



- Board of Directors  
*Finance and Insurance Committee*

4/10/2012 Board Meeting

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**8-1**

## **Subject**

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

## **Description**

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This letter recommends approval of the biennial budget for FY 2012/13 and FY 2013/14, and the revenue requirements for FY 2012/13 and FY 2013/14; and adoption of: (1) the recommended water rates and charges to be effective on January 1, 2013 and January 1, 2014; (2) the resolution fixing and adopting water rates to be effective on January 1, 2013 and January 1, 2014; (3) the resolution to fix and adopt the Readiness-to-Serve Charge effective January 1, 2013; and (4) the resolution to fix and adopt the Capacity Charge effective January 1, 2013.

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

### **PUBLIC HEARING**

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

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

### **BIENNIAL BUDGET AND RATES AND CHARGES OPTIONS**

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

Option #1 – Proposed rate increase of 7.5 percent in FY 2012/13 and 5 percent in FY 2013/14.

This option fully funds the Board's priorities as described in the January 10, 2012 Board Letter 8-1. These priorities include:

- Funding for the Capital Investment Plan (CIP) of \$257 million in FY 2012/13 and \$295 million in FY 2013/14. The CIP is carefully prioritized to fund projects that primarily focus on necessary refurbishment and replacement of aging infrastructure that are critical to maintaining water quality, reliability, and worker safety and continues to reflect the deferral of facility expansion and other projects that neither enhance reliability nor provide an adequate return on investment.
- Continued rebuilding of storage reserves by providing funding for Metropolitan to continue utilization of storage agreements in the region, the Central Valley, and the Colorado River system if current year supplies exceed demands. This initiative will help reduce the likelihood that Metropolitan will need to declare a Water Supply Allocation in coming years.
- Continued funding of conservation programs at \$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.
- Full funding of local resource plan reflects incentives for existing Local Resources Program and Groundwater Recovery Program projects. By FY 2016/17, it is anticipated that additional projects, which are eligible for incentives based on project cost, will come on-line to meet the 2010 Integrated Resources Plan Update goals for local resource development.
- Continued focus on Bay-Delta with increased funding to aggressively pursue near-term and long-term Bay-Delta solutions that will ensure a greater degree of water supply reliability for Metropolitan's State Water Project supplies. Funding is directed at habitat restoration surveys and studies, environmental documentation activities, technical evaluations and science modeling to support the Bay Delta Conservation Plan and the Delta Habitat Conservation and Conveyance Program.
- Initiate funding of Other Post Employment Benefits/Retiree Health Care (OPEB) by setting aside \$5 million in FY 2012/13, and increasing to \$10 million in FY 2013/14. Increases of \$5 million each year through FY 2016/17 are proposed to reach full funding of the actuarial required contribution for OPEB.
- Increasing reserves by \$8.3 million in FY 2013/14 and providing the likelihood of 3 percent rate increases in later years.

Option #2 – Proposed rate increases of 5 percent in FY 2012/13 and 5 percent in FY 2013/14.

This option reduces funding in the following areas:

- Reduces ability to utilize water storage if more supply becomes available by decreasing funding for these storage programs by \$8.8 million in FY 2012/13 and \$7.6 million in FY 2013/14.
- Reduces expenditures by \$5 million in each fiscal year by eliminating funding for 18 additional positions, reducing operating equipment replacement, and reducing debt administration costs, primarily due to reduced liquidity costs. Reserves are anticipated to stay at the minimum level throughout the five-year planning horizon and projected rate increases in later years are expected to be in the 3 percent to 5 percent range.

Option #3 – Proposed rate increases of 6.5 percent in FY 2012/13 and 5 percent in FY 2013/14.

- This option reduces funding similar to Option #2 but provides a higher rate increase in FY 2012/13. The 6.5 percent increase in FY 2012/13 would increase reserves by \$4.7 million in FY 2013/14 and provides a greater likelihood of 3 percent increases in later years.

The proposed biennial budget for FY 2012/13 and FY 2013/14 continues to reflect Metropolitan's key priorities while keeping proposed increases to water rates and charges as low as possible. This letter proposes a two-year (biennial) budget and corresponding two years of rates at the levels provided in Option #1. If Option #2 or

Option #3 is adopted by the Board, the cost reductions provided in Option #2 or Option #3 to accommodate the Board's request for lower rate increases will be incorporated in the proposed biennial budget.

## REVENUE REQUIREMENTS

Table 1 summarizes the revenue requirements for FY 2012/13 and FY 2013/14 under the three options.

**Table 1. Revenue Requirements by Option**

Fiscal Year	Option 1		Option 2		Option 3	
	2012/13	2013/14	2012/13	2013/14	2012/13	2013/14
<b>Departmental Operations &amp; Main</b>	\$ 340,627,600	\$ 355,688,700	\$ 337,877,600	\$ 353,088,500	\$ 337,877,600	\$ 353,088,500
<b>General District Requirements</b>						
State Water Project	593,444,201	563,752,923	593,475,189	564,045,941	593,475,189	564,045,941
Colorado River Aqueduct	36,178,684	24,926,279	36,178,684	24,926,279	36,178,684	24,926,279
Supply Programs	45,125,279	44,883,518	36,287,598	37,024,018	36,287,598	37,024,018
Demand Management	53,205,188	53,624,040	53,205,188	53,624,040	53,205,188	53,624,040
Capital Financing Program	396,979,175	469,827,124	396,229,175	468,427,124	396,229,175	468,427,124
Other O&M	30,694,400	38,129,600	29,194,400	37,129,600	29,194,400	37,129,600
Increase (Decrease) in Require	6,700,000	22,900,000	8,500,000	26,200,000	8,300,000	26,300,000
Total	1,162,326,927	1,218,043,484	1,153,070,235	1,211,377,002	1,152,870,235	1,211,477,002
<b>Revenue Offsets</b>	(124,922,474)	(121,487,735)	(124,907,622)	(121,294,607)	(124,974,621)	(121,583,052)
<b>Net Revenue Requirements</b>	\$ 1,378,032,053	\$ 1,452,244,449	\$ 1,366,040,212	\$ 1,443,170,895	\$ 1,365,773,214	\$ 1,442,982,450

Totals may not foot due to rounding

## RATES AND CHARGES BY OPTION

The detailed rates and charges under the three options are as follows:

**Table 2. Rates and Charges by Option**

Effective January 1st	2012	Option 1		Option 2		Option 3	
		2013	2014	2013	2014	2013	2014
Tier 1 Supply Rate (\$/AF)	\$106	\$149	\$157	\$140	\$148	\$142	\$150
Delta Supply Surcharge (\$/AF)	\$58	*	*	*	*	*	*
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290	\$290	\$290	\$290	\$290
System Access Rate (\$/AF)	\$217	\$228	\$247	\$223	\$243	\$228	\$247
Water Stewardship Rate (\$/AF)	\$43	\$41	\$42	\$41	\$41	\$41	\$42
System Power Rate (\$/AF)	\$136	\$190	\$164	\$189	\$161	\$190	\$163
Full Service Untreated Volumetric Cost (\$/AF)							
Tier 1	\$560	\$608	\$610	\$593	\$593	\$601	\$602
Tier 2	\$686	\$749	\$743	\$743	\$735	\$749	\$742
Replenishment Water Rate Untreated (\$/AF)	\$442	**	**	**	**	**	**
Interim Agricultural Water Program Untreated (\$/AF)	\$537	***	***	***	***	***	***
Treatment Surcharge (\$/AF)	\$234	\$260	\$302	\$254	\$297	\$258	\$301
Full Service Treated Volumetric Cost (\$/AF)							
Tier 1	\$794	\$868	\$912	\$847	\$890	\$859	\$903
Tier 2	\$920	\$1,009	\$1,045	\$997	\$1,032	\$1,007	\$1,043
Treated Replenishment Water Rate (\$/AF)	\$651	**	**	**	**	**	**
Treated Interim Agricultural Water Program (\$/AF)	\$765	***	***	***	***	***	***
Readiness-to-Serve Charge (\$M)	\$146	\$146	\$169	\$142	\$166	\$145	\$168
Capacity Charge (\$/cfs)	\$7,400	\$6,600	\$8,900	\$6,400	\$8,600	\$6,500	\$8,700

\* The Delta Supply Surcharge will be suspended after 2012.

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

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

## Policy

Metropolitan Water District Administrative Code Section 5108: Annual budget

Metropolitan Water District Administrative Code Sections 4301 (a) (b): Cost of Service and Revenue Requirement

Metropolitan Water District Administrative Code Sections 4304 (c) (f): Apportionment of Revenues and Setting of Water Rates and Charges to Raise Firm Revenues

## California Environmental Quality Act (CEQA)

CEQA determination for Options #1, #2, #3 and #4:

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

## Board Options

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### Option #1

Adopt the CEQA determination and

- a. Approve the FY 2012/13 budget and:
  - i. Appropriate \$1,099.3 million for Metropolitan O&M and operating equipment, power costs on the Colorado River Aqueduct, SWP operations, maintenance, power and replacement costs and SWP capital charges; demand management programs including the local resources and conservation credits program; and costs associated with supply programs;
  - ii. Appropriate as continuing appropriation, \$342.0 million for FY 2012/13 debt service on Metropolitan general obligation and revenue bonds; and
  - iii. Authorize the use of \$55.0 million in operating revenues to fund Replacement and Refurbishment expenditures.
- b. Approve the FY 2013/14 budget and:
  - i. Appropriate \$1,081.0 million for the for Metropolitan O&M and operating equipment, power costs on the Colorado River Aqueduct, SWP operations, maintenance, power and replacement costs and SWP capital charges; demand management programs including the local resources and conservation credits program; and costs associated with supply programs;
  - ii. Appropriate as continuing appropriation, \$344.8 million for FY 2013/14 debt service on Metropolitan general obligation and revenue bonds; and
  - iii. Authorize the use of \$125.0 million in operating revenues to fund Replacement and Refurbishment expenditures.
- c. Determine that the revenue requirement to be paid from rates and charges is \$1,378.0 million in FY 2012/13 and \$1,452.2 million in FY 2013/14;
- d. Approve water rates effective January 1, 2013, and January 1, 2014, as shown under Option #1 in Table 2 above;
- e. Adopt the Resolution fixing and adopting water rates to be effective January 1, 2013 and 2014, in the form of **Attachment 8**, using the rates shown under Option #1 in Section 1 of the Resolution;
- f. Adopt the Resolution Fixing And Adopting A Readiness-To-Serve Charge For Calendar Year 2013, in the form of **Attachment 9**, using the charge shown under Option #1 in Section 5 of the Resolution; and
- g. Adopt the Resolution Fixing And Adopting A Capacity Charge Effective January 1, 2013, in the form of **Attachment 10**, using the charge shown under Option #1 in Section 6 of the Resolution.

**Fiscal Impact:** Revenues from rates and charges of \$1,374.0 million in FY 2012/13, and \$1,457.9 million in FY 2013/14, and an increase in the effective rate of 7.5 percent in 2013 and 5 percent in 2014 if the rates and charges are adopted as recommended.

### Option #2

Adopt the CEQA determination and

- a. Approve the FY 2012/13 budget and:
  - i. Appropriate \$1,086.2 million for Metropolitan O&M and operating equipment, power costs on the Colorado River Aqueduct, SWP operations, maintenance, power and replacement costs and SWP capital charges; demand management programs including the local resources and conservation credits program; and costs associated with supply programs;
  - ii. Appropriate as continuing appropriation, \$342.0 million for FY 2012/13 debt service on Metropolitan general obligation and revenue bonds; and
  - iii. Authorize the use of \$55.0 million in operating revenues to fund Replacement and Refurbishment expenditures.

- b. Approve the FY 2013/14 budget and:
  - i. Appropriate \$1,069.8 million for Metropolitan O&M and operating equipment, power costs on the Colorado River Aqueduct, SWP operations, maintenance, power and replacement costs and SWP capital charges; demand management programs including the local resources and conservation credits program; and costs associated with supply programs;
  - ii. Appropriate as continuing appropriation, \$344.8 million for FY 2013/14 debt service on Metropolitan general obligation and revenue bonds; and
  - iii. Authorize the use of \$125.0 million in operating revenues to fund Replacement and Refurbishment expenditures.
- c. Determine that the revenue requirement to be paid from rates and charges is \$1,366.0 million in FY 2012/13 and \$1,443.2 million in FY 2013/14;
- d. Approve water rates effective January 1, 2013, and January 1, 2014 , as shown under Option #2 in Table 2 above;
- e. Adopt the Resolution fixing and adopting water rates to be effective January 1, 2013 and 2014, in the form of **Attachment 8**, using the rates shown under Option #2 in Section 1 of the Resolution;
- f. Adopt the Resolution Fixing And Adopting A Readiness-To-Serve Charge For Calendar Year 2013, in the form of **Attachment 9**, using the charge shown under Option #2 in Section 5 of the Resolution; and
- g. Adopt the Resolution Fixing And Adopting A Capacity Charge Effective January 1, 2013, in the form of **Attachment 10**, using the charge shown under Option #2 in Section 6 of the Resolution.

**Fiscal Impact:** Revenues from rates and charges of \$1,358.1 million in FY 2012/13, and \$1,422.9 million in FY 2013/14, and an increase in the effective rate of 5 percent in 2013 and 5 percent in 2014 if the rates and charges are adopted as recommended.

### Option #3

Adopt the CEQA determination and

- a. Approve the FY 2012/13 budget and:
  - i. Appropriate \$1,086.2 million for Metropolitan O&M and operating equipment, power costs on the Colorado River Aqueduct, SWP operations, maintenance, power and replacement costs and SWP capital charges; demand management programs including the local resources and conservation credits program; and costs associated with supply programs;
  - ii. Appropriate as continuing appropriation, \$342.0 million for FY 2012/13 debt service on Metropolitan general obligation and revenue bonds; and
  - iii. Authorize the use of \$55.0 million in operating revenues to fund Replacement and Refurbishment expenditures.
- b. Approve the FY 2013/14 budget and:
  - i. Appropriate \$1,069.8 million for Metropolitan O&M and operating equipment, power costs on the Colorado River Aqueduct, SWP operations, maintenance, power and replacement costs and SWP capital charges; demand management programs including the local resources and conservation credits program; and costs associated with supply programs;
  - ii. Appropriate as continuing appropriation, \$344.8 million for FY 2013/14 debt service on Metropolitan general obligation and revenue bonds; and
  - iii. Authorize the use of \$125.0 million in operating revenues to fund Replacement and Refurbishment expenditures.
- c. Determine that the revenue requirement to be paid from rates and charges is \$1,365.8 million in FY 2012/13 and \$1,443.0 million in FY 2013/14;
- d. Approve water rates effective January 1, 2013, and January 1, 2014 , as shown under Option 3 in Table 2 above;
- e. Adopt the Resolution Fixing And Adopting Water Rates To Be Effective January 1, 2013 and 2014, in the form of **Attachment 8**, using the rates shown under Option 3 in Section 1 of the Resolution;
- f. Adopt the Resolution Fixing And Adopting A Readiness-To-Serve Charge For Calendar Year 2013, in the form of **Attachment 9**, using the charge shown under Option 3 in Section 5 of the Resolution ; and
- g. Adopt the Resolution Fixing And Adopting A Capacity Charge Effective January 1, 2013, in the form of **Attachment 10**, using the charge shown under Option 3 in Section 6 of the Resolution.

**Fiscal Impact:** Revenues from rates and charges of \$1,367.6 million in FY 2012/13, and \$1,443.5 million in FY 2013/14, and an increase in the effective rate of 6.5 percent in 2013 and 5 percent in 2014 if the rates and charges are adopted as recommended.

**Option #4**

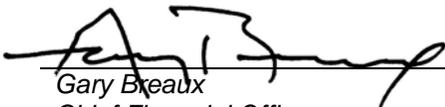
Adopt the CEQA determination and instruct staff to modify the proposed budgets and the recommended rates and charges.

**Fiscal Impact:** Unknown

**Staff Recommendation**

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Option #1

	4/5/2012
_____ Gary Breaux Chief Financial Officer	Date
	4/5/2012
_____ Jeffrey Kightlinger General Manager	Date

**Attachment 1 – Biennial FY 2012/13 and FY 2013/14 Budget Summary**

**Attachment 2 – Metropolitan Water District of Southern California, FY 2012/13 Cost of Service Option 1**

**Attachment 3 – Metropolitan Water District of Southern California, FY 2013/14 Cost of Service Option 1**

**Attachment 4 – Metropolitan Water District of Southern California, FY 2012/13 Cost of Service Option 2**

**Attachment 5 – Metropolitan Water District of Southern California, FY 2013/14 Cost of Service Option 2**

**Attachment 6 – Metropolitan Water District of Southern California, FY 2012/13 Cost of Service Option 3**

**Attachment 7 – Metropolitan Water District of Southern California, FY 2013/14 Cost of Service Option 3**

**Attachment 8 – Resolution Fixing and Adopting Water Rates to be effective January 1, 2013, and 2014**

**Attachment 9 – Resolution to Fix and Adopt Readiness-to-Serve Charge**

**Attachment 10 – Resolution to Fix and Adopt Capacity Charge**

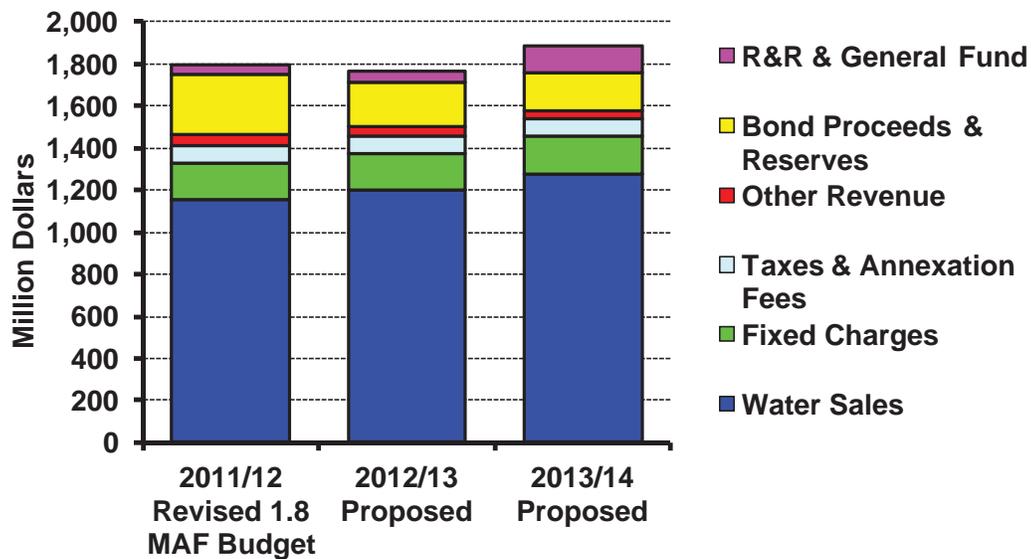
**Attachment 11 – Public Hearing Comments**

**Biennial Budget Summary  
FY 2012/13 & 2013/14**

The biennial budget includes a discussion of sources and uses of funds. The budget is developed and monitored on a modified accrual basis. This means that revenues and expenses are recognized in the period they are earned and incurred regardless of whether cash has been received or disbursed.

The modified-accrual basis of accounting is in accordance with Generally Accepted Accounting Principles (GAAP) and provides a better match of revenues and expenses for budgeting and reporting.

**Figure 1. Sources of Funds**



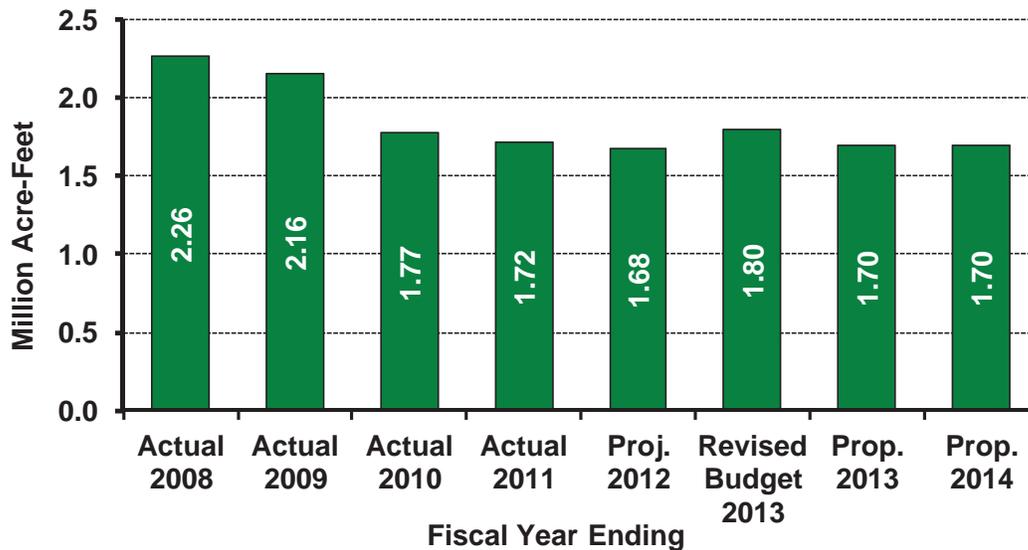
**SOURCES OF FUNDS**

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 \$1.50 billion for fiscal year 2012/13 and \$1.58 billion for fiscal year 2013/14. For 2012/13 this is \$35.6 million more than the 2011/12 revised budget and for 2013/14 this is \$80.4 million more than 2012/13. The increase in revenues is due to increases in water rates and charges in 2012, 2013 and 2014. 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 \$1,197.2 million in 2012/13 and \$1,271.3 million in 2013/14 and are based on rates and charges adopted by the Board for January 1, 2012. In addition, a 7.5 percent rate increase is estimated for January 1, 2013 and 5.0 percent rate increase for January 1, 2014.

Water sales for both 2012/13 and 2013/14 are estimated to be 1.70 million acre-feet (MAF) during the July through June fiscal year period.

**Figure 2. Water Sales Trend \***

\* Proposed budget for FY2012-13 and FY 2013-14 are based on modified accrual and represent water sales for July through June, prior years are based on cash basis and represent water sales for May through April.

The 2012/13 fiscal year water sales include 1.52 MAF of firm sales, zero replenishment sales, zero agricultural sales, and 185 thousand acre-feet (TAF) of exchange sales. Treated sales are estimated to be 973 TAF or 57 percent of total sales in 2012/13. The 2013/14 fiscal year water sales include 1.50 MAF of firm sales, zero replenishment sales, zero agricultural sales, and 198 TAF of exchange sales. Treated sales are estimated to be 973 TAF or 57 percent of total sales in 2013/14. 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 Contract (SWC) are estimated to be \$82.6 million in 2012/13 and \$81.1 million in 2013/14.

#### **Fixed Charges**

The fixed charges are comprised of the Capacity Charge and Readiness-to-Serve Charge. In 2012/13 these charges are estimated to generate \$30.8 million and \$146.0 million, respectively. In 2013/14 these charges are estimated to generate \$29.1 million and \$157.5 million, respectively. In total this represents a \$6.5 million increase from the 2011/12 to the 2012/13 and a \$9.8 million increase from the 2012/13 to the 2013/14 budget.

#### **Other Revenue**

Interest earnings are estimated to total \$13.8 and \$14.3 million for 2012/13 and 2013/14 respectively (including trust accounts and construction funds).

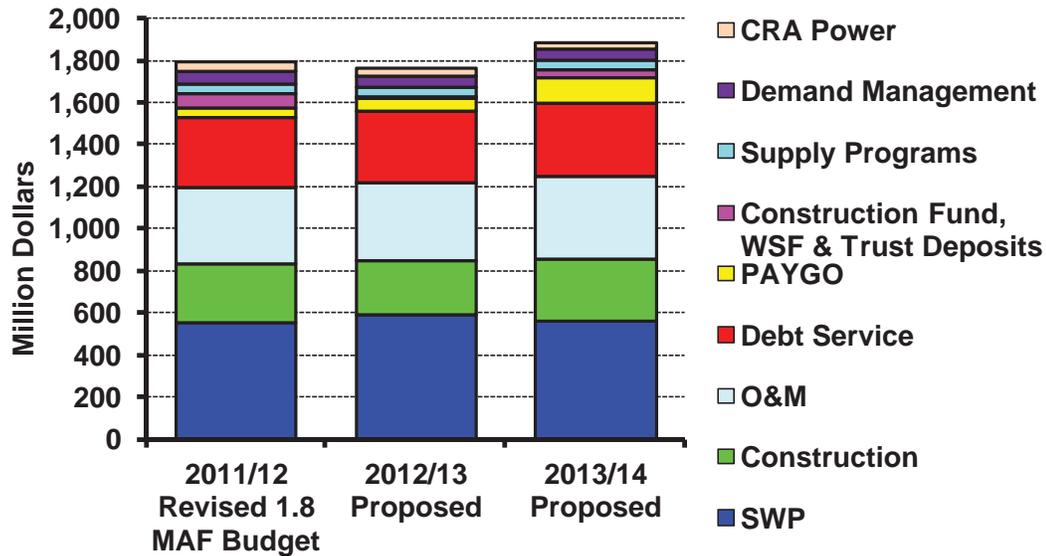
Receipts from hydroelectric and Colorado River Aqueduct (CRA) power sales are estimated to be \$23.6 million for 2012/13 and \$20.5 million for 2013/14.

**Other Sources**

To meet the on-going funding requirements of the CIP, Metropolitan plans to issue \$190 million of fixed rate bonds in 2012/13 and \$180 million of fixed rate bonds in 2013/14. These bonds are expected to generate \$352.8 million in bond proceeds, after about \$3 million to cover the cost of

issuance and \$14 million to fund reserves. The remaining CIP funding requirements will be met from current operating funds (i.e., PAYGO from the R&R and General Fund). In 2012/13, a total of \$1.78 billion will be available for expenditures and other obligations and in 2013/14 this figure will increase to \$1.89 billion.

**Figure 3. Uses of Funds**



**USES OF FUNDS**

Total uses of funds are \$1.76 billion for 2012/13 and \$1.88 billion for 2013/14. Figure 3 shows the breakdown of expenditures and other obligations that make up the Uses of Funds for 2012/13 and 2013/14.

**Colorado River Aqueduct Power**

CRA power costs are projected to be \$36.2 million and \$24.9 million based on pumping 727 TAF and 890 TAF at Whitsett Intake Pumping Plant respectively in 2012/13 and 2013/14. 2013/14 is \$11.2 million lower despite the increase in pumping as a result of the expected use of exchange energy in 2013/14.

**State Water Contract**

State Water Contract (SWC) expenditures are budgeted at \$593.4 million for 2012/13 and \$563.8 million in 2013/14. This is based on

total deliveries of 1.26 MAF for 2012/13, of which 120 TAF are received via exchange, and 1.14 MAF for 2013/14, of which 108 TAF are received via exchange.

SWC power costs are expected to be \$270.7 million for 2012/13 and \$230.0 million for 2013/14 and include the cost of pumping 1.14 MAF and 1.03 MAF respectively.

For 2012/13 the average total unit cost of SWC power is expected to be about \$238 per acre-foot, which includes \$61 per acre-foot for fixed power costs and \$176 per acre-foot for variable pumping costs. For 2013/14 the average total unit cost of SWC power is expected to be about \$223 per acre-foot, which includes \$29 per acre-foot for fixed power costs and \$193 per acre-foot for variable pumping costs.

SWC minimum operations, maintenance, power, and replacement charges are estimated to increase \$5.1 million to \$184.6 million in 2013/14. Capital charges are expected to increase \$5.9 million to \$149.2 million in 2013/14.

### 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 has entered into agreements to provide financial assistance to water-recycling projects. Recycling projects that receive Metropolitan contributions are expected to produce 162 TAF of recycled water, principally for landscape irrigation, groundwater recharge, and industrial uses in 2012/13 and 169 TAF in 2013/14. Metropolitan is expected to spend \$24.7 million in 2012/13 and \$24.9 million on these efforts in 2013/14.

Metropolitan has also entered into agreements to provide financial assistance to projects to recover contaminated groundwater. These

groundwater recovery projects are expected to produce about 58 TAF in 2012/13 at a cost to Metropolitan of \$8.5 million. In 2013/14 groundwater recovery projects are expected to produce about 62 TAF at a cost to Metropolitan of \$8.7 million.

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 2012/13 and 2013/14 funding for CCP has been budgeted at \$20.0 million per year.

### OPERATIONS AND MAINTENANCE

The proposed 2012/13 operations and maintenance (O&M) budget, including operating equipment purchases, is estimated to be \$371.3 million. This is \$15.0 million higher than the 2011/12 Revised 1.8 MAF budget of \$356.3 million presented to the Board in April 2011. The proposed 2013/14 O&M budget is \$393.8 million, an increase of \$22.5 million as compared to the 2012/13 proposed budget. Table 1 summarizes the O&M budget by expenditure type. A more detailed discussion of significant factors impacting the proposed O&M budgets follows Table 1.

**Table 1. 2012/13 Operations & Maintenance Annual Budget (dollars) by Expenditure Type**

	2011/12 Revised 1.8 MAF Budget	2012/13 Budget	2012/13 Proposed	2013/14 Proposed	2012/13 Budget vs. 2012/13 Proposed	2012/13 Proposed vs. 2013/14 Proposed
Salaries and Benefits*	224,881,800	229,248,400	226,059,500	238,244,500	(3,188,900)	12,185,000
Variable Treatment **	22,891,400	24,281,700	25,512,700	26,409,500	1,231,000	896,800
Outside Services	38,279,600	38,868,200	41,439,000	41,239,300	2,570,800	(199,700)
Materials & Supplies ***	46,657,200	48,106,900	47,616,400	49,795,400	(490,500)	2,179,000
Cargill Settlement & OPEB	500,000	-	5,000,000	10,000,000	5,000,000	5,000,000
Other	15,604,400	20,187,400	17,652,800	19,936,700	(2,534,600)	2,283,900
Operating Equipment	7,489,400	7,344,700	8,041,600	8,192,900	696,900	151,300
<b>Total O&amp;M</b>	<b>356,303,800</b>	<b>368,037,300</b>	<b>371,322,000</b>	<b>393,818,300</b>	<b>3,284,700</b>	<b>22,496,300</b>
Total Budgeted Positions	1,921	1,921	1,907	1,907	(14)	-

\* Includes Overhead Credit for Construction.

\*\* Costs associated with treatment plants only.

\*\*\* Without chemicals associated with treatment plants.

### **2012/13 O&M Budget**

The proposed 2012/13 O&M budget includes \$371.3 million for labor and benefits, water treatment chemicals, power, and solids handling, materials and supplies, professional services, and operating equipment purchases. This is \$15.0 million higher than the 2011/12 Revised 1.8 MAF budget of \$356.3 million reviewed by the Board in April 2011 due primarily to initial funding of Metropolitan's Other Post-Employment Benefits (OPEB) obligation; variable treatment costs; initiation of the PC Replacement Program; an increase in employee medical insurance costs; promotion of key initiatives and legal costs related to the Bay-Delta; and increased litigation costs related to water quality, employment, and water rates.

The proposed 2012/13 budget is \$3.3 million higher than the provisional 2012/13 budget of \$368.0 million approved by the Board in April 2011 due primarily to beginning the phasing in process towards full funding of the OPEB obligation.

**Salaries and Benefits** – Labor costs, not including those charged to construction, are \$226.7 million. Although the proposed 2012/13 budget assumes no across-the-board salary increases, consistent with the bargaining unit contracts approved by the Board, overall O&M labor is \$1.2 million higher than the Revised 1.8 MAF 2011/12 budget. This increase reflects a \$3.1 million increase in the cost of employee benefits as compared to the 2011/12 budget driven primarily by employee and retiree medical insurance cost increases. In addition, the O&M budget also reflects \$1.6 million for merit increases for eligible employees and a \$0.9 million increase in overtime for planned shutdown support offset by a reduction of \$2.4 million for elimination of 15 positions and an increase in the construction overhead applied as a credit reducing O&M labor by \$2.0 million.

The total authorized personnel complement for 2012/13 for both O&M and capital work is 1,907 positions, including 24 agency and district temporary full-time equivalents (FTEs), and reflects a decrease of 15 regular

positions from the 2011/12 budget. Total authorized regular employee positions are 138 positions below the 2008/09 budget. The proposed 2012/13 O&M budget assumes a vacancy rate of approximately 2.7 percent. Although this slightly less than the 3.2 percent assumed for the 2011/12 O&M budget, 10 regular employee positions are held unfunded in lieu of a vacancy rate. The value of these 10 positions increases the overall vacancy rate to about 3.3 percent, resulting in a total of 1,542 budgeted O&M positions.

**Other O&M** – As a result of reduced revenues from water sales, initial funding of Metropolitan's OPEB obligation to its current and future retirees was eliminated from the Revised 1.8 MAF 2011/12 budget. The proposed 2012/13 budget includes \$5 million to renew that commitment. Consistent with Metropolitan's IT Strategic Plan, the proposed 2012/13 budget includes \$1.4 million to initiate replacement of outdated desktop workstations at the end of their anticipated useful life as part of the two-year PC Replacement Program. This program was deferred one year beyond the planned refresh cycle to mitigate budget increases, but now needs to proceed since many computers will be about six years old by the time of replacement. The General Manager's costs in support of Bay-Delta activities for near-term and long-term activities and the General Counsel's legal costs related to water quality, employment, and water rates are expected to increase by \$2.2 million. Chemicals, solids, and power reflect the cost of the water treatment process and is anticipated to increase by \$1.2 million in 2012/13 driven primarily by an overall increase in chemical unit commodity prices, increased treated water volumes, higher electricity rates, and refined assumptions on solids removal.

### **2013/14 O&M Budget**

The proposed 2013/14 O&M budget is \$393.8 million, an increase of \$22.5 million as compared to the 2012/13 proposed budget. This is primarily due to merit increases for eligible employees, an increase in funding of OPEB, variable treatment costs, and completion of the PC Replacement Program.

**Salaries and Benefits** – The proposed 2013/14 O&M labor budget is about \$12.2 million higher than the proposed 2012/13 budget driven primarily by \$13.2 million in merit increases for eligible employees partially offset by an increase in the construction overhead applied as a credit reducing O&M labor by \$0.6 million and reductions in overtime, agency temporary, and district temporary employees.

The total personnel complement for 2013/14 for both O&M and capital work remains at 1,907 positions, including 24 agency and district temporary FTEs. The proposed 2013/14 O&M budget assumes a vacancy rate of approximately 2.9 percent. The 2013/14 O&M budget retains 6 regular employee positions held unfunded in lieu of a vacancy rate. Including the value of these positions increases the effective vacancy rate to about 3.3 percent, resulting in a total of 1,542 budgeted O&M positions. Additional changes

in personnel will depend on long-range staffing plan inputs related primarily to CIP impacts, a continued emphasis on maintenance management best practices, and careful review of vacated positions as a result of increasing employee retirements.

**Other O&M** – The proposed 2013/14 budget increases the ongoing funding of Metropolitan's OPEB obligation to \$10 million, a \$5 million increase as compared to 2012/13. The proposed 2013/14 budget also funds \$3.5 million for completion of the two-year PC Replacement Program to replace outdated desktop workstations at the end of their anticipated useful life, an increase of \$2.1 million as compared to 2012/13. The cost of chemicals, power, and sludge disposal incurred in the water treatment process is anticipated to increase by \$0.9 million in 2013/14 driven primarily by modest inflationary pressure on chemical commodity prices and electricity rates.

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

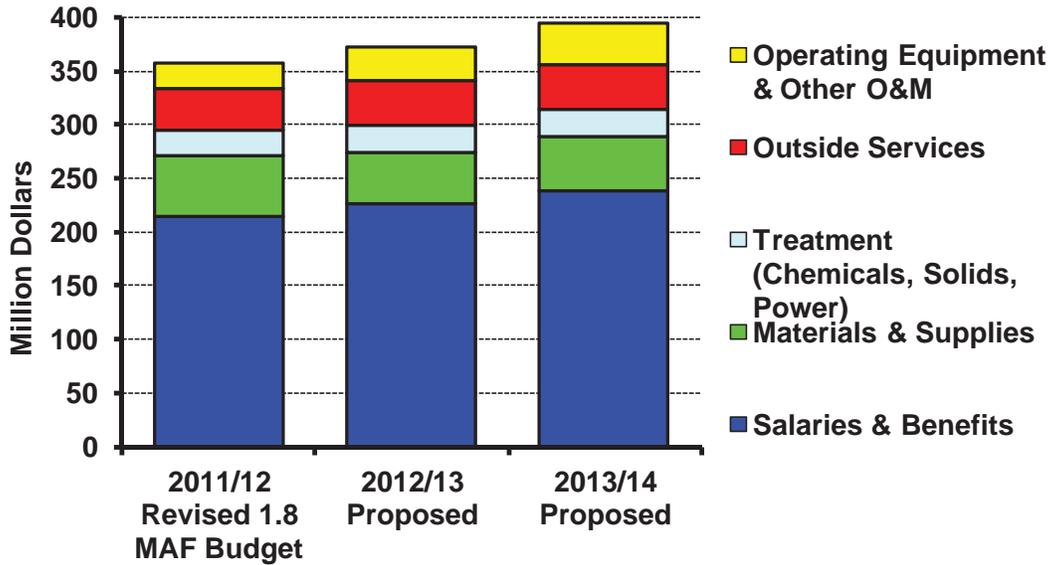


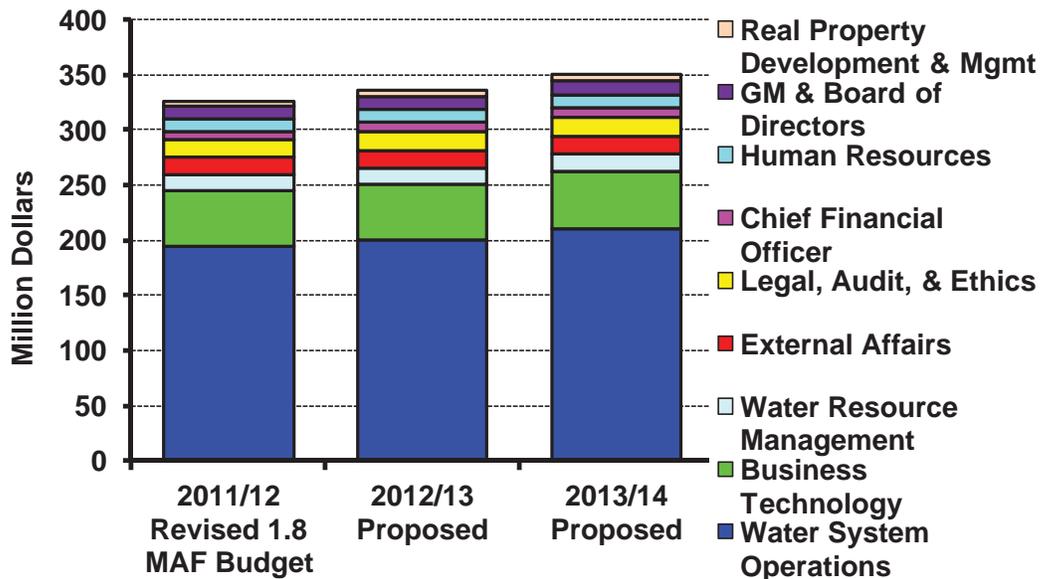
Figure 4 summarizes the total departmental O&M budget by expenditure type, of which 59 percent is for salaries and benefits.

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 59 percent of the total departmental budget for both 2011/12 and 2012/13.

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	2011/12 Revised 1.8 MAF Budget	2012/13 Budget	2012/13 Proposed	2013/14 Proposed	2012/13 Budget vs. 2012/13 Proposed	%	2012/13 Proposed vs. 2013/14 Proposed	%
Office of the General Manager	\$ 10,450,800	\$ 10,601,700	\$ 12,287,200	\$ 12,666,200	\$ 1,685,500	15.9%	\$ 379,000	3.1%
Water System Operations w/o Variable Treatment	172,304,600	176,710,700	175,947,200	184,581,500	(763,500)	(0.4%)	8,634,300	4.9%
Water Resource Management	14,470,700	15,444,900	14,903,500	15,197,200	(541,400)	(3.5%)	293,700	2.0%
Engineering Services	23,916,400	24,764,900	24,476,000	25,759,100	(288,900)	(1.2%)	1,283,100	5.2%
Business Technology	49,877,100	50,340,500	49,321,700	52,106,300	(1,018,800)	(2.0%)	2,784,600	5.6%
Real Property Development & Mgmt	5,560,900	5,839,600	5,021,000	5,288,300	(818,600)	(14.0%)	267,300	5.3%
Human Resources	11,477,400	11,672,800	11,545,800	11,853,000	(127,000)	(1.1%)	307,200	2.7%
Office of the Chief Financial Officer	8,262,300	8,385,200	8,396,500	8,728,600	11,300	0.1%	332,100	4.0%
External Affairs	15,920,600	16,079,900	15,521,800	15,998,100	(558,100)	(3.5%)	476,300	3.1%
<b>Subtotal - General Manager's Dep.</b>	<b>312,240,800</b>	<b>319,840,200</b>	<b>317,420,700</b>	<b>332,178,300</b>	<b>(2,419,500)</b>	<b>(0.8%)</b>	<b>14,757,600</b>	<b>4.6%</b>
General Counsel	12,552,600	12,535,900	14,666,300	14,555,900	2,130,400	17.0%	(110,400)	(0.8%)
General Auditor	2,682,000	2,682,000	2,688,500	2,759,500	6,500	0.2%	71,000	2.6%
Ethics Office	573,800	573,700	570,800	592,400	(2,900)	(0.5%)	21,600	3.8%
Overhead Credit from Construction	(18,230,600)	(19,408,300)	(20,231,400)	(20,806,900)	(823,100)	4.2%	(575,500)	2.8%
<b>Total Departmental Budget</b>	<b>309,818,600</b>	<b>316,223,500</b>	<b>315,114,900</b>	<b>329,279,200</b>	<b>(1,108,600)</b>	<b>(0.4%)</b>	<b>14,164,300</b>	<b>4.5%</b>
<b>Other O&amp;M</b>								
Cargill Settlement	500,000	-	-	-	-	NA	-	NA
PC Replacement	-	1,400,000	1,400,000	3,525,000	-	NA	2,125,000	151.8%
CCP Vendor Administration	1,839,100	1,589,100	1,589,100	1,589,100	-	NA	-	NA
Performance Programs	673,000	673,000	673,000	673,000	-	NA	-	NA
Association Dues	4,432,500	4,849,700	4,849,700	4,981,000	-	NA	131,300	2.7%
OPEB Funding	-	-	5,000,000	10,000,000	5,000,000	NA	5,000,000	100.0%
Contingency	-	2,681,200	-	-	(2,681,200)	(100.0%)	-	NA
Insurance	7,504,000	7,766,600	7,766,600	7,766,600	-	NA	-	NA
Leases	600,000	630,000	776,600	790,000	146,600	23.3%	13,400	1.7%
Taxes	555,800	597,800	597,800	612,000	-	NA	14,200	2.4%
<b>Subtotal - Other</b>	<b>16,104,400</b>	<b>20,187,400</b>	<b>22,652,800</b>	<b>29,936,700</b>	<b>2,465,400</b>	<b>12.2%</b>	<b>7,283,900</b>	<b>32.2%</b>
<b>TOTAL OPERATIONS &amp; MAINTENANCE</b>	<b>325,923,000</b>	<b>336,410,900</b>	<b>337,767,700</b>	<b>359,215,900</b>	<b>1,356,800</b>	<b>0.4%</b>	<b>21,448,200</b>	<b>6.3%</b>
Operating Equipment	7,489,400	7,344,700	8,041,600	8,192,900	696,900	9.5%	151,300	1.9%
Variable Treatment	22,891,400	24,281,700	25,512,700	26,409,500	1,231,000	5.1%	896,800	3.5%
<b>GRAND TOTAL</b>	<b>\$ 356,303,800</b>	<b>\$ 368,037,300</b>	<b>\$ 371,322,000</b>	<b>\$ 393,818,300</b>	<b>\$ 3,284,700</b>	<b>0.9%</b>	<b>\$ 22,496,300</b>	<b>6.1%</b>

Totals may not foot due to rounding

**LABOR**

The total authorized positions (including temporary workers) for 2012/13 and 2013/14 for both O&M and capital work is 1,907 positions, a reduction of fifteen regular full time equivalent positions from 2011/12. Total authorized O&M positions are down by 15 positions to 1,619 in 2012/13 and drop one more position to a total of 1,618 in 2013/14. Positions dedicated to capital work remain flat during the biennium. The proposed 2012/13 O&M budget assumes a vacancy rate of approximately 2.7 percent and holds 10 regular employee positions unfunded. When the value of these 10 positions is taken into account, the effective overall O&M vacancy rate is about 3.3 percent, which is about the

same as the 3.2 percent rate assumed for the 2011/12 budget. Similarly, the proposed 2013/14 O&M budget assumes a vacancy rate of approximately 2.9 percent and holds 6 regular employee positions unfunded in lieu of a vacancy rate, resulting in an effective O&M vacancy rate of about 3.3 percent. The effect of the vacancy rate and the unfunded positions reduces the number of budgeted O&M regular positions to 1,542 in both fiscal years. An estimated vacancy impact similarly affects the authorized positions budgeted for capital work reducing the budgeted capital regular positions to 256 in both fiscal years. The authorized personnel complement is broken down in Tables 3 and 4.

