 13. FY 2014/15 Proof of Revenue if Rates Effective January 1 (\$ millions)**

	Revenues if Rates Effective Jan 1	Revenue Requirements	Difference	% Over (Under) Collected
Supply	240.5	253.5	(13.0)	-5%
System Access Rate	435.4	453.5	(18.1)	-4%
Water Stewardship Rate	71.8	81.6	(9.8)	-12%
System Power Rate	253.7	220.5	33.3	15%
Treatment Surcharge	289.2	315.0	(25.8)	-8%
Readiness-to-serve Charge	162.0	159.3	2.7	2%
Capacity Charge	36.7	42.4	(5.7)	-13%
<b>Total</b>	<b>1,489.3</b>	<b>1,525.8</b>	<b>(36.5)</b>	<b>-2%</b>

Totals may not foot due to rounding

Metropolitan Water District of Southern California  
**Fiscal Year 2015/16 Cost of Service**

February 2014

**Table of Contents**

**1 Cost of Service**.....4

    1.1 Cost of Service Process.....4

    1.2 Revenue Requirements .....6

    1.3 Service Function Costs .....9

**1.3.1 Functional Allocation Bases** ..... 10

            (a) Direct assignment ..... 12

            (b) Work-In-Progress; Net Book Value Plus Work-In-Progress ..... 12

            (c) Prorating in proportion to other allocations..... 13

            (d) Manager analyses ..... 13

            (e) Prior year results..... 14

    1.4 Classified Costs..... 17

**2 Rates and Charges** .....**23**

    2.1 System Access Rate (SAR).....26

    2.2 Water Stewardship Rate (WSR) .....26

    2.3 System Power Rate (SPR) .....26

    2.4 Treatment Surcharge.....27

    2.5 Capacity Charge.....27

    2.6 Readiness-to-Serve Charge.....27

    2.7 Purchase Order.....28

    2.8 Tier 2 supply rate .....28

    2.9 Tier 1 supply rate .....28

**3 Sales**.....28

**4 Proof of Revenue**.....28



List of Schedules and Tables

<b>Schedule 1.</b>	<b>Revenue Requirements (by budget line item)</b>	<b>8</b>
<b>Schedule 2.</b>	<b>Summary of Functional Allocations by Type of Allocation Basis</b>	<b>11</b>
<b>Schedule 3.</b>	<b>Net Book Value and Work in Progress Allocation Base</b>	<b>13</b>
<b>Schedule 4.</b>	<b>Revenue Requirement (by service function)</b>	<b>15</b>
<b>Schedule 5.</b>	<b>Service Function Revenue Requirements (by budget line item)</b>	<b>16</b>
<b>Schedule 6.</b>	<b>Classification Percentages</b>	<b>20</b>
<b>Schedule 7.</b>	<b>Service Function Revenue Requirements (by classification category)</b>	<b>22</b>
<b>Schedule 8.</b>	<b>Classified Service Function Revenue Requirements (by rate design element)</b>	<b>24</b>
<b>Schedule 9.</b>	<b>Rates and Charges Summary</b>	<b>25</b>
<b>Schedule 10.</b>	<b>FY 2015/16 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)</b>	<b>30</b>
<b>Schedule 11.</b>	<b>FY 2015/16 Proof of Revenue if Rates Effective January 1 (\$ millions)</b>	<b>30</b>

## **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; (3) classify service function costs on the basis for which the cost was incurred; and (4) allocate costs to rate elements. 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

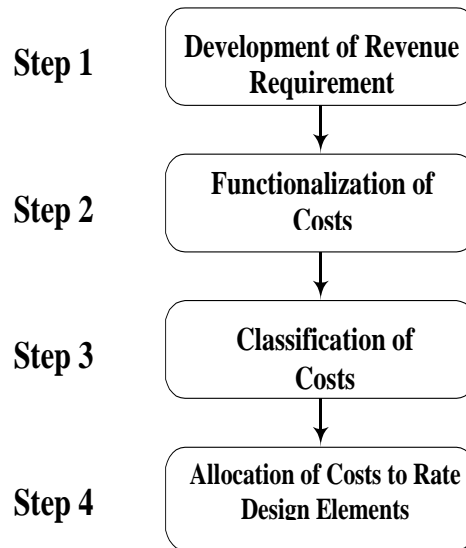
In order to provide more finite functional allocation, many of these functional categories are subdivided into more detailed sub-functions in the cost of service process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions State Water Project (SWP), Colorado River Aqueduct (CRA), and Other. Similarly, costs in the Storage function are broken down into the subfunctions 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 distribution 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 summer 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 2015/16. Throughout the report, FY 2015/16 is used as the “test year” to demonstrate the application of the cost of service process. Schedule 1 summarizes the FY 2015/16 revenue requirement by the major budget line items used in Metropolitan’s budgeting process. Current estimates indicate Metropolitan’s annual expenditures (including capital financing costs, but not construction outlays financed with bond proceeds, if any) will total approximately \$1.67 billion in FY 2015/16.

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 \$58 million in FY 2015/16. It is expected that Metropolitan will also generate about \$92 million in ad valorem property tax revenues (assuming that ad valorem tax rates are maintained at 0.0035 percent of assessed valuation). Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the State Water Project (SWP), and other SWP costs. The total revenue offsets for FY 2015/16 are estimated to be around \$150 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or \$1.52 billion. Given an effective date of January 1, 2016, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2015 will generate a total of \$1.51 billion in 2015/16.

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 (CRA), SWP, the capital financing costs associated with the Capital Investment Plan (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 69 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to the capital financing program at \$546 million, which makes up approximately 30 percent of Metropolitan's FY 2015/16 revenue requirements. Capital financing costs include pay-as-you-go funding of the CIP at \$221 million. Metropolitan's SWP costs are the second largest component of the revenue requirement at \$515 million, constituting approximately 28 percent of the revenue requirement. 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. Departmental O&M costs at \$407 million make up 22 percent of the total revenue requirement in FY 2015/16. Water System Operations is the largest single component of the Departmental Costs and accounts for 12 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 CRA and other conveyance and supply facilities.

**Schedule 1. Revenue Requirements (by budget line item)**

	<b>Fiscal Year Ending 2016</b>	<b>% of Revenue Requirements (1)</b>
<b>Departmental Operations &amp; Maintenance</b>		
Office of the General Manager & Human Resources	\$ 26,823,727	1.5%
External Affairs	17,775,377	1.0%
Water System Operations	223,919,148	12.3%
Chief Financial Officer	9,669,357	0.5%
Business Technology & Engineering Services	88,953,247	4.9%
Real Property Development & Mgmt	5,535,530	0.3%
Water Resource Management	17,147,220	0.9%
Ethics Department	1,042,500	0.1%
General Counsel	13,118,929	0.7%
Audit Department	3,077,088	0.2%
<b>Total</b>	<b>407,062,123</b>	<b>22.4%</b>
<b>General District Requirements</b>		
State Water Project	515,004,362	28.3%
Colorado River Aqueduct Power	36,503,152	2.0%
Supply Programs	64,587,106	3.6%
Demand Management	61,654,768	3.4%
Capital Financing Program	545,707,370	30.0%
Operating Equipment and Leases	20,134,780	1.1%
Increase (Decrease) in Required Reserves	18,200,000	1.0%
<b>Total</b>	<b>1,261,791,537</b>	<b>69.4%</b>
<b>Revenue Offsets</b>	<b>(149,551,747)</b>	<b>8.2%</b>
<b>Net Revenue Requirements</b>	<b>\$ 1,519,301,913</b>	<b>100.0%</b>
(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 AWWA rate setting guidelines, a standard chart of accounts for utilities developed by the National Association of Regulatory Utility 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, as permitted under the AWWA guidelines.

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 transfer programs such as Kern Delta Program, Semitropic Water Storage Program, Yuba Accord Program, and the Arvin-Edison Water Storage Program. Costs for in-basin programs within Metropolitan's service area, such as Conjunctive Use Programs, 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" subfunction. 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 subfunctions 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 costs to the various service functions. The primary functional allocation bases used in the cost of service process are listed below.

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

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**

<b>Primary Functional Allocation Bases</b>	<b>Estimated for FY 2016</b>	<b>% of Allocated Dollars</b>
Direct Assignment	\$ 960,945,758	52.8%
Net Book Value/Work in Progress	586,888,768	32.3%
Prorating	90,370,491	5.0%
Manager Analysis	36,650,772	2.0%
Prior-Year Results	78,962,512	4.3%
Other	\$ 64,587,106	3.6%
<b>Total Dollars Allocated</b>	<b>\$ 1,818,405,407</b>	<b>100.0%</b>
<b>Portion of Above Allocations Relating to:</b>		
Revenue Requirements before Offsets	1,668,853,660	
Revenue Offsets	149,551,747	
<b>Total Dollars Allocated</b>	<b>\$ 1,818,405,407</b>	

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 SWP are directly assigned to conveyance.

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

Capital financing costs, including debt service and funding replacements and refurbishments from operating revenues, comprise about 30 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 plus work in progress for assets under construction 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**

<b>Functional Categories</b>	<b>NBV for FY 2016</b>	<b>% of Total NBV</b>
Source of Supply	\$ 30,045,775	0.4%
Conveyance & Aqueduct	1,819,765,719	21.2%
Storage	2,136,816,244	24.9%
Treatment	2,775,371,175	32.3%
Distribution	1,357,227,987	15.8%
Administrative & General	333,078,879	3.9%
Hydroelectric	132,201,411	1.5%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 8,584,507,190</b>	<b>100.0%</b>

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.

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

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

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 subfunctions 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 firsthand knowledge of the organization's internal

operations to generate a functional analysis of departmental costs. For example, Fleet Services Unit costs are allocated to treatment, storage, conveyance and distribution based on vehicle count by location.

**(e) Prior year results**

If available, accounting data for the prior fiscal year by appropriation are used to functionalize Departmental O&M costs for several units or sections. Many of the appropriations parallel the service functions used in the cost of service. For example, Conveyance and Distribution Section costs are allocated to distribution, hydroelectric, and conveyance functions based on the prior year accounting data by appropriation.