**Table 3. Authorized Regular and Temporary Positions**

	2010/11 Budget	2011/12 Budget	2012/13 Proposed	2013/14 Proposed	2011/12 Budget vs. 2012/13 Proposed	2012/13 Proposed vs. 2013/14 Proposed
Regular Full Time Positions	1,899	1,898	1,883	1,883	-15	0
District Temporary Positions	22	18	18	18	0	0
Agency Temporary Positions	3	6	6	6	0	0
<b>Total</b>	<b>1,924</b>	<b>1,921</b>	<b>1,907</b>	<b>1,907</b>	<b>-15</b>	<b>0</b>

Totals may not foot due to rounding.

**Table 4. Authorized O&M and Capital Positions**

	2011/12 Budget	2012/13 Proposed	2013/14 Proposed
<b>O&amp;M Positions</b>			
Regular Full Time Positions	1,613	1,599	1,598
District & Agency Temporary Positions	21	20	20
<b>Total O&amp;M</b>	<b>1,634</b>	<b>1,619</b>	<b>1,618</b>
<b>Capital Positions</b>			
Regular Full Time Positions	285	284	285
District & Agency Temporary Positions	3	4	3
<b>Total Capital</b>	<b>287</b>	<b>288</b>	<b>289</b>
<b>GRAND TOTAL</b>	<b>1,921</b>	<b>1,907</b>	<b>1,907</b>

Totals may not foot due to rounding.

## Supply Programs

Major supply program expenditures for 2012/13 and 2013/14 are estimated to be \$45.1 million and \$44.9 million respectively and include (may not foot due to rounding):

- \$13.7 million in 2012/13 and \$13.4 million in 2013/14 for Central Valley Storage Programs;
- \$13.0 million in 2012/13 and \$13.7 million in 2013/14 for operating and maintaining the IID/MWD conservation agreement;
- \$13.3 million in 2012/13 and \$12.2 million in 2013/14 for Colorado Programs;
- \$4.8 million in 2012/13 and \$4.7 million in 2013/14 for the Palo Verde Irrigation District (PVID) Land Management Program;
- \$0.1 million in 2012/13 and \$0.6 million in 2013/14 for State Water Project Transfer Programs; and
- \$0.3 million in 2012/13 and \$0.3 million in 2013/14 for In-Basin Programs.

## ANNUAL CAPITAL INVESTMENT PLAN

The CIP budget for 2012/13 and 2013/14 is estimated to be \$257.3 million and \$294.6 million in 2013/14 and is funded by a combination of debt and current operating revenues (R&R and General Fund). The 2012/13 capital budget is \$89.5 million lower than the 2011/12 budget and the 2013/14 capital budget is \$37.3 million higher than the 2012/13 budget.

The CIP is funded by a combination of debt and current operating revenues (PAYGO). The two largest areas of expenditures in the 2012/13 and 2013/14 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 includes R&R and other projects that are funded from current operating revenues in the R&R and General Fund. In total these funds

are commonly referred to as Pay-As-You-Go (PAYGO) funding. The PAYGO funding for 2012/13 has been budgeted at \$55 million. In 2013/14 PAYGO funding has been budgeted at \$125 million and enables the majority of R&R projects to be funded from PAYGO in 2013/14.

### Debt Service

The portion of the CIP that is not funded from cash will be funded from bond proceeds. In 2012/13, \$202.3 million of capital will be funded with bond proceeds. In 2013/14, \$169.6 million of capital will be funded with bond proceeds. Metropolitan plans to issue \$190 million in new debt in 2012/13 and an additional \$180 million in 2013/14. This will result in construction proceeds of \$352.8 million, after allowing for about \$3 million to cover the cost of issuance and \$14 million to fund reserves.

Debt service payments in 2012/13 are budgeted to be \$342.0 million and include \$40.4 million in G.O. bond debt service, \$293.6 million in revenue bond debt service, \$8.4 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 2012/13 are expected to be \$9.2 million more than the revised 2011/12 budget.

Debt service payments in 2013/14 are budgeted to be \$344.8 million and include \$40.4 million in G.O. bond debt service, \$294.4 million in revenue bond debt service, \$8.7 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 2013/14 are expected to be \$2.8 million more than the 2012/13 budget.

Metropolitan currently has \$4.8 billion in outstanding debt. Of this amount, \$4.6 billion is revenue bond debt, of which 11 percent is in a variable rate mode.

### Reserve Transfers

The 2012/13 budget forecasts a \$1.9 million increase in reserves by June 30, 2013. The Water Rate Stabilization Fund (WRSF) and the Treatment Surcharge Stabilization Fund (TSSF)

are expected to be drawn down \$8.0 million. The Revenue Remainder Fund is expected to increase by \$6.0 million and the Water Stewardship Fund (WSF) is expected to increase by \$3.9 million.

The 2013/14 budget forecasts a \$8.3 million increase in reserves by June 30, 2014. The Water Rate Stabilization Fund (WRSF) and the Treatment Surcharge Stabilization Fund (TSSF) are expected to increase \$4.6 million. The Revenue Remainder Fund is expected to increase by \$2.7 million and the Water Stewardship Fund (WSF) is expected to increase by \$1.1 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 \$967.9 million at June 30, 2013. Of that total, \$720.9 million is restricted by bond covenants, contracts, or board policy, and \$246.9 million is unrestricted. In addition, fund balances are budgeted to be \$1,006.4 million at June 30, 2014. Of that total, \$752.2 million is restricted by bond covenants, contracts, or board policy, and \$254.2 million is unrestricted.

On June 30, 2013 the minimum and maximum reserve fund targets are estimated to be \$198.3 million and \$472.6 million, respectively. Based on projected revenues and expenditures, it is estimated that the balance in the WRSF, TSSF, Revenue Remainder Fund, and WSF will total about \$221.0 million, about \$22.7 million over the minimum target.

On June 30, 2014 the minimum and maximum reserve fund targets are estimated to be \$201.0 million and \$485.0 million, respectively. Based on projected revenues and expenditures, it is estimated that the balance in the WRSF, TSSF, Revenue Remainder Fund, and WSF will total about \$229.3 million, about \$28.3 million over the minimum target.

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

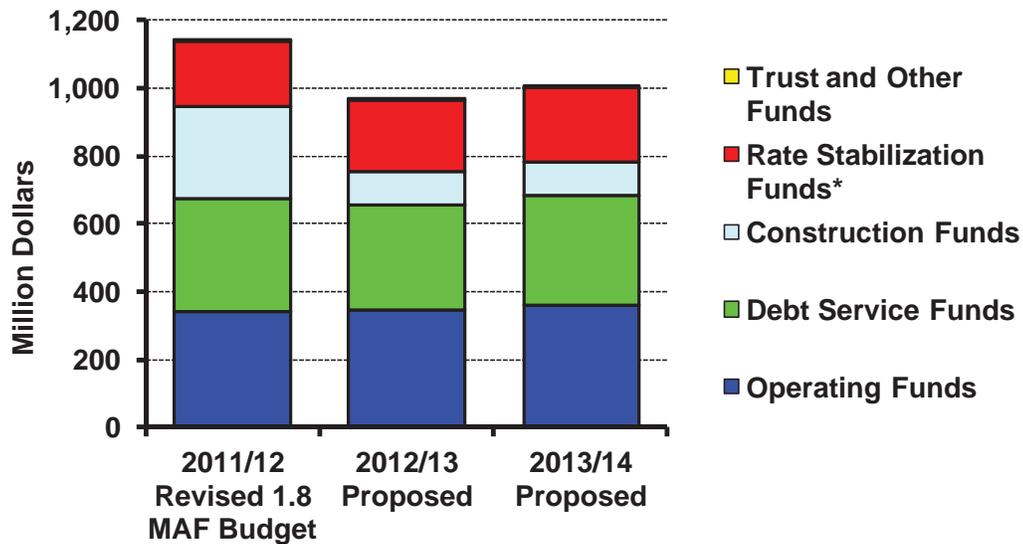
	Restricted		Unrestricted	Total
	Contractual	Board		
<b>2012/13 Proposed</b>				
Operating Funds	231.1	114.8		345.9
Debt Service Funds	311.2			311.2
Construction Funds	62.8		33.8	96.6
Rate Stabilization Funds*			213.2	213.2
Trust and Other Funds	1.0			1.0
<b>Total June 30, 2013</b>	<b>606.1</b>	<b>114.8</b>	<b>246.9</b>	<b>967.9</b>
<b>2013/14 Proposed</b>				
Operating Funds	238.9	123.1		362.0
Debt Service Funds	322.6			322.6
Construction Funds	66.6		33.8	100.4
Rate Stabilization Funds*			220.5	220.5
Trust and Other Funds	1.0			1.0
<b>Total June 30, 2014</b>	<b>629.1</b>	<b>123.1</b>	<b>254.2</b>	<b>1,006.4</b>

Based on modified accrual accounting.

Totals may not foot due to rounding.

\* includes Water Rate Stabilization Fund (including SDCWA litigation amount), Water Treatment Surcharge Stabilization Fund and Revenue Remainder.

**Figure 6. Fund Distribution by Type**



\* includes Water Rate Stabilization Fund (including SDCWA litigation amount), Water Treatment Surcharge Stabilization Fund and Revenue Remainder.

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

	2010/11 Actual	2011/12 Revised 1.8 MAF Budget	2011/12 Projected	2012/13 Budget	2012/13 Proposed	2013/14 Proposed	2012/13	2013/14
							Proposed Compared to	Proposed Compared to
							2011/12 Revised 1.8 MAF Budget	2012/13 Proposed
<b>USES OF FUNDS</b>								
<b>Expenditures</b>								
State Water Contract	\$ 491.9	\$ 557.5	\$ 508.3	\$ 552.7	\$ 593.4	\$ 563.8	\$ 36.0	\$ (29.7)
Supply Programs	101.5	47.5	64.0	45.4	45.1	44.9	(2.4)	(0.2)
Colorado River Power	46.9	45.4	33.0	46.5	36.2	24.9	(9.2)	(11.3)
Debt Service	314.0	332.8	333.3	355.3	342.0	344.8	9.2	2.8
Demand Management	48.2	59.1	55.1	60.7	53.2	53.6	(5.9)	0.4
Departmental O&M	296.7	309.8	317.9	316.2	315.1	329.3	5.4	14.2
Treatment Chemicals, Solids & Power	23.2	22.9	32.2	24.3	25.5	26.4	2.6	0.9
Other O&M	10.7	23.6	22.8	27.6	30.7	38.1	7.1	7.4
<b>Sub-total Expenditures</b>	<b>1,333.1</b>	<b>1,398.5</b>	<b>1,366.5</b>	<b>1,428.6</b>	<b>1,441.3</b>	<b>1,425.8</b>	<b>42.7</b>	<b>(15.4)</b>
<b>Capital Investment Plan</b>	<b>250.4</b>	<b>281.9</b>	<b>192.5</b>	<b>346.8</b>	<b>257.3</b>	<b>294.6</b>	<b>(24.7)</b>	<b>37.3</b>
<b>Fund Deposits</b>								
R&R and General Fund	45.0	45.0	45.0	60.0	55.0	125.0	10.0	70.0
Revenue Bond Construction	73.0	20.9	-	-	-	2.9	(20.9)	2.9
Water Stewardship Fund	1.6	-	2.3	-	3.9	1.1	3.9	(2.8)
Interest for Construction & Trust Funds	3.4	3.6	2.5	2.5	1.0	0.9	(2.6)	(0.1)
Increase in Required Reserves	-	44.5	16.9	58.2	6.7	29.0	(37.8)	22.3
Increase in Rate Stabilization Fund	-	-	-	11.3	-	4.6	-	4.6
Other Fund Activity	4.4	-	-	-	-	-	-	-
<b>Sub-total Fund Deposits</b>	<b>127.4</b>	<b>114.0</b>	<b>66.8</b>	<b>132.0</b>	<b>66.7</b>	<b>163.5</b>	<b>(47.4)</b>	<b>96.9</b>
<b>TOTAL USES OF FUNDS</b>	<b>\$ 1,710.9</b>	<b>\$ 1,794.5</b>	<b>\$ 1,625.7</b>	<b>\$ 1,907.4</b>	<b>\$ 1,765.2</b>	<b>\$ 1,884.0</b>	<b>\$ (29.3)</b>	<b>\$ 118.7</b>
<b>SOURCES OF FUNDS</b>								
<b>Revenues</b>								
Taxes	\$ 87.3	\$ 80.0	\$ 80.0	\$ 81.6	\$ 81.6	\$ 80.1	\$ 1.6	\$ (1.5)
Annexations	0.6	1.0	1.0	1.0	1.0	1.0	-	-
Interest Income	20.0	18.0	18.2	18.7	13.8	14.3	(4.3)	0.5
Hydro Power	22.1	21.5	26.0	20.5	23.6	20.9	2.1	(2.6)
Fixed Charges (RTS & Capacity Charge)	153.5	170.2	170.2	186.9	176.8	186.6	6.5	9.8
Water Sales Revenue	995.6	1,155.4	1,069.5	1,228.3	1,197.2	1,271.3	41.8	74.1
Miscellaneous Revenue	68.2	18.2	35.9	19.5	6.0	6.1	(12.2)	0.1
Bond Proceeds and Reimbursements	288.2	268.0	20.0	99.2	179.3	178.6	(88.7)	(0.6)
<b>Sub-total Receipts</b>	<b>1,635.6</b>	<b>1,732.4</b>	<b>1,420.8</b>	<b>1,655.7</b>	<b>1,679.2</b>	<b>1,759.0</b>	<b>(53.1)</b>	<b>79.7</b>
<b>Fund Withdrawals</b>								
R&R and General Fund	45.0	45.0	45.0	60.0	55.0	125.0	10.0	70.0
Bond Funds for Construction	-	-	127.5	191.7	23.0	-	23.0	(23.0)
Water Stewardship Fund	-	-	-	-	-	-	-	-
Decrease in Required Reserves	7.1	-	-	-	-	-	-	-
Decrease in Rate Stabilization Fund	23.2	17.1	32.4	-	8.0	-	(9.2)	(8.0)
<b>Sub-total Fund Withdrawals</b>	<b>75.3</b>	<b>62.1</b>	<b>204.9</b>	<b>251.7</b>	<b>86.0</b>	<b>125.0</b>	<b>23.8</b>	<b>39.0</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>\$ 1,710.9</b>	<b>\$ 1,794.5</b>	<b>\$ 1,625.7</b>	<b>\$ 1,907.4</b>	<b>\$ 1,765.2</b>	<b>\$ 1,884.0</b>	<b>\$ (29.3)</b>	<b>\$ 118.7</b>

FY2012 is based on cash, FY2013 and beyond are based on modified accrual accounting.

Totals may not foot due to rounding.

**Table 7. June 30, 2013 Sources and Uses by Fund (dollars in millions)**

Fiscal Year Ending June 30th, 2013 (\$ in Millions)	All Funds	Operating Funds							Debt Service Funds	Reserve Funds (1)	Construction Funds		Trust & Other Funds
		General	Water Revenue	O&M	Water Standby	Water Stewardship	Self-Insured Retention	State Contract			R&R	Revenue Bond Construction	
<b>Beginning of Year Balance</b>	<b>987.2</b>	<b>64.4</b>	<b>-</b>	<b>169.2</b>	<b>1.1</b>	<b>3.9</b>	<b>25.1</b>	<b>79.8</b>	<b>309.0</b>	<b>215.2</b>	<b>33.8</b>	<b>84.8</b>	<b>1.0</b>
<b>USES OF FUNDS</b>													
<b>Expenditures</b>													
State Water Contract	593.4	-	-	424.6	-	-	-	168.9	-	-	-	-	-
Supply Programs	45.1	-	-	45.1	-	-	-	-	-	-	-	-	-
Colorado River Power	36.2	-	-	36.2	-	-	-	-	-	-	-	-	-
Debt Service	342.0	1.3	-	8.4	-	-	-	-	332.3	-	-	-	-
Demand Management	53.2	-	-	53.2	-	-	-	-	-	-	-	-	-
Departmental O&M	315.1	-	-	315.1	-	-	-	-	-	-	-	-	-
Treatment Chemicals, Sludge & Power	25.5	-	-	25.5	-	-	-	-	-	-	-	-	-
Other O&M	30.7	8.0	-	22.7	-	-	-	-	-	-	-	-	-
<b>Sub-total Expenditures</b>	<b>1,441.3</b>	<b>9.3</b>	<b>-</b>	<b>930.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>168.9</b>	<b>332.3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Capital Investment Plan</b>	<b>257.3</b>	<b>27.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>27.6</b>	<b>202.3</b>	<b>-</b>
<b>Fund Deposits</b>													
R&R and General Fund	55.0	27.4	-	-	-	-	-	-	-	-	27.6	-	-
Revenue Bond Construction	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Stewardship Fund	3.9	-	-	-	-	3.9	-	-	-	-	-	-	-
Interest for Construction & Trust Funds	1.0	-	-	-	-	-	-	-	-	-	-	1.0	0.0
Increase in Required Reserves	6.7	-	-	(2.5)	-	-	-	1.0	2.2	6.0	-	-	-
Increase in Rate Stabilization Fund	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total Fund Deposits</b>	<b>66.7</b>	<b>27.4</b>	<b>-</b>	<b>(2.5)</b>	<b>-</b>	<b>3.9</b>	<b>-</b>	<b>1.0</b>	<b>2.2</b>	<b>6.0</b>	<b>27.6</b>	<b>1.0</b>	<b>0.0</b>
<b>TOTAL USES OF FUNDS</b>	<b>1,765.2</b>	<b>64.2</b>	<b>-</b>	<b>928.2</b>	<b>-</b>	<b>3.9</b>	<b>-</b>	<b>169.9</b>	<b>334.5</b>	<b>6.0</b>	<b>55.1</b>	<b>203.3</b>	<b>0.0</b>
<b>SOURCES OF FUNDS</b>													
<b>Revenues</b>													
Taxes	81.6	-	-	-	-	-	-	41.3	40.4	-	-	-	-
Annexations	1.0	-	-	-	-	-	-	1.0	-	-	-	-	-
Interest Income	13.8	0.9	-	2.4	0.0	0.1	0.4	1.1	4.4	3.0	0.5	1.0	0.0
Hydro Power	23.6	-	23.6	-	-	-	-	-	-	-	-	-	-
Fixed Charges (RTS & Capacity Charge)	176.8	-	176.8	-	-	-	-	-	-	-	-	-	-
Water Sales Revenue	1,197.2	-	1,197.2	-	-	-	-	-	-	-	-	-	-
Miscellaneous Revenue	6.0	6.0	-	-	-	-	-	-	-	-	-	-	-
Bond Proceeds	179.3	-	-	-	-	-	-	-	-	-	-	179.3	-
<b>Sub-total Receipts</b>	<b>1,679.2</b>	<b>6.9</b>	<b>1,397.6</b>	<b>2.4</b>	<b>0.0</b>	<b>0.1</b>	<b>0.4</b>	<b>43.4</b>	<b>44.7</b>	<b>3.0</b>	<b>0.5</b>	<b>180.3</b>	<b>0.0</b>
<b>Fund Withdrawals</b>													
Transfer Fund	-	-	-	-	-	-	-	-	-	-	-	-	-
R&R and General Fund	55.0	27.4	-	-	-	-	-	-	-	-	27.6	-	-
Bond Funds for Construction	23.0	-	-	-	-	-	-	-	-	-	-	23.0	-
Water Stewardship Fund	-	-	-	-	-	-	-	-	-	-	-	-	-
Decrease in Required Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-
Decrease in Rate Stabilization Fund	8.0	-	-	-	-	-	-	-	-	8.0	-	-	-
<b>Sub-total Fund Withdrawals</b>	<b>86.0</b>	<b>27.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.0</b>	<b>27.6</b>	<b>23.0</b>	<b>-</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>1,765.2</b>	<b>34.3</b>	<b>1,397.6</b>	<b>2.4</b>	<b>0.0</b>	<b>0.1</b>	<b>0.4</b>	<b>43.4</b>	<b>44.7</b>	<b>11.0</b>	<b>28.0</b>	<b>203.3</b>	<b>0.0</b>
<b>Inter-Fund Transfers</b>	<b>-</b>	<b>34.8</b>	<b>(1,397.6)</b>	<b>920.9</b>	<b>(0.0)</b>	<b>3.8</b>	<b>(0.4)</b>	<b>126.5</b>	<b>289.8</b>	<b>(5.0)</b>	<b>27.1</b>	<b>-</b>	<b>-</b>
<b>End of Year Balance</b>	<b>967.9</b>	<b>64.4</b>	<b>-</b>	<b>166.7</b>	<b>1.1</b>	<b>7.8</b>	<b>25.1</b>	<b>80.8</b>	<b>311.2</b>	<b>213.2</b>	<b>33.8</b>	<b>62.8</b>	<b>1.0</b>

Based on modified accrual accounting.

Totals may not foot due to rounding.

(1) includes Water Rate Stabilization Fund (including SDCWA litigation amount), Water Treatment Surcharge Stabilization Fund and Revenue Remainder.

**Table 8. June 30, 2014 Sources and Uses by Fund (dollars in millions)**

Fiscal Year Ending June 30th, 2014 (\$ in Millions)	All Funds	Operating Funds							Debt Service Funds	Reserve Funds (1)	Construction Funds		Trust & Other Funds
		General	Water Revenue	O&M	Water Standby	Water Stewardship	Self-Insured Retention	State Contract			R&R	Revenue Bond Construction	
<b>Beginning of Year Balance (2)</b>	<b>967.9</b>	<b>64.4</b>	<b>-</b>	<b>166.7</b>	<b>1.1</b>	<b>7.8</b>	<b>25.1</b>	<b>80.8</b>	<b>311.2</b>	<b>213.2</b>	<b>33.8</b>	<b>62.8</b>	<b>1.0</b>
<b>USES OF FUNDS</b>													
<b>Expenditures</b>													
State Water Contract	563.8	-	-	400.2	-	-	-	163.6	-	-	-	-	-
Supply Programs	44.9	-	-	44.9	-	-	-	-	-	-	-	-	-
Colorado River Power	24.9	-	-	24.9	-	-	-	-	-	-	-	-	-
Debt Service	344.8	1.3	-	8.7	-	-	-	-	334.9	-	-	-	-
Demand Management	53.6	-	-	53.6	-	-	-	-	-	-	-	-	-
Departmental O&M	329.3	-	-	329.3	-	-	-	-	-	-	-	-	-
Treatment Chemicals, Sludge & Power	26.4	-	-	26.4	-	-	-	-	-	-	-	-	-
Other O&M	38.1	8.2	-	29.9	-	-	-	-	-	-	-	-	-
<b>Sub-total Expenditures</b>	<b>1,425.8</b>	<b>9.5</b>	<b>-</b>	<b>917.9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>163.6</b>	<b>334.9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Capital Investment Plan</b>	<b>294.6</b>	<b>22.6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>102.4</b>	<b>169.6</b>	<b>-</b>
<b>Fund Deposits</b>													
R&R and General Fund	125.0	22.6	-	-	-	-	-	-	-	-	102.4	-	-
Revenue Bond Construction	2.9	-	-	-	-	-	-	-	-	-	-	2.9	-
Water Stewardship Fund	1.1	-	-	-	-	1.1	-	-	-	-	-	-	-
Interest for Construction & Trust Funds	0.9	-	-	-	-	-	-	-	-	-	-	0.9	0.0
Increase in Required Reserves	29.0	-	-	7.8	-	-	-	7.2	11.3	2.7	-	-	-
Increase in Rate Stabilization Fund	4.6	-	-	-	-	-	-	-	-	4.6	-	-	-
<b>Sub-total Fund Deposits</b>	<b>163.5</b>	<b>22.6</b>	<b>-</b>	<b>7.8</b>	<b>-</b>	<b>1.1</b>	<b>-</b>	<b>7.2</b>	<b>11.3</b>	<b>7.3</b>	<b>102.4</b>	<b>3.8</b>	<b>0.0</b>
<b>TOTAL USES OF FUNDS</b>	<b>1,884.0</b>	<b>54.7</b>	<b>-</b>	<b>925.7</b>	<b>-</b>	<b>1.1</b>	<b>-</b>	<b>170.8</b>	<b>346.2</b>	<b>7.3</b>	<b>204.7</b>	<b>173.4</b>	<b>0.0</b>
<b>SOURCES OF FUNDS</b>													
<b>Revenues</b>													
Taxes	80.1	-	-	-	-	-	-	39.7	40.4	-	-	-	-
Annexations	1.0	-	-	-	-	-	-	1.0	-	-	-	-	-
Interest Income	14.3	0.9	-	2.5	0.0	0.1	0.4	1.2	4.6	3.1	0.5	0.9	0.0
Hydro Power	20.9	-	20.9	-	-	-	-	-	-	-	-	-	-
Fixed Charges (RTS & Capacity Charge)	186.6	-	186.6	-	-	-	-	-	-	-	-	-	-
Water Sales Revenue	1,271.3	-	1,271.3	-	-	-	-	-	-	-	-	-	-
Miscellaneous Revenue	6.1	6.1	-	-	-	-	-	-	-	-	-	-	-
Bond Proceeds	178.6	-	-	-	-	-	-	-	6.1	-	-	172.5	-
<b>Sub-total Receipts</b>	<b>1,759.0</b>	<b>7.1</b>	<b>1,478.8</b>	<b>2.5</b>	<b>0.0</b>	<b>0.1</b>	<b>0.4</b>	<b>41.9</b>	<b>51.1</b>	<b>3.1</b>	<b>0.5</b>	<b>173.4</b>	<b>0.0</b>
<b>Fund Withdrawals</b>													
Transfer Fund	-	-	-	-	-	-	-	-	-	-	-	-	-
R&R and General Fund	125.0	22.6	-	-	-	-	-	-	-	-	102.4	-	-
Bond Funds for Construction	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Stewardship Fund	-	-	-	-	-	-	-	-	-	-	-	-	-
Decrease in Required Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-
Decrease in Rate Stabilization Fund	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total Fund Withdrawals</b>	<b>125.0</b>	<b>22.6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>102.4</b>	<b>-</b>	<b>-</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>1,884.0</b>	<b>29.7</b>	<b>1,478.8</b>	<b>2.5</b>	<b>0.0</b>	<b>0.1</b>	<b>0.4</b>	<b>41.9</b>	<b>51.1</b>	<b>3.1</b>	<b>102.8</b>	<b>173.4</b>	<b>0.0</b>
<b>Inter-Fund Transfers</b>	<b>-</b>	<b>35.0</b>	<b>(1,478.8)</b>	<b>913.2</b>	<b>(0.0)</b>	<b>1.0</b>	<b>(0.4)</b>	<b>128.8</b>	<b>295.1</b>	<b>4.1</b>	<b>101.9</b>	<b>-</b>	<b>-</b>
<b>End of Year Balance</b>	<b>1,006.4</b>	<b>64.4</b>	<b>-</b>	<b>174.5</b>	<b>1.1</b>	<b>8.9</b>	<b>25.1</b>	<b>88.0</b>	<b>322.6</b>	<b>220.5</b>	<b>33.8</b>	<b>66.6</b>	<b>1.0</b>

Based on modified accrual accounting.

Totals may not foot due to rounding.

(1) includes Water Rate Stabilization Fund (including SDCWA litigation amount), Water Treatment Surcharge Stabilization Fund and Revenue Remainder.

Metropolitan Water District of Southern California  
**Fiscal Year 2012/13 Cost of Service  
Option 1**

March 2012

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## **1 Cost of Service**

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

### ***1.1 Cost of Service Process***

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

#### ***Step 1 - Development Of Revenue Requirements***

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

#### ***Step 2 – Identification Of Service Function Costs***

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

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

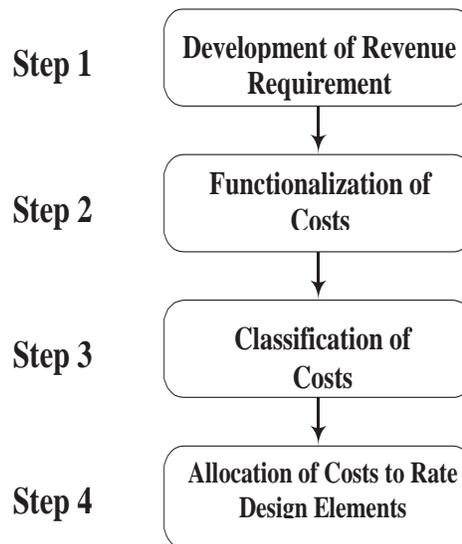
In order to provide more finite functional allocation, many of these functional categories are subdivided into more detailed sub-functions in the cost of service process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions State Water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

### Step 3 - Classification Of Costs

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

### Step 4 - Allocation Of Costs To Rate Design Elements

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

**Figure 1. The Cost of Service Process**

### **1.2 Revenue Requirements**

The estimated revenue requirements presented in this report are for FY 2012/13. Throughout the report, FY 2012/13 is used as the “test year” to demonstrate the application of the cost of service process. Schedule 1 summarizes the FY 2012/13 revenue requirement by the major budget line items used in Metropolitan’s budgeting process. Current estimates indicate Metropolitan’s annual cash expenditures (including capital financing costs, but not construction outlays financed with bond proceeds) will total approximately \$1.50 billion in FY 2012/13.

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 \$42.3 million in FY 2012/13. It is expected that Metropolitan will also generate about \$82.6 million in ad valorem property tax revenues and annexation charges. Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, and a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the State Water Project. The total revenue offsets for FY 2012/13 are estimated to be around \$125 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or \$1.378 billion. Given an effective date of January 1, 2013, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2012 will generate a total of \$1.374 billion in 2012/13.

All of Metropolitan’s costs fall under the broad categories of Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific organizational groups. General District Requirements consist of requirements associated with the Colorado River Aqueduct, State Water Project, the capital financing costs associated with the Capital Investment 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 71 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to SWP expenditures, which make up approximately 36 percent of Metropolitan's FY 2012/13 revenue requirements. Metropolitan's SWP contract requires Metropolitan to pay its allocated share of the capital, minimum operations, maintenance, power and replacement costs incurred to develop and convey its water supply entitlement, irrespective of the quantity of water Metropolitan takes delivery of in any given year. Metropolitan's capital financing program is the second largest component of the revenue requirement, constituting approximately 24 percent of the revenue requirement. Departmental O&M costs make up 21 percent of the total revenue requirement in FY 2012/13. 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 Colorado River Aqueduct and other conveyance and supply facilities.

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

	<b>Fiscal Year Ending 2013</b>	<b>% of Revenue Requirements (1)</b>
<b>Departmental Operations &amp; Maintenance</b>		
Office of the General Manager & Human Resources	\$ 19,656,300	1.2%
External Affairs	15,521,800	1.0%
Water System Operations	201,459,900	12.4%
Chief Financial Officer	6,460,400	0.4%
Business Technology & Engineering Services	63,365,100	3.9%
Real Property Development & Mgmt	5,021,000	0.3%
Water Resource Management	14,903,500	0.9%
Ethics Department	438,300	0.0%
General Counsel	11,741,300	0.7%
Audit Department	2,060,000	0.1%
<b>Total</b>	<b>340,627,600</b>	<b>20.9%</b>
<b>General District Requirements</b>		
State Water Project	593,444,201	36.5%
Colorado River Aqueduct Power	36,178,684	2.2%
Supply Programs	45,125,279	2.8%
Demand Management	53,205,188	3.3%
Capital Financing Program	396,979,175	24.4%
Operating Equipment and Leases	30,694,400	1.9%
Increase (Decrease) in Required Reserves	6,700,000	0.4%
<b>Total</b>	<b>1,162,326,927</b>	<b>71.4%</b>
<b>Revenue Offsets</b>	<b>(124,922,474)</b>	<b>7.7%</b>
<b>Net Revenue Requirements</b>	<b>\$ 1,378,032,053</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 Commissioners (NARUC), and the National Council of Governmental Accounting. Because all water utilities are not identical, the rate structure reflects Metropolitan's unique physical, financial, and institutional characteristics.

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

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

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

- *Supply.* This function includes costs for those SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the member agencies' demands. For example, Metropolitan's supply related costs include investments in the Conservation Agreement with the Imperial Irrigation District and the Palo Verde Irrigation District (PVID) Program from the Colorado River supply programs. The SWP programs include 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 Proposition 13 are also included.
- *Conveyance and Aqueduct.* This function includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water through Metropolitan's internal distribution system. Variable power costs for the SWP and CRA are also considered to be Conveyance and Aqueduct costs but are separately reported under a "power" sub-function. Conveyance and Aqueduct facilities can be distinguished from Metropolitan's other facilities primarily by the fact that they do not typically include direct connections to the member agencies. For purposes of this study, the Inland Feeder Project functions as an extension of the SWP East Branch and is therefore considered a Conveyance and Aqueduct facility as well.
- *Storage.* Storage costs include the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs within the distribution system. Metropolitan's larger storage facilities are operated to provide (1) emergency storage in the event of an earthquake or similar system outage; (2) drought storage that produces additional supplies during times of shortage; and (3) regulatory storage to balance system demands and supplies and provide for operating flexibility. To reasonably allocate the costs of storage capacity among member agencies, the

storage service function is categorized into sub-functions of emergency, drought, and regulatory storage.

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

### ***1.3.1 Functional Allocation Bases***

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

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

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

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

<b>Primary Functional Allocation Bases</b>	<b>Estimated for FY 2013</b>	<b>% of Allocated Dollars</b>
Direct Assignment	\$ 1,052,669,297	64.7%
Work in Progress/Net Book Value	436,850,275	26.8%
Prorating	58,811,650	3.6%
Manager Analysis	34,420,500	2.1%
Other	\$ 45,125,279	2.8%
<b>Total Dollars Allocated</b>	<b>\$ 1,627,877,001</b>	<b>100.0%</b>
<b>Portion of Above Allocations Relating to:</b>		
Revenue Requirements before Offsets	1,502,954,527	
Revenue Offsets	124,922,474	
<b>Total Dollars Allocated</b>	<b>\$ 1,627,877,001</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 24 percent of Metropolitan's annual revenue requirements. One approach would be to allocate payments on each debt issue in direct proportion to specific project expenditures made using bond proceeds. But, this approach would result in a high degree of volatility in relative capital cost allocations from year to year. The approach used in this analysis is one widely used in water industry cost of service studies. Capital and debt-related costs (including repair and replacement costs paid from current revenues) are allocated on the basis of the relative net book values of fixed assets within each functional category. This approach produces capital cost allocations that are consistent with the functional distribution of assets. Also, since the allocation basis is tied to fixed asset records

rather than debt payment records, the resulting allocations are more reflective of the true useful lives of assets. Use of net book values as an allocation basis provides an improved matching of functional costs with asset lives. A listing of fixed asset net book values summarized by asset function is shown in Schedule 3.

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

<b>Functional Categories</b>	<b>NBV for FY 2013</b>	<b>% of Total NBV</b>
Source of Supply	\$ 23,297,862	0.3%
Conveyance & Aqueduct	1,864,648,314	20.8%
Storage	2,261,013,314	25.2%
Treatment	3,057,396,365	34.1%
Distribution	1,316,181,317	14.7%
Administrative & General	322,585,783	3.6%
Hydroelectric	115,593,239	1.3%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 8,960,716,194</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. For organizational units handling current construction activity, however, allocations are based on work-in-progress alone. For these organizational units, exclusion of net book value from the allocation basis is done because the costs being allocated relate directly to work in progress not yet reflected in the completed assets records.

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

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

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

**(c) Prorating in proportion to other allocations**

Utility cost of service studies frequently contain line items for which it would be difficult to identify an allocation basis specific to that line item. In these cases, the most logical allocation basis is often a prorata blend of allocation results calculated for other revenue requirements in the same departmental group, or general category. Reasonable prorata allocations are based on a

logical nexus between a cost and the purpose which it serves. For example: Human Resources Section costs are allocated using all labor costs, since Human Resources spends its time and resources attending to the labor force.

**(d) Manager analyses**

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

A summary of the functional allocation results is shown in Schedules 4 and 5. Schedule 4 provides a breakdown of the revenue requirement for FY 2012/13 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 44 percent of the allocated revenue requirement.

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

<b>Functional Categories</b>	<b>Fiscal Year Ending 2013</b>	<b>% of Allocated Dollars (1)</b>
<b>Source of Supply</b>		
CRA	\$ 37,174,156	2.7%
SWP	107,004,224	7.6%
Other Supply	10,244,704	0.7%
<b>Total</b>	<b>154,423,085</b>	<b>11.0%</b>
<b>Conveyance &amp; Aqueduct</b>		
CRA		
<i>CRA Power (net of sales)</i>	41,593,463	3.0%
<i>CRA All Other</i>	42,615,037	3.0%
SWP		
<i>SWP Power</i>	270,436,884	19.3%
<i>SWP All Other</i>	201,985,108	14.4%
Other Conveyance & Aqueduct	67,100,247	4.8%
<b>Total</b>	<b>623,730,739</b>	<b>44.5%</b>
<b>Storage</b>		
Storage Costs Other Than Power		
<i>Emergency</i>	52,580,680	3.8%
<i>Drought</i>	42,839,486	3.1%
<i>Regulatory</i>	12,823,276	0.9%
Wadsworth plant pumping/generation	(313,364)	0.0%
<b>Total</b>	<b>107,930,077</b>	<b>7.7%</b>
<b>Treatment</b>		
Jensen	40,689,329	2.9%
Weymouth	42,645,796	3.0%
Diemer	50,025,103	3.6%
Mills	30,003,568	2.1%
Skinner	63,076,847	4.5%
<b>Total</b>	<b>226,440,643</b>	<b>16.2%</b>
<b>Distribution</b>	119,095,747	8.5%
<b>Demand Management</b>	61,128,625	4.4%
<b>Hydroelectric</b>	(11,123,797)	0.8%
<b>Administrative &amp; General</b>	96,406,935	6.9%
<b>Total Functional Allocations:</b>	<b>\$ 1,378,032,053</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)**

	Source of Supply	Conveyance & Aqueduct	Storage	Treatment	Distribution	Demand Management	Hydro Electric	Administrative & General	Total \$ Allocated
<b>Departmental Operations &amp; Maintenance</b>									
Office of the General Manager & Human Resources	\$ 973,547	\$ 7,535,604	\$ 575,486	\$ 3,242,444	\$ 2,223,760	\$ 196,010	\$ 174,582	\$ 4,734,867	\$ 19,656,300
External Affairs	-	-	-	-	-	2,843,550	-	12,678,250	15,521,800
Water System Operations	12,250,467	35,011,017	3,418,916	92,038,406	53,778,592	8,426	4,033,386	920,690	201,459,900
Chief Financial Officer	-	-	-	-	-	-	-	6,460,400	6,460,400
Business Technology & Engineering Services	1,950,202	8,283,277	7,463,691	14,286,131	7,995,789	379,340	653,611	22,353,059	63,365,100
Real Property Development & Mgmt	-	-	5,021,000	-	-	-	-	-	5,021,000
Water Resource Management	10,186,819	5,776	-	236,832	1,184,509	3,289,564	-	-	14,903,500
Ethics Department	-	-	-	-	-	-	-	438,300	438,300
General Counsel	-	-	-	-	-	-	-	11,741,300	11,741,300
Audit Department	-	-	-	-	-	-	-	2,060,000	2,060,000
<b>Total Departmental O&amp;M</b>	25,361,036	50,835,675	16,479,093	109,803,812	65,182,649	6,716,890	4,861,579	61,386,866	340,627,600
<b>General District Requirements</b>									
State Water Project	83,601,729	509,842,472	-	-	-	-	-	-	593,444,201
Colorado River Aqueduct Power	-	36,178,684	-	-	-	-	-	-	36,178,684
Supply Programs	45,125,279	-	-	-	-	-	-	-	45,125,279
Demand Management	-	-	-	-	-	53,205,188	-	-	53,205,188
Capital Financing Program	962,830	75,534,968	92,515,692	129,931,284	80,953,086	-	4,600,187	12,481,128	396,979,175
Other Operating Costs	689,103	1,133,376	407,345	2,295,089	1,574,037	1,727,841	123,574	22,744,034	30,694,400
Increase (Decrease) in Required Reserves	-	-	-	-	-	-	-	6,700,000	6,700,000
<b>Total General District Requirements</b>	130,378,941	622,689,499	92,923,037	132,226,374	82,527,124	54,933,029	4,723,761	41,925,162	1,162,326,927
<b>Revenue Offsets</b>	(1,316,892)	(49,794,435)	(1,472,053)	(15,589,543)	(28,614,026)	(521,294)	(20,709,138)	(6,905,093)	(124,922,474)
<b>Net Revenue Requirements</b>	<b>\$ 154,423,085</b>	<b>\$ 623,730,739</b>	<b>\$ 107,930,077</b>	<b>\$ 226,440,643</b>	<b>\$ 119,095,747</b>	<b>\$ 61,128,625</b>	<b>\$ (11,123,797)</b>	<b>\$ 96,406,935</b>	<b>\$ 1,378,032,053</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 associated with average system demands. Variable commodity costs include costs of chemicals, most power costs, and other cost components that increase or decrease in relation to the volume of water supplied. Fixed commodity costs include fixed operations and maintenance and capital financing costs that are not related to accommodating peak demands or standby service.

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

An additional component used in Metropolitan's cost classification process is the hydroelectric component. While not a part of most water utilities' cost classification procedures, the hydroelectric

classification component is necessary to segregate revenue requirements carried from the hydroelectric function established in the functional allocation process. Hydroelectric revenue requirements are later embedded in the distribution function. Any net revenues generated by the hydroelectric operations offset the distribution costs and reduce the System Access Rate. All users of the distribution system benefit proportionately from the revenue offset provided by the sale of hydroelectric energy.

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

Costs for the Conveyance and Aqueduct (C&A) service function are classified into demand, commodity, and standby categories. Because the capital costs for C&A were incurred to meet all three classification categories, an analysis of C&A capacity usage for the three years ending June 2013 was used to determine that 52 percent of the available conveyance capacity has been used to meet member agency demands on an average annual basis. A system peak factor<sup>1</sup> of 1.4 was applied to the average annual usage to determine that 22 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 26 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct sub-functions. The classification shares reflect the system average use of conveyance capacity and not the usage of individual facilities. All of the Conveyance and Aqueduct energy costs for pumping water to Southern California are classified as variable commodity costs and, therefore, are not shown in Schedule 6 because they carry through the classification step.

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

Distribution service function costs were classified using daily flow data for the three calendar years ending December 2013. During this period, the average annual volume of deliveries to the member agencies used 43 percent of the peak distribution capacity. The difference between the three-year average non-coincident peak and the commodity flows divided by the system capacity, or 37 percent of the distribution capacity, was used to meet peak day demands in excess of average annual flows.

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<sup>1</sup> Peak monthly deliveries to the member agencies average about 42 percent more than the average monthly deliveries.

Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the peak non-coincident<sup>2</sup> 24-hour daily flow of all the member agencies. The remaining 20 percent of distribution capacity is associated with standby service.

As presented in Schedule 6, treatment service function costs were also classified using daily flow data of deliveries to the member agencies for the three years ending December 2013. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. Schedule 7 summarizes the service function revenue requirements by classification category. Administrative and general costs have been allocated to the classification categories by service function based on the ratio of classified non-A&G service function costs to total non-A&G service function costs.

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

**Schedule 6. Classification Percentages**

Function	Classification Percentages			Total % Classified	Comments
	Fixed				
	Commodity	Demand	Standby		
<b>Source of Supply</b>					
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs classified as commodity
State Water Project	100%	0%	0%	100%	Supply costs classified as commodity
<b>Conveyance &amp; Aqueduct</b>					
Colorado River Aqueduct	52%	22%	26%	100%	Demand (peaking) percentage represents application of system monthly peak factor of 1.4 to average monthly flow. Commodity percentage represents average flows. Remainder of capacity is for standby (expected growth). SWP and CRA are treated the same due to application of system wide uniform price.
State Water Project	52%	22%	26%	100%	
Other	52%	22%	26%	100%	
<b>Storage</b>					
Emergency	0%	0%	100%	100%	Standby service (recovered by RTS)
Drought	100%	0%	0%	100%	Recovered by Supply Rates
Regulatory	43%	37%	20%	100%	See distribution (below)
<b>Treatment</b>	32%	36%	32%	100%	Demand percentage represents amount of system treatment capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total capacity. The same classification is applied to all five treatment plants due to the use of a uniform system wide treatment surcharge.
<b>Distribution</b>	43%	37%	20%	100%	Demand percentage represents amount of system distribution capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total system capacity. The same classification is applied to all distribution facilities due to the use of a system wide uniform system access rate.

Totals may not foot due to rounding

A summary of cost classification results is shown in Schedule 7. The classification of the service function costs results in about 8 percent, or \$106 million of the total revenue requirements, being allocated to the demand classification category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan's property tax revenue is allocated to C&A fixed demand costs and offsets the amount that is recovered through rates. The taxes are used to pay for the general obligation bond debt service allocated to the C&A costs.

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

Functional Categories (by sub-Function)	Fixed Demand	Commodity	Standby	Variable Commodity	Hydroelectric	Total Classified
<b>Source of Supply</b>						
CRA	\$ -	\$ 40,971,251	\$ -	\$ -	\$ -	\$ 40,971,251
SWP	-	117,934,000	-	-	-	117,934,000
Other Supply	-	11,291,133	-	-	-	11,291,133
<b>Subtotal: Source of Supply</b>	-	170,196,384	-	-	-	<b>170,196,384</b>
<b>Conveyance &amp; Aqueduct</b>						
CRA						
<i>CRA Power</i>	-	9,313,386	-	34,133,663	-	43,447,049
<i>CRA All Other</i>	2,023,284	42,320,363	2,387,265	-	-	46,730,912
SWP						
<i>SWP Power</i>	-	-	-	278,518,596	-	278,518,596
<i>SWP All Other</i>	16,666,589	184,333,103	19,664,849	-	-	220,664,540
Other Conveyance & Aqueduct	13,451,104	42,320,108	16,573,957	-	-	72,345,169
<b>Subtotal: Conveyance &amp; Aqueduct</b>	32,140,977	278,286,959	38,626,071	312,652,258	-	<b>661,706,266</b>
<b>Storage</b>						
Storage Costs Other Than Power						
<i>Emergency</i>	-	-	55,314,664	-	-	55,314,664
<i>Drought</i>	-	47,215,256	-	-	-	47,215,256
<i>Regulatory</i>	4,260,485	7,173,694	2,328,544	-	-	13,762,724
Storage Power	-	-	-	(322,729)	-	(322,729)
<b>Subtotal: Storage</b>	4,260,485	54,388,951	57,643,208	(322,729)	-	<b>115,969,915</b>
<b>Water Quality</b>						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
<b>Subtotal: Water Quality</b>	-	-	-	-	-	-
<b>Treatment</b>	48,276,762	136,260,837	28,430,788	30,189,296	-	<b>243,157,683</b>
<b>Distribution</b>	20,843,626	97,213,058	11,391,966	-	-	<b>129,448,650</b>
<b>Demand Management</b>	-	67,372,511	-	-	-	<b>67,372,511</b>
<b>Hydroelectric</b>	-	-	-	-	(9,819,357)	<b>(9,819,357)</b>
<b>Total Costs Classified</b>	<b>\$ 105,521,850</b>	<b>\$ 803,718,701</b>	<b>\$ 136,092,033</b>	<b>\$ 342,518,826</b>	<b>\$ (9,819,357)</b>	<b>\$ 1,378,032,053</b>

Totals may not foot due to rounding

About 58 percent of the revenue requirement (\$804 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 \$136 million and account for about 10 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 \$342 million, and account for about 25 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, 2013 in order to collect all costs from rates and charges in fiscal year 2012/13, with the use of \$1.9 million draws from reserve funds. Average costs by member agency will vary depending upon an agency’s RTS allocation, capacity charge and relative proportions of treated and untreated Tier 1, and Tier 2 purchases.

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

Service Function by Classification Category	Rate Design Elements							Total Costs Allocated
	Supply Rates	System Access Rate	Water Stewardship Rate	System Power Rate	Capacity Charge	Readiness-to-Serve Charge	Treatment Surcharge	
<b>Supply</b>								
Fixed Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fixed Commodity	170,196,384	-	-	-	-	-	-	170,196,384
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Supply</b>	170,196,384	-	-	-	-	-	-	170,196,384
<b>Conveyance and Aqueduct</b>								
Fixed Demand	-	-	-	-	-	32,140,977	-	32,140,977
Fixed Commodity	-	278,286,959	-	-	-	-	-	278,286,959
Fixed Standby	-	-	-	-	-	38,626,071	-	38,626,071
Variable Commodity	-	-	-	312,652,258	-	-	-	312,652,258
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Conveyance and Aqueduct</b>	-	278,286,959	-	312,652,258	-	70,767,048	-	661,706,266
<b>Storage</b>								
Fixed Demand	-	-	-	-	4,260,485	-	-	4,260,485
Fixed Commodity	47,215,256	7,173,694	-	-	-	-	-	54,388,951
Fixed Standby	-	-	-	-	-	57,643,208	-	57,643,208
Variable Commodity	(322,729)	-	-	-	-	-	-	(322,729)
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Storage</b>	46,892,528	7,173,694	-	-	4,260,485	57,643,208	-	115,969,915
<b>Treatment</b>								
Fixed Demand	-	-	-	-	-	-	48,276,762	48,276,762
Fixed Commodity	-	-	-	-	-	-	136,260,837	136,260,837
Fixed Standby	-	-	-	-	-	-	28,430,788	28,430,788
Variable Commodity	-	-	-	-	-	-	30,189,296	30,189,296
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Treatment</b>	-	-	-	-	-	-	243,157,683	243,157,683
<b>Distribution</b>								
Fixed Demand	-	-	-	-	20,843,626	-	-	20,843,626
Fixed Commodity	-	97,213,058	-	-	-	-	-	97,213,058
Fixed Standby	-	-	-	-	-	11,391,966	-	11,391,966
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	(9,819,357)	-	-	-	-	-	(9,819,357)
<b>Subtotal: Distribution</b>	-	87,393,701	-	-	20,843,626	11,391,966	-	119,629,293
<b>Demand Management</b>								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	67,372,511	-	-	-	-	67,372,511
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Demand Management</b>	-	-	67,372,511	-	-	-	-	67,372,511
<b>Total</b>								
Fixed Demand	-	-	-	-	25,104,111	32,140,977	48,276,762	105,521,850
Fixed Commodity	217,411,641	382,673,712	67,372,511	-	-	-	136,260,837	803,718,701
Fixed Standby	-	-	-	-	-	107,661,245	28,430,788	136,092,033
Variable Commodity	(322,729)	-	-	312,652,258	-	-	30,189,296	342,518,826
Hydroelectric	-	(9,819,357)	-	-	-	-	-	(9,819,357)
<b>Total</b>	<b>\$ 217,088,912</b>	<b>\$ 372,854,355</b>	<b>\$ 67,372,511</b>	<b>\$ 312,652,258</b>	<b>\$ 25,104,111</b>	<b>\$ 139,802,222</b>	<b>\$ 243,157,683</b>	<b>\$ 1,378,032,053</b>

Totals may not foot due to rounding

**Schedule 9. Rates and Charges Summary**

<b>Effective January 1st</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Tier 1 Supply Rate (\$/AF)	\$106	\$149	\$157
Delta Supply Surcharge (\$/AF)	\$58	*	*
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290
System Access Rate (\$/AF)	\$217	\$228	\$247
Water Stewardship Rate (\$/AF)	\$43	\$41	\$42
System Power Rate (\$/AF)	\$136	\$190	\$164
Full Service Untreated Volumetric Cost (\$/AF)			
Tier 1	\$560	\$608	\$610
Tier 2	\$686	\$749	\$743
Replenishment Water Rate Untreated (\$/AF)	\$442	**	**
Interim Agricultural Water Program Untreated (\$/AF)	\$537	***	***
Treatment Surcharge (\$/AF)	\$234	\$260	\$302
Full Service Treated Volumetric Cost (\$/AF)			
Tier 1	\$794	\$868	\$912
Tier 2	\$920	\$1,009	\$1,045
Treated Replenishment Water Rate (\$/AF)	\$651	**	**
Treated Interim Agricultural Water Program (\$/AF)	\$765	***	***
Readiness-to-Serve Charge (\$M)	\$146	\$146	\$169
Capacity Charge (\$/cfs)	\$7,400	\$6,600	\$8,900

\* The Delta Supply Surcharge will be suspended after 2012.

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

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

### **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. All system users (member agency or third party) pay the SAR to use Metropolitan's conveyance and distribution system. To meet the board stated objective to collect all costs in 2012/13, the SAR would increase from its current level of \$217 per acre-foot to \$228 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 \$373 million in FY 2012/13, or 27 percent of the total revenue requirement.

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

The WSR would decrease from its current level of \$43 per acre-foot to \$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 \$67 million in FY 2012/13, about 4 percent of the revenue requirement. The WSR is a volumetric rate levied on each acre-foot of water that moves through the Metropolitan system. All system users (member agency or third parties) will pay the same proportional costs for existing and future conservation and recycling investments.

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

SPR would increase from \$136 per acre-foot to \$190 per acre-foot in 2013. 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 2012/13 the revenue requirement for the SPR is estimated to be about \$313 million, about 23 percent of the total revenue requirement.

### **2.4 Treatment Surcharge**

The treatment surcharge would increase from its current level of \$234 per acre-foot to \$260 per acre-foot to collect all treatment costs in 2012/13. 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 \$243 million in FY 2012/13, almost 18 percent of the total revenue requirement. The treatment surcharge recovers all costs associated with providing treated water service, including commodity, demand and standby related costs. Significant capital improvements at Metropolitan's five treatment plants, such as the Ozone Retrofit Program, Skinner Filtration Plant Expansion Project, and improvement programs at all five treatment plants result in additional capital financing costs being allocated to the treatment surcharge.

### **2.5 Capacity Charge**

The Capacity Charge would decrease from its current level of \$7,400 per cubic-foot-second to \$6,600 per cubic-foot-second of capacity during 2013. The capacity charge is levied on the maximum summer day demand placed on the system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2011 is used to levy the capacity charge effective January 1, 2013 through December 31, 2013. Demands measured for the purposes of billing the capacity charge include all firm demand and agricultural demand, including wheeling service and exchanges. Replenishment service is not included in the measurement of peak day demand for purposes of billing the capacity charge.

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

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan's system, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods particularly October through April. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total capacity charge. The estimated capacity charge to be paid by each member agency in calendar year 2013 (as of February 2012) is included in Schedule 10.

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

AGENCY	Peak Day Demand (cfs)				Rate (\$/cfs):
	(May 1 through September 30)				\$6,600
	Calendar Year				Calendar Year
	2009	2010	2011	3-Year Peak	2013 Capacity Charge
Anaheim	40.7	44.8	39.3	44.8	\$295,680
Beverly Hills	31.0	31.2	31.5	31.5	\$207,900
Burbank	21.6	22.3	21.4	22.3	\$147,180
Calleguas	192.8	208.9	210.1	210.1	\$1,386,660
Central Basin	94.7	74.2	79.2	94.7	\$625,020
Compton	5.9	3.3	2.4	5.9	\$38,940
Eastern	233.8	229.6	192.5	233.8	\$1,543,080
Foothill	24.3	20.2	19.0	24.3	\$160,380
Fullerton	37.4	32.2	27.4	37.4	\$246,840
Glendale	56.0	49.6	49.0	56.0	\$369,600
Inland Empire	106.1	124.2	138.0	138.0	\$910,800
Las Virgenes	42.7	43.9	43.4	43.9	\$289,740
Long Beach	67.2	61.2	51.5	67.2	\$443,520
Los Angeles	698.2	525.9	329.0	698.2	\$4,608,120
MWDOC	489.5	425.5	382.7	489.5	\$3,230,700
Pasadena	50.2	50.5	50.6	50.6	\$333,960
San Diego	1,055.3	949.5	760.7	1,055.3	\$6,964,980
San Fernando	-	4.1	1.6	4.1	\$27,060
San Marino	3.5	4.2	1.3	4.2	\$27,720
Santa Ana	16.4	20.0	20.0	20.0	\$132,000
Santa Monica	25.0	24.3	21.1	25.0	\$165,000
Three Valleys	132.7	139.4	122.7	139.4	\$920,040
Torrance	39.3	42.8	35.5	42.8	\$282,480
Upper San Gabriel	27.6	22.9	20.4	27.6	\$182,160
West Basin	221.3	221.2	214.6	221.3	\$1,460,580
Western	214.4	199.5	179.3	214.4	\$1,415,040
<b>Total</b>	<b>3,927.6</b>	<b>3,575.4</b>	<b>3,044.2</b>	<b>4,002.3</b>	<b>\$26,415,180</b>

Totals may not foot due to rounding

#### 2.6 Readiness-to-Serve Charge (RTS)

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 \$58 million in FY 2012/13. 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 \$82 million in FY 2012/13. Currently the RTS recovers \$146 million, an amount that represents a portion of the capital financing costs for facilities that serve existing users. The RTS would remain at its current level in calendar year 2013.

The RTS is allocated to the member agencies based on each agency's proportional share of a ten-year rolling average of all firm deliveries (including water transfers and exchanges that use Metropolitan system capacity). The ten-year rolling average will not include replenishment service and interim agricultural deliveries because these deliveries will be the first to be curtailed in the event of an emergency. A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency's potential long-term need for standby service under different demand conditions. Member agencies that so choose may have a portion of their total RTS obligation offset by standby charge collections levied by Metropolitan on behalf of the member agency. Schedule 11 provides an estimate as of December 2011 of each agency's total RTS obligation for calendar year 2013.

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

Water rate \$79.89/acre-foot			
Member Agency	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2001/02 - FY2010/11	RTS Share	12 months @ \$146 million per year (1/13-12/13)
Anaheim	21,892	1.20%	\$ 1,748,933
Beverly Hills	12,041	0.66%	961,910
Burbank	12,605	0.69%	1,006,991
Calleguas MWD	111,069	6.08%	8,873,223
Central Basin MWD	61,810	3.38%	4,937,938
Compton	2,832	0.15%	226,207
Eastern MWD	94,101	5.15%	7,517,714
Foothill MWD	11,169	0.61%	892,270
Fullerton	10,225	0.56%	816,838
Glendale	21,707	1.19%	1,734,153
Inland Empire Utilities Agency	61,330	3.36%	4,899,647
Las Virgenes MWD	22,730	1.24%	1,815,912
Long Beach	35,737	1.96%	2,854,979
Los Angeles	302,313	16.54%	24,151,619
Municipal Water District of Orange County	227,364	12.44%	18,163,973
Pasadena	22,799	1.25%	1,821,417
San Diego County Water Authority	449,537	24.60%	35,913,311
San Fernando	125	0.01%	9,946
San Marino	972	0.05%	77,613
Santa Ana	13,464	0.74%	1,075,624
Santa Monica	12,284	0.67%	981,323
Three Valleys MWD	70,981	3.88%	5,670,605
Torrance	19,931	1.09%	1,592,238
Upper San Gabriel Valley MWD	19,031	1.04%	1,520,345
West Basin MWD	135,862	7.43%	10,853,948
Western MWD	73,618	4.03%	5,881,321
<b>MWD Total</b>	<b>1,827,524</b>	<b>100.00%</b>	<b>\$ 146,000,000</b>

Totals may not foot due to rounding

**2.7 Purchase Order**

The potential extension of the Purchase Order is part of the Long Range Finance Plan workgroup discussions. A final decision is expected in 2012.

**2.8 Tier 2 supply rate**

The Tier 2 Supply Rate reflects Metropolitan's cost of developing long-term firm supplies. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. The Tier 2 Supply Rate also recovers a greater proportion of the cost of developing additional supplies from member agencies that have increasing demands on the Metropolitan system. The Tier 2 Supply Rate would remain at its current level of \$290 per acre-foot.

The total revenue requirement for the supply service function is about \$217 million in FY 2012/13. At an expected average sales level of 1.7 million acre-feet (MAF) it is estimated that no acre-feet will be sold at the Tier 2 Supply Rate. The remaining supply costs are recovered by the Tier 1 Supply Rate and by the replenishment rate discussed below.

The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. Based on the outcome of the Long Range Finance Plan in 2012, a detailed table with Tier 1 limits will be provided to the Board in 2012.

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

The Tier 1 Supply Rate would be reduced from its current level of \$164 per acre-foot to \$149 per acre-foot. The Tier 1 Supply Rate recovers the majority of the supply revenue requirement. The Tier 1 Supply Rate is simply calculated as the amount of the total supply revenue requirement that is not recovered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. At an expected demand level of about 1.7 MAF it is estimated that Metropolitan will sell about 1.51 MAF at the Tier 1 Supply Rate in 2012/13.

### **2.10 Replenishment water rates**

Discussion on the replenishment program are continuing with the member agencies in the Long Range Finance Plan Workgroup. If adopted, the new replenishment program would replace the existing replenishment rate. Therefore, the existing replenishment rate is discontinued.

## **3 Sales**

Staff estimates of water sales used for developing the rate recommendation were based on current member agency demands and information and an expectation that demands will trend to levels expected under normal weather conditions. Since 1989/90, total sales have averaged about 2.00 million acre-feet per year, ranging from a high of around 2.5 million acre-feet in 1989/90 to a low of about 1.5 million acre-feet in 1997/98. In 2011/12 water sales are projected to be around 1.7 million acre-feet. Water sales in 2012/13 are expected to be about 1.7 million acre-feet.

## **4 Proof of Revenue**

Based on expected sales of 1.7 MAF the expected revenues would be about \$50 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, 2013, the expected revenues for 2012/13 will be about \$4.1 million (0.3 percent) less than the total revenue requirement in 2012/13. The total revenue requirement includes a \$6-million increase in the required reserves for the Revenue Remainder Fund. Accounting for this adjustment, the increase in reserves is almost \$1.9 million in 2012/13.

**Schedule 12. FY 2012/13 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)**

	Revenues if Rates Effective July 1st	Revenue Requirements	Difference	% Over (Under) Collected
Supply	225.8	217.1	8.7	4%
System Access Rate	386.2	372.9	13.4	4%
Water Stewardship Rate	69.5	67.4	2.1	3%
System Power Rate	321.9	312.7	9.2	3%
Treatment Surcharge	252.9	243.2	9.7	4%
Readiness-to-serve Charge	146.0	139.8	6.2	4%
Capacity Charge	26.3	25.1	1.2	5%
<b>Total</b>	<b>1,428.5</b>	<b>1,378.0</b>	<b>50.5</b>	<b>4%</b>

Totals may not foot due to rounding

**Schedule 13. FY 2012/13 Proof of Revenue if Rates Effective January 1 (\$ millions)**

	Revenues if Rates Effective Jan 1	Revenue Requirements	Difference	% Over (Under) Collected
Supply	238.2	217.1	21.1	10%
System Access Rate	376.1	372.9	3.3	1%
Water Stewardship Rate	71.3	67.4	3.9	6%
System Power Rate	272.4	312.7	(40.3)	-13%
Treatment Surcharge	239.2	243.2	(4.0)	-2%
Readiness-to-serve Charge	146.0	139.8	6.2	4%
Capacity Charge	30.8	25.1	5.7	23%
<b>Total</b>	<b>1,374.0</b>	<b>1,378.0</b>	<b>(4.1)</b>	<b>0%</b>

Totals may not foot due to rounding

Metropolitan Water District of Southern California  
**Fiscal Year 2013/14 Cost of Service  
Option 1**

March 2012

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

<b>Functional Categories</b>	<b>NBV for FY 2014</b>	<b>% of Total NBV</b>
Source of Supply	\$ 22,855,983	0.3%
Conveyance & Aqueduct	1,849,143,743	20.2%
Storage	2,236,593,975	24.5%
Treatment	3,279,376,388	35.9%
Distribution	1,324,730,492	14.5%
Administrative & General	317,241,039	3.5%
Hydroelectric	112,451,435	1.2%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 9,142,393,053</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. For organizational units handling current construction activity, however, allocations are based on work-in-progress alone. For these organizational units, exclusion of net book value from the allocation basis is done because the costs being allocated relate directly to work in progress not yet reflected in the completed assets records.

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

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

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

**(c) Prorating in proportion to other allocations**

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

## **1 Cost of Service**

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

### ***1.1 Cost of Service Process***

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

#### ***Step 1 - Development Of Revenue Requirements***

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

#### ***Step 2 – Identification Of Service Function Costs***

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

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

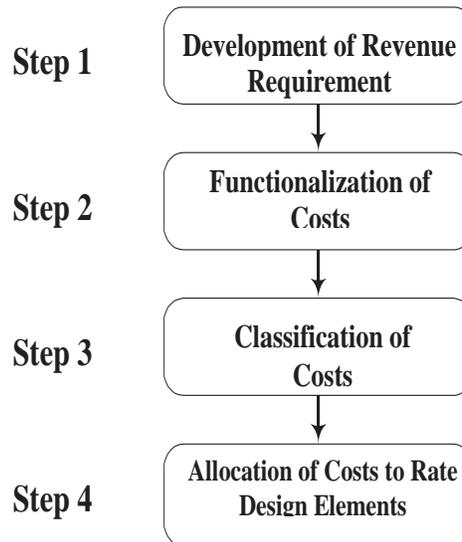
In order to provide more finite functional allocation, many of these functional categories are subdivided into more detailed sub-functions in the cost of service process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions State Water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

### Step 3 - Classification Of Costs

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

### Step 4 - Allocation Of Costs To Rate Design Elements

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

**Figure 1. The Cost of Service Process**

### **1.2 Revenue Requirements**

The estimated revenue requirements presented in this report are for FY 2013/14. Throughout the report, FY 2013/14 is used as the “test year” to demonstrate the application of the cost of service process. Schedule 1 summarizes the FY 2013/14 revenue requirement by the major budget line items used in Metropolitan’s budgeting process. Current estimates indicate Metropolitan’s annual cash expenditures (including capital financing costs, but not construction outlays financed with bond proceeds) will total approximately \$1.573 billion in FY 2013/14.

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 \$40 million in FY 2013/14. It is expected that Metropolitan will also generate about \$81 million in ad valorem property tax revenues and annexation charges. Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, and a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the State Water Project. The total revenue offsets for FY 2013/14 are estimated to be around \$121 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or \$1.452 billion. Given an effective date of January 1, 2014, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2013 will generate a total of \$1.458 billion in 2013/14.

All of Metropolitan’s costs fall under the broad categories of Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific organizational groups. General District Requirements consist of requirements associated with the Colorado River Aqueduct, State Water Project, the capital financing costs associated with the Capital Investment 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 72 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to SWP expenditures, which make up approximately 33 percent of Metropolitan's FY 2013/14 revenue requirements. Metropolitan's SWP contract requires Metropolitan to pay its allocated share of the capital, minimum operations, maintenance, power and replacement costs incurred to develop and convey its water supply entitlement, irrespective of the quantity of water Metropolitan takes delivery of in any given year. Metropolitan's capital financing program is the second largest component of the revenue requirement, constituting approximately 28 percent of the revenue requirement. Departmental O&M costs make up 21 percent of the total revenue requirement in FY 2013/14. 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 Colorado River Aqueduct and other conveyance and supply facilities.

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

	<b>Fiscal Year Ending 2014</b>	<b>% of Revenue Requirements (1)</b>
<b>Departmental Operations &amp; Maintenance</b>		
Office of the General Manager & Human Resources	\$ 20,318,700	1.2%
External Affairs	15,998,100	0.9%
Water System Operations	210,991,000	12.4%
Chief Financial Officer	6,781,500	0.4%
Business Technology & Engineering Services	66,966,300	4.0%
Real Property Development & Mgmt	5,288,300	0.3%
Water Resource Management	15,197,200	0.9%
Ethics Department	459,200	0.0%
General Counsel	11,564,600	0.7%
Audit Department	2,123,800	0.1%
<b>Total</b>	<b>355,688,700</b>	<b>21.0%</b>
<b>General District Requirements</b>		
State Water Project	563,752,923	33.3%
Colorado River Aqueduct Power	24,926,279	1.5%
Supply Programs	44,883,518	2.6%
Demand Management	53,624,040	3.2%
Capital Financing Program	469,827,124	27.7%
Operating Equipment and Leases	38,129,600	2.2%
Increase (Decrease) in Required Reserves	22,900,000	1.4%
<b>Total</b>	<b>1,218,043,484</b>	<b>71.9%</b>
<b>Revenue Offsets</b>	<b>(121,487,735)</b>	<b>7.2%</b>
<b>Net Revenue Requirements</b>	<b>\$ 1,452,244,449</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 Commissioners (NARUC), and the National Council of Governmental Accounting. Because all water utilities are not identical, the rate structure reflects Metropolitan's unique physical, financial, and institutional characteristics.

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

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

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

- *Supply.* This function includes costs for those SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the member agencies' demands. For example, Metropolitan's supply related costs include investments in the Conservation Agreement with the Imperial Irrigation District and the Palo Verde Irrigation District (PVID) Program from the Colorado River supply programs. The SWP programs include 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 Proposition 13 are also included.
- *Conveyance and Aqueduct.* This function includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water through Metropolitan's internal distribution system. Variable power costs for the SWP and CRA are also considered to be Conveyance and Aqueduct costs but are separately reported under a "power" sub-function. Conveyance and Aqueduct facilities can be distinguished from Metropolitan's other facilities primarily by the fact that they do not typically include direct connections to the member agencies. For purposes of this study, the Inland Feeder Project functions as an extension of the SWP East Branch and is therefore considered a Conveyance and Aqueduct facility as well.
- *Storage.* Storage costs include the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs within the distribution system. Metropolitan's larger storage facilities are operated to provide: (1) emergency storage in the event of an earthquake or similar system outage; (2) drought storage that produces additional supplies during times of shortage; and (3) regulatory storage to balance system demands and supplies and provide for operating flexibility. To reasonably allocate the costs of storage capacity among member agencies, the

storage service function is categorized into sub-functions of emergency, drought, and regulatory storage.

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

### ***1.3.1 Functional Allocation Bases***

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

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

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

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

<b>Primary Functional Allocation Bases</b>	<b>Estimated for FY 2014</b>	<b>% of Allocated Dollars</b>
Direct Assignment	\$ 1,040,444,227	61.4%
Work in Progress/Net Book Value	511,145,624	30.2%
Prorating	62,966,949	3.7%
Manager Analysis	35,779,600	2.1%
Other	\$ 44,883,518	2.6%
<b>Total Dollars Allocated</b>	<b>\$ 1,695,219,918</b>	<b>100.0%</b>
<b>Portion of Above Allocations Relating to:</b>		
Revenue Requirements before Offsets	1,573,732,184	
Revenue Offsets	121,487,735	
<b>Total Dollars Allocated</b>	<b>\$ 1,695,219,918</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) Work-In-Progress; Net Book Value Plus Work-In-Progress**

Capital financing costs, including debt service and funding replacements and refurbishments from operating revenues, comprise about 28 percent of Metropolitan's annual revenue requirements. One approach would be to allocate payments on each debt issue in direct proportion to specific project expenditures made using bond proceeds. But, this approach would result in a high degree of volatility in relative capital cost allocations from year to year. The approach used in this analysis is one widely used in water industry cost of service studies. Capital and debt-related costs (including repair and replacement costs paid from current revenues) are allocated on the basis of the relative net book values of fixed assets within each functional category. This approach produces capital cost allocations that are consistent with the functional distribution of assets. Also, since the allocation basis is tied to fixed asset records rather than debt payment records, the resulting allocations are more reflective of the true useful lives of assets. Use of net book values as an allocation basis provides an improved matching of functional costs with asset lives. A listing of fixed asset net book values summarized by asset function is shown in Schedule 3.

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

<b>Functional Categories</b>	<b>NBV for FY 2014</b>	<b>% of Total NBV</b>
Source of Supply	\$ 22,855,983	0.3%
Conveyance & Aqueduct	1,849,143,743	20.2%
Storage	2,236,593,975	24.5%
Treatment	3,279,376,388	35.9%
Distribution	1,324,730,492	14.5%
Administrative & General	317,241,039	3.5%
Hydroelectric	112,451,435	1.2%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 9,142,393,053</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. For organizational units handling current construction activity, however, allocations are based on work-in-progress alone. For these organizational units, exclusion of net book value from the allocation basis is done because the costs being allocated relate directly to work in progress not yet reflected in the completed assets records.

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

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

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

**(c) Prorating in proportion to other allocations**

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

**(d) Manager analyses**

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

A summary of the functional allocation results is shown in Schedules 4 and 5. Schedule 4 provides a breakdown of the revenue requirement for FY 2013/14 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 41 percent of the allocated revenue requirement.

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

<b>Functional Categories</b>	<b>Fiscal Year Ending 2014</b>	<b>% of Allocated Dollars (1)</b>
<b>Source of Supply</b>		
CRA	\$ 36,970,994	2.5%
SWP	108,981,494	7.4%
Other Supply	10,724,586	0.7%
<b>Total</b>	<b>156,677,074</b>	<b>10.6%</b>
<b>Conveyance &amp; Aqueduct</b>		
CRA		
<i>CRA Power (net of sales)</i>	34,614,011	2.4%
<i>CRA All Other</i>	45,244,881	3.1%
SWP		
<i>SWP Power</i>	230,736,656	15.7%
<i>SWP All Other</i>	212,710,208	14.4%
Other Conveyance & Aqueduct	78,053,752	5.3%
<b>Total</b>	<b>601,359,509</b>	<b>40.8%</b>
<b>Storage</b>		
Storage Costs Other Than Power		
<i>Emergency</i>	60,105,932	4.1%
<i>Drought</i>	48,933,370	3.3%
<i>Regulatory</i>	15,418,109	1.0%
Wadsworth plant pumping/generation	(505,271)	0.0%
<b>Total</b>	<b>123,952,141</b>	<b>8.5%</b>
<b>Treatment</b>		
Jensen	47,094,693	3.2%
Weymouth	52,289,713	3.6%
Diemer	58,160,298	3.9%
Mills	34,021,843	2.3%
Skinner	70,451,214	4.8%
<b>Total</b>	<b>262,017,762</b>	<b>17.8%</b>
<b>Distribution</b>	131,375,601	8.9%
<b>Demand Management</b>	61,749,973	4.2%
<b>Hydroelectric</b>	(9,756,389)	0.7%
<b>Administrative &amp; General</b>	124,868,779	8.5%
<b>Total Functional Allocations:</b>	<b>\$ 1,452,244,449</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)**

	Source of Supply	Conveyance & Aqueduct	Storage	Treatment	Distribution	Demand Management	Hydro Electric	Administrative & General	Total \$ Allocated
<b>Departmental Operations &amp; Maintenance</b>									
Office of the General Manager & Human Resources	\$ 1,000,399	\$ 7,752,208	\$ 591,220	\$ 3,386,660	\$ 2,308,977	\$ 198,850	\$ 181,952	\$ 4,898,434	\$ 20,318,700
External Affairs	-	-	-	-	-	2,968,200	-	13,029,900	15,998,100
Water System Operations	12,925,414	36,212,956	3,447,068	96,781,777	56,410,059	8,745	4,249,447	955,534	210,991,000
Chief Financial Officer	-	-	-	-	-	-	-	6,781,500	6,781,500
Business Technology & Engineering Services	2,027,317	8,555,721	7,658,198	15,425,373	8,308,169	389,660	688,839	23,913,023	66,966,300
Real Property Development & Mgmt	-	-	5,288,300	-	-	-	-	-	5,288,300
Water Resource Management	10,386,182	5,871	-	240,698	1,204,198	3,360,251	-	-	15,197,200
Ethics Department	-	-	-	-	-	-	-	459,200	459,200
General Counsel	-	-	-	-	-	-	-	11,564,600	11,564,600
Audit Department	-	-	-	-	-	-	-	2,123,800	2,123,800
<b>Total Departmental O&amp;M</b>	26,339,312	52,526,756	16,984,786	115,834,507	68,231,403	6,925,706	5,120,238	63,725,991	355,688,700
<b>General District Requirements</b>									
State Water Project	84,978,587	478,774,336	-	-	-	-	-	-	563,752,923
Colorado River Aqueduct Power	-	24,926,279	-	-	-	-	-	-	24,926,279
Supply Programs	44,883,518	-	-	-	-	-	-	-	44,883,518
Demand Management	-	-	-	-	-	53,624,040	-	-	53,624,040
Capital Financing Program	1,116,526	89,361,361	108,356,748	160,305,015	89,688,193	-	5,539,688	15,459,593	469,827,124
Other Operating Costs	697,678	1,137,255	412,316	2,361,856	1,610,280	1,727,778	126,894	30,055,542	38,129,600
Increase (Decrease) in Required Reserves	-	-	-	-	-	-	-	22,900,000	22,900,000
<b>Total General District Requirements</b>	131,676,309	594,199,231	108,769,064	162,666,871	91,298,473	55,351,818	5,666,581	68,415,136	1,218,043,484
<b>Revenue Offsets</b>	(1,338,547)	(45,366,478)	(1,801,709)	(16,483,616)	(28,154,276)	(527,551)	(20,543,209)	(7,272,348)	(121,487,735)
<b>Net Revenue Requirements</b>	<b>\$ 156,677,074</b>	<b>\$ 601,359,509</b>	<b>\$ 123,952,141</b>	<b>\$ 262,017,762</b>	<b>\$ 131,375,601</b>	<b>\$ 61,749,973</b>	<b>\$ (9,756,389)</b>	<b>\$ 124,868,779</b>	<b>\$ 1,452,244,449</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 associated with average system demands. Variable commodity costs include costs of chemicals, most power costs, and other cost components that increase or decrease in relation to the volume of water supplied. Fixed commodity costs include fixed operations and maintenance and capital financing costs that are not related to accommodating peak demands or standby service.

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

An additional component used in Metropolitan's cost classification process is the hydroelectric component. While not a part of most water utilities' cost classification procedures, the hydroelectric

classification component is necessary to segregate revenue requirements carried from the hydroelectric function established in the functional allocation process. Hydroelectric revenue requirements are later embedded in the distribution function. Any net revenues generated by the hydroelectric operations offset the distribution costs and reduce the System Access Rate. All users of the distribution system benefit proportionately from the revenue offset provided by the sale of hydroelectric energy.

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

Costs for the Conveyance and Aqueduct (C&A) service function are classified into demand, commodity, and standby categories. Because the capital costs for C&A were incurred to meet all three classification categories, an analysis of C&A capacity usage for the three years ending June 2014 was used to determine that 52 percent of the available conveyance capacity has been used to meet member agency demands on an average annual basis. A system peak factor<sup>1</sup> of 1.4 was applied to the average annual usage to determine that 22 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 26 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct sub-functions. The classification shares reflect the system average use of conveyance capacity and not the usage of individual facilities. All of the Conveyance and Aqueduct energy costs for pumping water to Southern California are classified as variable commodity costs and, therefore, are not shown in Schedule 6 because they carry through the classification step.

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

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<sup>1</sup> Peak monthly deliveries to the member agencies average about 42 percent more than the average monthly deliveries.

Distribution service function costs were classified using daily flow data for the three calendar years ending December 2014. During this period, the average annual volume of deliveries to the member agencies used 42 percent of the peak distribution capacity. The difference between the three-year average non-coincident peak and the commodity flows divided by the system capacity, or 38 percent of the distribution capacity, was used to meet peak day demands in excess of average annual flows. Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the peak non-coincident<sup>2</sup> 24-hour daily flow of all the member agencies. The remaining 20 percent of distribution capacity is associated with standby service.

As presented in Schedule 6, treatment service function costs were also classified using daily flow data of deliveries to the member agencies for the three years ending December 2014. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. Schedule 7 summarizes the service function revenue requirements by classification category. Administrative and general costs have been allocated to the classification categories by service function based on the ratio of classified non-A&G service function costs to total non-A&G service function costs.

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

**Schedule 6. Classification Percentages**

Function	Classification Percentages			Total % Classified	Comments
	Fixed				
	Commodity	Demand	Standby		
<b>Source of Supply</b>					
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs classified as commodity
State Water Project	100%	0%	0%	100%	Supply costs classified as commodity
<b>Conveyance &amp; Aqueduct</b>					
Colorado River Aqueduct	52%	22%	26%	100%	Demand (peaking) percentage represents application of system monthly peak factor of 1.4 to average monthly flow. Commodity percentage represents average flows. Remainder of capacity is for standby (expected growth). SWP and CRA are treated the same due to application of system wide uniform price.
State Water Project	52%	22%	26%	100%	
Other	52%	22%	26%	100%	
<b>Storage</b>					
Emergency	0%	0%	100%	100%	Standby service (recovered by RTS)
Drought	100%	0%	0%	100%	Recovered by Supply Rates
Regulatory	42%	37%	20%	100%	See distribution (below)
<b>Treatment</b>	32%	36%	32%	100%	Demand percentage represents amount of system treatment capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total capacity. The same classification is applied to all five treatment plants due to the use of a uniform system wide treatment surcharge.
<b>Distribution</b>	42%	37%	20%	100%	Demand percentage represents amount of system distribution capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total system capacity. The same classification is applied to all distribution facilities due to the use of a system wide uniform system access rate.

Totals may not foot due to rounding

A summary of cost classification results is shown in Schedule 7. The classification of the service function costs results in about 9 percent, or \$129 million of the total revenue requirements, being allocated to the demand classification category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan's property tax revenue is allocated to C&A fixed demand costs and offsets the amount that is recovered through rates. The taxes are used to pay for the general obligation bond debt service allocated to the C&A costs.

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

Functional Categories (by sub-Function)	Fixed Demand	Commodity	Standby	Variable Commodity	Hydroelectric	Total Classified
<b>Source of Supply</b>						
CRA	\$ -	\$ 41,264,844	\$ -	\$ -	\$ -	\$ 41,264,844
SWP	-	121,638,720	-	-	-	121,638,720
Other Supply	-	11,970,151	-	-	-	11,970,151
<b>Subtotal: Source of Supply</b>	-	174,873,715	-	-	-	<b>174,873,715</b>
<b>Conveyance &amp; Aqueduct</b>						
CRA						
CRA Power	-	11,143,063	-	25,835,735	-	36,978,798
CRA All Other	2,436,992	44,943,376	2,886,867	-	-	50,267,235
SWP						
SWP Power	-	-	-	242,027,696	-	242,027,696
SWP All Other	18,710,541	194,754,938	22,164,553	-	-	235,630,032
Other Conveyance & Aqueduct	16,228,896	49,243,062	20,066,562	-	-	85,538,520
<b>Subtotal: Conveyance &amp; Aqueduct</b>	37,376,429	300,084,439	45,117,982	267,863,430	-	<b>650,442,280</b>
<b>Storage</b>						
Storage Costs Other Than Power						
Emergency	-	-	64,584,997	-	-	64,584,997
Drought	-	54,616,543	-	-	-	54,616,543
Regulatory	5,374,305	8,534,768	2,920,597	-	-	16,829,671
Storage Power	-	-	-	(529,996)	-	(529,996)
<b>Subtotal: Storage</b>	5,374,305	63,151,312	67,505,594	(529,996)	-	<b>135,501,215</b>
<b>Water Quality</b>						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
<b>Subtotal: Water Quality</b>	-	-	-	-	-	-
<b>Treatment</b>	61,070,691	154,199,189	38,934,987	31,683,284	-	<b>285,888,151</b>
<b>Distribution</b>	25,107,104	106,111,360	13,644,134	-	-	<b>144,862,598</b>
<b>Demand Management</b>	-	68,921,680	-	-	-	<b>68,921,680</b>
<b>Hydroelectric</b>	-	-	-	-	(8,245,191)	<b>(8,245,191)</b>
<b>Total Costs Classified</b>	<b>\$ 128,928,529</b>	<b>\$ 867,341,695</b>	<b>\$ 165,202,698</b>	<b>\$ 299,016,718</b>	<b>\$ (8,245,191)</b>	<b>\$ 1,452,244,449</b>

Totals may not foot due to rounding

About 60 percent of the revenue requirement (\$867 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 \$165 million and account for about 11 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 \$299 million, and account for about 20 percent of the total revenue requirement. Because of the variable nature of these costs, it is appropriate to recover them through volumetric rates.

## **2 Rates and Charges**

Schedule 8 provides a cross-reference between the classified service function costs and their allocation to the rate design elements. The specifics of each rate design element are discussed in detail in the following section. Schedule 9 summarizes the rates and charges that would be effective on January 1, 2014 in order to collect all costs from rates and charges in fiscal year 2013/14, with the increase of \$8.3 million in reserves. 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)**

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	174,873,715	-	-	-	-	-	-	174,873,715
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Supply</b>	174,873,715	-	-	-	-	-	-	174,873,715
<b>Conveyance and Aqueduct</b>								
Fixed Demand	-	-	-	-	-	37,376,429	-	37,376,429
Fixed Commodity	-	300,084,439	-	-	-	-	-	300,084,439
Fixed Standby	-	-	-	-	-	45,117,982	-	45,117,982
Variable Commodity	-	-	-	267,863,430	-	-	-	267,863,430
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Conveyance and Aqueduct</b>	-	300,084,439	-	267,863,430	-	82,494,411	-	650,442,280
<b>Storage</b>								
Fixed Demand	-	-	-	-	5,374,305	-	-	5,374,305
Fixed Commodity	54,616,543	8,534,768	-	-	-	-	-	63,151,312
Fixed Standby	-	-	-	-	-	67,505,594	-	67,505,594
Variable Commodity	(529,996)	-	-	-	-	-	-	(529,996)
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Storage</b>	54,086,547	8,534,768	-	-	5,374,305	67,505,594	-	135,501,215
<b>Treatment</b>								
Fixed Demand	-	-	-	-	-	-	61,070,691	61,070,691
Fixed Commodity	-	-	-	-	-	-	154,199,189	154,199,189
Fixed Standby	-	-	-	-	-	-	38,934,987	38,934,987
Variable Commodity	-	-	-	-	-	-	31,683,284	31,683,284
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Treatment</b>	-	-	-	-	-	-	285,888,151	285,888,151
<b>Distribution</b>								
Fixed Demand	-	-	-	-	25,107,104	-	-	25,107,104
Fixed Commodity	-	106,111,360	-	-	-	-	-	106,111,360
Fixed Standby	-	-	-	-	-	13,644,134	-	13,644,134
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	(8,245,191)	-	-	-	-	-	(8,245,191)
<b>Subtotal: Distribution</b>	-	97,866,170	-	-	25,107,104	13,644,134	-	136,617,408
<b>Demand Management</b>								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	68,921,680	-	-	-	-	68,921,680
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Demand Management</b>	-	-	68,921,680	-	-	-	-	68,921,680
<b>Total</b>								
Fixed Demand	-	-	-	-	30,481,409	37,376,429	61,070,691	128,928,529
Fixed Commodity	229,490,258	414,730,568	68,921,680	-	-	-	154,199,189	867,341,695
Fixed Standby	-	-	-	-	-	126,267,710	38,934,987	165,202,698
Variable Commodity	(529,996)	-	-	267,863,430	-	-	31,683,284	299,016,718
Hydroelectric	-	(8,245,191)	-	-	-	-	-	(8,245,191)
<b>Total</b>	\$ 228,960,262	\$ 406,485,377	\$ 68,921,680	\$ 267,863,430	\$ 30,481,409	\$ 163,644,139	\$ 285,888,151	\$ 1,452,244,449

Totals may not foot due to rounding

**Schedule 9. Rates and Charges Summary**

Effective January 1st	2012	2013	2014
Tier 1 Supply Rate (\$/AF)	\$106	\$149	\$157
Delta Supply Surcharge (\$/AF)	\$58	*	*
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290
System Access Rate (\$/AF)	\$217	\$228	\$247
Water Stewardship Rate (\$/AF)	\$43	\$41	\$42
System Power Rate (\$/AF)	\$136	\$190	\$164
Full Service Untreated Volumetric Cost (\$/AF)			
Tier 1	\$560	\$608	\$610
Tier 2	\$686	\$749	\$743
Replenishment Water Rate Untreated (\$/AF)	\$442	**	**
Interim Agricultural Water Program Untreated (\$/AF)	\$537	***	***
Treatment Surcharge (\$/AF)	\$234	\$260	\$302
Full Service Treated Volumetric Cost (\$/AF)			
Tier 1	\$794	\$868	\$912
Tier 2	\$920	\$1,009	\$1,045
Treated Replenishment Water Rate (\$/AF)	\$651	**	**
Treated Interim Agricultural Water Program (\$/AF)	\$765	***	***
Readiness-to-Serve Charge (\$M)	\$146	\$146	\$169
Capacity Charge (\$/cfs)	\$7,400	\$6,600	\$8,900

\* The Delta Supply Surcharge will be suspended after 2012.