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 2015/16 into the major service functions and sub-functions prior to the redistribution 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 37 percent of the allocated revenue requirement.

**Schedule 4. Revenue Requirement (by service function)**

<b>Functional Categories</b>	<b>Fiscal Year Ending 2016</b>	<b>% of Allocated Dollars (1)</b>
<b>Source of Supply</b>		
CRA	\$ 49,789,900	3.3%
SWP	95,432,787	6.2%
Other Supply	11,871,069	0.8%
<b>Total</b>	<b>157,093,756</b>	<b>10.3%</b>
<b>Conveyance &amp; Aqueduct</b>		
CRA		
<i>CRA Power (net of sales)</i>	49,687,613	3.3%
<i>CRA All Other</i>	54,120,949	3.5%
SWP		
<i>SWP Power</i>	193,167,512	12.6%
<i>SWP All Other</i>	182,474,598	11.9%
Other Conveyance & Aqueduct	91,586,306	6.0%
<b>Total</b>	<b>571,036,979</b>	<b>37.4%</b>
<b>Storage</b>		
Storage Costs Other Than Power		
<i>Emergency</i>	70,357,779	4.6%
<i>Drought</i>	59,168,827	3.9%
<i>Regulatory</i>	17,617,872	1.2%
Wadsworth plant pumping/generation	(1,520,282)	0.1%
<b>Total</b>	<b>145,624,196</b>	<b>9.7%</b>
<b>Treatment</b>		
Jensen	61,349,287	4.0%
Weymouth	61,349,492	4.0%
Diemer	67,142,912	4.4%
Mills	32,072,346	2.1%
Skinner	67,880,784	4.4%
<b>Total</b>	<b>289,794,820</b>	<b>19.0%</b>
<b>Distribution</b>	155,066,169	10.2%
<b>Demand Management</b>	71,932,969	4.7%
<b>Hydroelectric</b>	(2,502,727)	0.2%
<b>Administrative &amp; General</b>	131,255,750	8.6%
<b>Total Functional Allocations:</b>	<b>\$ 1,519,301,913</b>	<b>100.0%</b>

(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)**

<b>Fiscal Year Ending 2016</b>	<b>Source of Supply</b>	<b>Conveyance &amp; Aqueduct</b>	<b>Storage</b>	<b>Treatment</b>	<b>Distribution</b>	<b>Demand Management</b>	<b>Hydro Electric</b>	<b>Administrative &amp; General</b>	<b>Total \$ Allocated</b>
<b>Departmental Operations &amp; Maintenance</b>									
Office of the General Manager & Human Resources	\$ 1,257,863	\$ 9,316,496	\$ 830,841	\$ 4,622,833	\$ 3,141,939	\$ 387,047	\$ 307,336	\$ 6,959,372	\$ 26,823,727
External Affairs	-	-	-	-	-	2,964,777	-	14,810,601	17,775,377
Water System Operations	13,149,850	39,923,732	3,609,561	101,232,509	59,407,473	8,416	5,608,693	978,913	223,919,148
Chief Financial Officer	-	-	-	-	-	-	-	9,669,357	9,669,357
Business Technology & Engineering Services	2,610,020	11,252,746	9,490,947	19,369,677	11,223,611	769,190	1,095,813	33,141,242	88,953,247
Real Property Development & Mgmt	-	-	5,535,530	-	-	-	-	-	5,535,530
Water Resource Management	9,846,196	-	-	135,472	1,212,049	5,750,578	-	202,925	17,147,220
Ethics Department	-	-	-	-	-	-	-	1,042,500	1,042,500
General Counsel	-	-	-	-	-	-	-	13,118,929	13,118,929
Audit Department	-	-	-	-	-	-	-	3,077,088	3,077,088
<b>Total Departmental O&amp;M</b>	<b>26,863,929</b>	<b>60,492,975</b>	<b>19,466,879</b>	<b>125,360,492</b>	<b>74,985,072</b>	<b>9,880,008</b>	<b>7,011,842</b>	<b>83,000,927</b>	<b>407,062,123</b>
<b>General District Requirements</b>									
State Water Project	78,539,665	436,464,698	-	-	-	-	-	-	515,004,362
Colorado River Aqueduct Power	-	36,503,152	-	-	-	-	-	-	36,503,152
Supply Programs	64,587,106	-	-	-	-	-	-	-	64,587,106
Demand Management	-	-	-	-	-	61,654,768	-	-	61,654,768
Capital Financing Program	1,828,348	110,736,537	130,029,723	176,427,193	98,372,294	-	8,044,731	20,268,544	545,707,370
Other Operating Costs	128,243	261,269	84,706	471,310	320,329	1,589,461	31,334	17,248,128	20,134,780
Increase (Decrease) in Required Reserves	-	-	-	-	-	-	-	18,200,000	18,200,000
<b>Total General District Requirements</b>	<b>145,083,361</b>	<b>583,965,655</b>	<b>130,114,429</b>	<b>176,898,503</b>	<b>98,692,623</b>	<b>63,244,228</b>	<b>8,076,065</b>	<b>55,716,672</b>	<b>1,261,791,537</b>
<b>Revenue Offsets</b>	<b>(14,853,534)</b>	<b>(73,421,651)</b>	<b>(3,957,112)</b>	<b>(12,464,174)</b>	<b>(18,611,526)</b>	<b>(1,191,267)</b>	<b>(17,590,634)</b>	<b>(7,461,849)</b>	<b>(149,551,747)</b>
<b>Net Revenue Requirements</b>	<b>\$ 157,093,756</b>	<b>\$ 571,036,979</b>	<b>\$ 145,624,196</b>	<b>\$ 289,794,820</b>	<b>\$ 155,066,169</b>	<b>\$ 71,932,969</b>	<b>\$ (2,502,727)</b>	<b>\$ 131,255,750</b>	<b>\$ 1,519,301,913</b>

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.

Two methods are 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.

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 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 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.

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 costs that tend to vary with the amount of water produced. 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 standby costs identified include the emergency storage capacity within the system, and the standby capacity within the conveyance and distribution systems.

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 test year was used to determine that 54 percent of the available conveyance capacity varies with the quantity of water produced. A system peak factor<sup>1</sup> of 1.4 was applied to the annual usage to determine that 24 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 22 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct subfunctions. 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 flow requirements, essentially increasing the physical distribution capacity. Therefore, regulatory storage is classified in the same manner as distribution costs.

---

<sup>1</sup> Peak monthly deliveries to the member agencies average about 44 percent more than the average monthly deliveries.



Distribution service function costs were classified as fixed commodity by using projected sales data for the test year. During this period, 44 percent of the system distribution capacity varies with the quantity of water produced. Distribution service function costs were classified as fixed demand by using three years of recorded non-coincident peaks. The difference between the three-year average noncoincident peak and the commodity flows divided by the system capacity, or 39 percent of the distribution capacity, was used to meet peak day demands. Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the historical peak noncoincident<sup>2</sup> 24-hour daily flow of all the member agencies. The remaining 17 percent of distribution capacity is associated with standby service.

Treatment service function costs were also classified as fixed commodity by using projected treated deliveries to the member agencies for the test year. Treatment fixed demand percentage calculation uses system noncoincident peak factor applied to the test year usage; the remaining capacity is associated with standby service. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. 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.

---

<sup>2</sup> The term “noncoincident” means that the peak day flow for each agency may or may not coincide with the peak day system flow. Both noncoincident and coincident approaches to measuring peak demands are used in rate design approaches. A noncoincident 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	Fixed	Fixed		
	Commodity	Demand	Standby		
<b>Source of Supply</b>					
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs classified as fixed commodity
State Water Project	100%	0%	0%	100%	Supply costs classified as fixed commodity
<b>Conveyance &amp; Aqueduct</b>					
Colorado River Aqueduct	54%	24%	22%	100%	Demand percentage represents amount of system conveyance capacity used to meet peak demands. Commodity percentage represents amount of capacity that is a function of the amount of water delivered. Standby percentage is the remaining conveyance capacity. SWP, CRA, and Other are treated the same due to the use of a uniform system-wide System Access Rate.
State Water Project	54%	24%	22%	100%	
Other	54%	24%	22%	100%	
<b>Storage</b>					
Emergency	0%	0%	100%	100%	Classifies as Standby (recovered by RTS)
Drought	100%	0%	0%	100%	Classified as fixed commodity (recovered by Supply Rates)
Regulatory	44%	39%	17%	100%	Classified the same way as distribution.
<b>Treatment</b>					
	30%	30%	40%	100%	Demand percentage represents amount of system treatment capacity used to meet peak demands. Commodity percentage represents amount of capacity that is a function of the amount of treated water delivered. Standby percentage is the remaining treatment capacity. The same classification is applied to all five treatment plants due to the use of a uniform system-wide Treatment Surcharge.
<b>Distribution</b>					
	44%	39%	17%	100%	Demand percentage represents amount of system distribution capacity used to meet peak demands. Commodity percentage represents amount of capacity that is a function of the amount of water delivered. Standby percentage is the remaining distribution capacity. The same classification is applied to all distribution facilities due to the use of a uniform system-wide 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 8 percent, or \$128 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 is used to pay for the general obligation bond debt service allocated to the C&A costs, and other SWP costs. This revenue offsets the amount that needs to be recovered through rates.