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

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

**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. All system users (member agency or third party) pay the SAR to use Metropolitan's conveyance and distribution system. To meet the board stated objective to collect all costs in 2013/14, the SAR would increase to \$247 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 \$406 million in FY 2013/14, or 28 percent of the total revenue requirement.

**2.2 Water Stewardship Rate (WSR)**

The WSR would increase to \$42 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 \$69 million in FY 2013/14, about 5 percent of the revenue requirement. The WSR is a volumetric rate levied on each acre-foot of water that moves

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

through the Metropolitan system. All system users (member agency or third parties) will pay the same proportional costs for existing and future conservation and recycling investments.

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

SPR would decrease to \$164 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 2013/14 the revenue requirement for the SPR is estimated to be about \$268 million, about 18 percent of the total revenue requirement.

### **2.4 Treatment Surcharge**

The treatment surcharge would increase to \$302 per acre-foot to collect all treatment costs in 2013/14. 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 \$286 million in FY 2013/14, almost 20 percent of the total revenue requirement. The treatment surcharge recovers all costs associated with providing treated water service, including commodity, demand and standby related costs. Significant capital improvements at Metropolitan's five treatment plants, such as the Ozone Retrofit Program, Skinner Filtration Plant Expansion Project, and improvement programs at all five treatment plants result in additional capital financing costs being allocated to the treatment surcharge.

### **2.5 Capacity Charge**

The Capacity Charge would increase to \$8,900 per cubic-foot-second of capacity during 2014. The capacity charge is levied on the maximum summer day demand placed on the system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2012 is used to levy the capacity charge effective January 1, 2014 through December 31, 2014. Demands measured for the purposes of billing the capacity charge include all firm demand and agricultural demand, including wheeling service and exchanges. Replenishment service is not included in the measurement of peak day demand for purposes of billing the capacity charge.

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan's system, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods particularly October through April. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total capacity charge. The estimated capacity charge to be paid by each member agency in calendar year 2014 will be provided to the Board by April 2013.

### **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 2013/14. 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 \$96 million in FY 2013/14. The RTS would increase to \$169 million in calendar year 2014.

The RTS is allocated to the member agencies based on each agency's proportional share of a ten-year rolling average of all firm deliveries (including water transfers and exchanges that use Metropolitan system capacity). The ten-year rolling average will not include replenishment service and interim agricultural deliveries because these deliveries will be the first to be curtailed in the event of an emergency. A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency's potential long-term need for standby service under different demand conditions. Member agencies that so choose may have a portion of their total RTS obligation offset by standby charge collections levied by Metropolitan on behalf of the member agency. The detailed schedule with an estimate of each agency's RTS obligation for calendar year 2014 will be provided to the Board by April 2013.

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

The new Purchase Order is part of the discussions in the Long Range Finance Plan Workgroup, and a decision is expected in 2012. The 2014 Purchase Order Commitment quantity and the Tier 1 Annual Limit for all member agencies will be provided to the Board by April 2013.

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

The Tier 2 Supply Rate reflects Metropolitan's cost of developing long-term firm supplies. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. The Tier 2 Supply Rate also recovers a greater proportion of the cost of developing additional supplies from member agencies that have increasing demands on the Metropolitan system. The Tier 2 Supply Rate would remain at its current level of \$290 per acre-foot.

The total revenue requirement for the supply service function is about \$229 million in FY 2013/14. At an expected average sales level of 1.7 million acre-feet it is estimated that no acre-feet will be sold at the Tier 2 Supply Rate.

The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. The Purchase Order is part of the Long Range Finance Plan forum and a decision is expected in 2012.

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

The Tier 1 Supply Rate would be increased to \$157 per acre-foot in 2014. The Tier 1 Supply Rate recovers the majority of the supply revenue requirement. The Tier 1 Supply Rate is simply calculated as the amount of the total supply revenue requirement that is not recovered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. At an expected demand level of about

1.7 MAF, it is estimated that Metropolitan will sell about 1.5 MAF at the Tier 1 Supply Rate in 2013/14.

### ***2.10 Replenishment water rates***

Discussion on the replenishment program are continuing with the member agencies in the Long Range Finance Plan Workgroup. If adopted, the new replenishment program would replace the existing replenishment rate. Therefore, the existing replenishment rate is discontinued.

## **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 2013/14, water sales are projected to be around 1.7 MAF.

## **4 Proof of Revenue**

Based on expected sales of 1.7 MAF the expected revenues would be about \$42.9 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, 2014, the expected revenues for 2013/14 will be about \$5.6 million higher than the total revenue requirement in 2013/14. The total revenue requirement includes a \$2.7 million increase in the required reserves for the Revenue Remainder Fund. Accounting for this adjustment, the reserves would increase by \$8.3 million in 2013/14.

**Schedule 10. FY 2013/14 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)**

	Revenues if Rates Effective July 1st	Revenue Requirements	Difference	% Over (Under) Collected
Supply	235.9	229.0	6.9	3%
System Access Rate	417.0	406.5	10.5	3%
Water Stewardship Rate	70.9	68.9	2.0	3%
System Power Rate	276.8	267.9	9.0	3%
Treatment Surcharge	293.8	285.9	7.9	3%
Readiness-to-serve Charge	169.0	163.6	5.4	3%
Capacity Charge	31.8	30.5	1.3	4%
<b>Total</b>	<b>1,495.2</b>	<b>1,452.2</b>	<b>42.9</b>	<b>3%</b>

Totals may not foot due to rounding

**Schedule 11. FY 2013/14 Proof of Revenue if Rates Effective January 1 (\$ millions)**

	Revenues if Rates Effective Jan 1	Revenue Requirements	Difference	% Over (Under) Collected
Supply	229.4	229.0	0.4	0%
System Access Rate	399.8	406.5	(6.7)	-2%
Water Stewardship Rate	70.0	68.9	1.1	2%
System Power Rate	300.3	267.9	32.4	12%
Treatment Surcharge	271.8	285.9	(14.0)	-5%
Readiness-to-serve Charge	157.5	163.6	(6.1)	-4%
Capacity Charge	29.1	30.5	(1.4)	-5%
<b>Total</b>	<b>1,457.9</b>	<b>1,452.2</b>	<b>5.6</b>	<b>0%</b>

Totals may not foot due to rounding

Metropolitan Water District of Southern California  
**Fiscal Year 2012/13 Cost of Service  
Option 2**

March 2012

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## **1 Cost of Service**

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

### ***1.1 Cost of Service Process***

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

#### ***Step 1 - Development Of Revenue Requirements***

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

#### ***Step 2 – Identification Of Service Function Costs***

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

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

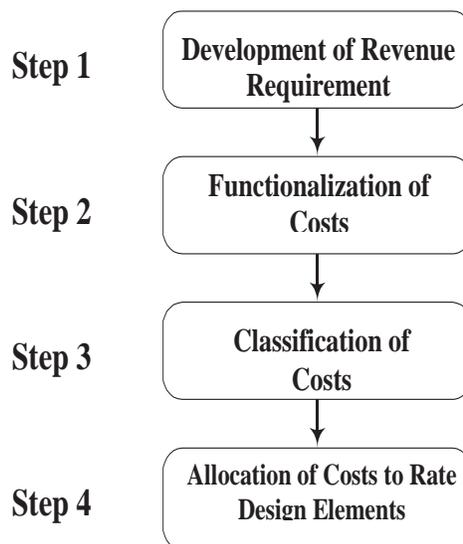
In order to provide more finite functional allocation, many of these functional categories are subdivided into more detailed sub-functions in the cost of service process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions State Water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

### Step 3 - Classification Of Costs

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

### Step 4 - Allocation Of Costs To Rate Design Elements

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

**Figure 1. The Cost of Service Process**

### **1.2 Revenue Requirements**

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

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 \$43.8 million in FY 2012/13. It is expected that Metropolitan will also generate about \$81.1 million in ad valorem property tax revenues and annexation charges. Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, and a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the State Water Project. The total revenue offsets for FY 2012/13 are estimated to be around \$125 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or \$1.366 billion. Given an effective date of January 1, 2013, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2012 will generate a total of \$1.358 billion in 2012/13.

All of Metropolitan’s costs fall under the broad categories of Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific organizational groups. General District Requirements consist of requirements associated with the Colorado River Aqueduct, State Water Project, the capital financing costs associated with the Capital Investment 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 71 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to SWP expenditures, which make up approximately 36 percent of Metropolitan's FY 2012/13 revenue requirements. Metropolitan's SWP contract requires Metropolitan to pay its allocated share of the capital, minimum operations, maintenance, power and replacement costs incurred to develop and convey its water supply entitlement, irrespective of the quantity of water Metropolitan takes delivery of in any given year. Metropolitan's capital financing program is the second largest component of the revenue requirement, constituting approximately 24 percent of the revenue requirement. Departmental O&M costs make up 21 percent of the total revenue requirement in FY 2012/13. 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 Colorado River Aqueduct and other conveyance and supply facilities.

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

	<b>Fiscal Year Ending 2013</b>	<b>% of Revenue Requirements (1)</b>
<b>Departmental Operations &amp; Maintenance</b>		
Office of the General Manager & Human Resources	\$ 19,088,600	1.2%
External Affairs	15,521,800	1.0%
Water System Operations	201,459,900	12.5%
Chief Financial Officer	6,197,200	0.4%
Business Technology & Engineering Services	61,947,000	3.8%
Real Property Development & Mgmt	5,021,000	0.3%
Water Resource Management	14,903,500	0.9%
Ethics Department	420,300	0.0%
General Counsel	11,343,700	0.7%
Audit Department	1,974,600	0.1%
<b>Total</b>	<b>337,877,600</b>	<b>20.9%</b>
<b>General District Requirements</b>		
State Water Project	593,475,189	36.7%
Colorado River Aqueduct Power	36,178,684	2.2%
Supply Programs	36,287,598	2.2%
Demand Management	53,205,188	3.3%
Capital Financing Program	396,229,175	24.5%
Operating Equipment and Leases	29,194,400	1.8%
Increase (Decrease) in Required Reserves	8,500,000	0.5%
<b>Total</b>	<b>1,153,070,235</b>	<b>71.4%</b>
<b>Revenue Offsets</b>	<b>(124,907,622)</b>	<b>7.7%</b>
<b>Net Revenue Requirements</b>	<b>\$ 1,366,040,212</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 Commissioners (NARUC), and the National Council of Governmental Accounting. Because all water utilities are not identical, the rate structure reflects Metropolitan's unique physical, financial, and institutional characteristics.

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

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

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

- *Supply.* This function includes costs for those SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the member agencies' demands. For example, Metropolitan's supply related costs include investments in the Conservation Agreement with the Imperial Irrigation District and the Palo Verde Irrigation District (PVID) Program from the Colorado River supply programs. The SWP programs include 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 Proposition 13 are also included.
- *Conveyance and Aqueduct.* This function includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water through Metropolitan's internal distribution system. Variable power costs for the SWP and CRA are also considered to be Conveyance and Aqueduct costs but are separately reported under a "power" sub-function. Conveyance and Aqueduct facilities can be distinguished from Metropolitan's other facilities primarily by the fact that they do not typically include direct connections to the member agencies. For purposes of this study, the Inland Feeder Project functions as an extension of the SWP East Branch and is therefore considered a Conveyance and Aqueduct facility as well.
- *Storage.* Storage costs include the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs within the distribution system. Metropolitan's larger storage facilities are operated to provide (1) emergency storage in the event of an earthquake or similar system outage; (2) drought storage that produces additional supplies during times of shortage; and (3) regulatory storage to balance system demands and supplies and provide for operating flexibility. To reasonably allocate the costs of storage capacity among member agencies, the

storage service function is categorized into sub-functions of emergency, drought, and regulatory storage.

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

### ***1.3.1 Functional Allocation Bases***

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

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

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

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

<b>Primary Functional Allocation Bases</b>	<b>Estimated for FY 2013</b>	<b>% of Allocated Dollars</b>
Direct Assignment	\$ 1,052,444,385	65.1%
Work in Progress/Net Book Value	435,100,275	26.9%
Prorating	57,602,698	3.6%
Manager Analysis	34,420,500	2.1%
Other	\$ 36,287,598	2.2%
<b>Total Dollars Allocated</b>	<b>\$ 1,615,855,457</b>	<b>100.0%</b>
<b>Portion of Above Allocations Relating to:</b>		
Revenue Requirements before Offsets	1,490,947,835	
Revenue Offsets	124,907,622	
<b>Total Dollars Allocated</b>	<b>\$ 1,615,855,457</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 24 percent of Metropolitan's annual revenue requirements. One approach would be to allocate payments on each debt issue in direct proportion to specific project expenditures made using bond proceeds. But, this approach would result in a high degree of volatility in relative capital cost allocations from year to year. The approach used in this analysis is one widely used in water industry cost of service studies. Capital and debt-related costs (including repair and replacement costs paid from current revenues) are allocated on the basis of the relative net book values of fixed assets within each functional category. This approach produces capital cost allocations that are consistent with the functional distribution of assets. Also, since the allocation basis is tied to fixed asset records

rather than debt payment records, the resulting allocations are more reflective of the true useful lives of assets. Use of net book values as an allocation basis provides an improved matching of functional costs with asset lives. A listing of fixed asset net book values summarized by asset function is shown in Schedule 3.

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

<b>Functional Categories</b>	<b>NBV for FY 2013</b>	<b>% of Total NBV</b>
Source of Supply	\$ 23,297,862	0.3%
Conveyance & Aqueduct	1,864,648,314	20.8%
Storage	2,261,013,314	25.2%
Treatment	3,057,396,365	34.1%
Distribution	1,316,181,317	14.7%
Administrative & General	322,585,783	3.6%
Hydroelectric	115,593,239	1.3%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 8,960,716,194</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. For organizational units handling current construction activity, however, allocations are based on work-in-progress alone. For these organizational units, exclusion of net book value from the allocation basis is done because the costs being allocated relate directly to work in progress not yet reflected in the completed assets records.

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

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

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

**(c) Prorating in proportion to other allocations**

Utility cost of service studies frequently contain line items for which it would be difficult to identify an allocation basis specific to that line item. In these cases, the most logical allocation basis is often a prorata blend of allocation results calculated for other revenue requirements in the same departmental group, or general category. Reasonable prorata allocations are based on a

logical nexus between a cost and the purpose which it serves. For example: Human Resources Section costs are allocated using all labor costs, since Human Resources spends its time and resources attending to the labor force.

**(d) Manager analyses**

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

A summary of the functional allocation results is shown in Schedules 4 and 5. Schedule 4 provides a breakdown of the revenue requirement for FY 2012/13 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 45 percent of the allocated revenue requirement.

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

<b>Functional Categories</b>	<b>Fiscal Year Ending 2013</b>	<b>% of Allocated Dollars (1)</b>
<b>Source of Supply</b>		
CRA	\$ 37,126,214	2.7%
SWP	98,160,437	7.1%
Other Supply	10,176,450	0.7%
<b>Total</b>	<b>145,463,102</b>	<b>10.5%</b>
<b>Conveyance &amp; Aqueduct</b>		
CRA		
<i>CRA Power (net of sales)</i>	41,555,192	3.0%
<i>CRA All Other</i>	42,363,613	3.0%
SWP		
<i>SWP Power</i>	270,451,753	19.5%
<i>SWP All Other</i>	201,958,579	14.5%
Other Conveyance & Aqueduct	66,928,992	4.8%
<b>Total</b>	<b>623,258,130</b>	<b>44.9%</b>
<b>Storage</b>		
Storage Costs Other Than Power		
<i>Emergency</i>	52,431,022	3.8%
<i>Drought</i>	42,716,007	3.1%
<i>Regulatory</i>	12,786,948	0.9%
Wadsworth plant pumping/generation	(313,364)	0.0%
<b>Total</b>	<b>107,620,613</b>	<b>7.8%</b>
<b>Treatment</b>		
Jensen	40,528,995	2.9%
Weymouth	42,472,753	3.1%
Diemer	49,840,985	3.6%
Mills	29,863,869	2.2%
Skinner	62,855,497	4.5%
<b>Total</b>	<b>225,562,098</b>	<b>16.2%</b>
<b>Distribution</b>	118,548,927	8.5%
<b>Demand Management</b>	61,087,495	4.4%
<b>Hydroelectric</b>	(11,167,386)	0.8%
<b>Administrative &amp; General</b>	95,667,234	6.9%
<b>Total Functional Allocations:</b>	<b>\$ 1,366,040,212</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)**

	Source of Supply	Conveyance & Aqueduct	Storage	Treatment	Distribution	Demand Management	Hydro Electric	Administrative & General	Total \$ Allocated
<b>Departmental Operations &amp; Maintenance</b>									
Office of the General Manager & Human Resources	\$ 932,880	\$ 7,468,717	\$ 551,446	\$ 3,106,998	\$ 2,130,867	\$ 187,822	\$ 167,290	\$ 4,542,580	\$ 19,088,600
External Affairs	-	-	-	-	-	2,843,550	-	12,678,250	15,521,800
Water System Operations	12,250,467	35,011,017	3,418,916	92,038,406	53,778,592	8,426	4,033,386	920,690	201,459,900
Chief Financial Officer	-	-	-	-	-	-	-	6,197,200	6,197,200
Business Technology & Engineering Services	1,888,478	8,181,759	7,427,204	14,080,555	7,854,800	366,913	642,543	21,504,748	61,947,000
Real Property Development & Mgmt	-	-	5,021,000	-	-	-	-	-	5,021,000
Water Resource Management	10,186,819	5,776	-	236,832	1,184,509	3,289,564	-	-	14,903,500
Ethics Department	-	-	-	-	-	-	-	420,300	420,300
General Counsel	-	-	-	-	-	-	-	11,343,700	11,343,700
Audit Department	-	-	-	-	-	-	-	1,974,600	1,974,600
<b>Total Departmental O&amp;M</b>	25,258,644	50,667,270	16,418,567	109,462,791	64,948,767	6,696,275	4,843,218	59,582,069	337,877,600
<b>General District Requirements</b>									
State Water Project	83,601,729	509,873,460	-	-	-	-	-	-	593,475,189
Colorado River Aqueduct Power	-	36,178,684	-	-	-	-	-	-	36,178,684
Supply Programs	36,287,598	-	-	-	-	-	-	-	36,287,598
Demand Management	-	-	-	-	-	53,205,188	-	-	53,205,188
Capital Financing Program	960,805	75,376,105	92,321,115	129,685,809	80,839,951	-	4,590,512	12,454,878	396,229,175
Other Operating Costs	603,411	992,437	356,690	2,009,687	1,378,301	1,710,588	108,207	22,035,079	29,194,400
Increase (Decrease) in Required Reserves	-	-	-	-	-	-	-	8,500,000	8,500,000
<b>Total General District Requirements</b>	121,453,543	622,420,685	92,677,805	131,695,496	82,218,252	54,915,776	4,698,719	42,989,957	1,153,070,235
<b>Revenue Offsets</b>	(1,249,085)	(49,829,825)	(1,475,759)	(15,596,189)	(28,618,093)	(524,555)	(20,709,323)	(6,904,792)	(124,907,622)
<b>Net Revenue Requirements</b>	<b>\$ 145,463,102</b>	<b>\$ 623,258,130</b>	<b>\$ 107,620,613</b>	<b>\$ 225,562,098</b>	<b>\$ 118,548,927</b>	<b>\$ 61,087,495</b>	<b>\$ (11,167,386)</b>	<b>\$ 95,667,234</b>	<b>\$ 1,366,040,212</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 associated with average system demands. Variable commodity costs include costs of chemicals, most power costs, and other cost components that increase or decrease in relation to the volume of water supplied. Fixed commodity costs include fixed operations and maintenance and capital financing costs that are not related to accommodating peak demands or standby service.

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

An additional component used in Metropolitan's cost classification process is the hydroelectric component. While not a part of most water utilities' cost classification procedures, the hydroelectric

classification component is necessary to segregate revenue requirements carried from the hydroelectric function established in the functional allocation process. Hydroelectric revenue requirements are later embedded in the distribution function. Any net revenues generated by the hydroelectric operations offset the distribution costs and reduce the System Access Rate. All users of the distribution system benefit proportionately from the revenue offset provided by the sale of hydroelectric energy.

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

Costs for the Conveyance and Aqueduct (C&A) service function are classified into demand, commodity, and standby categories. Because the capital costs for C&A were incurred to meet all three classification categories, an analysis of C&A capacity usage for the three years ending June 2013 was used to determine that 52 percent of the available conveyance capacity has been used to meet member agency demands on an average annual basis. A system peak factor<sup>1</sup> of 1.4 was applied to the average annual usage to determine that 22 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 26 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct sub-functions. The classification shares reflect the system average use of conveyance capacity and not the usage of individual facilities. All of the Conveyance and Aqueduct energy costs for pumping water to Southern California are classified as variable commodity costs and, therefore, are not shown in Schedule 6 because they carry through the classification step.

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

Distribution service function costs were classified using daily flow data for the three calendar years ending December 2013. During this period, the average annual volume of deliveries to the member agencies used 43 percent of the peak distribution capacity. The difference between the three-year average non-coincident peak and the commodity flows divided by the system capacity, or 37 percent of the distribution capacity, was used to meet peak day demands in excess of average annual flows.

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<sup>1</sup> Peak monthly deliveries to the member agencies average about 42 percent more than the average monthly deliveries.

Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the peak non-coincident<sup>2</sup> 24-hour daily flow of all the member agencies. The remaining 20 percent of distribution capacity is associated with standby service.

As presented in Schedule 6, treatment service function costs were also classified using daily flow data of deliveries to the member agencies for the three years ending December 2013. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. Schedule 7 summarizes the service function revenue requirements by classification category. Administrative and general costs have been allocated to the classification categories by service function based on the ratio of classified non-A&G service function costs to total non-A&G service function costs.

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

**Schedule 6. Classification Percentages**

Function	Classification Percentages			Total % Classified	Comments
	Fixed				
	Commodity	Demand	Standby		
<b>Source of Supply</b>					
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs classified as commodity
State Water Project	100%	0%	0%	100%	Supply costs classified as commodity
<b>Conveyance &amp; Aqueduct</b>					
Colorado River Aqueduct	52%	22%	26%	100%	Demand (peaking) percentage represents application of system monthly peak factor of 1.4 to average monthly flow. Commodity percentage represents average flows. Remainder of capacity is for standby (expected growth). SWP and CRA are treated the same due to application of system wide uniform price.
State Water Project	52%	22%	26%	100%	
Other	52%	22%	26%	100%	
<b>Storage</b>					
Emergency	0%	0%	100%	100%	Standby service (recovered by RTS)
Drought	100%	0%	0%	100%	Recovered by Supply Rates
Regulatory	43%	37%	20%	100%	See distribution (below)
<b>Treatment</b>	32%	36%	32%	100%	Demand percentage represents amount of system treatment capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total capacity. The same classification is applied to all five treatment plants due to the use of a uniform system wide treatment surcharge.
<b>Distribution</b>	43%	37%	20%	100%	Demand percentage represents amount of system distribution capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total system capacity. The same classification is applied to all distribution facilities due to the use of a system wide uniform system access rate.

Totals may not foot due to rounding

A summary of cost classification results is shown in Schedule 7. The classification of the service function costs results in about 8 percent, or \$106 million of the total revenue requirements, being allocated to the demand classification category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan's property tax revenue is allocated to C&A fixed demand costs and offsets the amount that is recovered through rates. The taxes are used to pay for the general obligation bond debt service allocated to the C&A costs.

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

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

Totals may not foot due to rounding

About 58 percent of the revenue requirement (\$791 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 \$136 million and account for about 10 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 \$343 million, and account for about 25 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, 2013 in order to collect all costs from rates and charges in fiscal year 2012/13, with the use of \$0.3 million draws from reserve funds. Average costs by member agency will vary depending upon an agency’s RTS allocation, capacity charge and relative proportions of treated and untreated Tier 1, and Tier 2 purchases.

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

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

Totals may not foot due to rounding

**Schedule 9. Rates and Charges Summary**

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

\* The Delta Supply Surcharge will be suspended after 2012.

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

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

### **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. All system users (member agency or third party) pay the SAR to use Metropolitan's conveyance and distribution system. To meet the board stated objective to collect all costs in 2012/13, the SAR would increase from its current level of \$217 per acre-foot to \$223 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 \$372 million in FY 2012/13, or 27 percent of the total revenue requirement.

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

The WSR would decrease from its current level of \$43 per acre-foot to \$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 \$67 million in FY 2012/13, about 4 percent of the revenue requirement. The WSR is a volumetric rate levied on each acre-foot of water that moves through the Metropolitan system. All system users (member agency or third parties) will pay the same proportional costs for existing and future conservation and recycling investments.

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

SPR would increase from \$136 per acre-foot to \$189 per acre-foot in 2013. 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 2012/13 the revenue requirement for the SPR is estimated to be about \$313 million, about 23 percent of the total revenue requirement.

### **2.4 Treatment Surcharge**

The treatment surcharge would increase from its current level of \$234 per acre-foot to \$254 per acre-foot to collect all treatment costs in 2012/13. 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 \$242 million in FY 2012/13, almost 18 percent of the total revenue requirement. The treatment surcharge recovers all costs associated with providing treated water service, including commodity, demand and standby related costs. Significant capital improvements at Metropolitan's five treatment plants, such as the Ozone Retrofit Program, Skinner Filtration Plant Expansion Project, and improvement programs at all five treatment plants result in additional capital financing costs being allocated to the treatment surcharge.

### **2.5 Capacity Charge**

The Capacity Charge would decrease from its current level of \$7,400 per cubic-foot-second to \$6,400 per cubic-foot-second of capacity during 2013. The capacity charge is levied on the maximum summer day demand placed on the system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2011 is used to levy the capacity charge effective January 1, 2013 through December 31, 2013. Demands measured for the purposes of billing the capacity charge include all firm demand and agricultural demand, including wheeling service and exchanges. Replenishment service is not included in the measurement of peak day demand for purposes of billing the capacity charge.

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

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan's system, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods particularly October through April. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total capacity charge. The estimated capacity charge to be paid by each member agency in calendar year 2013 (as of February 2012) is included in Schedule 10.

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

AGENCY	Peak Day Demand (cfs)				Rate (\$/cfs):
	(May 1 through September 30)				\$6,400
	Calendar Year				Calendar Year
	2009	2010	2011	3-Year Peak	2013 Capacity Charge
Anaheim	40.7	44.8	39.3	44.8	\$286,720
Beverly Hills	31.0	31.2	31.5	31.5	\$201,600
Burbank	21.6	22.3	21.4	22.3	\$142,720
Calleguas	192.8	208.9	210.1	210.1	\$1,344,640
Central Basin	94.7	74.2	79.2	94.7	\$606,080
Compton	5.9	3.3	2.4	5.9	\$37,760
Eastern	233.8	229.6	192.5	233.8	\$1,496,320
Foothill	24.3	20.2	19.0	24.3	\$155,520
Fullerton	37.4	32.2	27.4	37.4	\$239,360
Glendale	56.0	49.6	49.0	56.0	\$358,400
Inland Empire	106.1	124.2	138.0	138.0	\$883,200
Las Virgenes	42.7	43.9	43.4	43.9	\$280,960
Long Beach	67.2	61.2	51.5	67.2	\$430,080
Los Angeles	698.2	525.9	329.0	698.2	\$4,468,480
MWDOC	489.5	425.5	382.7	489.5	\$3,132,800
Pasadena	50.2	50.5	50.6	50.6	\$323,840
San Diego	1,055.3	949.5	760.7	1,055.3	\$6,753,920
San Fernando	-	4.1	1.6	4.1	\$26,240
San Marino	3.5	4.2	1.3	4.2	\$26,880
Santa Ana	16.4	20.0	20.0	20.0	\$128,000
Santa Monica	25.0	24.3	21.1	25.0	\$160,000
Three Valleys	132.7	139.4	122.7	139.4	\$892,160
Torrance	39.3	42.8	35.5	42.8	\$273,920
Upper San Gabriel	27.6	22.9	20.4	27.6	\$176,640
West Basin	221.3	221.2	214.6	221.3	\$1,416,320
Western	214.4	199.5	179.3	214.4	\$1,372,160
<b>Total</b>	<b>3,927.6</b>	<b>3,575.4</b>	<b>3,044.2</b>	<b>4,002.3</b>	<b>\$25,614,720</b>

Totals may not foot due to rounding

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

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 \$57 million in FY 2012/13. 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 \$82 million in FY 2012/13. Currently the RTS recovers \$146 million, an amount that represents a portion of the capital financing costs for facilities that serve existing users. The RTS would decrease to \$142 million in calendar year 2013.

The RTS is allocated to the member agencies based on each agency's proportional share of a ten-year rolling average of all firm deliveries (including water transfers and exchanges that use Metropolitan system capacity). The ten-year rolling average will not include replenishment service and interim agricultural deliveries because these deliveries will be the first to be curtailed in the event of an emergency. A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency's potential long-term need for standby service under different demand conditions. Member agencies that so choose may have a portion of their total RTS obligation offset by standby charge collections levied by Metropolitan on behalf of the member agency. Schedule 11 provides an estimate as of December 2011 of each agency's total RTS obligation for calendar year 2013.

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

Water rate \$77.70/acre-foot				
Member Agency	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2001/02 - FY2010/11	RTS Share	12 months @ \$142 million per year (1/13-12/13)	
Anaheim	21,892	1.20%	\$	1,701,017
Beverly Hills	12,041	0.66%		935,556
Burbank	12,605	0.69%		979,402
Calleguas MWD	111,069	6.08%		8,630,121
Central Basin MWD	61,810	3.38%		4,802,652
Compton	2,832	0.15%		220,010
Eastern MWD	94,101	5.15%		7,311,749
Foothill MWD	11,169	0.61%		867,824
Fullerton	10,225	0.56%		794,459
Glendale	21,707	1.19%		1,686,642
Inland Empire Utilities Agency	61,330	3.36%		4,765,410
Las Virgenes MWD	22,730	1.24%		1,766,161
Long Beach	35,737	1.96%		2,776,761
Los Angeles	302,313	16.54%		23,489,931
Municipal Water District of Orange County	227,364	12.44%		17,666,330
Pasadena	22,799	1.25%		1,771,515
San Diego County Water Authority	449,537	24.60%		34,929,385
San Fernando	125	0.01%		9,674
San Marino	972	0.05%		75,486
Santa Ana	13,464	0.74%		1,046,155
Santa Monica	12,284	0.67%		954,437
Three Valleys MWD	70,981	3.88%		5,515,246
Torrance	19,931	1.09%		1,548,615
Upper San Gabriel Valley MWD	19,031	1.04%		1,478,692
West Basin MWD	135,862	7.43%		10,556,579
Western MWD	73,618	4.03%		5,720,189
<b>MWD Total</b>	<b>1,827,524</b>	<b>100.00%</b>	<b>\$</b>	<b>142,000,000</b>

Totals may not foot due to rounding

### 2.7 Purchase Order

The potential extension of the Purchase Order is part of the Long Range Finance Plan workgroup discussions. A final decision is expected in 2012.

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

The Tier 2 Supply Rate reflects Metropolitan's cost of developing long-term firm supplies. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. The Tier 2 Supply Rate also recovers a greater proportion of the cost of developing additional supplies from member agencies that have increasing demands on the Metropolitan system. The Tier 2 Supply Rate would remain at its current level of \$290 per acre-foot.

The total revenue requirement for the supply service function is about \$207 million in FY 2012/13. At an expected average sales level of 1.7 million acre-feet (MAF) it is estimated that no acre-feet will be sold at the Tier 2 Supply Rate. The remaining supply costs are recovered by the Tier 1 Supply Rate and by the replenishment rate discussed below.

The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. Based on the outcome of the Long Range Finance Plan in 2012, a detailed table with Tier 1 limits will be provided to the Board in 2012.

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

The Tier 1 Supply Rate would be reduced from its current level of \$164 per acre-foot to \$140 per acre-foot. The Tier 1 Supply Rate recovers the majority of the supply revenue requirement. The Tier 1 Supply Rate is simply calculated as the amount of the total supply revenue requirement that is not recovered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. At an expected demand level of about 1.7 MAF it is estimated that Metropolitan will sell about 1.51 MAF at the Tier 1 Supply Rate in 2012/13.

### **2.10 Replenishment water rates**

Discussion on the replenishment program are continuing with the member agencies in the Long Range Finance Plan Workgroup. If adopted, the new replenishment program would replace the existing replenishment rate. Therefore, the existing replenishment rate is discontinued.

## **3 Sales**

Staff estimates of water sales used for developing the rate recommendation were based on current member agency demands and information and an expectation that demands will trend to levels expected under normal weather conditions. Since 1989/90, total sales have averaged about 2.00 million acre-feet per year, ranging from a high of around 2.5 million acre-feet in 1989/90 to a low of about 1.5 million acre-feet in 1997/98. In 2011/12 water sales are projected to be around 1.7 million acre-feet. Water sales in 2012/13 are expected to be about 1.7 million acre-feet.

#### **4 Proof of Revenue**

Based on expected sales of 1.7 MAF the expected revenues would be about \$28 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, 2013, the expected revenues for 2012/13 will be about \$7.9 million (0.6 percent) less than the total revenue requirement in 2012/13. The total revenue requirement includes a \$7.6-million increase in the required reserves for the Revenue Remainder Fund. Accounting for this adjustment, the required draw from reserves is almost \$0.3 million in 2012/13.

**Schedule 12. FY 2012/13 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)**

	Revenues if Rates Effective July 1st	Revenue Requirements	Difference	% Over (Under) Collected
Supply	212.1	207.0	5.1	2%
System Access Rate	377.8	371.6	6.1	2%
Water Stewardship Rate	69.5	67.3	2.2	3%
System Power Rate	320.2	313.0	7.1	2%
Treatment Surcharge	247.1	242.3	4.8	2%
Readiness-to-serve Charge	142.0	139.7	2.3	2%
Capacity Charge	25.5	25.1	0.4	2%
<b>Total</b>	<b>1,394.1</b>	<b>1,366.0</b>	<b>28.1</b>	<b>2%</b>

Totals may not foot due to rounding

**Schedule 13. FY 2012/13 Proof of Revenue if Rates Effective January 1 (\$ millions)**

	Revenues if Rates Effective Jan 1	Revenue Requirements	Difference	% Over (Under) Collected
Supply	232.1	207.0	25.1	12%
System Access Rate	372.3	371.6	0.6	0%
Water Stewardship Rate	71.3	67.3	4.0	6%
System Power Rate	271.6	313.0	(41.4)	-13%
Treatment Surcharge	236.5	242.3	(5.8)	-2%
Readiness-to-serve Charge	144.0	139.7	4.3	3%
Capacity Charge	30.4	25.1	5.3	21%
<b>Total</b>	<b>1,358.1</b>	<b>1,366.0</b>	<b>(7.9)</b>	<b>-1%</b>

Totals may not foot due to rounding

Metropolitan Water District of Southern California  
**Fiscal Year 2013/14 Cost of Service  
Option 2**

March 2012

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## **1 Cost of Service**

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

### ***1.1 Cost of Service Process***

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

#### ***Step 1 - Development Of Revenue Requirements***

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

#### ***Step 2 – Identification Of Service Function Costs***

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

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

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

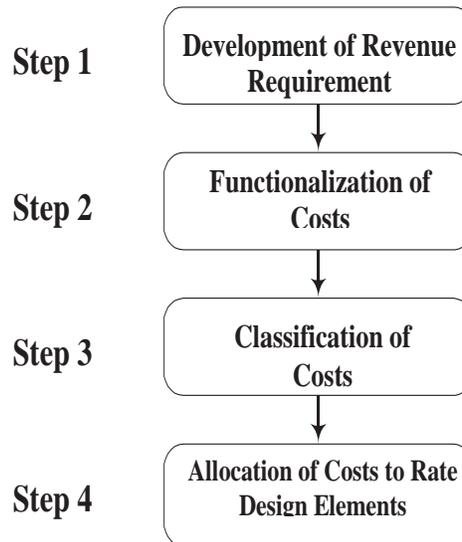
### Step 3 - Classification Of Costs

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

### Step 4 - Allocation Of Costs To Rate Design Elements

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

**Figure 1. The Cost of Service Process**



### **1.2 Revenue Requirements**

The estimated revenue requirements presented in this report are for FY 2013/14. Throughout the report, FY 2013/14 is used as the “test year” to demonstrate the application of the cost of service process. Schedule 1 summarizes the FY 2013/14 revenue requirement by the major budget line items used in Metropolitan’s budgeting process. Current estimates indicate Metropolitan’s annual cash expenditures (including capital financing costs, but not construction outlays financed with bond proceeds) will total approximately \$1.56 billion in FY 2013/14.

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 \$41 million in FY 2013/14. It is expected that Metropolitan will also generate about \$81 million in ad valorem property tax revenues and annexation charges. Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, and a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the State Water Project. The total revenue offsets for FY 2013/14 are estimated to be around \$121 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or \$1.443 billion. Given an effective date of January 1, 2014, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2013 will generate a total of \$1.423 billion in 2013/14.

All of Metropolitan’s costs fall under the broad categories of Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific organizational groups. General District Requirements consist of requirements associated with the Colorado River Aqueduct, State Water Project, the capital financing costs associated with the Capital Investment 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 72 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to SWP expenditures, which make up approximately 33 percent of Metropolitan's FY 2013/14 revenue requirements. Metropolitan's SWP contract requires Metropolitan to pay its allocated share of the capital, minimum operations, maintenance, power and replacement costs incurred to develop and convey its water supply entitlement, irrespective of the quantity of water Metropolitan takes delivery of in any given year. Metropolitan's capital financing program is the second largest component of the revenue requirement, constituting approximately 28 percent of the revenue requirement. Departmental O&M costs make up 21 percent of the total revenue requirement in FY 2013/14. 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 Colorado River Aqueduct and other conveyance and supply facilities.

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

	<b>Fiscal Year Ending 2014</b>	<b>% of Revenue Requirements (1)</b>
<b>Departmental Operations &amp; Maintenance</b>		
Office of the General Manager & Human Resources	\$ 19,793,700	1.2%
External Affairs	15,998,100	0.9%
Water System Operations	210,991,000	12.5%
Chief Financial Officer	6,538,100	0.4%
Business Technology & Engineering Services	65,604,400	3.9%
Real Property Development & Mgmt	5,288,300	0.3%
Water Resource Management	15,197,200	0.9%
Ethics Department	442,500	0.0%
General Counsel	11,190,800	0.7%
Audit Department	2,044,400	0.1%
<b>Total</b>	<b>353,088,500</b>	<b>20.9%</b>
<b>General District Requirements</b>		
State Water Project	564,045,941	33.5%
Colorado River Aqueduct Power	24,926,279	1.5%
Supply Programs	37,024,018	2.2%
Demand Management	53,624,040	3.2%
Capital Financing Program	468,427,124	27.8%
Operating Equipment and Leases	37,129,600	2.2%
Increase (Decrease) in Required Reserves	26,200,000	1.6%
<b>Total</b>	<b>1,211,377,002</b>	<b>71.9%</b>
<b>Revenue Offsets</b>	<b>(121,294,607)</b>	<b>7.2%</b>
<b>Net Revenue Requirements</b>	<b>\$ 1,443,170,895</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 Commissioners (NARUC), and the National Council of Governmental Accounting. Because all water utilities are not identical, the rate structure reflects Metropolitan's unique physical, financial, and institutional characteristics.

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

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

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

- *Supply.* This function includes costs for those SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the member agencies' demands. For example, Metropolitan's supply related costs include investments in the Conservation Agreement with the Imperial Irrigation District and the Palo Verde Irrigation District (PVID) Program from the Colorado River supply programs. The SWP programs include 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 Proposition 13 are also included.
- *Conveyance and Aqueduct.* This function includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water through Metropolitan's internal distribution system. Variable power costs for the SWP and CRA are also considered to be Conveyance and Aqueduct costs but are separately reported under a "power" sub-function. Conveyance and Aqueduct facilities can be distinguished from Metropolitan's other facilities primarily by the fact that they do not typically include direct connections to the member agencies. For purposes of this study, the Inland Feeder Project functions as an extension of the SWP East Branch and is therefore considered a Conveyance and Aqueduct facility as well.
- *Storage.* Storage costs include the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs within the distribution system. Metropolitan's larger storage facilities are operated to provide: (1) emergency storage in the event of an earthquake or similar system outage; (2) drought storage that produces additional supplies during times of shortage; and (3) regulatory storage to balance system demands and supplies and provide for operating flexibility. To reasonably allocate the costs of storage capacity among member agencies, the

storage service function is categorized into sub-functions of emergency, drought, and regulatory storage.

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

### ***1.3.1 Functional Allocation Bases***

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

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

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

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

<b>Primary Functional Allocation Bases</b>	<b>Estimated for FY 2014</b>	<b>% of Allocated Dollars</b>
Direct Assignment	\$ 1,042,571,646	61.8%
Work in Progress/Net Book Value	508,745,624	30.2%
Prorating	61,639,221	3.7%
Manager Analysis	35,779,600	2.1%
Other	\$ 37,024,018	2.2%
<b>Total Dollars Allocated</b>	<b>\$ 1,685,760,109</b>	<b>100.0%</b>
<b>Portion of Above Allocations Relating to:</b>		
Revenue Requirements before Offsets	1,564,465,502	
Revenue Offsets	121,294,607	
<b>Total Dollars Allocated</b>	<b>\$ 1,685,760,109</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) Work-In-Progress; Net Book Value Plus Work-In-Progress**

Capital financing costs, including debt service and funding replacements and refurbishments from operating revenues, comprise about 28 percent of Metropolitan's annual revenue requirements. One approach would be to allocate payments on each debt issue in direct proportion to specific project expenditures made using bond proceeds. But, this approach would result in a high degree of volatility in relative capital cost allocations from year to year. The approach used in this analysis is one widely used in water industry cost of service studies. Capital and debt-related costs (including repair and replacement costs paid from current revenues) are allocated on the basis of the relative net book values of fixed assets within each functional category. This approach produces capital cost allocations that are consistent with the functional distribution of assets. Also, since the allocation basis is tied to fixed asset records rather than debt payment records, the resulting allocations are more reflective of the true useful lives of assets. Use of net book values as an allocation basis provides an improved matching of functional costs with asset lives. A listing of fixed asset net book values summarized by asset function is shown in Schedule 3.

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

<b>Functional Categories</b>	<b>NBV for FY 2014</b>	<b>% of Total NBV</b>
Source of Supply	\$ 22,855,983	0.3%
Conveyance & Aqueduct	1,849,143,743	20.2%
Storage	2,236,593,975	24.5%
Treatment	3,279,376,388	35.9%
Distribution	1,324,730,492	14.5%
Administrative & General	317,241,039	3.5%
Hydroelectric	112,451,435	1.2%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 9,142,393,053</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. For organizational units handling current construction activity, however, allocations are based on work-in-progress alone. For these organizational units, exclusion of net book value from the allocation basis is done because the costs being allocated relate directly to work in progress not yet reflected in the completed assets records.