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

Fiscal year ending 2016 Functional categories (by sub-Fuction)	Fixed Demand	Fixed Commodity	Fixed Standby	Variable Commodity	Hydroelectric	Total Classified
<b>Source of Supply</b>						
CRA	\$ -	\$ 56,046,227	\$ -	\$ -	\$ -	\$ 56,046,227
SWP	-	107,424,349	-	-	-	107,424,349
Other Supply	-	13,362,722	-	-	-	13,362,722
<b>Subtotal: Source of Supply</b>	-	176,833,298	-	-	-	<b>176,833,298</b>
<b>Conveyance &amp; Aqueduct</b>						
CRA						
CRA Power	-	15,767,412	-	36,999,932	-	52,767,344
CRA All Other	3,653,667	53,315,310	3,430,966	-	-	60,399,943
SWP						
SWP Power	-	-	-	200,311,875	-	200,311,875
SWP All Other	11,657,228	181,135,410	10,946,690	-	-	203,739,328
Other Conveyance & Aqueduct	19,755,083	60,362,655	20,045,465	-	-	100,163,203
<b>Subtotal: Conveyance &amp; Aqueduct</b>	35,065,978	310,580,788	34,423,121	237,311,807	-	<b>617,381,694</b>
<b>Storage</b>						
Storage Costs Other Than Power						
Emergency	-	10,371,290	64,054,093	-	-	74,425,383
Drought	-	66,603,658	-	-	-	66,603,658
Regulatory	6,433,941	9,938,395	2,783,666	-	-	19,156,002
Storage Power	-	-	-	(1,576,510)	-	(1,576,510)
<b>Subtotal: Storage</b>	6,433,941	86,913,343	66,837,759	(1,576,510)	-	<b>158,608,533</b>
<b>Water Quality</b>						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
<b>Subtotal: Water Quality</b>	-	-	-	-	-	-
<b>Treatment</b>	52,540,967	164,650,840	66,325,142	31,253,654	-	<b>314,770,603</b>
<b>Distribution</b>	33,937,690	122,366,155	14,683,254	-	-	<b>170,987,099</b>
<b>Demand Management</b>	-	80,971,672	-	-	-	<b>80,971,672</b>
<b>Hydroelectric</b>	-	-	-	-	(250,986)	<b>(250,986)</b>
<b>Total Costs Classified</b>	<b>\$ 127,978,576</b>	<b>\$ 942,316,096</b>	<b>\$ 182,269,275</b>	<b>\$ 266,988,951</b>	<b>\$ (250,986)</b>	<b>\$ 1,519,301,913</b>

Totals may not foot due to rounding

About 62 percent of the revenue requirement (\$942 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 \$182 million and account for about 12 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 \$267 million, and account for about 18 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, 2016 using the assumptions and methodology of this report. 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 and Tier 2 purchases.

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

Fiscal year ending 2016 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	
<b>Supply</b>								
Fixed Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fixed Commodity	176,833,298	-	-	-	-	-	-	176,833,298
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Supply</b>	176,833,298	-	-	-	-	-	-	176,833,298
<b>Conveyance and Aqueduct</b>								
Fixed Demand	-	-	-	-	-	35,065,978	-	35,065,978
Fixed Commodity	-	310,580,788	-	-	-	-	-	310,580,788
Fixed Standby	-	-	-	-	-	34,423,121	-	34,423,121
Variable Commodity	-	-	-	237,311,807	-	-	-	237,311,807
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Conveyance and Aqueduct</b>	-	310,580,788	-	237,311,807	-	69,489,099	-	617,381,694
<b>Storage</b>								
Fixed Demand	-	-	-	-	6,433,941	-	-	6,433,941
Fixed Commodity	66,603,658	20,309,685	-	-	-	-	-	86,913,343
Fixed Standby	-	-	-	-	-	66,837,759	-	66,837,759
Variable Commodity	(1,576,510)	-	-	-	-	-	-	(1,576,510)
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Storage</b>	65,027,148	20,309,685	-	-	6,433,941	66,837,759	-	158,608,533
<b>Treatment</b>								
Fixed Demand	-	-	-	-	-	-	52,540,967	52,540,967
Fixed Commodity	-	-	-	-	-	-	164,650,840	164,650,840
Fixed Standby	-	-	-	-	-	-	66,325,142	66,325,142
Variable Commodity	-	-	-	-	-	-	31,253,654	31,253,654
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Treatment</b>	-	-	-	-	-	-	314,770,603	314,770,603
<b>Distribution</b>								
Fixed Demand	-	-	-	-	33,937,690	-	-	33,937,690
Fixed Commodity	-	122,366,155	-	-	-	-	-	122,366,155
Fixed Standby	-	-	-	-	-	14,683,254	-	14,683,254
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	(250,986)	-	-	-	-	-	(250,986)
<b>Subtotal: Distribution</b>	-	122,115,169	-	-	33,937,690	14,683,254	-	170,736,113
<b>Demand Management</b>								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	80,971,672	-	-	-	-	80,971,672
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Demand Management</b>	-	-	80,971,672	-	-	-	-	80,971,672
<b>Total</b>								
Fixed Demand	-	-	-	-	40,371,631	35,065,978	52,540,967	127,978,576
Fixed Commodity	243,436,956	453,256,628	80,971,672	-	-	-	164,650,840	942,316,096
Fixed Standby	-	-	-	-	-	115,944,134	66,325,142	182,269,275
Variable Commodity	(1,576,510)	-	-	237,311,807	-	-	31,253,654	266,988,951
Hydroelectric	-	(250,986)	-	-	-	-	-	(250,986)
<b>Total</b>	\$ 241,860,446	\$ 453,005,642	\$ 80,971,672	\$ 237,311,807	\$ 40,371,631	\$ 151,010,111	\$ 314,770,603	\$ 1,519,301,913

Totals may not foot due to rounding

**Schedule 9. Rates and Charges Summary**

<b>Effective January 1st</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Tier 1 Supply Rate (\$/AF)	\$148	\$160	\$155
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290
System Access Rate (\$/AF)	\$243	\$256	\$261
Water Stewardship Rate (\$/AF)	\$41	\$41	\$41
System Power Rate (\$/AF)	\$161	\$125	\$137
Full Service Untreated Volumetric Cost (\$/AF)			
Tier 1	\$593	\$582	\$594
Tier 2	\$735	\$712	\$729
Treatment Surcharge (\$/AF)	\$297	\$343	\$352
Full Service Treated Volumetric Cost (\$/AF)			
Tier 1	\$890	\$925	\$946
Tier 2	\$1,032	\$1,055	\$1,081
Readiness-to-Serve Charge (\$M)	\$166	\$158	\$152
Capacity Charge (\$/cfs)	\$8,600	\$10,700	\$10,300

### **2.1 System Access Rate (SAR)**

The SAR is a volumetric<sup>3</sup> system-wide rate levied on each acre-foot of water that moves through the MWD system. The MWD system includes MWD's right to use SWP facilities for transportation of SWP and non-SWP water. All system users (member agency or third party) pay the SAR to use Metropolitan's conveyance and distribution system. To meet the board-tated objective to collect all costs in 2015/16, the SAR would increase to \$261 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 \$454 million in FY 2015/16, or 30 percent of the total revenue requirement.

### **2.2 Water Stewardship Rate (WSR)**

The WSR would remain unchanged at \$41 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 \$81 million in FY 2015/16, about 5 percent of the revenue requirement. The WSR is a volumetric rate paid by 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.

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

The benefits of demand management programs are recognized by section 130.5 of the MWD Act, enacted by S.B. 60 (Stats. 1999, Ch. 414), which requires Metropolitan to "place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures." Because Metropolitan is mandated under S.B. 60 to fund water supply programs like conservation and recycling, it is appropriate to recover the costs of supporting these programs on all water moved through the system.

### **2.3 System Power Rate (SPR)**

SPR would increase to \$137 per acre-foot in 2014. 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 2015/16 the revenue requirement for the SPR is estimated to be about \$237 million, about 16 percent of the total revenue requirement.

---

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



#### **2.4 Treatment Surcharge**

The treatment surcharge would increase to \$352 per acre-foot to collect all treatment costs in 2015/16. 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 \$314 million in FY 2015/16, almost 21 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 at Weymouth, as well as refurbishments 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 decrease to \$10,300 per cubic-foot-second of capacity during calendar year 2016. The decrease is due to the decrease in pay-as-you-go funding of the CIP. The capacity charge is levied on the maximum summer day demand placed on the distribution system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2014 is used to levy the capacity charge effective January 1, 2016 through December 31, 2016. Demands measured for the purposes of billing the capacity charge include all firm demand, including wheeling service and exchanges.

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan's distribution 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 2016 will be provided to the Board in April 2015.

#### **2.6 Readiness-to-Serve Charge**

The costs of providing standby service, such as emergency storage, are recovered by the RTS. Metropolitan's costs for providing emergency storage capacity within the system are estimated to be about \$67 million in FY 2015/16. 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, and standby costs for the distribution function, are also allocated to the RTS. These costs are estimated to be about \$84 million in FY 2015/16. The RTS would decrease to \$152 million in calendar year 2016. The decrease is due to the decrease in pay-as-you go funding of the CIP.

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). 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. The

detailed schedule with an estimate of each agency's RTS obligation for calendar year 2016 will be provided to the Board in April 2015.

### **2.7 *Purchase Order***

The Purchase Order determines the amount of water that can be purchased at the Tier 1 rate. The existing Amended and Restated Purchase Order agreements presently in effect expire December 31, 2014. The Purchase Order will be addressed in the second half of 2014.

### **2.8 *Tier 2 supply rate***

The Tier 2 Supply Rate reflects Metropolitan's cost of purchasing water transfers north of the Delta. 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 would remain at its current level of \$290 per acre-foot. At an expected average sales level of 1.75 million acre-feet, it is estimated that no acre-feet will be sold at the Tier 2 Supply Rate.

### **2.9 *Tier 1 supply rate***

The total revenue requirement for the supply service function is about \$241 million in FY 2015/16. The Tier 1 Supply Rate would decrease to \$155 per acre-foot in 2016. 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 divided by the estimated amount of Tier 1 water sales. At an expected demand level of about 1.75 MAF, it is estimated that Metropolitan will sell about 1.57 MAF at the Tier 1 Supply Rate in 2015/16. The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. The 2016 Tier 1 Annual Limit for all member agencies will be provided to the Board in April 2015.

## **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 MAF per year, ranging from a high of around 2.5 MAF in 1989/90 to a low of about 1.5 MAF in 1997/98. In 2015/16, water sales are projected to be 1.75 MAF. Treated water sales are projected to be 898 TAF in 2015/16, and Exchanges 179 TAF.