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

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

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

**(c) Prorating in proportion to other allocations**

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

**(d) Manager analyses**

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

A summary of the functional allocation results is shown in Schedules 4 and 5. Schedule 4 provides a breakdown of the revenue requirement for FY 2013/14 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 41 percent of the allocated revenue requirement.

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

<b>Functional Categories</b>	<b>Fiscal Year Ending 2014</b>	<b>% of Allocated Dollars (1)</b>
<b>Source of Supply</b>		
CRA	\$ 36,929,274	2.5%
SWP	101,123,582	6.9%
Other Supply	10,658,380	0.7%
<b>Total</b>	<b>148,711,236</b>	<b>10.2%</b>
<b>Conveyance &amp; Aqueduct</b>		
CRA		
<i>CRA Power (net of sales)</i>	34,571,699	2.4%
<i>CRA All Other</i>	44,994,008	3.1%
SWP		
<i>SWP Power</i>	231,044,265	15.8%
<i>SWP All Other</i>	212,716,811	14.5%
Other Conveyance & Aqueduct	77,787,929	5.3%
<b>Total</b>	<b>601,114,712</b>	<b>41.1%</b>
<b>Storage</b>		
Storage Costs Other Than Power		
<i>Emergency</i>	59,890,175	4.1%
<i>Drought</i>	48,756,609	3.3%
<i>Regulatory</i>	15,363,059	1.0%
Wadsworth plant pumping/generation	(505,271)	0.0%
<b>Total</b>	<b>123,504,572</b>	<b>8.5%</b>
<b>Treatment</b>		
Jensen	46,906,914	3.2%
Weymouth	52,074,341	3.6%
Diemer	57,932,243	4.0%
Mills	33,863,757	2.3%
Skinner	70,176,845	4.8%
<b>Total</b>	<b>260,954,100</b>	<b>17.8%</b>
<b>Distribution</b>	130,767,086	8.9%
<b>Demand Management</b>	61,718,696	4.2%
<b>Hydroelectric</b>	(9,806,298)	0.7%
<b>Administrative &amp; General</b>	126,206,791	8.6%
<b>Total Functional Allocations:</b>	<b>\$ 1,443,170,895</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)**

	Source of Supply	Conveyance & Aqueduct	Storage	Treatment	Distribution	Demand Management	Hydro Electric	Administrative & General	Total \$ Allocated
<b>Departmental Operations &amp; Maintenance</b>									
Office of the General Manager & Human Resources	\$ 963,023	\$ 7,691,283	\$ 569,131	\$ 3,260,130	\$ 2,222,711	\$ 191,421	\$ 175,154	\$ 4,720,846	\$ 19,793,700
External Affairs	-	-	-	-	-	2,968,200	-	13,029,900	15,998,100
Water System Operations	12,925,414	36,212,956	3,447,068	96,781,777	56,410,059	8,745	4,249,447	955,534	210,991,000
Chief Financial Officer	-	-	-	-	-	-	-	6,538,100	6,538,100
Business Technology & Engineering Services	1,968,014	8,459,054	7,623,151	15,224,614	8,171,295	377,872	678,053	23,102,347	65,604,400
Real Property Development & Mgmt	-	-	5,288,300	-	-	-	-	-	5,288,300
Water Resource Management	10,386,182	5,871	-	240,698	1,204,198	3,360,251	-	-	15,197,200
Ethics Department	-	-	-	-	-	-	-	442,500	442,500
General Counsel	-	-	-	-	-	-	-	11,190,800	11,190,800
Audit Department	-	-	-	-	-	-	-	2,044,400	2,044,400
<b>Total Departmental O&amp;M</b>	26,242,633	52,369,164	16,927,650	115,507,219	68,008,263	6,906,489	5,102,654	62,024,427	353,088,500
<b>General District Requirements</b>									
State Water Project	84,978,587	479,067,354	-	-	-	-	-	-	564,045,941
Colorado River Aqueduct Power	-	24,926,279	-	-	-	-	-	-	24,926,279
Supply Programs	37,024,018	-	-	-	-	-	-	-	37,024,018
Demand Management	-	-	-	-	-	53,624,040	-	-	53,624,040
Capital Financing Program	1,112,886	89,070,033	108,003,493	159,827,335	89,482,557	-	5,521,628	15,409,193	468,427,124
Other Operating Costs	612,522	998,446	361,990	2,073,575	1,413,734	1,710,852	111,405	29,847,076	37,129,600
Increase (Decrease) in Required Reserves	-	-	-	-	-	-	-	26,200,000	26,200,000
<b>Total General District Requirements</b>	123,728,013	594,062,112	108,365,483	161,900,910	90,896,291	55,334,891	5,633,033	71,456,270	1,211,377,002
<b>Revenue Offsets</b>	(1,259,409)	(45,316,563)	(1,788,561)	(16,454,029)	(28,137,468)	(522,685)	(20,541,986)	(7,273,906)	(121,294,607)
<b>Net Revenue Requirements</b>	<b>\$ 148,711,236</b>	<b>\$ 601,114,712</b>	<b>\$ 123,504,572</b>	<b>\$ 260,954,100</b>	<b>\$ 130,767,086</b>	<b>\$ 61,718,696</b>	<b>\$ (9,806,298)</b>	<b>\$ 126,206,791</b>	<b>\$ 1,443,170,895</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 associated with average system demands. Variable commodity costs include costs of chemicals, most power costs, and other cost components that increase or decrease in relation to the volume of water supplied. Fixed commodity costs include fixed operations and maintenance and capital financing costs that are not related to accommodating peak demands or standby service.

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

An additional component used in Metropolitan's cost classification process is the hydroelectric component. While not a part of most water utilities' cost classification procedures, the hydroelectric

classification component is necessary to segregate revenue requirements carried from the hydroelectric function established in the functional allocation process. Hydroelectric revenue requirements are later embedded in the distribution function. Any net revenues generated by the hydroelectric operations offset the distribution costs and reduce the System Access Rate. All users of the distribution system benefit proportionately from the revenue offset provided by the sale of hydroelectric energy.

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

Costs for the Conveyance and Aqueduct (C&A) service function are classified into demand, commodity, and standby categories. Because the capital costs for C&A were incurred to meet all three classification categories, an analysis of C&A capacity usage for the three years ending June 2014 was used to determine that 52 percent of the available conveyance capacity has been used to meet member agency demands on an average annual basis. A system peak factor<sup>1</sup> of 1.4 was applied to the average annual usage to determine that 22 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 26 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct sub-functions. The classification shares reflect the system average use of conveyance capacity and not the usage of individual facilities. All of the Conveyance and Aqueduct energy costs for pumping water to Southern California are classified as variable commodity costs and, therefore, are not shown in Schedule 6 because they carry through the classification step.

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

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<sup>1</sup> Peak monthly deliveries to the member agencies average about 42 percent more than the average monthly deliveries.

Distribution service function costs were classified using daily flow data for the three calendar years ending December 2014. During this period, the average annual volume of deliveries to the member agencies used 42 percent of the peak distribution capacity. The difference between the three-year average non-coincident peak and the commodity flows divided by the system capacity, or 38 percent of the distribution capacity, was used to meet peak day demands in excess of average annual flows. Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the peak non-coincident<sup>2</sup> 24-hour daily flow of all the member agencies. The remaining 20 percent of distribution capacity is associated with standby service.

As presented in Schedule 6, treatment service function costs were also classified using daily flow data of deliveries to the member agencies for the three years ending December 2014. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. Schedule 7 summarizes the service function revenue requirements by classification category. Administrative and general costs have been allocated to the classification categories by service function based on the ratio of classified non-A&G service function costs to total non-A&G service function costs.

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

**Schedule 6. Classification Percentages**

Function	Classification Percentages			Total % Classified	Comments
	Fixed				
	Commodity	Demand	Standby		
<b>Source of Supply</b>					
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs classified as commodity
State Water Project	100%	0%	0%	100%	Supply costs classified as commodity
<b>Conveyance &amp; Aqueduct</b>					
Colorado River Aqueduct	52%	22%	26%	100%	Demand (peaking) percentage represents application of system monthly peak factor of 1.4 to average monthly flow. Commodity percentage represents average flows. Remainder of capacity is for standby (expected growth). SWP and CRA are treated the same due to application of system wide uniform price.
State Water Project	52%	22%	26%	100%	
Other	52%	22%	26%	100%	
<b>Storage</b>					
Emergency	0%	0%	100%	100%	Standby service (recovered by RTS)
Drought	100%	0%	0%	100%	Recovered by Supply Rates
Regulatory	42%	37%	20%	100%	See distribution (below)
<b>Treatment</b>	32%	36%	32%	100%	Demand percentage represents amount of system treatment capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total capacity. The same classification is applied to all five treatment plants due to the use of a uniform system wide treatment surcharge.
<b>Distribution</b>	42%	37%	20%	100%	Demand percentage represents amount of system distribution capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total system capacity. The same classification is applied to all distribution facilities due to the use of a system wide uniform system access rate.

Totals may not foot due to rounding

A summary of cost classification results is shown in Schedule 7. The classification of the service function costs results in about 9 percent, or \$129 million of the total revenue requirements, being allocated to the demand classification category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan's property tax revenue is allocated to C&A fixed demand costs and offsets the amount that is recovered through rates. The taxes are used to pay for the general obligation bond debt service allocated to the C&A costs.

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

Functional Categories (by sub-Function)	Fixed Demand	Commodity	Standby	Variable Commodity	Hydroelectric	Total Classified
<b>Source of Supply</b>						
CRA	\$ -	\$ 41,255,585	\$ -	\$ -	\$ -	\$ 41,255,585
SWP	-	112,970,338	-	-	-	112,970,338
Other Supply	-	11,907,023	-	-	-	11,907,023
<b>Subtotal: Source of Supply</b>	-	166,132,946	-	-	-	<b>166,132,946</b>
<b>Conveyance &amp; Aqueduct</b>						
CRA						
<i>CRA Power</i>	-	11,102,596	-	25,908,667	-	37,011,263
<i>CRA All Other</i>	2,438,455	44,719,695	2,887,582	-	-	50,045,732
SWP						
<i>SWP Power</i>	-	-	-	243,005,504	-	243,005,504
<i>SWP All Other</i>	18,779,866	194,928,569	22,238,844	-	-	235,947,279
Other Conveyance & Aqueduct	16,238,304	49,107,912	20,063,347	-	-	85,409,563
<b>Subtotal: Conveyance &amp; Aqueduct</b>	37,456,625	299,858,771	45,189,773	268,914,172	-	<b>651,419,341</b>
<b>Storage</b>						
Storage Costs Other Than Power						
<i>Emergency</i>	-	-	64,553,715	-	-	64,553,715
<i>Drought</i>	-	54,468,507	-	-	-	54,468,507
<i>Regulatory</i>	5,375,337	8,509,353	2,920,130	-	-	16,804,819
Storage Power	-	-	-	(531,429)	-	(531,429)
<b>Subtotal: Storage</b>	5,375,337	62,977,860	67,473,844	(531,429)	-	<b>135,295,612</b>
<b>Water Quality</b>						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
<b>Subtotal: Water Quality</b>	-	-	-	-	-	-
<b>Treatment</b>	61,108,354	153,491,741	38,903,046	31,768,933	-	<b>285,272,075</b>
<b>Distribution</b>	25,112,083	105,659,825	13,642,035	-	-	<b>144,413,943</b>
<b>Demand Management</b>	-	68,949,119	-	-	-	<b>68,949,119</b>
<b>Hydroelectric</b>	-	-	-	-	(8,312,141)	<b>(8,312,141)</b>
<b>Total Costs Classified</b>	<b>\$ 129,052,399</b>	<b>\$ 857,070,262</b>	<b>\$ 165,208,699</b>	<b>\$ 300,151,676</b>	<b>\$ (8,312,141)</b>	<b>\$ 1,443,170,895</b>

Totals may not foot due to rounding

About 59 percent of the revenue requirement (\$857 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 \$165 million and account for about 11 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 \$300 million, and account for about 21 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, 2014 in order to collect all costs from rates and charges in fiscal year 2013/14, with the use of \$16.2 million draws from reserve funds. Average costs by member agency will vary depending upon an agency’s RTS allocation, capacity charge and relative proportions of treated and untreated Tier 1, and Tier 2 purchases.

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

Service Function by Classification Category	Rate Design Elements							Total Costs Allocated
	Supply Rates	System Access Rate	Water Stewardship Rate	System Power Rate	Capacity Charge	Readiness-to-Serve Charge	Treatment Surcharge	
<b>Supply</b>								
Fixed Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fixed Commodity	166,132,946	-	-	-	-	-	-	166,132,946
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Supply</b>	166,132,946	-	-	-	-	-	-	166,132,946
<b>Conveyance and Aqueduct</b>								
Fixed Demand	-	-	-	-	-	37,456,625	-	37,456,625
Fixed Commodity	-	299,858,771	-	-	-	-	-	299,858,771
Fixed Standby	-	-	-	-	-	45,189,773	-	45,189,773
Variable Commodity	-	-	-	268,914,172	-	-	-	268,914,172
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Conveyance and Aqueduct</b>	-	299,858,771	-	268,914,172	-	82,646,399	-	651,419,341
<b>Storage</b>								
Fixed Demand	-	-	-	-	5,375,337	-	-	5,375,337
Fixed Commodity	54,468,507	8,509,353	-	-	-	-	-	62,977,860
Fixed Standby	-	-	-	-	-	67,473,844	-	67,473,844
Variable Commodity	(531,429)	-	-	-	-	-	-	(531,429)
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Storage</b>	53,937,079	8,509,353	-	-	5,375,337	67,473,844	-	135,295,612
<b>Treatment</b>								
Fixed Demand	-	-	-	-	-	-	61,108,354	61,108,354
Fixed Commodity	-	-	-	-	-	-	153,491,741	153,491,741
Fixed Standby	-	-	-	-	-	-	38,903,046	38,903,046
Variable Commodity	-	-	-	-	-	-	31,768,933	31,768,933
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Treatment</b>	-	-	-	-	-	-	285,272,075	285,272,075
<b>Distribution</b>								
Fixed Demand	-	-	-	-	25,112,083	-	-	25,112,083
Fixed Commodity	-	105,659,825	-	-	-	-	-	105,659,825
Fixed Standby	-	-	-	-	-	13,642,035	-	13,642,035
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	(8,312,141)	-	-	-	-	-	(8,312,141)
<b>Subtotal: Distribution</b>	-	97,347,684	-	-	25,112,083	13,642,035	-	136,101,802
<b>Demand Management</b>								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	68,949,119	-	-	-	-	68,949,119
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Demand Management</b>	-	-	68,949,119	-	-	-	-	68,949,119
<b>Total</b>								
Fixed Demand	-	-	-	-	-	37,456,625	61,108,354	129,052,399
Fixed Commodity	220,601,453	414,027,949	68,949,119	-	-	-	153,491,741	857,070,262
Fixed Standby	-	-	-	-	-	126,305,653	38,903,046	165,208,699
Variable Commodity	(531,429)	-	-	268,914,172	-	-	31,768,933	300,151,676
Hydroelectric	-	(8,312,141)	-	-	-	-	-	(8,312,141)
<b>Total</b>	<b>\$ 220,070,024</b>	<b>\$ 405,715,808</b>	<b>\$ 68,949,119</b>	<b>\$ 268,914,172</b>	<b>\$ 30,487,420</b>	<b>\$ 163,762,278</b>	<b>\$ 285,272,075</b>	<b>\$ 1,443,170,895</b>

Totals may not foot due to rounding

**Schedule 9. Rates and Charges Summary**

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

\* The Delta Supply Surcharge will be suspended after 2012.

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

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

**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. All system users (member agency or third party) pay the SAR to use Metropolitan's conveyance and distribution system. To meet the board stated objective to collect all costs in 2013/14, the SAR would increase to \$243 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 \$372 million in FY 2013/14, 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 \$67 million in FY 2013/14, about 5 percent of the revenue requirement. The WSR is a volumetric rate levied on each acre-foot of water

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

that moves through the Metropolitan system. All system users (member agency or third parties) will pay the same proportional costs for existing and future conservation and recycling investments.

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

SPR would decrease to \$161 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 2013/14 the revenue requirement for the SPR is estimated to be about \$313 million, about 23 percent of the total revenue requirement.

### **2.4 Treatment Surcharge**

The treatment surcharge would increase to \$297 per acre-foot to collect all treatment costs in 2013/14. 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 \$242 million in FY 2013/14, almost 18 percent of the total revenue requirement. The treatment surcharge recovers all costs associated with providing treated water service, including commodity, demand and standby related costs. Significant capital improvements at Metropolitan's five treatment plants, such as the Ozone Retrofit Program, Skinner Filtration Plant Expansion Project, and improvement programs at all five treatment plants result in additional capital financing costs being allocated to the treatment surcharge.

### **2.5 Capacity Charge**

The Capacity Charge would increase to \$8,600 per cubic-foot-second of capacity during 2014. The capacity charge is levied on the maximum summer day demand placed on the system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2012 is used to levy the capacity charge effective January 1, 2014 through December 31, 2014. Demands measured for the purposes of billing the capacity charge include all firm demand and agricultural demand, including wheeling service and exchanges. Replenishment service is not included in the measurement of peak day demand for purposes of billing the capacity charge.

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan's system, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods particularly October through April. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total capacity charge. The estimated capacity charge to be paid by each member agency in calendar year 2014 will be provided to the Board by April 2013.

### **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 \$57 million in FY 2013/14. 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 \$82 million in FY 2013/14. The RTS would increase to \$166 million in calendar year 2014.

The RTS is allocated to the member agencies based on each agency's proportional share of a ten-year rolling average of all firm deliveries (including water transfers and exchanges that use Metropolitan system capacity). The ten-year rolling average will not include replenishment service and interim agricultural deliveries because these deliveries will be the first to be curtailed in the event of an emergency. A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency's potential long-term need for standby service under different demand conditions. Member agencies that so choose may have a portion of their total RTS obligation offset by standby charge collections levied by Metropolitan on behalf of the member agency. The detailed schedule with an estimate of each agency's RTS obligation for calendar year 2014 will be provided to the Board by April 2013.

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

The new Purchase Order is part of the discussions in the Long Range Finance Plan Workgroup, and a decision is expected in 2012. The 2014 Purchase Order Commitment quantity and the Tier 1 Annual Limit for all member agencies will be provided to the Board by April 2013.

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

The Tier 2 Supply Rate reflects Metropolitan's cost of developing long-term firm supplies. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. The Tier 2 Supply Rate also recovers a greater proportion of the cost of developing additional supplies from member agencies that have increasing demands on the Metropolitan system. The Tier 2 Supply Rate would remain at its current level of \$290 per acre-foot.

The total revenue requirement for the supply service function is about \$207 million in FY 2013/14. At an expected average sales level of 1.7 million acre-feet it is estimated that no acre-feet will be sold at the Tier 2 Supply Rate.

The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. The Purchase Order is part of the Long Range Finance Plan forum and a decision is expected in 2012.

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

The Tier 1 Supply Rate would be increased to \$148 per acre-foot in 2014. The Tier 1 Supply Rate recovers the majority of the supply revenue requirement. The Tier 1 Supply Rate is simply calculated as the amount of the total supply revenue requirement that is not recovered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. At an expected demand level of about

1.7 MAF, it is estimated that Metropolitan will sell about 1.5 MAF at the Tier 1 Supply Rate in 2013/14.

### ***2.10 Replenishment water rates***

Discussion on the replenishment program are continuing with the member agencies in the Long Range Finance Plan Workgroup. If adopted, the new replenishment program would replace the existing replenishment rate. Therefore, the existing replenishment rate is discontinued.

## **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 2013/14, water sales are projected to be around 1.7 MAF.

## **4 Proof of Revenue**

Based on expected sales of 1.7 MAF the expected revenues would be about \$16.1 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, 2014, the expected revenues for 2013/14 will be about \$20.3 million lower than the total revenue requirement in 2013/14. The total revenue requirement includes a \$4.1 million increase in the required reserves for the Revenue Remainder Fund. Accounting for this adjustment, the draws from reserves are \$16.2 million in 2013/14.

**Schedule 10. FY 2013/14 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)**

	Revenues if Rates Effective July 1st	Revenue Requirements	Difference	% Over (Under) Collected
Supply	222.3	220.1	2.3	1%
System Access Rate	410.2	405.7	4.5	1%
Water Stewardship Rate	69.2	68.9	0.3	0%
System Power Rate	271.8	268.9	2.9	1%
Treatment Surcharge	288.9	285.3	3.6	1%
Readiness-to-serve Charge	166.0	163.8	2.2	1%
Capacity Charge	30.7	30.5	0.3	1%
<b>Total</b>	<b>1,459.2</b>	<b>1,443.2</b>	<b>16.1</b>	<b>1%</b>

Totals may not foot due to rounding

**Schedule 11. FY 2013/14 Proof of Revenue if Rates Effective January 1 (\$ millions)**

	Revenues if Rates Effective Jan 1	Revenue Requirements	Difference	% Over (Under) Collected
Supply	215.9	220.1	(4.2)	-2%
System Access Rate	392.2	405.7	(13.6)	-3%
Water Stewardship Rate	69.2	68.9	0.3	0%
System Power Rate	297.0	268.9	28.1	10%
Treatment Surcharge	266.5	285.3	(18.8)	-7%
Readiness-to-serve Charge	154.0	163.8	(9.8)	-6%
Capacity Charge	28.1	30.5	(2.4)	-8%
<b>Total</b>	<b>1,422.9</b>	<b>1,443.2</b>	<b>(20.3)</b>	<b>-1%</b>

Totals may not foot due to rounding

Metropolitan Water District of Southern California  
**Fiscal Year 2012/13 Cost of Service  
Option 3**

March 2012

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## **1 Cost of Service**

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

### ***1.1 Cost of Service Process***

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

#### ***Step 1 - Development Of Revenue Requirements***

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

#### ***Step 2 – Identification Of Service Function Costs***

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

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

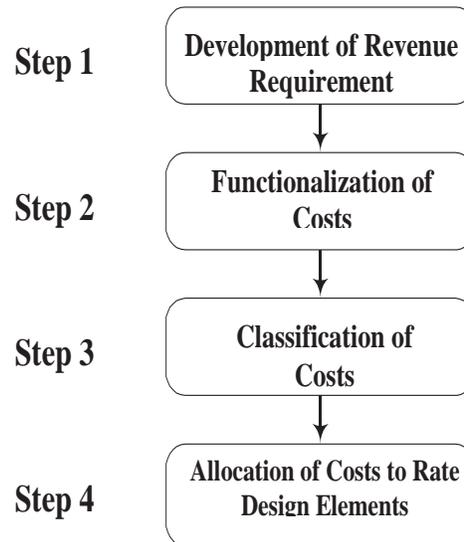
In order to provide more finite functional allocation, many of these functional categories are subdivided into more detailed sub-functions in the cost of service process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions State Water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

### Step 3 - Classification Of Costs

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

### Step 4 - Allocation Of Costs To Rate Design Elements

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

**Figure 1. The Cost of Service Process**

### **1.2 Revenue Requirements**

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

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 \$42.3 million in FY 2012/13. It is expected that Metropolitan will also generate about \$82.6 million in ad valorem property tax revenues and annexation charges. Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, and a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the State Water Project. The total revenue offsets for FY 2012/13 are estimated to be around \$125 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or \$1.366 billion. Given an effective date of January 1, 2013, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2012 will generate a total of \$1.368 billion in 2012/13.

All of Metropolitan’s costs fall under the broad categories of Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific organizational groups. General District Requirements consist of requirements associated with the Colorado River Aqueduct, State Water Project, the capital financing costs associated with the Capital Investment 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 71 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to SWP expenditures, which make up approximately 36 percent of Metropolitan's FY 2012/13 revenue requirements. Metropolitan's SWP contract requires Metropolitan to pay its allocated share of the capital, minimum operations, maintenance, power and replacement costs incurred to develop and convey its water supply entitlement, irrespective of the quantity of water Metropolitan takes delivery of in any given year. Metropolitan's capital financing program is the second largest component of the revenue requirement, constituting approximately 24 percent of the revenue requirement. Departmental O&M costs make up 21 percent of the total revenue requirement in FY 2012/13. 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 Colorado River Aqueduct and other conveyance and supply facilities.

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

	<b>Fiscal Year Ending 2013</b>	<b>% of Revenue Requirements (1)</b>
<b>Departmental Operations &amp; Maintenance</b>		
Office of the General Manager & Human Resources	\$ 19,088,600	1.2%
External Affairs	15,521,800	1.0%
Water System Operations	201,459,900	12.5%
Chief Financial Officer	6,197,200	0.4%
Business Technology & Engineering Services	61,947,000	3.8%
Real Property Development & Mgmt	5,021,000	0.3%
Water Resource Management	14,903,500	0.9%
Ethics Department	420,300	0.0%
General Counsel	11,343,700	0.7%
Audit Department	1,974,600	0.1%
<b>Total</b>	<b>337,877,600</b>	<b>20.9%</b>
<b>General District Requirements</b>		
State Water Project	593,475,189	36.7%
Colorado River Aqueduct Power	36,178,684	2.2%
Supply Programs	36,287,598	2.2%
Demand Management	53,205,188	3.3%
Capital Financing Program	396,229,175	24.5%
Operating Equipment and Leases	29,194,400	1.8%
Increase (Decrease) in Required Reserves	8,300,000	0.5%
<b>Total</b>	<b>1,152,870,235</b>	<b>71.4%</b>
<b>Revenue Offsets</b>	<b>(124,974,621)</b>	<b>7.7%</b>
<b>Net Revenue Requirements</b>	<b>\$ 1,365,773,214</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 Commissioners (NARUC), and the National Council of Governmental Accounting. Because all water utilities are not identical, the rate structure reflects Metropolitan's unique physical, financial, and institutional characteristics.

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

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

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

- *Supply.* This function includes costs for those SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the member agencies' demands. For example, Metropolitan's supply related costs include investments in the Conservation Agreement with the Imperial Irrigation District and the Palo Verde Irrigation District (PVID) Program from the Colorado River supply programs. The SWP programs include 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 Proposition 13 are also included.
- *Conveyance and Aqueduct.* This function includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water through Metropolitan's internal distribution system. Variable power costs for the SWP and CRA are also considered to be Conveyance and Aqueduct costs but are separately reported under a "power" sub-function. Conveyance and Aqueduct facilities can be distinguished from Metropolitan's other facilities primarily by the fact that they do not typically include direct connections to the member agencies. For purposes of this study, the Inland Feeder Project functions as an extension of the SWP East Branch and is therefore considered a Conveyance and Aqueduct facility as well.
- *Storage.* Storage costs include the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs within the distribution system. Metropolitan's larger storage facilities are operated to provide (1) emergency storage in the event of an earthquake or similar system outage; (2) drought storage that produces additional supplies during times of shortage; and (3) regulatory storage to balance system demands and supplies and provide for operating flexibility. To reasonably allocate the costs of storage capacity among member agencies, the

storage service function is categorized into sub-functions of emergency, drought, and regulatory storage.

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

### ***1.3.1 Functional Allocation Bases***

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

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

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

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

<b>Primary Functional Allocation Bases</b>	<b>Estimated for FY 2013</b>	<b>% of Allocated Dollars</b>
Direct Assignment	\$ 1,052,244,385	65.1%
Work in Progress/Net Book Value	435,100,275	26.9%
Prorating	57,669,696	3.6%
Manager Analysis	34,420,500	2.1%
Other	\$ 36,287,598	2.2%
<b>Total Dollars Allocated</b>	<b>\$ 1,615,722,455</b>	<b>100.0%</b>
<b>Portion of Above Allocations Relating to:</b>		
Revenue Requirements before Offsets	1,490,747,835	
Revenue Offsets	124,974,621	
<b>Total Dollars Allocated</b>	<b>\$ 1,615,722,455</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 24 percent of Metropolitan's annual revenue requirements. One approach would be to allocate payments on each debt issue in direct proportion to specific project expenditures made using bond proceeds. But, this approach would result in a high degree of volatility in relative capital cost allocations from year to year. The approach used in this analysis is one widely used in water industry cost of service studies. Capital and debt-related costs (including repair and replacement costs paid from current revenues) are allocated on the basis of the relative net book values of fixed assets within each functional category. This approach produces capital cost allocations that are consistent with the functional distribution of assets. Also, since the allocation basis is tied to fixed asset records

rather than debt payment records, the resulting allocations are more reflective of the true useful lives of assets. Use of net book values as an allocation basis provides an improved matching of functional costs with asset lives. A listing of fixed asset net book values summarized by asset function is shown in Schedule 3.

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

<b>Functional Categories</b>	<b>NBV for FY 2013</b>	<b>% of Total NBV</b>
Source of Supply	\$ 23,297,862	0.3%
Conveyance & Aqueduct	1,864,648,314	20.8%
Storage	2,261,013,314	25.2%
Treatment	3,057,396,365	34.1%
Distribution	1,316,181,317	14.7%
Administrative & General	322,585,783	3.6%
Hydroelectric	115,593,239	1.3%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 8,960,716,194</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. For organizational units handling current construction activity, however, allocations are based on work-in-progress alone. For these organizational units, exclusion of net book value from the allocation basis is done because the costs being allocated relate directly to work in progress not yet reflected in the completed assets records.

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

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

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

**(c) Prorating in proportion to other allocations**

Utility cost of service studies frequently contain line items for which it would be difficult to identify an allocation basis specific to that line item. In these cases, the most logical allocation basis is often a prorata blend of allocation results calculated for other revenue requirements in the same departmental group, or general category. Reasonable prorata allocations are based on a

logical nexus between a cost and the purpose which it serves. For example: Human Resources Section costs are allocated using all labor costs, since Human Resources spends its time and resources attending to the labor force.

**(d) Manager analyses**

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

A summary of the functional allocation results is shown in Schedules 4 and 5. Schedule 4 provides a breakdown of the revenue requirement for FY 2012/13 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 45 percent of the allocated revenue requirement.

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

<b>Functional Categories</b>	<b>Fiscal Year Ending 2013</b>	<b>% of Allocated Dollars (1)</b>
<b>Source of Supply</b>		
CRA	\$ 37,124,488	2.7%
SWP	98,155,875	7.1%
Other Supply	10,175,977	0.7%
<b>Total</b>	<b>145,456,341</b>	<b>10.5%</b>
<b>Conveyance &amp; Aqueduct</b>		
CRA		
<i>CRA Power (net of sales)</i>	41,553,136	3.0%
<i>CRA All Other</i>	42,361,643	3.1%
SWP		
<i>SWP Power</i>	270,439,183	19.5%
<i>SWP All Other</i>	201,947,275	14.5%
Other Conveyance & Aqueduct	66,925,874	4.8%
<b>Total</b>	<b>623,227,111</b>	<b>44.9%</b>
<b>Storage</b>		
Storage Costs Other Than Power		
<i>Emergency</i>	52,428,579	3.8%
<i>Drought</i>	42,714,017	3.1%
<i>Regulatory</i>	12,786,352	0.9%
Wadsworth plant pumping/generation	(313,364)	0.0%
<b>Total</b>	<b>107,615,585</b>	<b>7.8%</b>
<b>Treatment</b>		
Jensen	40,527,024	2.9%
Weymouth	42,470,673	3.1%
Diemer	49,838,523	3.6%
Mills	29,862,410	2.2%
Skinner	62,852,355	4.5%
<b>Total</b>	<b>225,550,984</b>	<b>16.2%</b>
<b>Distribution</b>	118,542,144	8.5%
<b>Demand Management</b>	61,084,656	4.4%
<b>Hydroelectric</b>	(11,167,826)	0.8%
<b>Administrative &amp; General</b>	95,464,219	6.9%
<b>Total Functional Allocations:</b>	<b>\$ 1,365,773,214</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)**

	Source of Supply	Conveyance & Aqueduct	Storage	Treatment	Distribution	Demand Management	Hydro Electric	Administrative & General	Total \$ Allocated
<b>Departmental Operations &amp; Maintenance</b>									
Office of the General Manager & Human Resources	\$ 932,880	\$ 7,468,717	\$ 551,446	\$ 3,106,998	\$ 2,130,867	\$ 187,822	\$ 167,290	\$ 4,542,580	\$ 19,088,600
External Affairs	-	-	-	-	-	2,843,550	-	12,678,250	15,521,800
Water System Operations	12,250,467	35,011,017	3,418,916	92,038,406	53,778,592	8,426	4,033,386	920,690	201,459,900
Chief Financial Officer	-	-	-	-	-	-	-	6,197,200	6,197,200
Business Technology & Engineering Services	1,888,478	8,181,759	7,427,204	14,080,555	7,854,800	366,913	642,543	21,504,748	61,947,000
Real Property Development & Mgmt	-	-	5,021,000	-	-	-	-	-	5,021,000
Water Resource Management	10,186,819	5,776	-	236,832	1,184,509	3,289,564	-	-	14,903,500
Ethics Department	-	-	-	-	-	-	-	420,300	420,300
General Counsel	-	-	-	-	-	-	-	11,343,700	11,343,700
Audit Department	-	-	-	-	-	-	-	1,974,600	1,974,600
<b>Total Departmental O&amp;M</b>	25,258,644	50,667,270	16,418,567	109,462,791	64,948,767	6,696,275	4,843,218	59,582,069	337,877,600
<b>General District Requirements</b>									
State Water Project	83,601,729	509,873,460	-	-	-	-	-	-	593,475,189
Colorado River Aqueduct Power	-	36,178,684	-	-	-	-	-	-	36,178,684
Supply Programs	36,287,598	-	-	-	-	-	-	-	36,287,598
Demand Management	-	-	-	-	-	53,205,188	-	-	53,205,188
Capital Financing Program	960,805	75,376,105	92,321,115	129,685,809	80,839,951	-	4,590,512	12,454,878	396,229,175
Other Operating Costs	603,411	992,437	356,690	2,009,687	1,378,301	1,710,588	108,207	22,035,079	29,194,400
Increase (Decrease) in Required Reserves	-	-	-	-	-	-	-	8,300,000	8,300,000
<b>Total General District Requirements</b>	121,453,543	622,420,685	92,677,805	131,695,496	82,218,252	54,915,776	4,698,719	42,789,957	1,152,870,235
<b>Revenue Offsets</b>	(1,255,846)	(49,860,844)	(1,480,787)	(15,607,303)	(28,624,875)	(527,395)	(20,709,763)	(6,907,807)	(124,974,621)
<b>Net Revenue Requirements</b>	<b>\$ 145,456,341</b>	<b>\$ 623,227,111</b>	<b>\$ 107,615,585</b>	<b>\$ 225,550,984</b>	<b>\$ 118,542,144</b>	<b>\$ 61,084,656</b>	<b>\$ (11,167,826)</b>	<b>\$ 95,464,219</b>	<b>\$ 1,365,773,214</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 associated with average system demands. Variable commodity costs include costs of chemicals, most power costs, and other cost components that increase or decrease in relation to the volume of water supplied. Fixed commodity costs include fixed operations and maintenance and capital financing costs that are not related to accommodating peak demands or standby service.

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

An additional component used in Metropolitan's cost classification process is the hydroelectric component. While not a part of most water utilities' cost classification procedures, the hydroelectric

classification component is necessary to segregate revenue requirements carried from the hydroelectric function established in the functional allocation process. Hydroelectric revenue requirements are later embedded in the distribution function. Any net revenues generated by the hydroelectric operations offset the distribution costs and reduce the System Access Rate. All users of the distribution system benefit proportionately from the revenue offset provided by the sale of hydroelectric energy.

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

Costs for the Conveyance and Aqueduct (C&A) service function are classified into demand, commodity, and standby categories. Because the capital costs for C&A were incurred to meet all three classification categories, an analysis of C&A capacity usage for the three years ending June 2013 was used to determine that 52 percent of the available conveyance capacity has been used to meet member agency demands on an average annual basis. A system peak factor<sup>1</sup> of 1.4 was applied to the average annual usage to determine that 22 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 26 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct sub-functions. The classification shares reflect the system average use of conveyance capacity and not the usage of individual facilities. All of the Conveyance and Aqueduct energy costs for pumping water to Southern California are classified as variable commodity costs and, therefore, are not shown in Schedule 6 because they carry through the classification step.

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

Distribution service function costs were classified using daily flow data for the three calendar years ending December 2013. During this period, the average annual volume of deliveries to the member agencies used 43 percent of the peak distribution capacity. The difference between the three-year average non-coincident peak and the commodity flows divided by the system capacity, or 37 percent of the distribution capacity, was used to meet peak day demands in excess of average annual flows.

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<sup>1</sup> Peak monthly deliveries to the member agencies average about 42 percent more than the average monthly deliveries.

Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the peak non-coincident<sup>2</sup> 24-hour daily flow of all the member agencies. The remaining 20 percent of distribution capacity is associated with standby service.

As presented in Schedule 6, treatment service function costs were also classified using daily flow data of deliveries to the member agencies for the three years ending December 2013. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. Schedule 7 summarizes the service function revenue requirements by classification category. Administrative and general costs have been allocated to the classification categories by service function based on the ratio of classified non-A&G service function costs to total non-A&G service function costs.

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

**Schedule 6. Classification Percentages**

Function	Classification Percentages			Total % Classified	Comments
	Fixed				
	Commodity	Demand	Standby		
<b>Source of Supply</b>					
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs classified as commodity
State Water Project	100%	0%	0%	100%	Supply costs classified as commodity
<b>Conveyance &amp; Aqueduct</b>					
Colorado River Aqueduct	52%	22%	26%	100%	Demand (peaking) percentage represents application of system monthly peak factor of 1.4 to average monthly flow. Commodity percentage represents average flows. Remainder of capacity is for standby (expected growth). SWP and CRA are treated the same due to application of system wide uniform price.
State Water Project	52%	22%	26%	100%	
Other	52%	22%	26%	100%	
<b>Storage</b>					
Emergency	0%	0%	100%	100%	Standby service (recovered by RTS)
Drought	100%	0%	0%	100%	Recovered by Supply Rates
Regulatory	43%	37%	20%	100%	See distribution (below)
<b>Treatment</b>	32%	36%	32%	100%	Demand percentage represents amount of system treatment capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total capacity. The same classification is applied to all five treatment plants due to the use of a uniform system wide treatment surcharge.
<b>Distribution</b>	43%	37%	20%	100%	Demand percentage represents amount of system distribution capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total system capacity. The same classification is applied to all distribution facilities due to the use of a system wide uniform system access rate.

Totals may not foot due to rounding

A summary of cost classification results is shown in Schedule 7. The classification of the service function costs results in about 8 percent, or \$105 million of the total revenue requirements, being allocated to the demand classification category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan's property tax revenue is allocated to C&A fixed demand costs and offsets the amount that is recovered through rates. The taxes are used to pay for the general obligation bond debt service allocated to the C&A costs.

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

Functional Categories (by sub-Function)	Fixed Demand	Commodity	Standby	Variable Commodity	Hydroelectric	Total Classified
<b>Source of Supply</b>						
CRA	\$ -	\$ 40,897,002	\$ -	\$ -	\$ -	\$ 40,897,002
SWP	-	108,130,270	-	-	-	108,130,270
Other Supply	-	11,210,039	-	-	-	11,210,039
<b>Subtotal: Source of Supply</b>	-	160,237,310	-	-	-	<b>160,237,310</b>
<b>Conveyance &amp; Aqueduct</b>						
CRA						
CRA Power	-	9,269,307	-	34,162,646	-	43,431,953
CRA All Other	2,020,892	42,032,460	2,383,473	-	-	46,436,825
SWP						
SWP Power	-	-	-	278,794,005	-	278,794,005
SWP All Other	16,682,081	184,216,901	19,675,115	-	-	220,574,097
Other Conveyance & Aqueduct	13,432,812	42,182,017	16,553,436	-	-	72,168,265
<b>Subtotal: Conveyance &amp; Aqueduct</b>	32,135,785	277,700,685	38,612,024	312,956,652	-	<b>661,405,145</b>
<b>Storage</b>						
Storage Costs Other Than Power						
Emergency	-	-	55,202,730	-	-	55,202,730
Drought	-	47,054,527	-	-	-	47,054,527
Regulatory	4,256,943	7,144,261	2,325,661	-	-	13,726,865
Storage Power	-	-	-	(323,045)	-	(323,045)
<b>Subtotal: Storage</b>	4,256,943	54,198,788	57,528,391	(323,045)	-	<b>115,661,077</b>
<b>Water Quality</b>						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
<b>Subtotal: Water Quality</b>	-	-	-	-	-	-
<b>Treatment</b>	48,238,763	135,412,930	28,368,132	30,218,891	-	<b>242,238,717</b>
<b>Distribution</b>	20,826,396	96,628,423	11,377,915	-	-	<b>128,832,734</b>
<b>Demand Management</b>	-	67,291,951	-	-	-	<b>67,291,951</b>
<b>Hydroelectric</b>	-	-	-	-	(9,893,722)	<b>(9,893,722)</b>
<b>Total Costs Classified</b>	<b>\$ 105,457,888</b>	<b>\$ 791,470,088</b>	<b>\$ 135,886,463</b>	<b>\$ 342,852,498</b>	<b>\$ (9,893,722)</b>	<b>\$ 1,365,773,214</b>

Totals may not foot due to rounding

About 58 percent of the revenue requirement (\$791 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 \$136 million and account for about 10 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 \$343 million, and account for about 25 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, 2013 in order to collect all costs from rates and charges in fiscal year 2012/13, with the increase of reserves by \$9.2 million. 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)**

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	160,237,310	-	-	-	-	-	-	160,237,310
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Supply</b>	160,237,310	-	-	-	-	-	-	160,237,310
<b>Conveyance and Aqueduct</b>								
Fixed Demand	-	-	-	-	-	32,135,785	-	32,135,785
Fixed Commodity	-	277,700,685	-	-	-	-	-	277,700,685
Fixed Standby	-	-	-	-	-	38,612,024	-	38,612,024
Variable Commodity	-	-	-	312,956,652	-	-	-	312,956,652
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Conveyance and Aqueduct</b>	-	277,700,685	-	312,956,652	-	70,747,809	-	661,405,145
<b>Storage</b>								
Fixed Demand	-	-	-	-	4,256,943	-	-	4,256,943
Fixed Commodity	47,054,527	7,144,261	-	-	-	-	-	54,198,788
Fixed Standby	-	-	-	-	-	57,528,391	-	57,528,391
Variable Commodity	(323,045)	-	-	-	-	-	-	(323,045)
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Storage</b>	46,731,482	7,144,261	-	-	4,256,943	57,528,391	-	115,661,077
<b>Treatment</b>								
Fixed Demand	-	-	-	-	-	-	48,238,763	48,238,763
Fixed Commodity	-	-	-	-	-	-	135,412,930	135,412,930
Fixed Standby	-	-	-	-	-	-	28,368,132	28,368,132
Variable Commodity	-	-	-	-	-	-	30,218,891	30,218,891
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Treatment</b>	-	-	-	-	-	-	242,238,717	242,238,717
<b>Distribution</b>								
Fixed Demand	-	-	-	-	20,826,396	-	-	20,826,396
Fixed Commodity	-	96,628,423	-	-	-	-	-	96,628,423
Fixed Standby	-	-	-	-	-	11,377,915	-	11,377,915
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	(9,893,722)	-	-	-	-	-	(9,893,722)
<b>Subtotal: Distribution</b>	-	86,734,701	-	-	20,826,396	11,377,915	-	118,939,012
<b>Demand Management</b>								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	67,291,951	-	-	-	-	67,291,951
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Demand Management</b>	-	-	67,291,951	-	-	-	-	67,291,951
<b>Total</b>								
Fixed Demand	-	-	-	-	25,083,339	32,135,785	48,238,763	105,457,888
Fixed Commodity	207,291,837	381,473,369	67,291,951	-	-	-	135,412,930	791,470,088
Fixed Standby	-	-	-	-	-	107,518,330	28,368,132	135,886,463
Variable Commodity	(323,045)	-	-	312,956,652	-	-	30,218,891	342,852,498
Hydroelectric	-	(9,893,722)	-	-	-	-	-	(9,893,722)
<b>Total</b>	<b>\$ 206,968,792</b>	<b>\$ 371,579,647</b>	<b>\$ 67,291,951</b>	<b>\$ 312,956,652</b>	<b>\$ 25,083,339</b>	<b>\$ 139,654,115</b>	<b>\$ 242,238,717</b>	<b>\$ 1,365,773,214</b>

Totals may not foot due to rounding

**Schedule 9. Rates and Charges Summary**

<b>Effective January 1st</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Tier 1 Supply Rate (\$/AF)	\$106	\$142	\$150
Delta Supply Surcharge (\$/AF)	\$58	*	*
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290
System Access Rate (\$/AF)	\$217	\$228	\$247
Water Stewardship Rate (\$/AF)	\$43	\$41	\$42
System Power Rate (\$/AF)	\$136	\$190	\$163
Full Service Untreated Volumetric Cost (\$/AF)			
Tier 1	\$560	\$601	\$602
Tier 2	\$686	\$749	\$742
Replenishment Water Rate Untreated (\$/AF)	\$442	**	**
Interim Agricultural Water Program Untreated (\$/AF)	\$537	***	***
Treatment Surcharge (\$/AF)	\$234	\$258	\$301
Full Service Treated Volumetric Cost (\$/AF)			
Tier 1	\$794	\$859	\$903
Tier 2	\$920	\$1,007	\$1,043
Treated Replenishment Water Rate (\$/AF)	\$651	**	**
Treated Interim Agricultural Water Program (\$/AF)	\$765	***	***
Readiness-to-Serve Charge (\$M)	\$146	\$145	\$168
Capacity Charge (\$/cfs)	\$7,400	\$6,500	\$8,700

\* The Delta Supply Surcharge will be suspended after 2012.