## **4 Proof of Revenue**

Based on expected sales of 1.75 MAF the expected revenues would be about \$1 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, 2016, the expected revenues for 2015/16 will be about \$12.1 million lower than the total revenue requirement in 2015/16. The total revenue requirement includes a \$0.4-million increase in the required reserves for the Revenue Remainder Fund. Draws from the Water Stewardship Fund are \$9.2 million in 2015/16. Accounting for these adjustments, the required draw from reserves is almost \$2.5 million in 2015/16.

**Schedule 10. FY 2015/16 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)**

	Revenues if Rates Effective July 1st	Revenue Requirements	Difference	% Over (Under) Collected
Supply	243.5	241.9	1.7	1%
System Access Rate	456.8	453.0	3.7	1%
Water Stewardship Rate	71.8	81.0	(9.2)	-11%
System Power Rate	239.8	237.3	2.4	1%
Treatment Surcharge	316.0	314.8	1.2	0%
Readiness-to-serve Charge	152.0	151.0	1.0	1%
Capacity Charge	40.6	40.4	0.2	0%
<b>Total</b>	<b>1,520.3</b>	<b>1,519.3</b>	<b>1.0</b>	<b>0%</b>

Totals may not foot due to rounding

**Schedule 11. FY 2015/16 Proof of Revenue if Rates Effective January 1 (\$ millions)**

	Revenues if Rates Effective Jan 1	Revenue Requirements	Difference	% Over (Under) Collected
Supply	248.0	241.9	6.1	3%
System Access Rate	451.8	453.0	(1.2)	0%
Water Stewardship Rate	71.8	81.0	(9.2)	-11%
System Power Rate	227.8	237.3	(9.5)	-4%
Treatment Surcharge	311.5	314.8	(3.3)	-1%
Readiness-to-serve Charge	155.0	151.0	4.0	3%
Capacity Charge	41.3	40.4	1.0	2%
<b>Total</b>	<b>1,507.2</b>	<b>1,519.3</b>	<b>(12.1)</b>	<b>-1%</b>

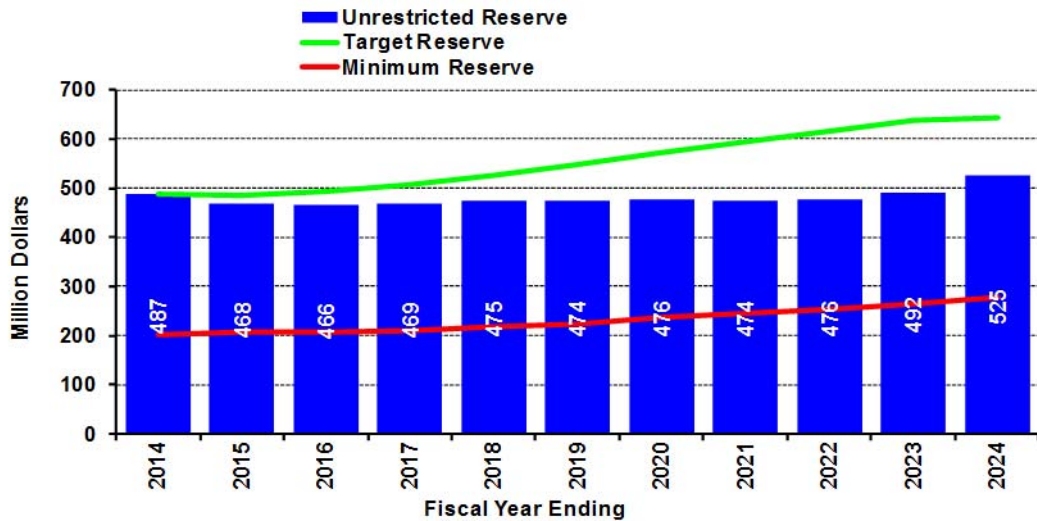
Totals may not foot due to rounding

## Ten-Year Financial Forecast

The ability to ensure a reliable supply of high quality water for Metropolitan’s 26 member agencies depends on the Metropolitan’s ongoing ability to fund operations and maintenance, maintain and augment local and imported water supplies, fund replacements and refurbishment of existing infrastructure, and invest in system improvements. This ten-year plan supports long range resource, capital investment and operational planning. As such, it includes a forecast of future costs and the revenues

necessary to support operations and investments in infrastructure and resources that are derived from the 2010 Update to the Integrated Resources Plan (2010 IRP Update) and other planning processes while conforming to Metropolitan's financial policies. These financial policies, which address reserve levels, financial indicators, and capital funding strategies, ensure sound financial management and fiscal stability for Metropolitan.

**Figure 7. Projected Rate Increases, Reserves and Financial Indicators**



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Ave Rate Increase</b>	5.0%	1.5%	1.5%	3.0%	3.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%
<b>Sales, MAF</b>	1.97	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
<b>CIP, \$M</b>	200	245	268	275	281	284	293	304	312	317	313
<b>PAYGO, \$M</b>	125	245	221	200	204	201	176	182	187	190	188
<b>Rev. Bond Cvg</b>	2.7	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.6	2.7	2.9
<b>Fixed Chg Cvg</b>	2.0	1.6	1.6	1.6	1.5	1.6	1.5	1.5	1.5	1.4	1.4
<b>Inflation</b>	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
<b>AV Taxes, \$M</b>	81	90	92	94	96	99	101	103	106	108	110
<b>BDCP, \$M</b>				16	24	46	91	148	204	259	302

Figure 7 summarizes the financial metrics of the ten-year financial forecast. The ten-year forecast includes a rate forecast, based on Metropolitan's existing cost of service and rate structure. The forecast shows that the overall increase in water rates and charges will vary

from 1.5 percent to 5 percent over the next ten years.

Table 9 shows the projected unbundled water rates and charges. Components of the rate structure may increase at different rates depending on the costs recovered. The full-service treated Tier 1 water rate is estimated to

be approximately \$1,248 per acre-foot by January 1, 2024, compared to \$890 per acre-foot on January 1, 2014, an average increase of 3.4 percent per year over the ten-year period.

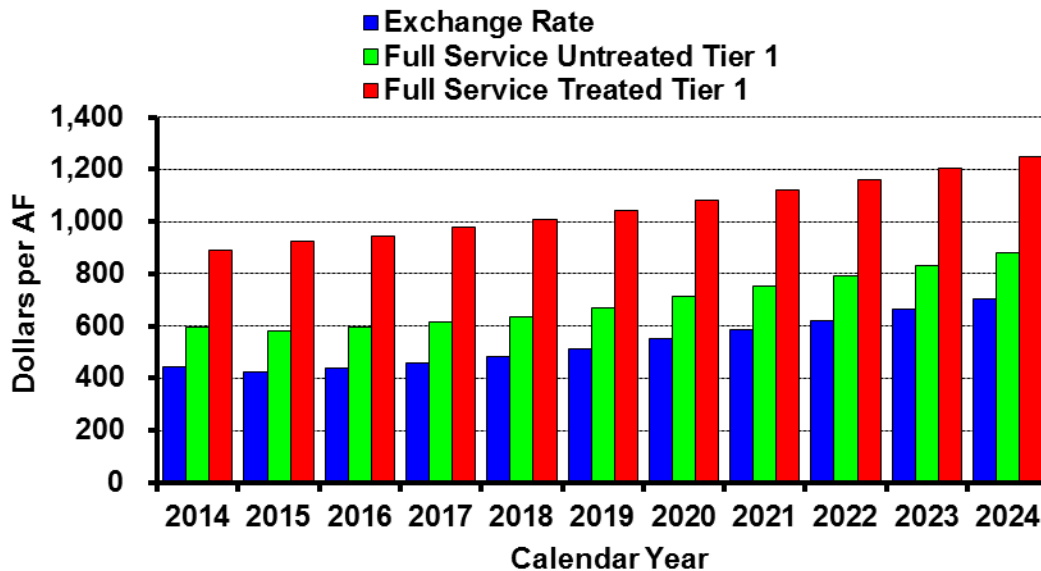
**Table 9. Projected Water Rates and Charges**

Rates and Charges Effective January 1st	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Tier 1 Supply Rate (\$/AF)	\$148	\$160	\$155	\$155	\$155	\$157	\$161	\$164	\$168	\$171	\$176
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290	\$290	\$290	\$290	\$290	\$290	\$290	\$290	\$290
System Access Rate (\$/AF)	\$243	\$256	\$261	\$269	\$278	\$292	\$310	\$331	\$354	\$377	\$403
Water Stewardship Rate (\$/AF)	\$41	\$41	\$41	\$41	\$41	\$41	\$41	\$41	\$41	\$41	\$41
System Power Rate (\$/AF)	\$161	\$125	\$137	\$148	\$163	\$180	\$201	\$216	\$227	\$244	\$258
Full Service Untreated Volumetric Cost (\$/AF)											
Tier 1	\$593	\$582	\$594	\$613	\$637	\$670	\$713	\$752	\$790	\$833	\$878
Tier 2	\$735	\$712	\$729	\$748	\$772	\$803	\$842	\$878	\$912	\$952	\$992
Exchange	\$445	\$422	\$439	\$458	\$482	\$513	\$552	\$588	\$622	\$662	\$702
Treatment Surcharge (\$/AF)	\$297	\$343	\$352	\$365	\$370	\$370	\$370	\$370	\$370	\$370	\$370
Full Service Treated Volumetric Cost (\$/AF)											
Tier 1	\$890	\$925	\$946	\$978	\$1,007	\$1,040	\$1,083	\$1,122	\$1,160	\$1,203	\$1,248
Tier 2	\$1,032	\$1,055	\$1,081	\$1,113	\$1,142	\$1,173	\$1,212	\$1,248	\$1,282	\$1,322	\$1,362
Readiness-to-Serve Charge (\$M)	\$166	\$158	\$152	\$152	\$152	\$157	\$167	\$187	\$212	\$234	\$258
Capacity Charge (\$/cfs)	\$8,600	\$10,700	\$10,300	\$10,400	\$10,500	\$11,100	\$11,100	\$11,400	\$11,800	\$12,000	\$12,100

Figure 8 shows the volumetric cost per acre-foot for Tier 1 Full Service untreated water, Tier 1 Full Service treated water, and untreated

Exchange Water delivered pursuant to the 2003 Amended and Restated Exchange Agreement between Metropolitan and SDCWA.

**Figure 8. Projected volumetric Rates**

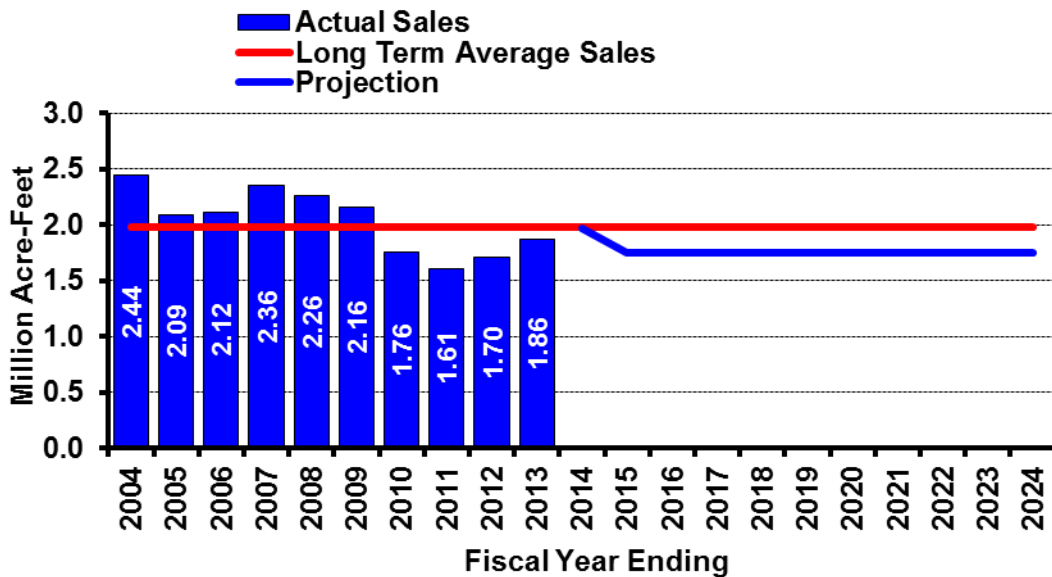


These estimated rate increases result from increasing investments for the SWP and the BDCP, investments in reliability through conservation and local resources, system improvements to water treatment, investments to maintain the conveyance and distribution system, and increasing operating and maintenance costs. Annual expenditures, excluding funding of the Capital Investment Plan (CIP), are expected to increase from \$1.4 billion in FY 2014/15 to \$2.0 billion by FY 2023/24, or an annual average increase of about 4 percent. Metropolitan's share of the costs for the Bay Delta Conservation Plan (BDCP) is expected to increase to about \$300 million by FY 2023/24. During this same period, capital investments are expected to be about \$2.9 billion. To finance these capital

investments, the ten-year forecast anticipates funding 100 percent of the CIP from PAYGO and Replacement and Refurbishment (R&R) funds for the first three fiscal years, then transitioning to funding 60 percent of the CIP from water sales revenues, or PAYGO. The balance of the CIP, or \$0.7 billion, would be financed by issuing revenue bond debt.

Consistent with the 2010 IRP Update, future growth in retail demands is expected to be met either by the development of local supply resources or by conservation efforts necessary to meet state policy to reduce per capita retail water use by 20 percent by 2020. These impacts result in flat projected annual water sales over the ten-year period of 1.75 MAF, as shown in Figure 9.

**Figure 9. Water Sales**



**SOURCES OF FUNDS**

**Revenues**

Volumetric water revenues are expected to increase from \$1.3 billion in FY 2014/15 to \$1.8 billion in FY 2023/24. This increase is due to anticipated rate increases.

Fixed water charges (Readiness-to-Serve and Capacity Charge) are expected to increase from about \$198.7 million in FY 2014/15 to \$293.4 million in FY 2023/24.

Property tax revenue is expected to increase from \$90.2 million in FY 2014/15 to \$110.2 million in FY 2023/24. This projection assumes the Board maintains the ad valorem tax rate at .0035 percent of assessed valuations. By FY 2023/24 almost all of the revenues are used to pay SWP costs, which would include Metropolitan’s share of BDCP costs.

Power sales from Metropolitan’s hydroelectric power recovery plants and excess CRA power are projected to average about \$20.9 million per year over this period.

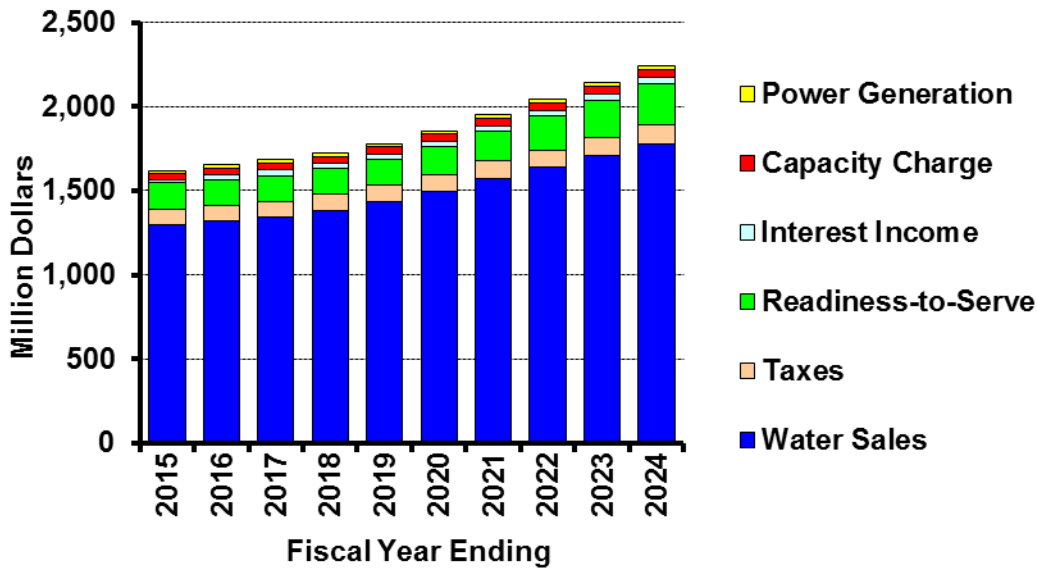
Interest income is projected to increase from \$16.1 million in FY 2014/15 to \$35.3 million in FY 2023/24 as a result of increased balances and higher average returns of

1.2 percent to 2.5 percent from FY 2014/15 to FY 2023/24.

Overall, volumetric water revenues continue to approximate 80 percent of total revenues throughout the period.

Forecasted revenues by major category are shown in Figure 10.

**Figure 10. Revenue Forecast**



**Other Funding Sources**

Other sources of funds include withdrawals from bond construction funds, Refurbishment and Replacement (R&R) Fund, General Fund, Water Stewardship Fund (WSF), Treatment Surcharge Stabilization Fund (TSSF), Water Rate Stabilization Fund (WRSF), and Revenue Remainder Fund.

**USES OF FUNDS**

Over the next ten years, total uses of funds are projected to range from \$1.9 billion to \$2.6 billion.

**Expenses**

Expenses are grouped into six major categories: SWP, O&M, demand management programs, CRA power costs, supply programs, and debt service & PAYGO funding. Figure 11 illustrates the general trends in expenses over the ten-year period from FY 2014/15 to FY 2023/24. Figure 12 shows the comparison of FY 2014/15 to FY 2023/24 in terms of the contribution of expenses to the total.



Figure 11. Expenditure Forecast

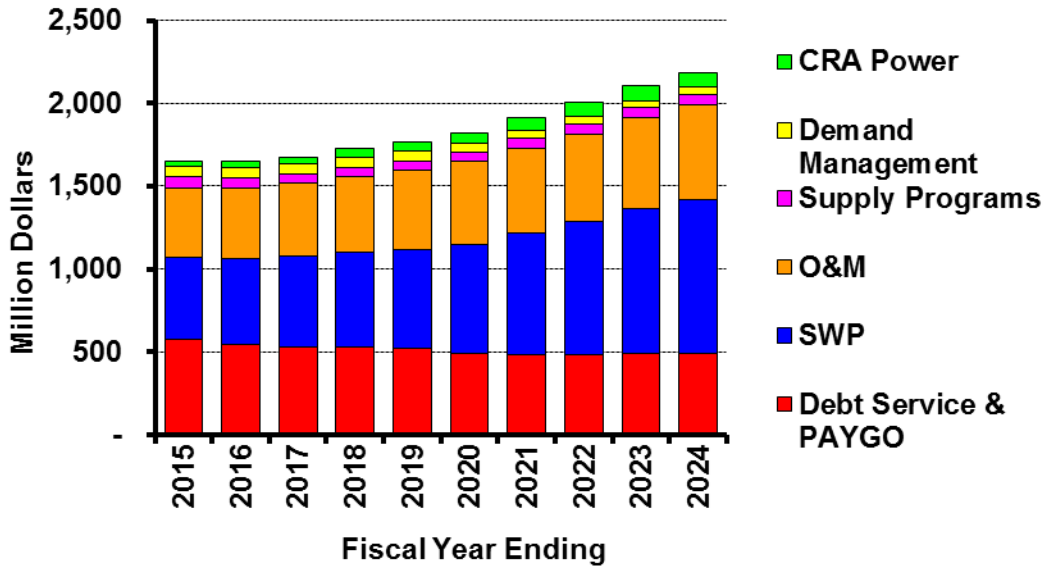
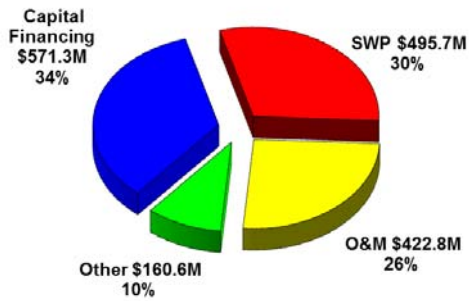