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

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

### **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. All system users (member agency or third party) pay the SAR to use Metropolitan's conveyance and distribution system. To meet the board stated objective to collect all costs in 2012/13, the SAR would increase from its current level of \$217 per acre-foot to \$228 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 \$371 million in FY 2012/13, or 27 percent of the total revenue requirement.

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

The WSR would decrease from its current level of \$43 per acre-foot to \$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 \$67 million in FY 2012/13, about 5 percent of the revenue requirement. The WSR is a volumetric rate levied on each acre-foot of water that moves through the Metropolitan system. All system users (member agency or third parties) will pay the same proportional costs for existing and future conservation and recycling investments.

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

SPR would increase from \$136 per acre-foot to \$190 per acre-foot in 2013. 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 2012/13 the revenue requirement for the SPR is estimated to be about \$313 million, about 23 percent of the total revenue requirement.

### **2.4 Treatment Surcharge**

The treatment surcharge would increase from its current level of \$234 per acre-foot to \$258 per acre-foot to collect all treatment costs in 2012/13. 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 \$242 million in FY 2012/13, almost 18 percent of the total revenue requirement. The treatment surcharge recovers all costs associated with providing treated water service, including commodity, demand and standby related costs. Significant capital improvements at Metropolitan's five treatment plants, such as the Ozone Retrofit Program, Skinner Filtration Plant Expansion Project, and improvement programs at all five treatment plants result in additional capital financing costs being allocated to the treatment surcharge.

### **2.5 Capacity Charge**

The Capacity Charge would decrease from its current level of \$7,400 per cubic-foot-second to \$6,500 per cubic-foot-second of capacity during 2013. The capacity charge is levied on the maximum summer day demand placed on the system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2011 is used to levy the capacity charge effective January 1, 2013 through December 31, 2013. Demands measured for the purposes of billing the capacity charge include all firm demand and agricultural demand, including wheeling service and exchanges. Replenishment service is not included in the measurement of peak day demand for purposes of billing the capacity charge.

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

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan's system, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods particularly October through April. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total capacity charge. The estimated capacity charge to be paid by each member agency in calendar year 2013 (as of February 2012) is included in Schedule 10.

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

AGENCY	Peak Day Demand (cfs)				Rate (\$/cfs): \$6,500
	(May 1 through September 30) Calendar Year				
	2009	2010	2011	3-Year Peak	Calendar Year 2013 Capacity Charge
Anaheim	40.7	44.8	39.3	44.8	\$291,200
Beverly Hills	31.0	31.2	31.5	31.5	\$204,750
Burbank	21.6	22.3	21.4	22.3	\$144,950
Calleguas	192.8	208.9	210.1	210.1	\$1,365,650
Central Basin	94.7	74.2	79.2	94.7	\$615,550
Compton	5.9	3.3	2.4	5.9	\$38,350
Eastern	233.8	229.6	192.5	233.8	\$1,519,700
Foothill	24.3	20.2	19.0	24.3	\$157,950
Fullerton	37.4	32.2	27.4	37.4	\$243,100
Glendale	56.0	49.6	49.0	56.0	\$364,000
Inland Empire	106.1	124.2	138.0	138.0	\$897,000
Las Virgenes	42.7	43.9	43.4	43.9	\$285,350
Long Beach	67.2	61.2	51.5	67.2	\$436,800
Los Angeles	698.2	525.9	329.0	698.2	\$4,538,300
MWDOC	489.5	425.5	382.7	489.5	\$3,181,750
Pasadena	50.2	50.5	50.6	50.6	\$328,900
San Diego	1,055.3	949.5	760.7	1,055.3	\$6,859,450
San Fernando	-	4.1	1.6	4.1	\$26,650
San Marino	3.5	4.2	1.3	4.2	\$27,300
Santa Ana	16.4	20.0	20.0	20.0	\$130,000
Santa Monica	25.0	24.3	21.1	25.0	\$162,500
Three Valleys	132.7	139.4	122.7	139.4	\$906,100
Torrance	39.3	42.8	35.5	42.8	\$278,200
Upper San Gabriel	27.6	22.9	20.4	27.6	\$179,400
West Basin	221.3	221.2	214.6	221.3	\$1,438,450
Western	214.4	199.5	179.3	214.4	\$1,393,600
<b>Total</b>	<b>3,927.6</b>	<b>3,575.4</b>	<b>3,044.2</b>	<b>4,002.3</b>	<b>\$26,014,950</b>

Totals may not foot due to rounding

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

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 \$57 million in FY 2012/13. 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 \$82 million in FY 2012/13. Currently the RTS recovers \$146 million, an amount that represents a portion of the capital financing costs for facilities that serve existing users. The RTS would decrease to \$145 million in calendar year 2013.

The RTS is allocated to the member agencies based on each agency's proportional share of a ten-year rolling average of all firm deliveries (including water transfers and exchanges that use Metropolitan system capacity). The ten-year rolling average will not include replenishment service and interim agricultural deliveries because these deliveries will be the first to be curtailed in the event of an emergency. A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency's potential long-term need for standby service under different demand conditions. Member agencies that so choose may have a portion of their total RTS obligation offset by standby charge collections levied by Metropolitan on behalf of the member agency. Schedule 11 provides an estimate as of February 2012 of each agency's total RTS obligation for calendar year 2013.

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

Water rate \$79.34/acre-foot				
Member Agency	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2001/02 - FY2010/11	RTS Share	12 months @ \$145 million per year (1/13-12/13)	
Anaheim	21,892	1.20%	\$	1,736,954
Beverly Hills	12,041	0.66%		955,321
Burbank	12,605	0.69%		1,000,094
Calleguas MWD	111,069	6.08%		8,812,448
Central Basin MWD	61,810	3.38%		4,904,117
Compton	2,832	0.15%		224,658
Eastern MWD	94,101	5.15%		7,466,223
Foothill MWD	11,169	0.61%		886,158
Fullerton	10,225	0.56%		811,243
Glendale	21,707	1.19%		1,722,276
Inland Empire Utilities Agency	61,330	3.36%		4,866,088
Las Virgenes MWD	22,730	1.24%		1,803,475
Long Beach	35,737	1.96%		2,835,425
Los Angeles	302,313	16.54%		23,986,197
Municipal Water District of Orange County	227,364	12.44%		18,039,562
Pasadena	22,799	1.25%		1,808,941
San Diego County Water Authority	449,537	24.60%		35,667,330
San Fernando	125	0.01%		9,878
San Marino	972	0.05%		77,081
Santa Ana	13,464	0.74%		1,068,257
Santa Monica	12,284	0.67%		974,601
Three Valleys MWD	70,981	3.88%		5,631,765
Torrance	19,931	1.09%		1,581,332
Upper San Gabriel Valley MWD	19,031	1.04%		1,509,932
West Basin MWD	135,862	7.43%		10,779,606
Western MWD	73,618	4.03%		5,841,038
<b>MWD Total</b>	<b>1,827,524</b>	<b>100.00%</b>	<b>\$</b>	<b>145,000,000</b>

### 2.7 Purchase Order

The potential extension of the Purchase Order is part of the Long Range Finance Plan workgroup discussions. A final decision is expected in 2012.

## **2.8 Tier 2 supply rate**

The Tier 2 Supply Rate reflects Metropolitan's cost of developing long-term firm supplies. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. The Tier 2 Supply Rate also recovers a greater proportion of the cost of developing additional supplies from member agencies that have increasing demands on the Metropolitan system. The Tier 2 Supply Rate would remain at its current level of \$290 per acre-foot.

The total revenue requirement for the supply service function is about \$207 million in FY 2012/13. At an expected average sales level of 1.7 million acre-feet (MAF) it is estimated that no acre-feet will be sold at the Tier 2 Supply Rate. The remaining supply costs are recovered by the Tier 1 Supply Rate and by the replenishment rate discussed below.

The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. Based on the outcome of the Long Range Finance Plan in 2012, a detailed table with Tier 1 limits will be provided to the Board in 2012.

## **2.9 Tier 1 supply rate**

The Tier 1 Supply Rate would be reduced from its current level of \$164 per acre-foot to \$142 per acre-foot. The Tier 1 Supply Rate recovers the majority of the supply revenue requirement. The Tier 1 Supply Rate is simply calculated as the amount of the total supply revenue requirement that is not recovered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. At an expected demand level of about 1.7 MAF it is estimated that Metropolitan will sell about 1.51 MAF at the Tier 1 Supply Rate in 2012/13.

## **2.10 Replenishment water rates**

Discussion on the replenishment program are continuing with the member agencies in the Long Range Finance Plan Workgroup. If adopted, the new replenishment program would replace the existing replenishment rate. Therefore, the existing replenishment rate is discontinued.

## **3 Sales**

Staff estimates of water sales used for developing the rate recommendation were based on current member agency demands and information and an expectation that demands will trend to levels expected under normal weather conditions. Since 1989/90, total sales have averaged about 2.00 million acre-feet per year, ranging from a high of around 2.5 million acre-feet in 1989/90 to a low of about 1.5 million acre-feet in 1997/98. In 2011/12 water sales are projected to be around 1.7 million acre-feet. Water sales in 2012/13 are expected to be about 1.7 million acre-feet.

## **4 Proof of Revenue**

Based on expected sales of 1.7 MAF the expected revenues would be about \$49 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, 2013, the expected revenues for 2012/13 will be about \$1.8 million (0.1 percent) higher than the total revenue requirement in 2012/13. The total revenue requirement includes a \$7.4-million increase in the required reserves for the Revenue Remainder Fund. Accounting for this adjustment, the increase in reserves is almost \$9.2 million in 2012/13.

**Schedule 12. FY 2012/13 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)**

	Revenues if Rates Effective July 1st	Revenue Requirements	Difference	% Over (Under) Collected
Supply	215.2	207.0	8.2	4%
System Access Rate	386.2	371.6	14.6	4%
Water Stewardship Rate	69.5	67.3	2.2	3%
System Power Rate	321.9	313.0	8.9	3%
Treatment Surcharge	250.9	242.2	8.7	4%
Readiness-to-serve Charge	145.0	139.7	5.3	4%
Capacity Charge	25.9	25.1	0.8	3%
<b>Total</b>	<b>1,414.6</b>	<b>1,365.8</b>	<b>48.8</b>	<b>4%</b>

Totals may not foot due to rounding

**Schedule 13. FY 2012/13 Proof of Revenue if Rates Effective January 1 (\$ millions)**

	Revenues if Rates Effective Jan 1	Revenue Requirements	Difference	% Over (Under) Collected
Supply	233.4	207.0	26.5	13%
System Access Rate	376.1	371.6	4.6	1%
Water Stewardship Rate	71.3	67.3	4.0	6%
System Power Rate	272.4	313.0	(40.6)	-13%
Treatment Surcharge	238.3	242.2	(4.0)	-2%
Readiness-to-serve Charge	145.5	139.7	5.8	4%
Capacity Charge	30.6	25.1	5.5	22%
<b>Total</b>	<b>1,367.6</b>	<b>1,365.8</b>	<b>1.8</b>	<b>0%</b>

Totals may not foot due to rounding

Metropolitan Water District of Southern California  
**Fiscal Year 2013/14 Cost of Service  
Option 3**

March 2012

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## **1 Cost of Service**

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

### ***1.1 Cost of Service Process***

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

#### ***Step 1 - Development Of Revenue Requirements***

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

#### ***Step 2 – Identification Of Service Function Costs***

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

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

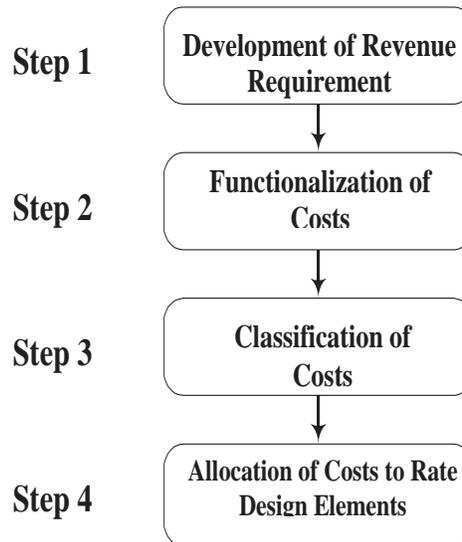
In order to provide more finite functional allocation, many of these functional categories are subdivided into more detailed sub-functions in the cost of service process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions State Water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

### Step 3 - Classification Of Costs

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

### Step 4 - Allocation Of Costs To Rate Design Elements

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

**Figure 1. The Cost of Service Process**

### **1.2 Revenue Requirements**

The estimated revenue requirements presented in this report are for FY 2013/14. Throughout the report, FY 2013/14 is used as the “test year” to demonstrate the application of the cost of service process. Schedule 1 summarizes the FY 2013/14 revenue requirement by the major budget line items used in Metropolitan’s budgeting process. Current estimates indicate Metropolitan’s annual cash expenditures (including capital financing costs, but not construction outlays financed with bond proceeds) will total approximately \$1.56 billion in FY 2013/14.

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 \$40 million in FY 2013/14. It is expected that Metropolitan will also generate about \$81 million in ad valorem property tax revenues and annexation charges. Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, and a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the State Water Project. The total revenue offsets for FY 2013/14 are estimated to be around \$121 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or \$1.443 billion. Given an effective date of January 1, 2014, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2013 will generate a total of \$1.444 billion in 2013/14.

All of Metropolitan’s costs fall under the broad categories of Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific organizational groups. General District Requirements consist of requirements associated with the Colorado River Aqueduct, State Water Project, the capital financing costs associated with the Capital Investment 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 72 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to SWP expenditures, which make up approximately 33 percent of Metropolitan's FY 2013/14 revenue requirements. Metropolitan's SWP contract requires Metropolitan to pay its allocated share of the capital, minimum operations, maintenance, power and replacement costs incurred to develop and convey its water supply entitlement, irrespective of the quantity of water Metropolitan takes delivery of in any given year. Metropolitan's capital financing program is the second largest component of the revenue requirement, constituting approximately 28 percent of the revenue requirement. Departmental O&M costs make up 21 percent of the total revenue requirement in FY 2013/14. 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 Colorado River Aqueduct and other conveyance and supply facilities.

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

	<b>Fiscal Year Ending 2014</b>	<b>% of Revenue Requirements (1)</b>
<b>Departmental Operations &amp; Maintenance</b>		
Office of the General Manager & Human Resources	\$ 19,793,700	1.2%
External Affairs	15,998,100	0.9%
Water System Operations	210,991,000	12.5%
Chief Financial Officer	6,538,100	0.4%
Business Technology & Engineering Services	65,604,400	3.9%
Real Property Development & Mgmt	5,288,300	0.3%
Water Resource Management	15,197,200	0.9%
Ethics Department	442,500	0.0%
General Counsel	11,190,800	0.7%
Audit Department	2,044,400	0.1%
<b>Total</b>	<b>353,088,500</b>	<b>20.9%</b>
<b>General District Requirements</b>		
State Water Project	564,045,941	33.5%
Colorado River Aqueduct Power	24,926,279	1.5%
Supply Programs	37,024,018	2.2%
Demand Management	53,624,040	3.2%
Capital Financing Program	468,427,124	27.8%
Operating Equipment and Leases	37,129,600	2.2%
Increase (Decrease) in Required Reserves	26,300,000	1.6%
<b>Total</b>	<b>1,211,477,002</b>	<b>71.8%</b>
<b>Revenue Offsets</b>	<b>(121,583,052)</b>	<b>7.2%</b>
<b>Net Revenue Requirements</b>	<b>\$ 1,442,982,450</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 Commissioners (NARUC), and the National Council of Governmental Accounting. Because all water utilities are not identical, the rate structure reflects Metropolitan's unique physical, financial, and institutional characteristics.

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

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

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

- *Supply.* This function includes costs for those SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the member agencies' demands. For example, Metropolitan's supply related costs include investments in the Conservation Agreement with the Imperial Irrigation District and the Palo Verde Irrigation District (PVID) Program from the Colorado River supply programs. The SWP programs include 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 Proposition 13 are also included.
- *Conveyance and Aqueduct.* This function includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water through Metropolitan's internal distribution system. Variable power costs for the SWP and CRA are also considered to be Conveyance and Aqueduct costs but are separately reported under a "power" sub-function. Conveyance and Aqueduct facilities can be distinguished from Metropolitan's other facilities primarily by the fact that they do not typically include direct connections to the member agencies. For purposes of this study, the Inland Feeder Project functions as an extension of the SWP East Branch and is therefore considered a Conveyance and Aqueduct facility as well.
- *Storage.* Storage costs include the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs within the distribution system. Metropolitan's larger storage facilities are operated to provide: (1) emergency storage in the event of an earthquake or similar system outage; (2) drought storage that produces additional supplies during times of shortage; and (3) regulatory storage to balance system demands and supplies and provide for operating flexibility. To reasonably allocate the costs of storage capacity among member agencies, the

storage service function is categorized into sub-functions of emergency, drought, and regulatory storage.

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

### **1.3.1 Functional Allocation Bases**

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

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

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

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

<b>Primary Functional Allocation Bases</b>	<b>Estimated for FY 2014</b>	<b>% of Allocated Dollars</b>
Direct Assignment	\$ 1,042,671,646	61.8%
Work in Progress/Net Book Value	508,745,624	30.2%
Prorating	61,927,666	3.7%
Manager Analysis	35,779,600	2.1%
Other	\$ 37,024,018	2.2%
<b>Total Dollars Allocated</b>	<b>\$ 1,686,148,554</b>	<b>100.0%</b>
<b>Portion of Above Allocations Relating to:</b>		
Revenue Requirements before Offsets	1,564,565,502	
Revenue Offsets	121,583,052	
<b>Total Dollars Allocated</b>	<b>\$ 1,686,148,554</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) Work-In-Progress; Net Book Value Plus Work-In-Progress**

Capital financing costs, including debt service and funding replacements and refurbishments from operating revenues, comprise about 28 percent of Metropolitan's annual revenue requirements. One approach would be to allocate payments on each debt issue in direct proportion to specific project expenditures made using bond proceeds. But, this approach would result in a high degree of volatility in relative capital cost allocations from year to year. The approach used in this analysis is one widely used in water industry cost of service studies. Capital and debt-related costs (including repair and replacement costs paid from current revenues) are allocated on the basis of the relative net book values of fixed assets within each functional category. This approach produces capital cost allocations that are consistent with the functional distribution of assets. Also, since the allocation basis is tied to fixed asset records rather than debt payment records, the resulting allocations are more reflective of the true useful lives of assets. Use of net book values as an allocation basis provides an improved matching of functional costs with asset lives. A listing of fixed asset net book values summarized by asset function is shown in Schedule 3.

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

<b>Functional Categories</b>	<b>NBV for FY 2014</b>	<b>% of Total NBV</b>
Source of Supply	\$ 22,855,983	0.3%
Conveyance & Aqueduct	1,849,143,743	20.2%
Storage	2,236,593,975	24.5%
Treatment	3,279,376,388	35.9%
Distribution	1,324,730,492	14.5%
Administrative & General	317,241,039	3.5%
Hydroelectric	112,451,435	1.2%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 9,142,393,053</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. For organizational units handling current construction activity, however, allocations are based on work-in-progress alone. For these organizational units, exclusion of net book value from the allocation basis is done because the costs being allocated relate directly to work in progress not yet reflected in the completed assets records.

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

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

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

**(c) Prorating in proportion to other allocations**

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

**(d) Manager analyses**

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

A summary of the functional allocation results is shown in Schedules 4 and 5. Schedule 4 provides a breakdown of the revenue requirement for FY 2013/14 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 41 percent of the allocated revenue requirement.

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

<b>Functional Categories</b>	<b>Fiscal Year Ending 2014</b>	<b>% of Allocated Dollars (1)</b>
<b>Source of Supply</b>		
CRA	\$ 36,922,428	2.5%
SWP	101,104,836	6.9%
Other Supply	10,656,404	0.7%
<b>Total</b>	<b>148,683,668</b>	<b>10.2%</b>
<b>Conveyance &amp; Aqueduct</b>		
CRA		
<i>CRA Power (net of sales)</i>	34,565,287	2.4%
<i>CRA All Other</i>	44,985,663	3.1%
SWP		
<i>SWP Power</i>	231,001,434	15.8%
<i>SWP All Other</i>	212,670,018	14.5%
Other Conveyance & Aqueduct	77,773,480	5.3%
<b>Total</b>	<b>600,995,882</b>	<b>41.1%</b>
<b>Storage</b>		
Storage Costs Other Than Power		
<i>Emergency</i>	59,879,052	4.1%
<i>Drought</i>	48,747,554	3.3%
<i>Regulatory</i>	15,360,206	1.0%
Wadsworth plant pumping/generation	(505,271)	0.0%
<b>Total</b>	<b>123,481,540</b>	<b>8.5%</b>
<b>Treatment</b>		
Jensen	46,897,843	3.2%
Weymouth	52,064,192	3.6%
Diemer	57,920,896	4.0%
Mills	33,857,191	2.3%
Skinner	70,162,984	4.8%
<b>Total</b>	<b>260,903,105</b>	<b>17.8%</b>
<b>Distribution</b>	130,737,875	8.9%
<b>Demand Management</b>	61,707,254	4.2%
<b>Hydroelectric</b>	(9,808,272)	0.7%
<b>Administrative &amp; General</b>	126,281,396	8.6%
<b>Total Functional Allocations:</b>	<b>\$ 1,442,982,450</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)**

	Source of Supply	Conveyance & Aqueduct	Storage	Treatment	Distribution	Demand Management	Hydro Electric	Administrative & General	Total \$ Allocated
<b>Departmental Operations &amp; Maintenance</b>									
Office of the General Manager & Human Resources	\$ 963,023	\$ 7,691,283	\$ 569,131	\$ 3,260,130	\$ 2,222,711	\$ 191,421	\$ 175,154	\$ 4,720,846	\$ 19,793,700
External Affairs	-	-	-	-	-	2,968,200	-	13,029,900	15,998,100
Water System Operations	12,925,414	36,212,956	3,447,068	96,781,777	56,410,059	8,745	4,249,447	955,534	210,991,000
Chief Financial Officer	-	-	-	-	-	-	-	6,538,100	6,538,100
Business Technology & Engineering Services	1,968,014	8,459,054	7,623,151	15,224,614	8,171,295	377,872	678,053	23,102,347	65,604,400
Real Property Development & Mgmt	-	-	5,288,300	-	-	-	-	-	5,288,300
Water Resource Management	10,386,182	5,871	-	240,698	1,204,198	3,360,251	-	-	15,197,200
Ethics Department	-	-	-	-	-	-	-	442,500	442,500
General Counsel	-	-	-	-	-	-	-	11,190,800	11,190,800
Audit Department	-	-	-	-	-	-	-	2,044,400	2,044,400
<b>Total Departmental O&amp;M</b>	26,242,633	52,369,164	16,927,650	115,507,219	68,008,263	6,906,489	5,102,654	62,024,427	353,088,500
<b>General District Requirements</b>									
State Water Project	84,978,587	479,067,354	-	-	-	-	-	-	564,045,941
Colorado River Aqueduct Power	-	24,926,279	-	-	-	-	-	-	24,926,279
Supply Programs	37,024,018	-	-	-	-	-	-	-	37,024,018
Demand Management	-	-	-	-	-	53,624,040	-	-	53,624,040
Capital Financing Program	1,112,886	89,070,033	108,003,493	159,827,335	89,482,557	-	5,521,628	15,409,193	468,427,124
Other Operating Costs	612,522	998,446	361,990	2,073,575	1,413,734	1,710,852	111,405	29,847,076	37,129,600
Increase (Decrease) in Required Reserves	-	-	-	-	-	-	-	26,300,000	26,300,000
<b>Total General District Requirements</b>	123,728,013	594,062,112	108,365,483	161,900,910	90,896,291	55,334,891	5,633,033	71,556,270	1,211,477,002
<b>Revenue Offsets</b>	(1,286,978)	(45,435,393)	(1,811,593)	(16,505,024)	(28,166,678)	(534,126)	(20,543,959)	(7,299,301)	(121,583,052)
<b>Net Revenue Requirements</b>	<b>\$ 148,683,668</b>	<b>\$ 600,995,882</b>	<b>\$ 123,481,540</b>	<b>\$ 260,903,105</b>	<b>\$ 130,737,875</b>	<b>\$ 61,707,254</b>	<b>\$ (9,808,272)</b>	<b>\$ 126,281,396</b>	<b>\$ 1,442,982,450</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 associated with average system demands. Variable commodity costs include costs of chemicals, most power costs, and other cost components that increase or decrease in relation to the volume of water supplied. Fixed commodity costs include fixed operations and maintenance and capital financing costs that are not related to accommodating peak demands or standby service.

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

An additional component used in Metropolitan's cost classification process is the hydroelectric component. While not a part of most water utilities' cost classification procedures, the hydroelectric

classification component is necessary to segregate revenue requirements carried from the hydroelectric function established in the functional allocation process. Hydroelectric revenue requirements are later embedded in the distribution function. Any net revenues generated by the hydroelectric operations offset the distribution costs and reduce the System Access Rate. All users of the distribution system benefit proportionately from the revenue offset provided by the sale of hydroelectric energy.

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

Costs for the Conveyance and Aqueduct (C&A) service function are classified into demand, commodity, and standby categories. Because the capital costs for C&A were incurred to meet all three classification categories, an analysis of C&A capacity usage for the three years ending June 2014 was used to determine that 52 percent of the available conveyance capacity has been used to meet member agency demands on an average annual basis. A system peak factor<sup>1</sup> of 1.4 was applied to the average annual usage to determine that 22 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 26 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct sub-functions. The classification shares reflect the system average use of conveyance capacity and not the usage of individual facilities. All of the Conveyance and Aqueduct energy costs for pumping water to Southern California are classified as variable commodity costs and, therefore, are not shown in Schedule 6 because they carry through the classification step.

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

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<sup>1</sup> Peak monthly deliveries to the member agencies average about 42 percent more than the average monthly deliveries.

Distribution service function costs were classified using daily flow data for the three calendar years ending December 2014. During this period, the average annual volume of deliveries to the member agencies used 42 percent of the peak distribution capacity. The difference between the three-year average non-coincident peak and the commodity flows divided by the system capacity, or 38 percent of the distribution capacity, was used to meet peak day demands in excess of average annual flows. Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the peak non-coincident<sup>2</sup> 24-hour daily flow of all the member agencies. The remaining 20 percent of distribution capacity is associated with standby service.

As presented in Schedule 6, treatment service function costs were also classified using daily flow data of deliveries to the member agencies for the three years ending December 2014. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. Schedule 7 summarizes the service function revenue requirements by classification category. Administrative and general costs have been allocated to the classification categories by service function based on the ratio of classified non-A&G service function costs to total non-A&G service function costs.

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

**Schedule 6. Classification Percentages**

Function	Classification Percentages			Total % Classified	Comments
	Fixed				
	Commodity	Demand	Standby		
<b>Source of Supply</b>					
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs classified as commodity
State Water Project	100%	0%	0%	100%	Supply costs classified as commodity
<b>Conveyance &amp; Aqueduct</b>					
Colorado River Aqueduct	52%	22%	26%	100%	Demand (peaking) percentage represents application of system monthly peak factor of 1.4 to average monthly flow. Commodity percentage represents average flows. Remainder of capacity is for standby (expected growth). SWP and CRA are treated the same due to application of system wide uniform price.
State Water Project	52%	22%	26%	100%	
Other	52%	22%	26%	100%	
<b>Storage</b>					
Emergency	0%	0%	100%	100%	Standby service (recovered by RTS)
Drought	100%	0%	0%	100%	Recovered by Supply Rates
Regulatory	42%	37%	20%	100%	See distribution (below)
<b>Treatment</b>	32%	36%	32%	100%	Demand percentage represents amount of system treatment capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total capacity. The same classification is applied to all five treatment plants due to the use of a uniform system wide treatment surcharge.
<b>Distribution</b>	42%	37%	20%	100%	Demand percentage represents amount of system distribution capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total system capacity. The same classification is applied to all distribution facilities due to the use of a system wide uniform system access rate.

Totals may not foot due to rounding

A summary of cost classification results is shown in Schedule 7. The classification of the service function costs results in about 9 percent, or \$129 million of the total revenue requirements, being allocated to the demand classification category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan's property tax revenue is allocated to C&A fixed demand costs and offsets the amount that is recovered through rates. The taxes are used to pay for the general obligation bond debt service allocated to the C&A costs.

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

Functional Categories (by sub-Fuction)	Fixed Demand	Commodity	Standby	Variable Commodity	Hydroelectric	Total Classified
<b>Source of Supply</b>						
CRA	\$ -	\$ 41,250,313	\$ -	\$ -	\$ -	\$ 41,250,313
SWP	-	112,955,902	-	-	-	112,955,902
Other Supply	-	11,905,502	-	-	-	11,905,502
<b>Subtotal: Source of Supply</b>	-	166,111,717	-	-	-	<b>166,111,717</b>
<b>Conveyance &amp; Aqueduct</b>						
CRA						
<i>CRA Power</i>	-	11,103,235	-	25,903,677	-	37,006,912
<i>CRA All Other</i>	2,436,736	44,717,405	2,885,528	-	-	50,039,670
SWP						
<i>SWP Power</i>	-	-	-	242,976,897	-	242,976,897
<i>SWP All Other</i>	18,770,739	194,912,516	22,227,887	-	-	235,911,142
Other Conveyance & Aqueduct	16,224,494	49,110,741	20,065,205	-	-	85,400,440
<b>Subtotal: Conveyance &amp; Aqueduct</b>	37,431,969	299,843,898	45,178,620	268,880,574	-	<b>651,335,061</b>
<b>Storage</b>						
Storage Costs Other Than Power						
<i>Emergency</i>	-	-	64,547,701	-	-	64,547,701
<i>Drought</i>	-	54,461,529	-	-	-	54,461,529
<i>Regulatory</i>	5,375,870	8,506,655	2,920,400	-	-	16,802,925
Storage Power	-	-	-	(531,465)	-	(531,465)
<b>Subtotal: Storage</b>	5,375,870	62,968,184	67,468,100	(531,465)	-	<b>135,280,690</b>
<b>Water Quality</b>						
CRA	-	-	-	-	-	-
SWP	-	-	-	-	-	-
Other	-	-	-	-	-	-
<b>Subtotal: Water Quality</b>	-	-	-	-	-	-
<b>Treatment</b>	61,094,588	153,482,450	38,889,202	31,771,083	-	<b>285,237,324</b>
<b>Distribution</b>	25,114,575	105,633,278	13,643,298	-	-	<b>144,391,151</b>
<b>Demand Management</b>	-	68,940,309	-	-	-	<b>68,940,309</b>
<b>Hydroelectric</b>	-	-	-	-	(8,313,802)	<b>(8,313,802)</b>
<b>Total Costs Classified</b>	<b>\$ 129,017,003</b>	<b>\$ 856,979,835</b>	<b>\$ 165,179,221</b>	<b>\$ 300,120,193</b>	<b>\$ (8,313,802)</b>	<b>\$ 1,442,982,450</b>

Totals may not foot due to rounding

About 59 percent of the revenue requirement (\$857 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 \$165 million and account for about 11 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 \$300 million, and account for about 21 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, 2014 in order to collect all costs from rates and charges in fiscal year 2013/14, while increasing reserves by \$4.7 million. 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)**

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	166,111,717	-	-	-	-	-	-	166,111,717
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Supply</b>	166,111,717	-	-	-	-	-	-	166,111,717
<b>Conveyance and Aqueduct</b>								
Fixed Demand	-	-	-	-	-	37,431,969	-	37,431,969
Fixed Commodity	-	299,843,898	-	-	-	-	-	299,843,898
Fixed Standby	-	-	-	-	-	45,178,620	-	45,178,620
Variable Commodity	-	-	-	268,880,574	-	-	-	268,880,574
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Conveyance and Aqueduct</b>	-	299,843,898	-	268,880,574	-	82,610,589	-	651,335,061
<b>Storage</b>								
Fixed Demand	-	-	-	-	5,375,870	-	-	5,375,870
Fixed Commodity	54,461,529	8,506,655	-	-	-	-	-	62,968,184
Fixed Standby	-	-	-	-	-	67,468,100	-	67,468,100
Variable Commodity	(531,465)	-	-	-	-	-	-	(531,465)
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Storage</b>	53,930,064	8,506,655	-	-	5,375,870	67,468,100	-	135,280,690
<b>Treatment</b>								
Fixed Demand	-	-	-	-	-	-	61,094,588	61,094,588
Fixed Commodity	-	-	-	-	-	-	153,482,450	153,482,450
Fixed Standby	-	-	-	-	-	-	38,889,202	38,889,202
Variable Commodity	-	-	-	-	-	-	31,771,083	31,771,083
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Treatment</b>	-	-	-	-	-	-	285,237,324	285,237,324
<b>Distribution</b>								
Fixed Demand	-	-	-	-	25,114,575	-	-	25,114,575
Fixed Commodity	-	105,633,278	-	-	-	-	-	105,633,278
Fixed Standby	-	-	-	-	-	13,643,298	-	13,643,298
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	(8,313,802)	-	-	-	-	-	(8,313,802)
<b>Subtotal: Distribution</b>	-	97,319,476	-	-	25,114,575	13,643,298	-	136,077,349
<b>Demand Management</b>								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	68,940,309	-	-	-	-	68,940,309
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Demand Management</b>	-	-	68,940,309	-	-	-	-	68,940,309
<b>Total</b>								
Fixed Demand	-	-	-	-	30,490,446	37,431,969	61,094,588	129,017,003
Fixed Commodity	220,573,246	413,983,830	68,940,309	-	-	-	153,482,450	856,979,835
Fixed Standby	-	-	-	-	-	126,290,019	38,889,202	165,179,221
Variable Commodity	(531,465)	-	-	268,880,574	-	-	31,771,083	300,120,193
Hydroelectric	-	(8,313,802)	-	-	-	-	-	(8,313,802)
<b>Total</b>	\$ 220,041,781	\$ 405,670,029	\$ 68,940,309	\$ 268,880,574	\$ 30,490,446	\$ 163,721,988	\$ 285,237,324	\$ 1,442,982,450

Totals may not foot due to rounding

**Schedule 9. Rates and Charges Summary**

Effective January 1st	2012	2013	2014
Tier 1 Supply Rate (\$/AF)	\$106	\$142	\$150
Delta Supply Surcharge (\$/AF)	\$58	*	*
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290
System Access Rate (\$/AF)	\$217	\$228	\$247
Water Stewardship Rate (\$/AF)	\$43	\$41	\$42
System Power Rate (\$/AF)	\$136	\$190	\$163
Full Service Untreated Volumetric Cost (\$/AF)			
Tier 1	\$560	\$601	\$602
Tier 2	\$686	\$749	\$742
Replenishment Water Rate Untreated (\$/AF)	\$442	**	**
Interim Agricultural Water Program Untreated (\$/AF)	\$537	***	***
Treatment Surcharge (\$/AF)	\$234	\$258	\$301
Full Service Treated Volumetric Cost (\$/AF)			
Tier 1	\$794	\$859	\$903
Tier 2	\$920	\$1,007	\$1,043
Treated Replenishment Water Rate (\$/AF)	\$651	**	**
Treated Interim Agricultural Water Program (\$/AF)	\$765	***	***
Readiness-to-Serve Charge (\$M)	\$146	\$145	\$168
Capacity Charge (\$/cfs)	\$7,400	\$6,500	\$8,700

\* The Delta Supply Surcharge will be suspended after 2012.

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

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

**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. All system users (member agency or third party) pay the SAR to use Metropolitan's conveyance and distribution system. To meet the board stated objective to collect all costs in 2013/14, the SAR would increase to \$247 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 \$406 million in FY 2013/14, or 28 percent of the total revenue requirement.

**2.2 Water Stewardship Rate (WSR)**

The WSR would increase to \$42 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 \$69 million in FY 2013/14, about 5 percent of the revenue requirement. The WSR is a volumetric rate levied on each acre-foot of water that moves

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

through the Metropolitan system. All system users (member agency or third parties) will pay the same proportional costs for existing and future conservation and recycling investments.

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

SPR would decrease to \$163 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 2013/14 the revenue requirement for the SPR is estimated to be about \$269 million, about 19 percent of the total revenue requirement.

### **2.4 Treatment Surcharge**

The treatment surcharge would increase to \$301 per acre-foot to collect all treatment costs in 2013/14. 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 \$285 million in FY 2013/14, almost 20 percent of the total revenue requirement. The treatment surcharge recovers all costs associated with providing treated water service, including commodity, demand and standby related costs. Significant capital improvements at Metropolitan's five treatment plants, such as the Ozone Retrofit Program, Skinner Filtration Plant Expansion Project, and improvement programs at all five treatment plants result in additional capital financing costs being allocated to the treatment surcharge.

### **2.5 Capacity Charge**

The Capacity Charge would increase to \$8,700 per cubic-foot-second of capacity during 2014. The capacity charge is levied on the maximum summer day demand placed on the system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2012 is used to levy the capacity charge effective January 1, 2014 through December 31, 2014. Demands measured for the purposes of billing the capacity charge include all firm demand and agricultural demand, including wheeling service and exchanges. Replenishment service is not included in the measurement of peak day demand for purposes of billing the capacity charge.

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan's system, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods particularly October through April. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total capacity charge. The estimated capacity charge to be paid by each member agency in calendar year 2014 will be provided to the Board by April 2013.

### **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 2013/14. 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 \$96 million in FY 2013/14. The RTS would increase to \$168 million in calendar year 2014.

The RTS is allocated to the member agencies based on each agency's proportional share of a ten-year rolling average of all firm deliveries (including water transfers and exchanges that use Metropolitan system capacity). The ten-year rolling average will not include replenishment service and interim agricultural deliveries because these deliveries will be the first to be curtailed in the event of an emergency. A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency's potential long-term need for standby service under different demand conditions. Member agencies that so choose may have a portion of their total RTS obligation offset by standby charge collections levied by Metropolitan on behalf of the member agency. The detailed schedule with an estimate of each agency's RTS obligation for calendar year 2014 will be provided to the Board by April 2013.

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

The new Purchase Order is part of the discussions in the Long Range Finance Plan Workgroup, and a decision is expected in 2012. The 2014 Purchase Order Commitment quantity and the Tier 1 Annual Limit for all member agencies will be provided to the Board by April 2013.

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

The Tier 2 Supply Rate reflects Metropolitan's cost of developing long-term firm supplies. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. The Tier 2 Supply Rate also recovers a greater proportion of the cost of developing additional supplies from member agencies that have increasing demands on the Metropolitan system. The Tier 2 Supply Rate would remain at its current level of \$290 per acre-foot.

The total revenue requirement for the supply service function is about \$220 million in FY 2013/14. At an expected average sales level of 1.7 million acre-feet it is estimated that no acre-feet will be sold at the Tier 2 Supply Rate.

The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. The Purchase Order is part of the Long Range Finance Plan forum and a decision is expected in 2012.

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

The Tier 1 Supply Rate would be increased to \$150 per acre-foot in 2014. The Tier 1 Supply Rate recovers the majority of the supply revenue requirement. The Tier 1 Supply Rate is simply calculated as the amount of the total supply revenue requirement that is not recovered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. At an expected demand level of about

1.7 MAF, it is estimated that Metropolitan will sell about 1.5 MAF at the Tier 1 Supply Rate in 2013/14.

### ***2.10 Replenishment water rates***

Discussion on the replenishment program are continuing with the member agencies in the Long Range Finance Plan Workgroup. If adopted, the new replenishment program would replace the existing replenishment rate. Therefore, the existing replenishment rate is discontinued.

## **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 2013/14, water sales are projected to be around 1.7 MAF.

## **4 Proof of Revenue**

Based on expected sales of 1.7 MAF the expected revenues would be about \$37.3 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, 2014, the expected revenues for 2013/14 will be about \$0.5 million higher than the total revenue requirement in 2013/14. The total revenue requirement includes a \$4.2 million increase in the required reserves for the Revenue Remainder Fund. Accounting for this adjustment, the reserves would increase by \$4.7 million in 2013/14.

**Schedule 10. FY 2013/14 Proof of Revenue if Rates Effective for Full Test Year (\$ millions)**

	Revenues if Rates Effective July 1st	Revenue Requirements	Difference	% Over (Under) Collected
Supply	225.3	220.0	5.3	2%
System Access Rate	417.0	405.7	11.3	3%
Water Stewardship Rate	70.9	68.9	2.0	3%
System Power Rate	275.2	268.9	6.3	2%
Treatment Surcharge	292.8	285.2	7.6	3%
Readiness-to-serve Charge	168.0	163.7	4.3	3%
Capacity Charge	31.1	30.5	0.6	2%
<b>Total</b>	<b>1,480.3</b>	<b>1,443.0</b>	<b>37.3</b>	<b>3%</b>

Totals may not foot due to rounding

**Schedule 11. FY 2013/14 Proof of Revenue if Rates Effective January 1 (\$ millions)**

	Revenues if Rates Effective Jan 1	Revenue Requirements	Difference	% Over (Under) Collected
Supply	218.9	220.0	(1.2)	-1%
System Access Rate	399.8	405.7	(5.9)	-1%
Water Stewardship Rate	70.0	68.9	1.1	2%
System Power Rate	299.5	268.9	30.6	11%
Treatment Surcharge	270.4	285.2	(14.9)	-5%
Readiness-to-serve Charge	156.5	163.7	(7.2)	-4%
Capacity Charge	28.5	30.5	(2.0)	-6%
<b>Total</b>	<b>1,443.5</b>	<b>1,443.0</b>	<b>0.5</b>	<b>0%</b>

Totals may not foot due to rounding

THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_\_

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**RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA  
FIXING AND ADOPTING WATER RATES  
TO BE EFFECTIVE JANUARY 1, 2013 AND 2014**

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WHEREAS, the Board of Directors (“Board”) of The Metropolitan Water District of Southern California (“Metropolitan”), pursuant to Sections 133 and 134 of the Metropolitan Water District Act (the “Act”), is authorized to fix such rate or rates for water as will result in revenue which, together with revenue from any water standby or availability service charge or assessment, will pay the operating expenses of Metropolitan, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by Metropolitan, and provide for the payment of the interest and principal of its bonded debt; and

WHEREAS, on March 12, 2002, the Board adopted Resolution 8805, “Resolution Of The Board Of Directors Of The Metropolitan Water District Of Southern California Fixing And Adopting Rates And Charges For Fiscal Year 2002/03 And To Direct Further Actions In Connection Therewith”, adopting new water rates and charges in order to enhance Metropolitan’s fiscal stability and ability to ensure the region’s long-term water supply while reasonably and fairly allocating the cost of providing service to its member agencies; and

WHEREAS, the new water rates and charges adopted by Resolution 8805 were the product of a three-year process that included a strategic planning process commenced by the Board in July 1998, discussions with member agencies, retail agencies and other stakeholders and numerous meetings of Metropolitan’s Board, Audit, Budget and Finance Committee, Budget, Finance and Investment Committee and Subcommittee on Rate Structure Implementation; and

WHEREAS, development of the new water rates and charges adopted by Resolution 8805 included Strategic Plan Policy Principles adopted by the Board on December 14, 1999 to provide a framework for the development of a revised rate structure; a Composite Rate Structure Framework adopted by the Board on April 11, 2000 (the “Rate Structure

Framework”); a Rate Structure Action Plan adopted by the Board on December 12, 2000; and study of (i) a detailed rate design proposal presented in December 2000 (the “December 2000 Proposal”) developed from the Rate Structure Framework and (ii) an alternative rate structure proposal presented in September 2001 (the “Proposal”) that addressed concerns which were raised about the December 2000 Proposal; and

WHEREAS, the new water rates and charges adopted by Resolution 8805 are supported by the cost of service process developed for the rate design proposals, which was demonstrated in detail in models provided to Metropolitan’s member agencies in February 2001 and October 2001, that showed: (i) the proposed cost of service process, (ii) estimated impacts on member agencies of the proposals under different demand conditions and over time, and (iii) additional information for the purposes of analyzing the potential impacts of the proposals on the member agencies; and

WHEREAS, by Resolution 8774, “Resolution Of The Board Of Directors Of The Metropolitan Water District Of Southern California To Approve Rate Structure Proposal And To Direct Further Actions In Connection Therewith,” adopted October 16, 2001, the Board approved the Proposal, which unbundled water rates and charges to reflect the different services provided by Metropolitan, and determined that the Proposal (i) was consistent with the Board's Strategic Plan Policy Principles, (ii) addressed issues raised during the consideration of the December 2000 Proposal, (iii) furthered Metropolitan’s strategic objectives of ensuring the region’s long term water supply reliability through encouragement of sound and efficient water resources management, water conservation, and accommodating a water transfer market, and (iv) enhanced the fiscal stability of Metropolitan; and

WHEREAS, by Resolution 8774, the Board directed the General Manager to (i) prepare a report on the Proposal describing each of the rates and charges and the cost of service process used to develop the rates and charges and (ii) utilize the Proposal as the basis for determining Metropolitan’s revenue requirements and recommending rates to become effective January 1, 2003, in accordance with Metropolitan’s annual rate-setting procedure under the Administrative Code; and

WHEREAS, on January 7, 2002, the General Manager presented to the Budget, Finance and Investment Committee (formerly the Audit, Budget and Finance Committee) a detailed report describing each of the rates and charges and the supporting cost of service process, dated December 2001 (the “Cost of Service Report”), that (i) describes the rate structure process and design; (ii) shows the costs of major service functions that Metropolitan provides to its member agencies; (iii) classifies these service function costs based on the use of and benefit from the Metropolitan system to create a logical nexus between the costs and the revenues required from each of the rates and charges; and (iv) sets forth the rates and charges necessary to defray such costs; and

WHEREAS, by Resolution 8805 the Board found and determined that the cost of service process reasonably and fairly: (i) allocates costs to the service functions that

Metropolitan provides to its member agencies; (ii) classifies service function costs based upon use of Metropolitan's system, and (iii) allocates costs to rates and charges based upon customary water industry standards; and

WHEREAS, by Resolution 8805 the Board found and determined that the new water rates and charges were supported by the cost of service process and that such rates and charges reasonably and fairly allocated the costs of providing service of Metropolitan's water system to its member agencies and third-party transporters of water, if any; and

WHEREAS, the Board received the Final Report on Rates and Charges, dated June 28, 2002, that (i) describes the rate structure process and design; (ii) shows the costs of major service functions that Metropolitan provides to its member agencies; (iii) classifies these service function costs based on the use and benefit of the Metropolitan system to create a logical nexus between the costs and the revenues required from each of the rates and charges; and (iv) sets forth the rates and charges necessary to defray such costs; and

WHEREAS, Metropolitan's water rates approved by the Board thereafter (on March 11, 2003, March 9, 2004, March 8, 2005, March 14, 2006, April 10, 2007, March 11, 2008, April 14, 2009 and April 14, 2010) have utilized the unbundled water rate elements in the new rate structure approved by Resolution 8774 and implemented by Resolution 8805, and that the cost of service process supporting Metropolitan's water rates approved by the Board on March 11, 2003 and in following years is the cost of service process described in the Cost of Service Report; and

WHEREAS, on January 9, 2012, the General Manager presented to the Finance and Insurance Committee of Metropolitan's Board his proposed biennial budget for fiscal years 2012/13 and 2013/14, determination of total revenues and of revenues to be derived from water sales and firm revenue sources required during fiscal years 2012/13 and 2013/14, and his recommendation for rates and charges to be imposed in fiscal years 2012/13 and 2013/14, with detailed reports for each fiscal year describing each of the proposed rates and charges and the supporting cost of service, dated December 2011, that (i) describe the rate structure process and design, (ii) show the costs of major service functions that Metropolitan provides to its member agencies, (iii) classify these service function costs based on the use of and benefit from the Metropolitan system to create a logical nexus between the costs and the revenues required from each of the rates and charges, and (iv) set forth the specific rates and charges necessary to defray such costs; and

WHEREAS, Board workshops regarding the proposed budget and future rates and charges were held on January 24, and February 13, as well as a presentation at the February 28, 2012 meeting of the Executive Committee; and

WHEREAS, on March 12, 2012, the General Manager presented to the Finance and Insurance Committee three separate options for rates and charges to be imposed in fiscal years 2012/13 and 2013/14 (the General Manager's rate recommendation presented on

January 9, 2012 and two alternatives developed from comments at the Board workshops), with each option including detailed reports for each fiscal year describing each of the proposed rates and charges and the supporting cost of service process; and

WHEREAS, the Finance and Insurance Committee of the Board conducted a public hearing at its regular meeting on March 12, 2012, at which interested parties were given the opportunity to present their views regarding the proposed water rates; and

WHEREAS, notice of the public hearing was published prior to the hearing in various newspapers of general circulation within Metropolitan's service area; and

WHEREAS, each of the meetings of the Board were conducted in accordance with the Brown Act (commencing at Section 54950 of the Government Code), for which due notice was provided and at which quorums were present and acting throughout;

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

**Section 1.** That the Board of Directors of The Metropolitan Water District of Southern California hereby fixes and adopts the following water rates, to be effective on January 1, 2013 and January 1, 2014 as shown in the table below, in order to enhance Metropolitan's fiscal stability and ability to ensure the region's long-term water supply while reasonably and fairly allocating the cost of providing service to its member agencies and other users of Metropolitan's system:

**Table 1. Rates and Charges by Option**

Effective January 1st	2012	Option 1		Option 2		Option 3	
		2013	2014	2013	2014	2013	2014
Tier 1 Supply Rate (\$/AF)	\$106	\$149	\$157	\$140	\$148	\$142	\$150
Delta Supply Surcharge (\$/AF)	\$58	*	*	*	*	*	*
Tier 2 Supply Rate (\$/AF)	\$290	\$290	\$290	\$290	\$290	\$290	\$290
System Access Rate (\$/AF)	\$217	\$228	\$247	\$223	\$243	\$228	\$247
Water Stewardship Rate (\$/AF)	\$43	\$41	\$42	\$41	\$41	\$41	\$42
System Power Rate (\$/AF)	\$136	\$190	\$164	\$189	\$161	\$190	\$163
Full Service Untreated Volumetric Cost (\$/AF)							
Tier 1	\$560	\$608	\$610	\$593	\$593	\$601	\$602
Tier 2	\$686	\$749	\$743	\$743	\$735	\$749	\$742
Replenishment Water Rate Untreated (\$/AF)	\$442	**	**	**	**	**	**
Interim Agricultural Water Program Untreated (\$/AF)	\$537	***	***	***	***	***	***
Treatment Surcharge (\$/AF)	\$234	\$260	\$302	\$254	\$297	\$258	\$301
Full Service Treated Volumetric Cost (\$/AF)							
Tier 1	\$794	\$868	\$912	\$847	\$890	\$859	\$903
Tier 2	\$920	\$1,009	\$1,045	\$997	\$1,032	\$1,007	\$1,043
Treated Replenishment Water Rate (\$/AF)	\$651	**	**	**	**	**	**
Treated Interim Agricultural Water Program (\$/AF)	\$765	***	***	***	***	***	***
Readiness-to-Serve Charge (\$M)	\$146	\$146	\$169	\$142	\$166	\$145	\$168
Capacity Charge (\$/cfs)	\$7,400	\$6,600	\$8,900	\$6,400	\$8,600	\$6,500	\$8,700

\* The Delta Supply Surcharge will be suspended after 2012.

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

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

**Section 2.** The Board finds and determines that the rates specified in Section 1 utilize the unbundled water rate elements of the rate structure approved by Resolution 8774 and implemented by Resolution 8805, and that the cost of service process supporting the rates specified in Section 1 is the cost of service process described in the Cost of Service Report.

**Section 3.** The Board finds and determines that the cost of service process reasonably, fairly and proportionately: (i) allocates costs to the service functions that Metropolitan provides to its member agencies and other users of Metropolitan's system; (ii) classifies service function costs based upon use of and benefit from Metropolitan's system, and (iii) allocates costs to rates and charges based upon customary water industry standards. Accordingly, the Board finds that the cost of service process supports the rates and charges by creating a logical nexus between the costs and the revenues required and the rates and charges necessary to defray the costs of providing service of Metropolitan's water system.

**Section 4.** The Board finds and determines that the rates specified in Section 1 are fixed by the Board pursuant to Sections 133 and 134 of the Act, and will result in revenue which, together with revenue from water standby or availability service charges or assessments, will pay the operating expenses of Metropolitan, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by Metropolitan, and provide for the payment of the interest and principal of its bonded debt.

**Section 5.** The Board finds and determines that the each of the rates specified in Section 1 does not exceed the reasonable and necessary cost of providing the product or service for which the rate is charged and that the per-acre-foot rates fairly apportion such costs among member agencies and other users of Metropolitan's system according to their burden on or benefit from Metropolitan's water system.

**Section 6.** The Board finds and determines that the respective per-acre-foot rates specified in Section 1 are paid for the corresponding products or services, that Metropolitan provides such products or services directly to the member agencies or other users of Metropolitan's system that pay such rates, that such products or services are not provided to those not charged.

**Section 7.** The Board finds and determines that each of the rates specified in Section 1 is imposed for the purpose of paying said cost of service and is not levied for general revenue purposes.

**Section 8.** The General Manager and the General Counsel are hereby authorized to do all things necessary and desirable to accomplish the purposes of this Resolution, including, without limitation, the commencement or defense of litigation.

**Section 9.** This Board finds that approval of the rates and charges as provided in this Resolution is not defined as a Project under the California Environmental Quality Act (CEQA), because they involve continuing administrative activities, such as general policy and procedure

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

**Section 10.** If any provision of this is held invalid, that invalidity shall not affect other provisions of this Resolution which can be given effect without the invalid portion or application, and to that end the provisions of this Resolution are severable.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a Resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on April 10, 2012.

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Board Executive Secretary  
The Metropolitan Water District  
of Southern California

THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_\_

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**RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA  
FIXING AND ADOPTING  
A READINESS-TO-SERVE CHARGE FOR CALENDAR YEAR 2013**

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WHEREAS, at its meeting on October 16, 2001, the Board of Directors (“Board”) of The Metropolitan Water District of Southern California (“Metropolitan”) approved a rate structure proposal described in Board Letter 9-6 dated October 16, 2001, including a readiness-to-serve charge; and

WHEREAS, providing firm revenue sources is a goal of such rate structure; and

WHEREAS, the amount of revenue to be raised by the readiness-to-serve charge shall be as determined by the Board and allocation of the readiness-to-serve charge among member public agencies shall be in accordance with the method established by the Board; and

WHEREAS, the readiness-to-serve charge is a charge imposed by Metropolitan upon its member agencies, and is not a fee or charge imposed upon real property or upon persons as an incident of property ownership; and

WHEREAS, Metropolitan has legal authority to impose such readiness-to-serve charge as a water rate pursuant to Section 134 of the Metropolitan Water District Act (the “Act”), and as an availability of service charge pursuant to Section 134.5 of the Act; and

WHEREAS, under authority of Sections 133 and 134 of the Act, the Board has the authority to fix the rate or rates for water as will result in revenue which, together with other revenues, will pay Metropolitan’s operating expenses and provide for payment of other costs, including payment of the interest and principal of Metropolitan’s non-tax funded bonded debt; and

WHEREAS, pursuant to Resolution 8329, adopted by the Board on July 9, 1991, proceeds of the readiness-to-serve charge and other revenues from the sale or availability of water are pledged to the payment of Metropolitan’s outstanding revenue bonds issued and revenue bonds to be issued pursuant to Resolution 8329; and

WHEREAS, under authority of Section 134.5 of the Act, a readiness-to-serve charge imposed as an availability of service charge may be collected from the member public agencies within Metropolitan, or may be imposed as a standby charge against individual parcels within Metropolitan’s service area; and

WHEREAS, under such authority, the water standby charge may be imposed on each acre of land or each parcel of land less than an acre within Metropolitan to which water is made available for any purpose by Metropolitan, whether the water is actually used or not; and

WHEREAS, certain member public agencies of Metropolitan have opted in prior fiscal years to provide collection of all or a portion of their readiness-to-serve charge obligation through a Metropolitan water standby charge imposed on parcels within those member agencies; and

WHEREAS, Metropolitan is willing to comply with the requests of member public agencies opting to have Metropolitan continue to levy water standby charges within their respective territories, on the terms and subject to the conditions contained herein; and

WHEREAS, the readiness-to-serve charge applicable to each member public agency, the method of its calculation, and the specific data used in its determination are as specified in the Engineer's Report dated March 2012 (the "Engineer's Report"); and

WHEREAS, the Finance and Insurance Committee of the Board conducted a public hearing on its proposed rates and charges at its regular meeting on March 12, 2012, at which interested parties were given the opportunity to present their views regarding the readiness-to-serve charge and the Engineer's Report; and

WHEREAS, notice of the public hearing on the proposed rates and charges was published prior to the hearing in various newspapers of general circulation within Metropolitan's service area; and

WHEREAS, notice of the public hearing and of the intention of Metropolitan's Board to consider and take action at its regular meeting to be held March 12, 2012, on the General Manager's recommendation to increase Metropolitan's readiness-to-serve charge for calendar year 2013 was mailed to each of Metropolitan's member public agencies; and

WHEREAS, board workshops regarding the proposed budget and future rates and charges were held on January 24, February 13, as well as a presentation at the February 28, 2012 meeting of the Executive Committee; and

WHEREAS, based on the feedback received from the board workshops, the General Manager presented three alternative recommendations for rates and charges on March 12, 2012, with proposed cost reductions to accommodate the Board's request for lower rate increases; and

WHEREAS, updated cost of service reports, dated March 2012, were provided for the three options included in the General Manager's recommendations for rates and charges presented to the Board on March 12, 2012; and

WHEREAS, the Engineer's Report reflects the range of costs provided in the updated cost of service reports; and

WHEREAS, each of the meetings of the Board were conducted in accordance with the Brown Act (commencing at Section 54950 of the Government Code), for which due notice was provided and at which quorums were present and acting throughout;

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

**Section 1.** That the Board of Directors of Metropolitan hereby fixes and adopts a readiness-to-serve charge for the period from January 1, 2013 through December 31, 2013.

**Section 2.** That said readiness-to-serve charge shall be in an amount sufficient to provide for payment of debt service and other appropriately allocated costs, for capital expenditures for projects needed to provide standby and emergency storage service needs.

**Section 3.** That such readiness-to-serve charge for January 1, 2013 through and including December 31, 2013 shall be the water rate as specified in Section 5, which shall be charged on a historic basis for each acre-foot of water, excluding water used for purposes of replenishing local storage and agriculture as defined by the Administrative Code, included in Metropolitan's average water deliveries to its member agencies for the applicable ten-year period identified in Section 5 below. The aggregate readiness-to-serve charge for the period from January 1, 2013 through and including December 31, 2013 shall be as specified in Section 5.

**Section 4.** That in the alternative, and without duplication, the readiness-to-serve charge shall be an availability of service charge pursuant to Section 134.5 of the Act.

**Section 5.** That the readiness-to-serve charge for January 1, 2013 through December 31, 2013 shall be allocated among the member public agencies in proportion to the average of deliveries through Metropolitan's system (in acre-feet) to each member public agency during the ten-year period ending June 30, 2011. Metropolitan sales of reclaimed water under the Local Projects Program, groundwater under the Groundwater Recovery Program, and deliveries under the Replenishment and Interim Agricultural Water Service Programs are not included in the readiness-to-serve charge water sales calculation. The allocation of the readiness-to-serve charge among member agencies is based on sales data recorded by Metropolitan and shall be conclusive in the absence of manifest error.

The amount of the readiness-to-serve charge to be imposed on each member public agency effective January 1, 2013, is as follows:

**Table 1**

**Option 1: Calendar Year 2013 Readiness-To-Serve Charge**

Member Agency	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2001/02 - FY2010/11	RTS Share	Water rate \$79.89/acre-foot	
				12 months @ \$146 million per year (1/13-12/13)
Anaheim	21,892	1.20%	\$	1,748,933
Beverly Hills	12,041	0.66%		961,910
Burbank	12,605	0.69%		1,006,991
Calleguas MWD	111,069	6.08%		8,873,223
Central Basin MWD	61,810	3.38%		4,937,938
Compton	2,832	0.15%		226,207
Eastern MWD	94,101	5.15%		7,517,714
Foothill MWD	11,169	0.61%		892,270
Fullerton	10,225	0.56%		816,838
Glendale	21,707	1.19%		1,734,153
Inland Empire Utilities Agency	61,330	3.36%		4,899,647
Las Virgenes MWD	22,730	1.24%		1,815,912
Long Beach	35,737	1.96%		2,854,979
Los Angeles	302,313	16.54%		24,151,619
Municipal Water District of Orange County	227,364	12.44%		18,163,973
Pasadena	22,799	1.25%		1,821,417
San Diego County Water Authority	449,537	24.60%		35,913,311
San Fernando	125	0.01%		9,946
San Marino	972	0.05%		77,613
Santa Ana	13,464	0.74%		1,075,624
Santa Monica	12,284	0.67%		981,323
Three Valleys MWD	70,981	3.88%		5,670,605
Torrance	19,931	1.09%		1,592,238
Upper San Gabriel Valley MWD	19,031	1.04%		1,520,345
West Basin MWD	135,862	7.43%		10,853,948
Western MWD	73,618	4.03%		5,881,321
<b>MWD Total</b>	<b>1,827,524</b>	<b>100.00%</b>	<b>\$</b>	<b>146,000,000</b>

Totals may not foot due to rounding

**Table 2**  
**Option 2: Calendar Year 2013 Readiness-To-Serve Charge**

Water rate \$77.70/acre-foot			
Member Agency	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2001/02 - FY2010/11	RTS Share	12 months @ \$142 million per year (1/13-12/13)
Anaheim	21,892	1.20%	\$ 1,701,017
Beverly Hills	12,041	0.66%	935,556
Burbank	12,605	0.69%	979,402
Calleguas MWD	111,069	6.08%	8,630,121
Central Basin MWD	61,810	3.38%	4,802,652
Compton	2,832	0.15%	220,010
Eastern MWD	94,101	5.15%	7,311,749
Foothill MWD	11,169	0.61%	867,824
Fullerton	10,225	0.56%	794,459
Glendale	21,707	1.19%	1,686,642
Inland Empire Utilities Agency	61,330	3.36%	4,765,410
Las Virgenes MWD	22,730	1.24%	1,766,161
Long Beach	35,737	1.96%	2,776,761
Los Angeles	302,313	16.54%	23,489,931
Municipal Water District of Orange County	227,364	12.44%	17,666,330
Pasadena	22,799	1.25%	1,771,515
San Diego County Water Authority	449,537	24.60%	34,929,385
San Fernando	125	0.01%	9,674
San Marino	972	0.05%	75,486
Santa Ana	13,464	0.74%	1,046,155
Santa Monica	12,284	0.67%	954,437
Three Valleys MWD	70,981	3.88%	5,515,246
Torrance	19,931	1.09%	1,548,615
Upper San Gabriel Valley MWD	19,031	1.04%	1,478,692
West Basin MWD	135,862	7.43%	10,556,579
Western MWD	73,618	4.03%	5,720,189
<b>MWD Total</b>	<b>1,827,524</b>	<b>100.00%</b>	<b>\$ 142,000,000</b>

Totals may not foot due to rounding

**Table 3**  
**Option 3: Calendar Year 2013 Readiness-To-Serve Charge**

Water rate \$79.34/acre-foot				
Member Agency	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2001/02 - FY2010/11	RTS Share	12 months @ \$145 million per year (1/13-12/13)	
Anaheim	21,892	1.20%	\$	1,736,954
Beverly Hills	12,041	0.66%		955,321
Burbank	12,605	0.69%		1,000,094
Calleguas MWD	111,069	6.08%		8,812,448
Central Basin MWD	61,810	3.38%		4,904,117
Compton	2,832	0.15%		224,658
Eastern MWD	94,101	5.15%		7,466,223
Foothill MWD	11,169	0.61%		886,158
Fullerton	10,225	0.56%		811,243
Glendale	21,707	1.19%		1,722,276
Inland Empire Utilities Agency	61,330	3.36%		4,866,088
Las Virgenes MWD	22,730	1.24%		1,803,475
Long Beach	35,737	1.96%		2,835,425
Los Angeles	302,313	16.54%		23,986,197
Municipal Water District of Orange County	227,364	12.44%		18,039,562
Pasadena	22,799	1.25%		1,808,941
San Diego County Water Authority	449,537	24.60%		35,667,330
San Fernando	125	0.01%		9,878
San Marino	972	0.05%		77,081
Santa Ana	13,464	0.74%		1,068,257
Santa Monica	12,284	0.67%		974,601
Three Valleys MWD	70,981	3.88%		5,631,765
Torrance	19,931	1.09%		1,581,332
Upper San Gabriel Valley MWD	19,031	1.04%		1,509,932
West Basin MWD	135,862	7.43%		10,779,606
Western MWD	73,618	4.03%		5,841,038
<b>MWD Total</b>	<b>1,827,524</b>	<b>100.00%</b>	<b>\$</b>	<b>145,000,000</b>

Totals may not foot due to rounding

**Section 6.** That the allocation of the readiness-to-serve charge among member agencies set forth in Section 5 above is consistent with the per-acre-foot water rates imposed pursuant to Section 3 above.

**Section 7.** That water conveyed through Metropolitan's system for the purposes of water transfers, exchanges or other similar arrangements shall be included in the calculation of a member agency's rolling ten-year average firm demands used to allocate the readiness-to-serve charge.

**Section 8.** That the readiness-to-serve charge and the amount applicable to each member public agency, the method of its calculation, and the specific data used in its determination are as specified in the General Manager's recommendation on rates and charges to be effective January 1, 2013, which forms the basis of the readiness-to-serve charge, and the corresponding cost of service report. Such recommendation and cost of service report are on file and available for review by interested parties at Metropolitan's headquarters.

**Section 9.** That except as provided in Section 11 below with respect to any readiness-to-serve charge collected by means of a Metropolitan water standby charge, the readiness-to-serve charge shall be due monthly, quarterly or semiannually as agreed upon by Metropolitan and the member agency.

**Section 10.** That such readiness-to-serve charge may, at the request of any member agency which elected to utilize Metropolitan's standby charge as a mechanism for collecting its readiness-to-serve charge obligation in FY 1996/97, be collected by continuing the Metropolitan water standby charge at the same rates imposed in FY 1996/97 upon land within Metropolitan's (and such member public agency's) service area to which water is made available by Metropolitan for any purpose, whether such water is used or not.

**Section 11.** That the proposed water standby charge, if continued, shall be collected on the tax rolls, together with the *ad valorem* property taxes which are levied by Metropolitan for the payment of pre-1978 voter-approved indebtedness. Any amounts so collected shall be applied as a credit against the applicable member agency's obligation to pay a readiness-to-serve charge. After such member agency's readiness-to-serve charge allocation is fully satisfied, any additional collections shall be credited to other outstanding obligations of such member agency to Metropolitan or future readiness-to-serve obligations of such agency or, if crediting against other outstanding obligations of a member agency to Metropolitan proves to be impracticable, may be transmitted to the member agency for application solely to the cost of capital infrastructure projects of benefit to properties within the member agency. Notwithstanding the provisions of Section 9 above, any member agency requesting to have all or a portion of its readiness-to-serve charge obligation collected through standby charge levies within its territory as provided herein shall pay any portion not collected through net standby charge collections to Metropolitan within 50 days after Metropolitan issues an invoice for remaining readiness-to-serve charges to such member agency, as provided in Administrative Code Section 4507.

**Section 12.** That notice is hereby given to the public and to each member public agency of The Metropolitan Water District of Southern California of the intention of Metropolitan's Board to consider and take action at its regular meeting to be held April 10, 2012 (or such other date as the Board shall hold its regular meeting in such month), on the General Manager's recommendation to continue its water standby charge for FY 2012/13 under authority of Section 134.5 of the Act on land within Metropolitan at the same rates, per acre of land, or per parcel of land less than an acre, imposed in FY 1996/97 upon land within Metropolitan's (and such member public agency's) service area. Such water standby charge will be continued as a means of collecting the readiness-to-serve charge.

**Section 13.** That no failure to collect, and no delay in collecting, any standby charges shall excuse or delay payment of any portion of the readiness-to-serve charge when due. All amounts collected as water standby charges shall be applied solely as credits to the readiness-to-serve charge of the applicable member agency, with any excess collections being carried forward and credited against other outstanding obligations of such member agency to Metropolitan.

**Section 14.** That the readiness-to-serve charge is imposed by Metropolitan as a rate or charge on its member agencies, and is not a fee or charge imposed upon real property or upon persons as incidents of property ownership, and the water standby charge is imposed within the respective territories of electing member agencies as a mechanism for collection of the readiness-to-serve charge. In the event that the water standby charge, or any portion thereof, is determined to be an unauthorized or invalid fee, charge or assessment by a final judgment in any proceeding at law or in equity, which judgment is not subject to appeal, or if the collection of the water standby charge shall be permanently enjoined and appeals of such injunction have been declined or exhausted, or if Metropolitan shall determine to rescind or revoke the water standby charge, then no further standby charge shall be collected within any member agency and each member agency which has requested continuation of Metropolitan water standby charges as a means of collecting its readiness-to-serve charge

obligation shall pay such readiness-to-serve charge obligation in full, as if continuation of such water standby charges had never been sought.

**Section 15.** That the General Manager and the General Counsel are hereby authorized to do all things necessary and desirable to accomplish the purposes of this Resolution, including, without limitation, the commencement or defense of litigation.

**Section 16** That this Board finds that the readiness-to-serve charge and other charges provided in this Resolution are not defined as a Project under the California Environmental Quality Act ("CEQA") since they involve continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed actions are not subject to CEQA because they involve the creation of government funding mechanisms or other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines).

**Section 17.** That if any provision of this Resolution or the application to any member agency, property or person whatsoever is held invalid, that invalidity shall not affect other provisions or applications of this Resolution which can be given effect without the invalid portion or application, and to that end the provisions of this Resolution are severable.

**Section 18.** That the General Manager is hereby authorized and directed to take all necessary action to satisfy relevant statutes requiring notice by mailing or by publication.

**Section 19.** That the Board Executive Secretary is hereby directed to transmit a certified copy of this Resolution to the presiding officer of the governing body of each member public agency.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a Resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on April 10, 2012.

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Board Executive Secretary  
The Metropolitan Water District  
of Southern California

**THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA  
ENGINEER'S REPORT**

**PROGRAM TO LEVY READINESS-TO-SERVE CHARGE,  
INCLUDING LOCAL OPTION FOR STANDBY CHARGE,  
DURING FISCAL YEAR 2012/13**

**March 2012**

**BACKGROUND**

The Metropolitan Water District of Southern California is a public agency with a primary purpose to provide imported water supply for domestic and municipal uses at wholesale rates to its member public agencies. More than 18 million people reside within Metropolitan's service area, which covers over 5,000 square miles and includes portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura. Metropolitan currently provides over 50 percent of the water used within its service area.

**REPORT PURPOSES**

As part of its role as an imported water supplier, Metropolitan builds capital facilities and implements water management programs that ensure reliable high quality water supplies throughout its service area. The purpose of this report is to: (1) identify and describe those facilities and programs that will be financed in part by Metropolitan's readiness-to-serve (RTS) charge in fiscal year 2012/13, and (2) describe the method and basis for levying Metropolitan's standby charge for those agencies electing to collect a portion of their RTS obligation through Metropolitan's standby charge. **Because the standby charge is levied and collected on a fiscal year basis the calculations in this report also are for the fiscal year, even though the RTS charge is imposed on a calendar year basis.** The RTS charge for calendar year 2012 was adopted by Metropolitan's Board on April 13, 2010 and the RTS charge for 2013 will be considered by the Board on March 13, 2012.

Metropolitan levies the RTS charge on its member agencies to recover a portion of the debt service on bonds issued to finance capital facilities needed to meet existing demands on Metropolitan's system. The standby charge is levied on parcels of land within certain of Metropolitan's member agencies as a method of collecting part or all of such member agency's RTS charge obligation. The RTS charge will partially pay for the facilities and programs described in this report. The standby charge, if levied, will be utilized solely for capital payments and debt service on the capital facilities identified in this report.

**METROPOLITAN'S RESPONSE TO INCREASING WATER DEMANDS**

To respond to increasing demands for water, Metropolitan and its member agencies collectively examined the available local and imported resource options in order to develop a least-cost plan that meets the reliability and quality needs of the region. The product of this intensive effort was an Integrated Resources Plan (IRP) for achieving a reliable and affordable water supply for Southern California. The major objective of the IRP was to develop a comprehensive water resources plan that ensures (1) reliability, (2) affordability, (3) water quality, (4) diversity of supply, and (5) adaptability for the region, while recognizing the environmental, institutional, and political constraints to resource development. As these constraints change over time, the IRP is periodically revisited and updated by Metropolitan and the member agencies to reflect current conditions. To meet the water supply needs of existing and future customers within its service area, Metropolitan continues to identify and develop additional water supplies to maintain the reliability of the imported water supply and delivery system. These efforts include the construction of capital facilities and implementation of demand management programs.

## **Capital Facilities**

The capital facilities include the State Water Project (SWP), the Colorado River Aqueduct (CRA), storage facilities including Diamond Valley Lake (DVL), and additional conveyance and distribution system components. The benefits of these capital facilities are both local and system-wide, as the facilities directly contribute to the reliable delivery of water supplies throughout Metropolitan's service area.

### State Water Project Benefits

In 1960, Metropolitan contracted with the California Department of Water Resources (DWR) to receive SWP supplies. Under this contract, Metropolitan is obligated to pay its portion of the construction and operation and maintenance costs of the SWP system through at least the year 2035, regardless of the quantities of project water Metropolitan takes. Metropolitan is entitled to 1.9 million acre-feet of the total SWP entitlements of 4.2 million acre-feet. All Metropolitan member agencies benefit from the SWP supplies, which are distributed to existing customers and are available to future customers throughout Metropolitan's service area. The potential benefit of the SWP allocable to the RTS charge in fiscal year 2012/13 is shown in Table 1.

### System Storage Benefits

The Metropolitan system, for purposes of meeting demands during times of shortage, regulating system flows, and to ensure system reliability in the event of a system outage, provides over 1,000,000 acre-feet of system storage capacity. DVL provides 800,000 acre-feet of storage capacity for water from the Colorado River Aqueduct and SWP, effectively doubling Southern California's previous surface water storage capacity. Water stored in system storage during above average supply conditions (surplus) provides a reserve against shortages when supply sources are limited or disrupted. System storage also preserves Metropolitan's capability to deliver water during scheduled maintenance periods, when conveyance facilities must be removed from service for rehabilitation, repair, or maintenance. The potential benefit of system storage in fiscal year 2012/13 is shown in Table 1.

### Conveyance and Distribution System Benefits

Metropolitan has an ongoing commitment, through physical system improvements and the maintenance and rehabilitation of existing facilities, to maintain the reliable delivery of water throughout the entire service area. System improvement projects include additional conveyance and distribution facilities to maintain the dependable delivery of water supplies, provide alternative system delivery capacity, and enhance system operations. Conveyance and distribution system improvement benefits also include projects to upgrade obsolete facilities or equipment, or to rehabilitate or replace facilities or equipment. These projects are needed to enhance system operations, comply with new regulations, and maintain a reliable distribution system. A list of conveyance and distribution system facilities is provided in Table 3 along with the fiscal year 2012/13 estimated conveyance and distribution system benefits.

## **Demand Management Program Benefits**

Demand management programs that could be financed by the RTS charge and standby charge include Metropolitan's participation in providing financial incentives to local agencies for the construction and development of local resource programs and conservation projects. Investments in demand side management programs like conservation, water recycling and groundwater recovery reduce the need to provide additional imported water supplies and help defer the need for additional conveyance, distribution, and storage facilities. A

summary of the estimated benefits of the demand management programs as measured by Metropolitan's anticipated expenditures for these programs in fiscal year 2012/13 is shown in Table 1.

#### Local Resources Program

In 1998, Metropolitan's Board adopted the Local Resources Program (LRP) with the goal of developing local water resources in a cost-efficient manner. Financial incentives of up to \$250 per acre-foot are provided to member agency-sponsored projects that best help the region achieve its local resource production goals of restoring degraded groundwater resources for potable use and developing recycled supplies. In both instances, the programs provide new water supplies, which help defer the need for additional regional conveyance, distribution and storage facilities.

Combined production from participating recycling and groundwater recovery projects is expected to yield approximately 220,000 acre-feet of water for fiscal year 2012/13 with financial incentive payments of about \$33 million. Regional recycling, recovered groundwater, and desalinated seawater production are projected to be about 658,000 acre-feet per year, by year 2025. An estimate of potential benefits as measured by Metropolitan's estimated incentive payments for recycling and groundwater recovery projects is shown in Table 2.

#### Water Conservation

Metropolitan actively promotes water conservation programs within its service area as a cost-effective strategy for ensuring the long-term reliability of supplies and as a means of reducing the need to expand system conveyance, distribution and treatment capacity. Through the Conservation Credits Program, Metropolitan reimburses local agencies for a share of their costs of implementing conservation projects. Since fiscal year 1990/91, Metropolitan has spent over \$309 million in financial incentives to support local conservation projects.

In 1991, Metropolitan agreed to implement conservation "Best Management Practices" (BMPs). By signing the California Urban Water Conservation Council's *Memorandum of Understanding Regarding Urban Water Conservation* (amended March 10, 2004), Metropolitan committed to implement proven and reliable water conserving technologies and practices within its jurisdiction. Based on Metropolitan's IRP, the Conservation Credits Program, in conjunction with plumbing codes and other conservation efforts, has saved over 1,569,000 acre-feet since inception through fiscal year 2010/11. In order to comply with the Governor's mandate of reducing demand by 20 percent by the year 2020, Metropolitan is working on increasing its conservation efforts in the next ten years to meet that request. Conservation is a critical element of Metropolitan's demand management program, effectively increasing the reliability of existing water supplies by lessening the need to import additional water while at the same time deferring the need to expand system capacity. An estimate of the potential benefits of water conservation projects as measured by Metropolitan's incentive payments is given in Table 2.

### **LONG-RANGE FINANCIAL PLANNING**

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

Since the passage of Article XIII A of the California Constitution, Metropolitan has necessarily relied more on water sales revenue than on *ad valorem* property taxes for the payment of debt. Water sales have become the dominant source of revenue, not only for operation and maintenance of the vast network of facilities supplying water to Southern California, but also for replacement and improvement of capital facilities.

The increased reliance on highly variable water sales revenue increases the probability of substantial rate swings from year to year mainly resulting from changing weather patterns. The use of water rates as a primary source of revenue has placed an increasing burden on ratepayers, which might more equitably be paid in part by assessments on land that in part derives its value from the availability of water. In December 1993, Metropolitan's Board approved a revenue structure that included additional charges to establish a commitment to Metropolitan's capital improvement program and provide revenue stability. This revenue structure included the RTS charge.

### **Readiness-To-Serve Charge**

As noted above, Metropolitan levies the RTS charge on its member agencies to recover a portion of the debt service on bonds issued to finance capital facilities needed to meet existing demands on Metropolitan's system. The estimated potential benefits that could be paid by an RTS charge in fiscal year 2012/13 exceed \$322 million as shown in Table 1.

Although the RTS charge could be set to recover the entire potential benefit amount, the General Manager is recommending that the RTS charge only recover a portion of the total potential benefit. For fiscal year 2012/13, the amount of the total potential benefit to be recovered by the RTS charge is estimated to range from \$142,000,000 up to \$146,000,000. These funds, when combined with Metropolitan's overall financial resources, will result in greater water rate stability for all users throughout Metropolitan's service area. Consistent with the rate structure approved by the Board in October of 2001, the RTS charge for fiscal year 2011/12 is allocated to each member agency on the basis of a ten-year rolling average of historic water purchases from Metropolitan ending June 30, 2011. This average includes all deliveries used to meet firm demand (consumptive municipal industrial demands), including water transfers and exchanges. The estimated fiscal year 2012/13 RTS for each member agency is shown in Table 4.

### **Standby Charge Option**

Metropolitan's standby charge is authorized by the State Legislature and has been levied by Metropolitan since fiscal year 1992/93. The standby charge recognizes that there are economic benefits to lands that have access to a water supply, whether or not such lands are using it. Utilization of the standby charge transfers some of the burden of maintaining Metropolitan's capital infrastructure from water rates and *ad valorem* taxes to all the benefiting properties within the service area. A fraction of the value of this benefit and of the cost of providing it can be effectively recovered, in part, through the imposition of a standby charge. The projects to be supported in part by a standby charge are capital projects that provide both local and Metropolitan-wide benefit to current landowners as well as existing water users. The estimated potential benefits system-wide are several times the amount to be recovered by means of the standby charge.

Metropolitan will levy standby charges only within the service areas of the member agencies that request that the standby charge be utilized. The standby charge for each acre or parcel of less than an acre will vary from member agency to member agency, as permitted under the legislation establishing Metropolitan's standby charge. The water standby charge for each member agency will be the same as that imposed by Metropolitan in fiscal year 1996/97 and is shown in Table 5.

The proposed standby charge includes the reimposition of water standby charges on: (1) parcels which water standby charges have been imposed in fiscal year 1996/97 and annually thereafter ("pre-1997 standby charges") and (2) parcels annexed to Metropolitan and to an electing member agency after January 1997 ("annexation standby charges"). Only land within member agencies which standby charges were imposed in fiscal year 1996/97 will be subject to the reimposition of pre-1997 standby charges for FY 2012/13. Only land annexed to Metropolitan and to an electing member public agency with respect to which standby charges were approved in accordance with the procedures of Article XIID, Section 4 of the California Constitution will be subject to the

imposition or reimposition, as applicable, of annexation standby charges for fiscal year 2012/13. Table 6 lists parcels annexed, or to be annexed, to Metropolitan and to electing member agencies during FY 2012/13, such parcels being subject to the annexation standby charge upon annexation. Parcels annexed prior to FY 2012/13 are subject to annexation standby charges as described in the Engineer's Report for the fiscal year of their annexation. These parcels and parcels that are subject to the pre-1997 standby charges are identified in a listing filed with the Executive Secretary.

The estimated potential benefits of Metropolitan's water supply program, which could be paid by a standby charge, exceed \$322 million for fiscal year 2012/13, as shown in Table 1. An average total standby charge of about \$74.4 per acre of land or per parcel of less than one acre would be necessary to pay for the total potential program benefits. Benefits in this amount will accrue to each acre of property and parcel within Metropolitan, as these properties are eligible to use water from the Metropolitan system. Because only properties located within Metropolitan's boundaries may receive water supplies from Metropolitan (except for certain contractual deliveries as permitted under Section 131 of the Metropolitan Water District Act), any benefit received by the public at large or by properties outside of the proposed area to be annexed is merely incidental.

Table 5 shows that the distribution of standby charge revenues from the various member agencies would provide net revenue flow of approximately \$43.5 million for fiscal year 2012/13. This total amount is less than the estimated benefits shown in Table 1. Metropolitan will use other revenue sources, such as water sales revenues, readiness-to-serve charge revenues (except to the extent collected through standby charges, as described above), interest income, and revenue from sales of hydroelectric power, to pay for the remaining program benefits. Thus, the benefits of Metropolitan's investments in water conveyance, storage, distribution, and demand management programs far exceed the recommended standby charge.

### **Equity**

The RTS charge is a firm revenue source. The revenues to be collected through this charge will not vary with sales in the current year. This charge is levied on Metropolitan's member agencies and is not a fee or charge upon real property or upon persons as an incident of property ownership. It ensures that agencies that only occasionally purchase water from Metropolitan but receive the reliability benefits of Metropolitan's system pay a greater share of the costs to provide that reliability. Within member agencies that elect to pay the RTS charge through Metropolitan's standby charges, the standby charge results in lower water rates than would otherwise be necessary due to the amount of revenue collected from lands which benefit from the availability of Metropolitan's water supply. With the standby charge, these properties are now contributing a more appropriate share of the cost of importing water to Southern California.

Metropolitan's water supply program increases the availability and reliable delivery of water throughout Metropolitan's service area. Increased water supplies benefit existing consumers and land uses through direct deliveries to consumers and properties, and through the replenishment of groundwater basins and reservoir storage as reserves against shortages due to droughts, natural emergencies, or scheduled facility shutdowns for maintenance. The benefits of reliable water supplies from the SWP, CRA, DVL, and system improvements accrue to more than 250 cities and communities within Metropolitan's six-county service area. Metropolitan's regional water system is interconnected, so water supplies from the SWP and CRA can be used throughout most of the service area and therefore benefit water users and properties system-wide.

Additional Metropolitan deliveries required in the coming fiscal year due to the demands of property development will be reduced by the implementation of demand management projects, including water conservation, water recycling, and groundwater recovery projects. As with the SWP, CRA and DVL and the conveyance and distribution facilities, demand management programs increase the future reliability of water supplies. In addition, demand management programs provide system-wide benefits by effectively decreasing the demand for imported water, which helps to defer construction of additional system conveyance and distribution capacity. However, the

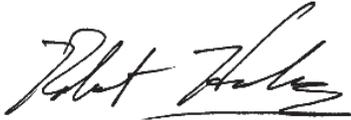
abilities of each member agency to implement these projects under Metropolitan's financial assistance programs vary and are generally represented by the historic use of imported Metropolitan water.

A major advantage of a firm revenue source, such as a RTS charge, is that it contributes to revenue stability during times of drought or low water sales. It affords Metropolitan additional security, when borrowing funds, that a portion of the revenue stream will be unaffected by drought or by rainfall. This security will help maintain Metropolitan's historically high credit rating, which results in lower interest expense to Metropolitan, and therefore, lower overall cost to the residents of its service area.

### SUMMARY

The foregoing and the attached tables describe the current benefits provided by the projects listed as mainstays to the water supply system for Metropolitan's service area. Benefits are provided to both water users and property owners. The projects represented by this report provide both local benefits as well as benefits throughout the entire service area. It is recommended, for fiscal year 2012/13, that the RTS charge be imposed with an option for local agencies to request that a standby charge be imposed on lands within Metropolitan's service area as a credit against such member agency's RTS, up to the standby charge per acre or parcel of less than one acre levied by Metropolitan within the applicable member agency for fiscal year 2012/13. The maximum standby charge would not exceed \$15 per acre of land or per parcel of less than one acre. The benefits described in this Engineer's Report exceed the recommended charge. A listing of all parcels in the service area and the proposed 2012/13 standby charge for each is available in the office of the Chief Financial Officer.