Figure 12. Expenditure Forecast, Contribution by Major Area

FY 2014/15: \$1.65B



FY 2023/24: \$2.19B



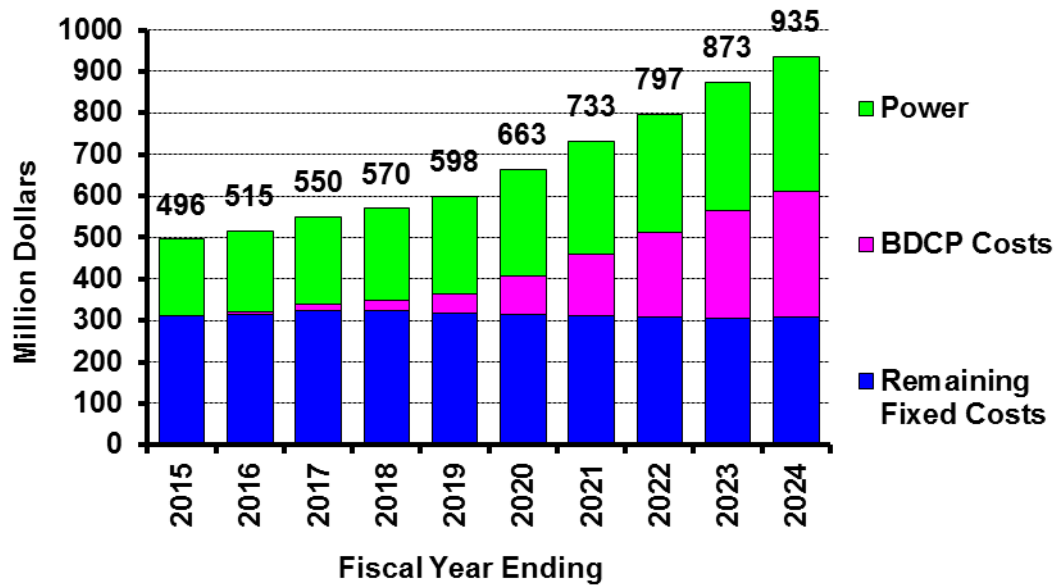
### State Water Project

SWP expenditures are projected to increase from \$496 million in FY 2014/15 to \$935 million in FY 2023/24. The projection assumes the BDCP moves forward. These costs account for \$302.0 million in FY 2023/24. The remainder of the fixed costs is based upon information provided by the DWR, and is associated with Transportation Capital and Minimum Operations & Maintenance, and the Delta Water Supply Capital and Minimum Operations & Maintenance. After adjusting downward in FY 2013/14, variable SWP power costs are projected to increase steadily beginning in FY 2014/15.

Power costs will vary depending on the price of electricity, total system deliveries, storage operations, and the amount of water pumped on the SWP. Increasing costs affecting the SWP include the cost of emissions allowance purchases directly and indirectly, the cost of adding renewable energy to the SWP power portfolio, and the cost of using the California Independent System Operator grid to transmit power from generation sources to the SWP load locations. Net flows through the SWP that incur power are expected to average 923 TAF per year.

The total SWP costs are shown in Figure 13.

**Figure 13. SWP Forecast**

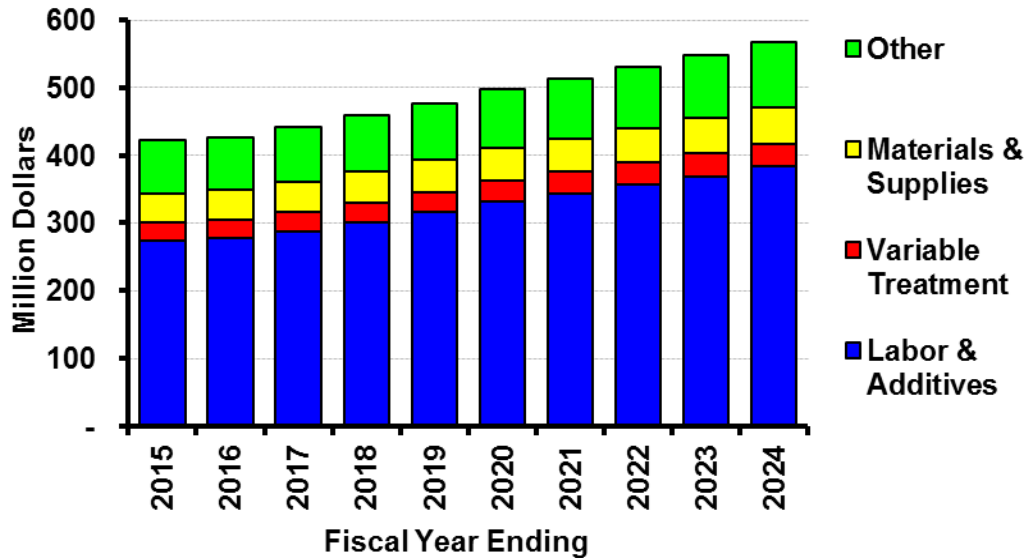


### Operations and Maintenance

O&M costs in FY 2023/24 are projected to be \$566.5 million. This represents an average annual increase of 3.3 percent from FY 2014/15 as a result of increasing labor, benefits, and treatment costs. During this time frame, inflation is assumed to be 2.5 percent. Items that are driving overall O&M costs up more rapidly than the rate of inflation include

rising benefit costs for pensions and medical costs for active and retired employees. In addition, the ten-year forecast assumes Metropolitan fully funds the annual required contribution to meet future retiree medical costs (OPEB) much like promised retirement benefits, rather than paying for retiree medical costs on a pay-as-you-go basis.

**Figure 14. O&M Forecast**



**Demand Management**

Demand management costs include funding for the Local Resource Program (LRP) and Conservation Credit Program (CCP) are projected to decrease from \$62.2 million in FY 2014/15 to \$45.9 million in FY 2023/24. The LRP costs are projected to decrease from \$42.2 million in FY 2014/15 to \$25.9 million in FY 2023/24. The yield from the LRP is expected to decrease from 275 TAF in FY 2014/15 to 184 TAF in FY 2016/17 as more projects become cost effective when compared to Metropolitan’s water rates. The CCP costs are projected to remain at \$20.0 million throughout the ten-year period and provide continued funding of residential, commercial, and outdoor conservation programs.

**CRA Power Costs**

CRA Power costs are projected to increase from \$29 million in FY 2014/15 to \$90 million in FY 2023/24. Power costs will vary depending on the price of electricity, total

system deliveries, storage operations, and the amount of water pumped on the CRA.

Colorado River diversions are expected to average 909 TAF from FY 2016/17 to FY 2023/24.

**Water Transfers and Supply Programs**

Supply programs vary slightly throughout the ten-year period from \$69.3 million in FY 2014/15 to \$63.2 million in FY 2023/24. The estimates represent expenditures for expected conditions. If extreme weather conditions are experienced, these cost estimates could be much higher or lower. If higher than normal demand is coupled with lower than normal supply, supply program costs could be more than four times higher. The proposed deposit of approximately \$120 million of projected reserves over the target into a water transfer and management fund in FY 2013/14 will help ensure sufficient funds are available for these programs in the near term.

### Capital Investment Plan

Metropolitan will be investing in infrastructure necessary to treat, store, and deliver water. Many of these investments will be required to repair and replace aging facilities, or Rehabilitation & Replacements (R&R). The ten-year projected CIP through FY 2023/24 is estimated at \$2.9 billion. The major elements of the ten-year projected capital program are shown in Table 10. This table shows the CIP

by major service function, driver and funding source. The CIP continues to reflect the deferral of facility expansion. The CIP focuses on projects that enhance reliability or provide an adequate return on investment while focusing on necessary refurbishment and replacement of aging infrastructure.

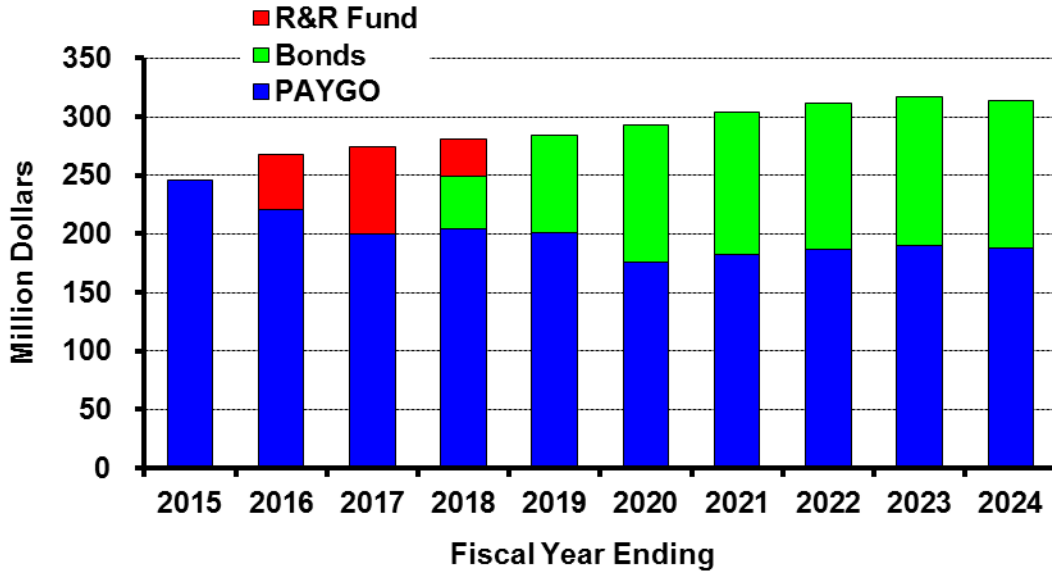
Figure 15 shows the funding source for the ten-year CIP.

**Table 10. CIP Ten-Year Forecast and Funding Sources (dollars in millions)**

Fiscal Year Ending	2015 Proposed	2016 Proposed	2017 Forecast	2018 Forecast	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	Total
<b>Major Service Functions</b>											
Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Conveyance & Aqueduct	27.2	22.3	27.2	46.3	46.1	44.6	44.2	63.0	58.0	59.6	438.4
Storage	12.2	12.6	2.0	-	-	-	-	-	-	-	26.8
Distribution	43.5	51.6	69.8	112.7	135.7	157.6	191.6	178.8	199.4	204.1	1,344.8
Treatment	126.1	148.7	121.4	95.1	79.3	73.8	57.3	58.8	48.4	49.7	858.5
Administrative & General	28.1	30.4	50.4	26.5	23.2	16.7	11.0	11.4	11.7	-	209.4
Hydroelectric	8.2	2.3	4.1	0.5	0.1	0.7	0.1	-	-	-	15.9
<b>Total</b>	<b>245.4</b>	<b>267.9</b>	<b>274.8</b>	<b>281.1</b>	<b>284.4</b>	<b>293.4</b>	<b>304.1</b>	<b>312.0</b>	<b>317.4</b>	<b>313.4</b>	<b>2,893.8</b>
<b>By Driver</b>											
Efficiency	-	0.2	0.8	4.0	1.7	0.0	-	-	-	-	6.7
Infrastructure	193.5	212.3	240.4	269.3	279.2	292.0	304.1	312.0	317.4	313.4	2,733.6
Regulatory	7.4	10.1	12.3	1.5	-	-	-	-	-	-	31.3
Supply	1.1	-	-	-	-	-	-	-	-	-	1.1
Water Quality	43.5	45.3	21.2	6.2	3.5	1.4	0.0	-	-	-	121.1
<b>Total</b>	<b>245.4</b>	<b>267.9</b>	<b>274.8</b>	<b>281.1</b>	<b>284.4</b>	<b>293.4</b>	<b>304.1</b>	<b>312.0</b>	<b>317.4</b>	<b>313.4</b>	<b>2,893.8</b>
<b>By System Improvements and R&amp;R</b>											
System Improvements	106.8	105.7	116.2	58.2	34.8	26.6	12.8	13.2	12.3	-	486.5
Rehabilitation and Replacements	138.6	162.1	158.6	222.9	249.6	266.8	291.3	298.8	305.1	313.4	2,407.3
<b>Total</b>	<b>245.4</b>	<b>267.9</b>	<b>274.8</b>	<b>281.1</b>	<b>284.4</b>	<b>293.4</b>	<b>304.1</b>	<b>312.0</b>	<b>317.4</b>	<b>313.4</b>	<b>2,893.8</b>
<b>Funding Sources</b>											
Bonds	-	-	-	45.2	83.4	117.4	122.1	125.0	127.4	125.4	745.8
R&R Fund	-	46.9	74.8	31.9	-	-	-	-	-	-	153.5
PAYGO	245.4	221.0	200.0	204.0	201.0	176.0	182.0	187.0	190.0	188.0	1,994.4
<b>Total</b>	<b>\$ 245.4</b>	<b>\$ 267.9</b>	<b>\$ 274.8</b>	<b>\$ 281.1</b>	<b>\$ 284.4</b>	<b>\$ 293.4</b>	<b>\$ 304.1</b>	<b>\$ 312.0</b>	<b>\$ 317.4</b>	<b>\$ 313.4</b>	<b>\$ 2,893.8</b>

Totals may not foot due to rounding.

**Figure 15. CIP Ten-Year Forecast and Funding Sources (dollars in millions)**



The CIP will be funded from a combination of bond proceeds and operating revenues. In order to mitigate increases in water rates, provide financial flexibility, and support Metropolitan's high credit ratings including maintaining revenue bond debt service and fixed charge coverage ratios, it is proposed that 60 percent of the CIP be funded from current revenues. This level of CIP funding is appropriate given that the 80 percent of the ten-year CIP is identified as R&R projects. Bond funded expenditures will include a combination of variable and fixed rate debt. Debt has been structured to mitigate near-term rate impacts and smooth out long-term debt service. Variable rate debt is used to mitigate interest cost over the long term, while mitigating interest rate exposure.

**Debt Financing**

As shown in Table 10, it is anticipated that there will be about \$2.9 billion of capital expenditures over this period. Of this, \$745.8 million, or 26 percent of future capital expenditures, are anticipated to be funded by

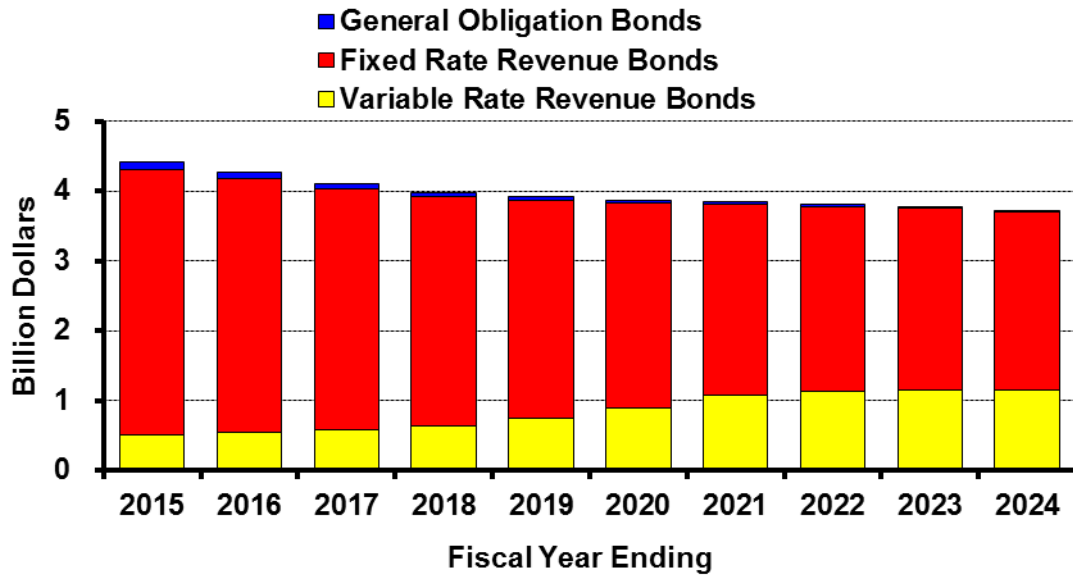
debt proceeds. Outstanding revenue bond debt currently represents \$4.5 billion, or 63 percent of Metropolitan's \$6.8 billion equity as of June 30, 2013. Metropolitan may not have outstanding revenue bond debt in amounts greater than 100 percent of its equity.

Total outstanding debt is illustrated in Figure 16. Total outstanding debt is estimated to decrease to \$3.7 billion by FY 2023/24.

Metropolitan's variable rate debt as a percentage of total revenue bond debt is projected to increase to 31 percent over this time period as fixed rate debt is retired and new variable rate debt is issued. The appropriate amount of variable rate debt will continue to be monitored and adjusted depending on market rates, financing needs, available short-term investments, and fund levels in the investment portfolio with which variable rate interest exposure can be hedged.

General Obligation (GO) bond debt service will decrease from \$23.2 million to \$2.5 million per year as voter approved indebtedness matures.

**Figure 16. Outstanding Debt**



**Other Obligations**

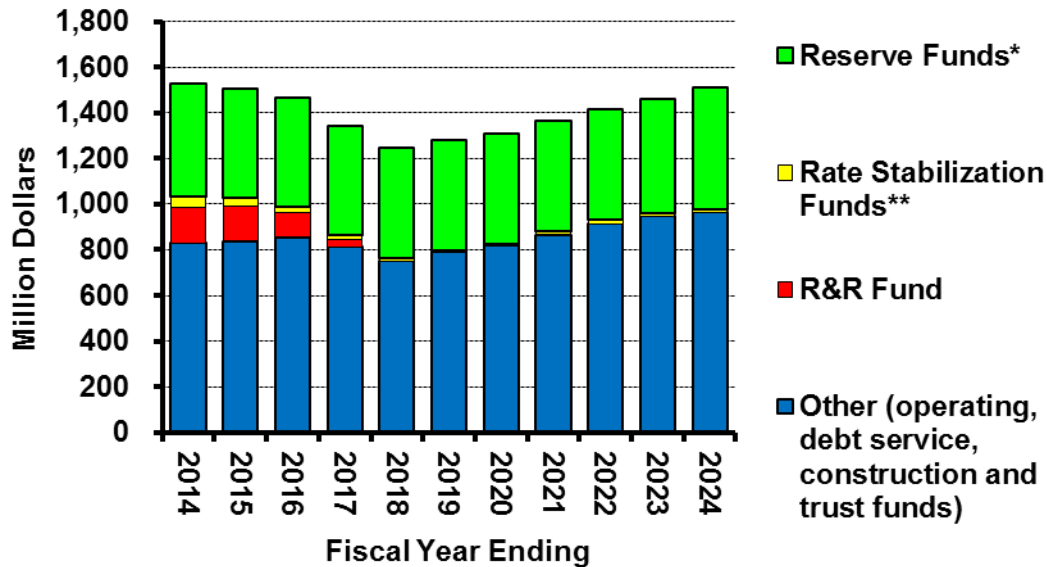
The forecast accounts for required transfers to and from operating funds to meet revenue bond covenants and board policies. Over the next ten years, as costs continue to increase (most notably the reserve requirements for

O&M Fund and State Water Contract Fund), the annual required transfer is estimated to average about \$23.4 million per year.

**FUND BALANCES AND RESERVES**

As shown in Figure 16, over the next ten years, total fund balances are projected to increase to \$1.63 billion in FY 2023/24.

**Figure 16. End of Year Fund Balances**



\* includes Water Rate Stabilization Fund and Revenue Remainder Fund.

\*\* includes Water Stewardship Fund and Treatment Surcharge Stabilization Fund.

**FINANCIAL RATIOS**

Metropolitan’s financial objective is to maintain a minimum revenue bond coverage ratio of 2.0 times. The revenue bond coverage ratio is projected to be 2.0 times in FY 2014/15 and increase to 2.9 times in FY 2023/24. Revenue bond debt service coverage is the primary indicator of credit quality and is equal to the ratio of net operating revenues to revenue bond debt service.

Fixed charge coverage measures the amount by which net-operating revenues “cover” all recurring fixed costs including SWC capital obligations. This is a broader ratio than the revenue bond coverage ratio and is one measure used to gauge Metropolitan’s overall financial strength. Metropolitan’s financial policy goal is to maintain a minimum fixed charge coverage ratio of 1.2 times. For FY 2014/15 through FY 2023/24, the fixed charge coverage is projected to decrease from 1.6 times to 1.4 times. Table 11 summarizes uses and sources of funds over the ten-year period.

**Table 11. Ten-Year Financial Forecast, Sources and Uses of Funds (dollars in millions)**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Fiscal Year Ending	Projected	Proposed	Proposed	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
<b>USES OF FUNDS</b>											
<b>Expenses</b>											
State Water Contract	\$ 426.0	\$ 495.7	\$ 515.0	\$ 549.6	\$ 569.8	\$ 598.4	\$ 663.0	\$ 733.0	\$ 797.1	\$ 873.2	\$ 934.9
Supply Programs	76.5	69.3	64.6	57.7	54.9	56.5	57.9	58.9	60.2	61.7	63.2
Colorado River Power	24.9	29.2	36.5	39.3	52.2	59.4	68.9	76.0	81.3	86.3	89.8
Debt Service	369.0	325.8	324.7	327.2	327.0	316.5	311.4	297.7	298.2	297.2	298.1
Demand Management	53.6	62.2	61.7	59.8	59.3	58.5	48.7	48.2	48.4	45.8	45.9
Departmental O&M	336.1	368.7	379.4	392.9	409.0	426.1	443.6	458.5	473.9	489.8	506.4
Treatment Chemicals, Solids & Power	26.4	26.6	27.6	27.7	28.4	29.4	30.7	32.1	32.8	33.5	34.2
Other O&M	128.0	27.5	20.1	20.8	21.5	22.2	22.9	23.6	24.4	25.2	26.0
<b>Sub-total Expenses</b>	<b>1,440.6</b>	<b>1,404.9</b>	<b>1,429.7</b>	<b>1,475.0</b>	<b>1,522.2</b>	<b>1,566.9</b>	<b>1,647.0</b>	<b>1,728.1</b>	<b>1,816.4</b>	<b>1,912.8</b>	<b>1,998.6</b>
<b>Capital Investment Plan</b>	<b>200.0</b>	<b>245.4</b>	<b>267.9</b>	<b>274.8</b>	<b>281.1</b>	<b>284.4</b>	<b>293.4</b>	<b>304.1</b>	<b>312.0</b>	<b>317.4</b>	<b>313.4</b>
<b>Fund Deposits</b>											
Water Transfer Fund	95.0	-	-	-	-	-	-	-	-	-	-
R&R and General Fund	225.0	245.4	221.0	200.0	204.0	201.0	176.0	182.0	187.0	190.0	188.0
Revenue Bond Construction	-	-	-	-	-	16.3	-	7.5	0.3	-	-
Water Stewardship Fund	14.1	-	-	-	-	-	1.6	1.5	0.9	3.7	3.2
Treatment Surcharge Stabilization Fund	-	-	-	-	-	-	3.7	5.0	-	-	-
Interest for Construction & Trust Funds	0.2	0.1	0.4	0.7	0.9	1.0	1.2	1.2	1.3	1.4	1.5
Increase in Required Reserves	10.7	11.2	18.2	19.8	10.7	33.3	41.9	49.9	53.7	44.3	40.1
Increase in Water Rate Stabilization Fund	-	-	-	-	-	-	-	-	-	4.6	20.0
Other Fund Activity	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total Fund Deposits</b>	<b>345.0</b>	<b>256.8</b>	<b>239.6</b>	<b>220.5</b>	<b>215.6</b>	<b>251.6</b>	<b>224.3</b>	<b>247.2</b>	<b>243.3</b>	<b>244.0</b>	<b>252.9</b>
<b>Member Agency Credit</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL USES OF FUNDS</b>	<b>\$ 1,985.6</b>	<b>\$ 1,907.1</b>	<b>\$ 1,937.1</b>	<b>\$ 1,970.3</b>	<b>\$ 2,018.8</b>	<b>\$ 2,102.9</b>	<b>\$ 2,164.7</b>	<b>\$ 2,279.4</b>	<b>\$ 2,371.7</b>	<b>\$ 2,474.3</b>	<b>\$ 2,564.8</b>
<b>SOURCES OF FUNDS</b>											
<b>Revenues</b>											
Taxes	\$ 81.1	\$ 90.2	\$ 92.2	\$ 94.3	\$ 96.4	\$ 98.6	\$ 100.8	\$ 103.1	\$ 105.4	\$ 107.8	\$ 110.2
Annexations	-	-	-	-	-	-	-	-	-	-	-
Interest Income	7.7	16.1	27.6	33.2	31.8	31.5	32.1	32.8	33.6	34.5	35.3
Hydro Power	17.0	19.3	18.9	20.0	20.5	20.7	21.6	21.0	21.7	22.2	22.7
Fixed Charges (RTS & Capacity Charge)	182.1	198.7	196.3	192.7	193.1	197.0	205.7	221.3	245.2	269.9	293.4
Water Sales Revenue	1,437.5	1,290.6	1,310.8	1,335.1	1,374.6	1,424.0	1,488.5	1,563.9	1,627.8	1,695.5	1,769.1
Miscellaneous Revenue	6.1	10.2	11.3	12.0	12.3	12.7	13.4	14.2	14.6	15.1	16.0
Bond Proceeds	-	-	-	-	39.9	99.7	109.7	129.6	129.1	129.0	119.0
<b>Sub-total Revenues</b>	<b>1,731.7</b>	<b>1,625.2</b>	<b>1,657.1</b>	<b>1,687.4</b>	<b>1,768.6</b>	<b>1,884.3</b>	<b>1,971.8</b>	<b>2,085.9</b>	<b>2,177.5</b>	<b>2,273.9</b>	<b>2,365.8</b>
<b>Fund Withdrawals</b>											
R&R and General Fund	130.0	245.4	267.9	274.8	235.9	201.0	176.0	182.0	187.0	190.0	188.0
Bond Funds for Construction	70.0	-	-	-	5.3	-	7.7	-	-	3.5	10.9
Water Stewardship Fund	-	9.8	9.2	7.9	7.9	8.6	-	-	-	-	-
Treatment Surcharge Stabilization Fund	0.5	4.4	-	-	-	-	-	-	1.8	6.9	-
Decrease in Required Reserves	-	-	-	-	-	-	-	-	-	-	-
Decrease in Rate Stabilization Fund	53.4	22.3	2.9	0.3	1.1	9.0	9.2	11.5	5.4	-	-
<b>Sub-total Fund Withdrawals</b>	<b>253.9</b>	<b>281.9</b>	<b>280.0</b>	<b>283.0</b>	<b>250.2</b>	<b>218.7</b>	<b>192.9</b>	<b>193.5</b>	<b>194.2</b>	<b>200.4</b>	<b>198.9</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>\$ 1,985.6</b>	<b>\$ 1,907.1</b>	<b>\$ 1,937.1</b>	<b>\$ 1,970.3</b>	<b>\$ 2,018.8</b>	<b>\$ 2,102.9</b>	<b>\$ 2,164.7</b>	<b>\$ 2,279.4</b>	<b>\$ 2,371.7</b>	<b>\$ 2,474.3</b>	<b>\$ 2,564.8</b>
<b>Fiscal Year Sales &amp; Exchange (MAF)</b>	<b>1.97</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>	<b>1.75</b>

Totals may not foot due to rounding.



**Table 12. Ten-Year Financial Forecast, Coverage Ratios and Fund Balances (dollars in millions)**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Fiscal Year Ending	Projected	Proposed	Proposed	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
<b>RATIOS</b>											
Fixed Charge Coverage	2.0	1.6	1.6	1.6	1.5	1.6	1.5	1.5	1.5	1.4	1.4
Revenue Bond Coverage	2.7	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.6	2.7	2.9
Var. Rate Debt as % of Rev. Bond Debt	11%	12%	13%	15%	16%	19%	23%	28%	30%	31%	31%
<b>RESTRICTED FUNDS EOY balance</b>											
General Fund	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1
Water Transfer Fund	119.9	119.9	119.9	60.0	-	-	-	-	-	-	-
Other	593.1	600.5	618.7	635.5	634.9	677.7	701.4	750.4	798.5	830.0	847.3
<b>Sub-total Restricted Funds</b>	<b>829.1</b>	<b>836.5</b>	<b>854.7</b>	<b>811.6</b>	<b>751.0</b>	<b>793.8</b>	<b>817.5</b>	<b>866.5</b>	<b>914.6</b>	<b>946.1</b>	<b>963.4</b>
<b>UNRESTRICTED FUNDS EOY balance</b>											
Reserve Funds (1)	494.0	475.5	473.0	476.5	482.2	481.0	483.5	481.5	483.5	498.8	532.2
Treatment Surcharge Stabilization Fund	4.4	0.0	0.0	0.0	0.0	0.0	3.7	8.7	6.9	0.0	0.0
Water Stewardship Fund	48.2	38.4	29.2	21.3	13.5	4.8	6.4	7.9	8.9	12.6	15.8
R&R Fund	153.5	153.5	106.7	31.9	-	-	-	-	-	-	-
General Fund	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
<b>Sub-total Unrestricted Funds</b>	<b>701.0</b>	<b>668.5</b>	<b>609.9</b>	<b>530.6</b>	<b>496.6</b>	<b>486.8</b>	<b>494.5</b>	<b>499.1</b>	<b>500.2</b>	<b>512.3</b>	<b>549.0</b>
<b>TOTAL FUNDS</b>	<b>\$ 1,530.1</b>	<b>\$ 1,505.0</b>	<b>\$ 1,464.6</b>	<b>\$ 1,342.2</b>	<b>\$ 1,247.6</b>	<b>\$ 1,280.6</b>	<b>\$ 1,312.0</b>	<b>\$ 1,365.7</b>	<b>\$ 1,414.8</b>	<b>\$ 1,458.4</b>	<b>\$ 1,512.3</b>

Totals may not foot due to rounding.

(1) includes Water Rate Stabilization Fund and Revenue Remainder Fund.