Prepared Under the Supervision of:



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Unit Manager V  
Water Resource Management

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Assistant General Manager/  
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TABLE 1

**ESTIMATED DISTRIBUTION OF BENEFITS OF WATER SUPPLY  
PAYABLE BY STANDBY CHARGE**

<b>Water Conveyance, Storage, Distribution and Supply Program</b>	<b>Estimated Potential Program Benefits for FY2012/13</b>	<b>Dollars Per Parcel of 1 Acre or Less</b>
Net Capital Payments to State Water Project (less portion paid by property taxes)	52,504,650	\$12.11
Non Tax Supported Debt Service Costs for System Storage <sup>1</sup>	92,515,692	\$21.33
Non Tax Supported Debt Service Costs for Conveyance and Distribution System <sup>2</sup>	\$124,620,270	\$28.74
<b>Sub-Total Capital Payments</b>	<b>\$269,640,612</b>	<b>\$62.18</b>
less Estimated Standby Charge Revenues	\$ (43,547,586)	(\$10.04)
Remaining capital payments	\$226,093,026	\$52.14
<b>Demand Management Programs: Water Recycling, Groundwater Recovery, and Water Conservation Projects</b>	<b>\$53,202,188</b>	<b>\$12.27</b>
Sub-Total Capital Financing and Demand Management Programs Costs not Paid by Standby Charge Revenues	\$279,295,214	\$64.41
<b>Total Benefits: Capital Financing and Demand Management Programs</b>	<b>\$322,842,800</b>	<b>\$74.45</b>

**Notes:**

[1] System storage includes Diamond Valley Lake, Lake Mathews, Lake Skinner and several other smaller surface reservoirs which provide storage for operational purposes.

[2] Conveyance and Distribution facilities include the Colorado River Aqueduct and the pipelines, laterals, feeders and canals that distribute water throughout the service area.

Totals may not foot due to rounding

<b>TABLE 2</b>	
<b>WATER RECYCLING, GROUNDWATER RECOVERY AND CONSERVATION PROJECTS</b>	
<b>Project Name</b>	<b>FY 2012/13 Payment</b>
<b>Water Recycling Projects</b>	<b>\$24,676,653</b>
Advanced Water Purification Facility Project	
Alamitos Barrier Reclaimed Water Project	
Burbank Reclaimed Water System Expansion Project	
Burbank Reclaimed Water System Expansion Project - Phase 2	
Calabasas Reclaimed Water System Expansion	
Capistrano Valley Non-Domestic Water System Expansion	
Century/Rio Hondo Reclamation Program	
City of Industry Regional Water System - Rowland	
City of Industry Regional Water System - Suburban	
City of Industry Regional Water System - Walnut	
Conejo Creek Diversion Project	
Decker Canyon WRP	
Development of Non-Domestic Water Sys. Exp. Ladera	
Direct Reuse Project Phase IIA	
Dry Weather Runoff Reclamation Facility	
Eastern Recycled Water Pipeline Reach 16	
Eastern Regional Reclaimed Water System	
EMWD Reach I Phase II	
Encina Basin Water Rec. Prog - Phases I and II	
Escondido Regional Reclaimed Water Project	
Fallbrook Reclamation Project	
Glendale Verdugo-Scholl Canyon Recl. Water Project	
Glendale Water Reclamation Expansion Project	
Green Acres Reclamation Project - Coastal	
Green Acres Reclamation Project - MWDOC	
Green Acres Reclamation Project - Santa Ana	
Groundwater Replenishment System Talbert Seawater Intrusion Barrier Component	
Hansen Area Water Recycling Project Phase 1	
Harbor Water Recycling Project	
IEUA Regional Recycled Water Dist. System	
IEUA Regional Recycled Water Dist. System Expansion	
Irvine Ranch Reclamation Project	
IRWD Recycled Water System Upgrade	
Lakewood Water Reclamation Project	

<b>TABLE 2 (Continued)</b>	
<b>WATER RECYCLING, GROUNDWATER RECOVERY AND CONSERVATION PROJECTS</b>	
<b>Project Name</b>	<b>FY 2012/13 Payment</b>
<b>Water Recycling Projects (continued)</b>	
Long Beach Reclamation Expansion Phase I	
Long Beach Reclamation Project	
Los Angeles Taylor Yard Water Recycling Project	
Moulton Niguel Phase 4 Reclamation System Expansion	
Moulton Niguel Reclamation Project	
North City Water Reclamation Project	
Oceanside Water Reclamation Project	
Olivenhain Recycled Project - SE Quadrant	
Otay Recycled Water System	
Padre Dam Reclaimed Water System Phase I	
Ramona/Santa Maria Water Reclamation Project	
Rancho California Reclamation Expansion	
Rancho Santa Fe Reclaimed Water System	
RDDMWD Recycled Water Program	
San Clemente Water Reclamation Project	
San Elijo Water Reclamation System	
San Pasqual Reclamation Project	
San Vicente Recycled Water Project	
Santa Margarita Reclamation Expansion Project	
Sepulveda Basin Water Reclamation Project	
Sepulveda Basin Water Recycling Project Phase IV	
Shadowridge Reclaimed Water System	
Trabuco Canyon Reclamation Expansion Project	
West Basin Water Reclamation Program	

<b>TABLE 2 (Continued)</b>	
<b>WATER RECYCLING, GROUNDWATER RECOVERY AND CONSERVATION PROJECTS</b>	
<b>Project Name</b>	<b>FY 2012/13 Payment</b>
<b>Groundwater Recovery Projects</b>	<b>8,525,535</b>
Arlington Desalter	
Beverly Hills Desalter	
Burbank Lake Street GAC Plant	
Capistrano Beach Desalter	
Chino Basin Desalter No. 1 - IEUA	
Chino Basin Desalter No. 1 - Western	
Irvine Desalter	
Juan Well Filter Facility	
Lower Sweetwater Desalter Phase 1	
Madrona Desalter (Goldsworthy)	
Menifee Basin Desalter	
Mesa Consolidated Colored Water Treatment Facility	
Oceanside Desalter Phase I	
Oceanside Desalter Phase I and II	
Pomona Well # 37	
San Juan Desalter	
Tapo Canyon Water Treatment Plant	
Temescal Basin Desalting Facility	
Tustin Desalter	
West Basin Desalter No. 1	
<b>Other 5-year Supply Plan Local Projects</b>	
<b>Conservation Projects</b>	<b>\$20,000,000</b>
Regionwide Residential	
Regionwide Commercial	
Public Sector Program	
Member Agency	
Water Savings Performance Program	
Enhanced Conservation Program	
Agriculture Conservation	
<b>Total</b>	<b>\$53,202,188</b>

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

**Description****Conveyance and Aqueduct Facilities**

ALL PUMPING PLANTS - 230 KV & 69 KV DISCONNECTS REPLACEMENT  
 ACCESS STRUCTURE, TRANSITION STRUCTURE AND MANHOLE COVER REPLACEMENT  
 ALL PUMPING PLANTS - BRIDGE CRANES  
 ALL PUMPING PLANTS - TRANSFORMER BANK BRIDGE  
 ALLEN MCCOLLOCH PIPELINE - RIGHT OF WAY  
 ALLEN MCCOLLOCH PIPELINE - UPDATE / MODIFY ALL BOYLE ENGINEERING DRAWINGS  
 AQUEDUCT & PUMPING PLANT ISOLATION / ACCESS FIXTURES - STUDY  
 AQUEDUCT & PUMPING PLANT ISOLATION GATES  
 ARROWHEAD EAST TUNNEL CONSTRUCTION  
 ARROWHEAD TDS REDUCTION  
 ARROWHEAD TUNNELS CLAIMS COST  
 ARROWHEAD TUNNELS CONNECTOR ROAD  
 ARROWHEAD TUNNELS CONSTRUCTION  
 ARROWHEAD TUNNELS ENGINEERING  
 ARROWHEAD TUNNELS RE-DESIGN  
 ARROWHEAD WEST TUNNEL CONSTRUCTION  
 AULD VALLEY CONTROL STRUCTURE AREA FACILITIES UPGRADE STUDY  
 AUXILIARY POWER SYSTEM REHABILITATION / UPGRADES STUDY  
 BACHELOR MOUNTAIN COMMUNICATION SITE ACQUISITION  
 BACHELOR MOUNTAIN TELECOM SITE IMPROVEMENTS  
 BANK TRANSFORMERS REPLACEMENT STUDY  
 BLACK METAL MOUNTAIN - COMMUNICATIONS FACILITY UPGRADE  
 BOX SPRINGS FEEDER REHAB PHASE III  
 BUDGET ADJUSTMENT  
 CABAZON RADIAL GATE FACILITY IMPROVEMENTS  
 CATHODIC PROTECTION STUDY - DESIGN AND CONSTRUCTION  
 CCRP - BLOW-OFF VALVES PHASE 4 PROJECT  
 CCRP - CONTINGENCY  
 CCRP - EMERGENCY REPAIR  
 CCRP - HEADGATE OPERATORS & CIRCUIT BREAKERS REHAB.  
 CCRP - PART 1 & 2  
 CCRP - SAND TRAP CLEANING EQUIPMENT & TRAVELING CRANE STUDY  
 CCRP - TRANSITION & MAN-WAY ACCESS COVER REPLACEMENT - STUDY & DESIGN  
 CCRP - TUNNELS STUDY  
 CEPSRP - 230 KV SYSTEM SYNCHRONIZERS  
 CEPSRP - ALL PUMPING PLANTS - CONTINGENCY & OTHER CREDITS  
 CEPSRP - ALL PUMPING PLANTS - REPLACE 6.9 KV TRANSFORMER BUSHINGS  
 CEPSRP - ALL PUMPING PLANTS - REPLACE 230KV , 69 KV & 6.9 KV LIGHTENING ARRESTERS  
 CEPSRP - ALL PUMPING PLANTS - REPLACE 230KV TRANSFORMER PROTECTION  
 CEPSRP - SWITCHYARDS & HEAD GATES REHABILITATION  
 CEPSRP- ALL PUMPING PLANTS - IRON MOUNTAIN - 230KV BREAKER SWITCH. INST.  
 COLORADO RIVER AQUEDUCT - PUMPING  
 CONTROL SYSTEM DRAWING UPGRADE STUDY (PHASE 1) - STUDY  
 COPPER BASIN AND GENE DAM OUTLET WORKS REHABILITATION (STUDY & DESIGN)  
 COPPER BASIN INTERIM CHLORINATION SYSTEM  
 COPPER BASIN OUTLET GATES RELIABILITY  
 COPPER BASIN POWER & PHONE LINES REPLACEMENT  
 CORROSION CONTROL OZONE MATERIAL TEST FACILITY  
 COST OF LAND AND RIGHT OF WAY  
 CRA - ACCESS STRUCTURE, TRANSITION STRUCTURE AND MANHOLE COVER REPLACEMENT  
 CRA - AQUEDUCT AND PUMPING PLANT ISOLATION GATES

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

## Description

Conveyance and Aqueduct Facilities (continued)

CRA - AUXILIARY POWER SYSTEM REHAB  
 CRA - BANK TRANSFORMERS REPLACEMENT STUDY  
 CRA - BLOW-OFF VALVES PHASE 4  
 CRA - CIRCULATING WATER SYSTEM STRAINER REPLACEMENT  
 CRA - CONTROL SYSTEM IMPLEMENTATION PHASE CLOSE OUT  
 CRA - CONVEYANCE RELIABILITY PROGRAM PART 1 & PART 2  
 CRA - COPPER BASIN OUTLET, AND COPPER BASIN & GENE WASH SLUICeways REHABILITATION  
 CRA - COPPER BASIN POWER & PHONE LINES REPLACEMENT  
 CRA - CUT & COVER FORNAT WASH EXPOSURE STUDY  
 CRA - CUT AND COVER FORNAT WASH EXPOSURE STUDY  
 CRA - DANBYTOWER FOOTER REPLACEMENT  
 CRA - DESERT PUMP PLANT OIL CONTAINMENT  
 CRA - DESERT SEWER SYSTEM REHABILITATION  
 CRA - DESERT WATER TANK ACCESS & SAFETY IMPROVEMENTS  
 CRA - DISCHARGE CONTAINMENT PROGRAM - INVESTIGATION  
 CRA - ELECTRICAL/ POWER SYST REL. PROG. - IRON MTN - 230KV BREAKER SWITC. INST.  
 CRA - GENE PUMPING PLANT MAIN TRANSFORMER AREA  
 CRA - INTAKE PUMPING PLANT - COOLING AND REJECT WATER DISCHARGE TO LAKE HAVASU  
 CRA - INTAKE PUMPING PLANT AUTOMATION PROGRAMMING  
 CRA - INVESTIGATION OF SIPHONS AND RESERVOIR OUTLETS  
 CRA - LAKEVIEW SIPHON FIRST BARREL - REPAIR DETERIORATED JOINTS  
 CRA - MAIN PUMP MOTOR EXCITERS  
 CRA - MAIN PUMP STUDY  
 CRA - MOUNTAIN SIPHONS SEISMIC VULNERABILITY STUDY  
 CRA - PUMPING PLANT RELIABILITY PROGRAM CONTINGENCY  
 CRA - PUMPING PLANTS VULNERABILITY ASSESSMENT  
 CRA - PUMPING WELL CONVERSION  
 CRA - QUAGGA MUSSEL BARRIERS  
 CRA - REAL PROPERTY - BOUNDARY SURVEYS  
 CRA - RELIABILITY PROGRAM 230 KV & 69 KV DISCONNECTS REPLACEMENT STUDY ( 5 PLANTS)  
 CRA - RELIABILITY PROGRAM INVESTIGATION  
 CRA - RELIABILITY PROGRAM PHASE 6 (AQUEDUCT PHASE 6 REHAB.) - SPEC 1568  
 CRA - RELIABILITY PHASE II CONTINGENCY  
 CRA - SAND TRAP CLEANING EQUIPMENT AND TRAVELING CRANE  
 CRA - SERVICE CONNECTION DWCV-2T VALVES REPLACEMENT AND STRUCTURE CONSTRUCTION  
 CRA - SERVICE CONNECTION DWCV-4 A, B, C, & D PLUG VALVES REPLACEMENT  
 CRA - SIPHONS, TRANSITIONS, CANALS, AND TUNNELS REHABILITATION AND IMPROVEMENTS  
 CRA - SUCTION & DISCHARGE LINES EXPANSION JOINT REHAB  
 CRA - SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM  
 CRA - SWITCHYARDS AND HEAD GATES REHAB  
 CRA - TRANSFORMER OIL & CHEMICAL UNLOADING PAD CONTAINMENT  
 CRA - TUNNELS VULNERABILITY STUDY - REPAIRS TO TUNNELS  
 CRA - WEST PORTAL UPGRADE - REHAB OF STILLING WELL, SLIDE GATE OPERATORS AND RADIAL GATES  
 CRA 2.4 KV STANDBY DIESEL ENGINE GENERATORS REPLACEMENT  
 CRA 230 KV & 69 KV DISCONNECTS SWITCH REPLACEMENT  
 CRA 230KV & 69KV PROTECTION PANEL UPGRADE  
 CRA AQUEDUCT BLOCKER GATE REPLACEMENT  
 CRA BLACK METAL COMMUNICATION SITE II UPGRADE  
 CRA CANAL CRACK REHAB AND EVALUATION  
 CRA CANAL CRACK REHABILITATION  
 CRA CIRCULATING WATER SYSTEM STRAINER REPLACEMENT  
 CRA CONVEYANCE RELIABILITY PROGRAM (CCRP) - BLOW-OFF REPAIR

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

**Description****Conveyance and Aqueduct Facilities (continued)**

CRA CONVEYANCE RELIABILITY PROGRAM PART 1 & PART 2  
 CRA DESERT AIRFIELDS IMPROVEMENT  
 CRA DISCHARGE CONTAINMENT PROGRAM - CONTINGENCY  
 CRA DISCHARGE CONTAINMENT PROGRAM - GENE & IRON DRAIN SYSTEMS  
 CRA DISCHARGE CONTAINMENT PROGRAM - INVESTIGATION  
 CRA DISCHARGE CONTAINMENT PROGRAM - OIL & CHEMICAL UNLOADING PAD CONTAINMENT  
 CRA ELECTRICAL / POWER SYSTEM RELIABILITY PROGRAM (CEPSRP)  
 CRA ENERGY EFFICIENCY IMPROVEMENTS  
 CRA GENE STORAGE WAREHOUSE REPLACEMENT  
 CRA HINDS PUMPING PLANT - WASH AREA UPGRADE  
 CRA INTAKE PPLANT - POWER & COMMUNICATION LINE REPLACEMENT  
 CRA IRON GARAGE HEAVY EQUIPMENT SERVICE PIT REPLACEMENT  
 CRA IRON HOUSING REPLACEMENT  
 CRA MAIN PUMP STUDY  
 CRA MILE 12 POWER LINE & FLOW MONITORING EQUIP. STUDY  
 CRA PUMP PLANT FLOW METER UPGRADE  
 CRA PUMP PLANT SUMP PIPING REPLACEMENT STUDY  
 CRA PUMPING PLANT RELIABILITY PROGRAM - HIGH PRESSURE COMPRESSOR REPLACEMENT  
 CRA PUMPING PLANT RELIABILITY PROGRAM - SUCTION & DISCHARGE LINES EXPANSION JOINT STUDY  
 CRA PUMPING PLANTS SWITCH HOUSE FAULT CURRENT PROTECTION  
 CRA PUMPING PLANTS VULNERABILITY ASSESSMENT  
 CRA PUMPING WELL CONVERSION  
 CRA QUAGGA MUSSEL BARRIERS  
 CRA RELIABILITY PROGRAM - DISCHARGE VALVE LUBRICATORS  
 CRA RELIABILITY PROGRAM - MOTOR BREAKER FAULTY CURRENT STUDY (5 PLANTS)  
 CRA RELIABILITY PROGRAM PHASE 6 (AQUEDUCT PHASE 6 REHAB.) - SPEC 1568  
 CRA SEISMIC EVALUATION - SWITCH HOUSE AND PUMP ANCHORAGE  
 CRA SERVICE CONNECTION DWCV-2T VALVES REPLACEMENT AND STRUCTURE CONSTRUCTION  
 CRA SERVICE CONNECTION DWCV-4 VALVES REPLACEMENT  
 CRA SIPHON REHAB  
 CRA SIPHONS, TRANSITIONS, CANALS, AND TUNNELS REHABILITATION AND IMPROVEMENTS  
 DAM SLUICeways AND OUTLETS REHABILITATION  
 DANBY TOWER FOOTER REPLACEMENT  
 DESERT FACILITIES FIRE PROTECTION SYSTEMS UPGRADE  
 DESERT LAND ACQUISITIONS  
 DESERT PUMP PLANT OIL CONTAINMENT  
 DESERT ROADWAY IMPROVEMENT  
 DESERT SEPTIC SYSTEM  
 DESERT SEWER SYSTEM REHABILITATION  
 DESERT WATER TANK ACCESS - FIRE WATER, CIRCULATING WATER, DOMESTIC WATER- STUDY  
 DIEMER FILTRATION PLANT - METROPOLITAN/SCE HELIPAD LAND SITE  
 DISCHARGE LINE ISOLATION BULKHEAD COUPLINGS  
 DISTRIBUTION SYSTEM FACILITIES - REHABILITATION PROGRAM  
 DISTRIBUTION SYSTEM FACILITIES REHABILITATION PROGRAM - MAINTENANCE & STORAGE SHOP (PC-1)  
 DISTRIBUTION SYSTEM RELIABILITY PROGRAM - PHASE 2  
 DVL TO SKINNER TRANSMISSION LINE STUDY  
 E. THORNTON IBBETSON GUEST QUARTERS  
 EAGLE AND HINDS EQUIPMENT WASH AREA UPGRADE  
 EAGLE KITCHEN UPGRADE  
 EAGLE MOUNTAIN PUMPING PLANT SCADA SYSTEM

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

## Description

Conveyance and Aqueduct Facilities (continued)

EAGLE MOUNTAIN SAND TRAPS STUDY  
 EAGLE MOUNTAIN SIPHONS SEISMIC VULNERABILITY STUDY  
 EAGLE MTN SAND TRAPS STUDY  
 EAGLE ROCK ASPHALT REPAIR PROJECT  
 EAGLE ROCK MAIN ROOF REPLACEMENT  
 ENVIRONMENTAL MITIGATION  
 ETIWANDA PIPELINE LINER REPAIR  
 ETIWANDA RESERVOIR LINER REPAIR  
 FUTURE SYSTEM RELIABILITY PROJECTS  
 GARVEY RESERVOIR - AUTOMATED DATA ACQUISITION SYSTEM  
 GARVEY RESEVOIR AUTOMATED DATA ACQUISITION SYSTEM REPLACEMENT  
 GENE & INTAKE P.P. - FREQUENCY PROTECTION RELAY REPLACEMENT  
 GENE & INTAKE PUMPING PLANTS - REPLACE UNDER FREQUENCY PROTECTION RELAY  
 GENE AIR CONDITION  
 GENE PUMPING PLANT - AIR STRIP EXTENSION PROJECT  
 GENE PUMPING PLANT - HEAVY EQUIPMENT SERVICE PIT  
 GENE PUMPING PLANT - PEDDLER SUBSTATION REPLACEMENT  
 GENE PUMPING PLANT - SCADA SYSTEM  
 GENE PUMPING PLANT MAIN TRANSFORMER AREA  
 GENE STORAGE WAREHOUSE REPLACEMENT  
 HEADGATE OPERATORS & CIRCUIT BREAKERS REHAB.  
 HIGHLAND PIPELINE CONSTRUCTION  
 HINDS PUMPING PLANT SCADA SYSTEM  
 INLAND FEEDER CONTINGENCY  
 INLAND FEEDER COST OF LAND AND RIGHT OF WAY  
 INLAND FEEDER ENVIRONMENTAL MITIGATION  
 INLAND FEEDER GROUNDWATER MONITORING  
 INLAND FEEDER HIGHLAND PIPELINE CLAIMS COST  
 INLAND FEEDER HIGHLAND PIPELINE CONSTRUCTION  
 INLAND FEEDER HIGHLAND PIPELINE DESIGN  
 INLAND FEEDER MENTONE PIPELINE CONSTRUCTION  
 INLAND FEEDER MENTONE PIPELINE DESIGN  
 INLAND FEEDER MENTONE PIPELINE RUSD CONSTRUCTION  
 INLAND FEEDER OWNER CONTROLLED INSURANCE PROGRAM  
 INLAND FEEDER PROJECT MANAGEMENT SUPPORT  
 INLAND FEEDER PURCHASE OF LAND AND RIGHT OF WAY  
 INLAND FEEDER RAISE BURIED STRUCTURES AND REALIGN DAVIS RD.  
 INLAND FEEDER REVERSE OSMOSIS PLANT  
 INLAND FEEDER RIVERSIDE BADLANDS TUNNEL CONSTRUCTION  
 INLAND FEEDER RIVERSIDE NORTH PIPELINE DESIGN  
 INLAND FEEDER RUSD CLAIMS DEFENSE  
 INLAND FEEDER STUDIES  
 INLAND FEEDER UNDERGROUND STORAGE TANK REMOVAL & ABOVEGROUND STORAGE TANK INSTALLATION  
 INSULATION JOINT TEST STATIONS  
 INTAKE PPLANT - POWER & COMMUNICATION LINE REPLACEMENT  
 INTAKE PUMPING PLANT - COOLING AND REJECT WATER DISCHARGE TO LAKE HAVASU  
 INTAKE PUMPING PLANT AUTOMATION PROGRAMMING  
 INTAKE PUMPING PLANT INSTRUMENTATION REPLACEMENT  
 INTAKE PUMPING PLANT INSTRUMENTATION REPLACEMENT & AUTOMATION  
 INTAKE PUMPING PLANT INSTRUMENTATION REPLACEMENT & AUTOMATION (4 PLANTS)  
 INTAKE PUMPING PLANT POWER & COMMUNICATION LINE REPLACEMENT

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

## Description

Conveyance and Aqueduct Facilities (continued)

INTAKE PUMPING PLANT SCADA SYSTEM  
 IRON MOUNTAIN PUMPING PLANT  
 IRON MOUNTAIN PUMPING PLANT SCADA SYSTEM  
 LAKE MATHEWS FOREBAY & HEADWORK FACILITY & EQUIPMENT  
 LAKE MATHEWS FOREBAY WALKWAY REPAIRS  
 LAKE MATHEWS ICS  
 LAKE MATHEWS INTERIM CHLORINATION SYSTEM  
 LAKE SKINNER - OUTLET CONDUIT FLOWMETER INSTALLATION  
 LAKE SKINNER BYPASS PIPELINE NO. 2 CATHODIC PROTECTION  
 LAKE SKINNER OUTLET CONDUIT  
 LAVERNE FACILITIES - EMERGENCY GENERATOR  
 LAVERNE FACILITIES - MATERIAL TESTING  
 MAGAZINE CANYON OIL & WATER SEPARATOR  
 MAGAZINE CANYON OIL/WATER SEPARATOR  
 MAPES LAND ACQUISTION  
 MILE 12 POWER LINE & FLOW MONITORING EQUIPMENT STUDY  
 MILLS FILTRATION PLANT - MODULE NO. 1 FILTER BED  
 MILLS PLANT SUPPLY PUMP STATION STUDY  
 MOTOR BREAKER FAULTY (5 PPLANTS)  
 NEWHALL TUNNEL - REPAIR STEEL LINER  
 NEWHALL TUNNEL - UPGRADE LINER SYSTEM  
 OC 44 SERVICE CONNECTIONS & EOC#2 METER ACCESS ROAD REPAIR  
 OC 88 PUMP PLANT FIRE PROTECTION STUDY  
 OLINDA PCS FACILITY REHABILITATION AND UPGRADE  
 OLINDA PRESSURE CONTROL STRUCTURE FACILITY REHABILITATION AND UPGRADE  
 ORANGE COUNTY 44 SERVICE CONNECTIONS & EOC#2 METER ACCESS ROAD REPAIR  
 ORANGE COUNTY 88 PUMP PLANT FIRE PROTECTION STUDY  
 OWNER CONTROLLED INSURANCE PROGRAM  
 PALO VERDE VALLEY LAND PURCHASE - 16,000 ACRES  
 PALOS VERDES FEEDER REHABILITATION OF DOMINGUEZ CHANNEL  
 PALOS VERDES RESERVOIR SPILLWAY MODIFICATION  
 PROJECT MANAGEMENT SUPPORT  
 PUDDINGSTONE RADIAL GATE REHABILITATION  
 PURCHASE OF LAND AND RIGHT OF WAY  
 QUAGGA MUSSEL STUDY  
 REPAIR UPPER FEEDER LEAKING EXPANSION JOINT  
 REPAIRS TO TUNNELS  
 RIALTO FEEDER REPAIR OF ANOMALOUS PIPE SECTION  
 RIVERSIDE BADLANDS TUNNEL CONSTRUCTION  
 RIVERSIDE BRANCH - ALESSANDRO BLVD. LEFT LAND TURN LANE  
 RIVERSIDE BRANCH - CONSTRUCTION OF CONTROL PANEL DISPLAY WALL  
 RIVERSIDE NORTH PIPELINE DESIGN & CONSTRUCTION  
 RIVERSIDE SOUTH PIPELINE CONSTRUCTION  
 SAN DIEGO PIPELINE REPAIR AT STATION 1268+57  
 SAN FERNANDO TUNNEL STATION 778+80 VALVE REPLACEMENT  
 SAN GABRIEL TOWER SEISMIC ASSESSMENT  
 SAN GABRIEL TOWER SLIDE GATE REHABILITATION  
 SAN JACINTO TUNNEL, WEST PORTAL  
 SAN JOAQUIN RESERVOIR - NEW DESIGN  
 SAN JOAQUIN RESERVOIR IMPROVEMENT- FLOATING COVER  
 SAN JOAQUIN RESERVOIR IMPROVEMENTS

<b>TABLE 3</b>	
<b>CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS</b>	
<b>Description</b>	
<u><i>Conveyance and Aqueduct Facilities (continued)</i></u>	
SAN JOAQUIN RESERVOIR IMPROVEMENTS STUDY	
SAND TRAP CLEANING EQUIPMENT AND TRAVELING CRANE STUDY	
SANTA ANA RIVER BRIGDE SEISMIC RETROFIT	
SANTIAGO TOWER ACCESS ROAD UPGRADE	
SANTIAGO TOWER PATROL ROAD REPAIR	
SD5 REPAIR	
SECOND LOWER FEEDER CARBON FIBER REPAIRS	
SECURITY FENCING AT OC-88 PUMPING PLANT	
SEISMIC PROGRAM	
SEISMIC UPGRADE OF 11 FACILITIES OF THE CONVEYANCE & DISTRIBUTION SYSTEM	
SERVICE CONNECTION & EOCF #2 METER ACCESS ROAD UPGRADE & BETTERMENT	
SKINNER FILTRATION PLANT - 1P2	
SKINNER FILTRATION PLANT HELIPAD UPGRADE	
SUCTION & DISCHARGE LINES EXPANSION JOINT STUDY	
SWITCHYARDS AND HEAD GATES REHAB	
TEMESCAL HYDRO-ELECTRIC PLANT ACCESS ROAD UPGRADE	
TRANSFORMER OIL & CHEMICAL UNLOADING PAD CONTAINMENT	
U.S. BUREAU OF LAND MANAGEMENT LAND ACQUISITION	
UPPER FEEDER CATHODIC PROTECTION SYSTEM	
UPPER FEEDER LEAKING EXPANSION JOINT REPAIR	
UPPER FEEDER SCHEDULES 2S	
VALLEY BRANCH - PIPELINE CORROSION TEST STATION	
WEST VALLEY FEEDER #2 CATHODIC PROTECTION SYSTEM REHABILITATION	
WEYMOUTH FILTRATION PLANT CHLORINE UNLOADING	
WHITE WATER SIPHON PROTECTION	
WHITEWATER SIPHON PROTECTION STRUCTURE	
<b><i>Sub-total Conveyance and Aqueduct facilities benefits</i></b>	<b>\$ 70,827,800</b>

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

**Description****Distribution Facilities**

42" CONICAL PLUG VALVE REPLACEMENT  
 ACCUSONIC FLOW METER UPGRADE  
 ALAMEDA CORRIDOR PIPELINE  
 ALL FACILITIES - WATER DISCHARGE ELIMINATION  
 ALL FACILITIES INSPECTION AND REPLACEMENT OF CRITICAL VACUUM VALVES  
 ALL PUMPING PLANTS - INSTALL HYPOCHLORINATION STATIONS  
 ALLEN MCCOLLOCH PIPELINE INTERCONNECTIONS  
 ALLEN MCCOLLOCH PIPELINE LOCAL CONTROL MODIFICATIONS  
 ALLEN MCCOLLOCH PIPELINE REPAIR  
 ALLEN MCCOLLOCH PIPELINE REPAIR - CARBON FIBER LINING REPAIR  
 ALLEN MCCOLLOCH PIPELINE REPAIR - SERVICE CONNECTIONS UPGRADES  
 ALLEN MCCOLLOCH PIPELINE REPAIR - STATION 276+63  
 ALLEN MCCOLLOCH PIPELINE REPAIR - SURGE SUPPRESSION SYSTEM AT OC88A  
 ALLEN MCCOLLOCH PIPELINE REPAIR - VALVE ACTUATOR REPLACEMENTS  
 ALLEN MCCOLLOCH PIPELINE REPAIR SERVICE CONNECTIONS SIMPLIFICATION  
 ALLEN MCCOLLOCH PIPELINE STRUCTURE - ROOF SLAB REPAIRS  
 ALLEN-MCCOLLOCH CORROSION/INTERFERENCE MITIGATION, STATION 719+34 TO 1178+02  
 ALLEN-MCCOLLOCH PIPELINE  
 ALLEN-MCCOLLOCH PIPELINE VALVE AND SERVICE CONNECTION VAULT REPAIRS  
 AMP -SERVICE CONNECTIONS UPGRADES  
 AMP -VALVE ACTUATOR REPLACEMENTS  
 AMP COMPLETION RESOLUTION RIGHT OF WAY ISSUES  
 AMR - RTU UPGRADE - PHASE 2  
 ANODE WELL REPLACEMENT FOR ORANGE COUNTY AND RIALTO FEEDERS  
 ASPHALT REPAIRS TO PERIMETER OF SEPULVEDA PCS  
 ASSESS THE CONDITION OF METROPOLITAN'S PRESTRESSED CONCRETE CYLINDER PIPE  
 ASSESS THE CONDITIONS OF MET'S  
 AULD VALLEY CONTROL STRUCTURE AREA FACILITIES  
 AUTOMATED RESERVOIR WATER QUALITY MONITORING  
 AUTOMATIC METER READING SYSTEM - RTU UPGRADE PHASE 2  
 AUTOMATIC METER READING SYSTEM UPGRADE  
 AUTOMATION COMMUNICATION UPGRADE  
 AUTOMATION DOCUMENTATION SURVEY F/A  
 BAR 97- ENHANCED AREA VEHICLE TESTING  
 BATTERY MONITORING SYSTEM FOR AUTOMATIC METER READING SYSTEM  
 BLACK METAL MOUNTAIN ELECTRICAL TRANSFORMER  
 BOX SPRINGS FEEDER BROKEN BACK REPAIR  
 BOX SPRINGS FEEDER BROKEN BACK REPAIR PHASE I  
 BOX SPRINGS FEEDER REPAIR - PHASE II  
 BUDGET ADJUSTMENT  
 C&D CRANE INSTALLATION AT OC-88 PUMPING PLANT  
 CALABASAS FEEDER CARBON FIBER /BROKEN BACK REPAIR  
 CALABASAS FEEDER INTERFERENCE MITIGATION  
 CAPITAL PROGRAM FOR PROJECTS COSTING LESS THAN \$250,000 FOR FY 2010/11  
 CAPITAL PROJECTS COSTING LESS THAN \$250,000 FOR FY2008-09  
 CASA LOMA AND SAN DIEGO CANAL LINING STUDY - PART 2  
 CATHODIC PROTECTION SYSTEM UPGRADES  
 CCP-PHASE 2 CONSTRUCTION  
 CDSRP - DISCHARGE ELIMINATION  
 CDSRP - ENTRAINED AIR IN UPPER FEEDER PIPELINE STUDY  
 CDSRP - SEPULVEDA FEEDER REPAIRS  
 CDSRP - SEPULVEDA TANKS RECOATING

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

**Description*****Distribution Facilities (continued)***

CENTRAL POOL AUGMENTATION - TUNNEL AND PIPELINE & RIGHT-OF-WAY ACQUISITION  
CENTRAL POOL AUGMENTATION AND WATER QUALITY PROJECT (CPAWQP)  
CHEMICAL INVENTORY AND USAGE REWRITE AND ELECTRICAL SYSTEM LOG  
CHEMICAL UNLOADING FACILITY RETROFIT  
CHEVALIER FALCON MILLING MACHINE  
COASTAL JUNCTION REVERSE FLOW BYPASS  
COMMUNICATIONS STRUCTURE ALARM MONITORING  
COMPREHENSIVE INFORMATION SECURITY ASSESSMENT PHASE III  
CONSTRUCTION PHASE 2  
CONTRACT & LITIGATION TASKS -CONTRACT # 1396  
CONTROL SYSTEM DATA STORAGE AND REPORTING  
CONTROL SYSTEM DRAWING & DOCUMENTATION UPDATE  
CONTROL SYSTEM ENHANCEMENT PROGRAM (CSEP) - DIGITAL SUBNET STANDARDIZATION  
CONTROL SYSTEMS AUTOMATION COMMUNICATION UPGRADE  
CONTROLS COMMUNICATIONS FRAME RELAY CONVERSION - APPROPRIATED  
CONVERSION OF DEFORMATION SURVEY MONITORING AT GENE WASH, COPPER BASIN, AND DIEMER BASIN 8  
CONVEYANCE AND DISTRIBUTION SYSTEM REHABILITATION PROGRAM (CDSRP) - CURRENT DRAIN STATIONS  
COPPER BASIN ICS  
COPPER BASIN SEWER SYSTEM  
CORROSION MATERIALS TESTING FACILITY SCADA UPGRADE  
COVINA PRESSURECONTROL FACILITY  
COYOTE CREEK NORTHERN PERIMETER LANDSCAPING  
CPA PIPELINE & TUNNEL ALIGNMENT  
CPA PIPELINE & TUNNEL ALIGNMENT - NON FUNDED PORTION  
CPA PIPELINE & TUNNEL ALIGNMENT - STUDY  
CPA WATER TREATMENT PLANT - NON FUNDED PORTION  
CPA WATER TREATMENT PLANT - RIGHT OF WAY - PHASE 2  
CPA WATER TREATMENT PLANT - STUDY  
CPAWQP - PHASE 2  
CPAWQP - STUDY AND LAND ACQUISITION - CONTINGENCY  
CPAWQP - STUDY AND LAND ACQUISITION - PIPELINE & TUNNEL ALIGNMENT - STUDY  
CPAWQP - STUDY AND LAND ACQUISITION - RIGHT-OF-WAY-ACQUISITION  
CPAWQP - STUDY AND LAND ACQUISITION - WATER TREATMENT PLANT - RIGHT OF WAY - PHASE 2  
CPAWQP - STUDY AND LAND ACQUISITION - WATER TREATMENT PLANT - STUDY  
CRA CABAZON & POTRERO SHAFT COVERS  
CRA CONTROL INTEGRATION  
CSEP - ELECTRONIC SYSTEM LOG (ESL)  
CSEP - ENERGY MANAGEMENT SYSTEM PHASE II  
CSEP - ENHANCED DISTRIBUTION SYSTEM CONTROL PROJECT  
CSEP - IMPLEMENTATION  
CSEP - OPERATIONS & BUSINESS DATA INTEGRATION PILOT  
CSEP - PLANT INFLUENT REDUNDANT FLOW METERING AND SPLITTING  
CSEP - PLC PHASE 2 - LIFE-CYCLE REPLACEMENT  
CSEP - PLC STANDARDIZATION  
CSEP - PLC STANDARDIZATION PHASE II  
CSEP - POWER MANAGEMENT SYSTEM  
CSEP - WATER PLANNING APPLICATION  
CSEP IMPLEMENTATION  
CSEP- SMART OPS (FORMERLY REAL TIME OPERATIONS SIMULATION)  
CURRENT DRAIN STATIONS  
DAM REHABILITATION & SAFETY IMPROVEMENTS ST. JOHN'S CANYON CHANNEL EROSION MITIGATION

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

## Description

**Distribution Facilities (continued)**

DANBY TOWER FOUNDATION INVESTIGATION AND SHORT TERM MITIGATION  
 DEODERA PCS PAVEMENT UPGRADE & BETTERMENT  
 DESERT BRANCH PUMP PLANT AUXILIARY (STATION SERVICE)  
 DESERT BRANCH, PURCHASE & INSTALL 5 PORT VIDEO CONFERENCING  
 DESERT FACILITIES DOMESTIC WATER GAC SYSTEM INSTALLATION  
 DESERT HIGH VOLTAGE TRANSMISSION TOWERS - REPLACE COPPER GROUND WIRES ON  
 DETAIL SEISMIC EVALUATION OF WATER STORAGE TANK  
 DFP - ELIMINATE BACKUP GENERATOR TIE-BUS & INSTALL MANUAL TRANSFER SWITCH FOR CHLORINE SCRUBBER  
 DIEMER AREA & PLANT - REPLACEMENT OF AREA CONTROL SYSTEMS  
 DIEMER FILTRATION PLANT - AIR COMPRESSORS REPLACEMENT  
 DIEMER FILTRATION PLANT - ASPHALT  
 DIEMER FILTRATION PLANT - ASPHALT ROAD REPAIRS  
 DIEMER FILTRATION PLANT - EMERGENCY POWER FEED  
 DIEMER FILTRATION PLANT - NORTH STORM DRAIN REPLACEMENT  
 DIEMER FILTRATION PLANT - ON-LINE TURBIDITY  
 DIEMER FILTRATION PLANT - SLOPE REPAIR  
 DIEMER FILTRATION PLANT - SLUDGE DEWATERING/DISPOSAL STUDY  
 DIEMER FILTRATION PLANT - SLUDGE LINE & STORM  
 DIEMER FILTRATION PLANT - USED WASHWATER RETURN PUMP CHECK VALVES UPGRADE  
 DIEMER FILTRATION PLANT - WASTE WATER DISCHARGE SYSTEM  
 DISCHARGE ELIMINATION  
 DISTRIBUTION SYSTEM - STANDPIPE STRENGTHENING PROGRAM  
 DISTRIBUTION SYSTEM - STATIONARY CORROSION REFERENCE  
 DISTRIBUTION SYSTEM CONTROL & EQUIP UPGRADE - ENHANCED DISTRIB. SYSTEM AUTOMATION PHASE I  
 DISTRIBUTION SYSTEM EQUIPMENT & INSTRUMENTATION UPGRADES  
 DISTRIBUTION SYSTEM REHABILITATION PROGRAM - ASSESS THE STATE OF MWD'S DISTRIBUTION SYSTEM  
 DISTRIBUTION SYSTEM REPLACEMENT OF AREA CONTROL SYSTEMS - WILLOWGLEN RTUS ADMINISTRATION  
 DISTRIBUTION SYSTEM REPLACEMENT OF AREA CONTROL SYSTEMS (DSRACS)  
 DISTRICT WIDE - ENHANCED VAPOR RECOVERY PHASE 2 GASOLINE DISPENSING  
 DSRACS - OPERATIONS CONTROL CENTER - CONTRACT #1396  
 DSRACS - SKINNER AREA  
 DSRACS - SOFTWARE DEVELOPMENT COST  
 DSRACS - WEYMOUTH  
 DVL & CONTROL SYSTEM REPLACEMENT INVESTIGATION & PREPARATION FOR PRELIMINARY DESIGN  
 EAGLE EQUIPMENT WASH AREA UPGRADE  
 EAGLE ROCK - ASPHALT REHABILITATION  
 EAGLE ROCK - FIRE PROTECTION AT THE WESTERN AREA OF THE EAGLE ROCK CONTROL CENTER PERIMETER GROUNDS  
 EAGLE ROCK LATERAL INTERCONNECTION REPAIR  
 EAGLE ROCK MAIN BUILDING ROOF REPLACEMENT - STUDY  
 EAGLE ROCK OCC - REHAB CONTROL ROOM  
 EAGLE ROCK OPERATIONS CONTROL CENTER  
 EAGLE ROCK RESIDENCE CONVERSION  
 EAGLE ROCK TOWER SLIDEGATE REHABILITATION  
 EAST INFLUENT CHANNEL REPAIR PROJECT  
 EAST ORANGE COUNTY FEEDER #2 REPAIR  
 EASTERN AND DESERT REGIONS PLUMBING RETROFIT  
 E-DISCOVERY STORAGE MANAGEMENT SYSTEM UPGRADE  
 ELECTRONIC SYSTEM LOG (ESL)  
 ENERGY MANAGEMENT SYSTEM - PHASE 2  
 ENHANCED DISTRIBUTION SYSTEM AUTOMATION PHASE I  
 ENHANCED DISTRIBUTION SYSTEM AUTOMATION PHASE II  
 EQUIPMENT UPGRADE AT THE NORTH PORTAL OF THE HOLLYWOOD TUNNEL

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

## Description

***Distribution Facilities (continued)***

ETIWANDA / RIALTO PIPELINE INTER-TIE CATHODIC PROTECTION  
 ETIWANDA CAVITATION TEST FACILITY COMMUNICATION AND CONTROL SYSTEM REPLACEMENT  
 ETIWANDA HEP NEEDLE VALVE OPERATORS  
 ETIWANDA PIPELINE AND CONTROL FACILITY - RIGHT OF WAY  
 ETIWANDA PIPELINE AND CONTROL FACILITY - AS BUILTS  
 ETIWANDA PIPELINE AND CONTROL FACILITY - CATHODIC PROTECTION  
 ETIWANDA PIPELINE AND CONTROL FACILITY - EMERGENCY DISCHARGE CONDUITS  
 ETIWANDA PIPELINE AND CONTROL FACILITY - LANDSCAPING AND IRRIGATION  
 ETIWANDA PIPELINE AND CONTROL FACILITY - RESIDENCES  
 ETIWANDA PIPELINE AND CONTROL FACILITY - RIALTO FEEDER TO UPPER PIPELINE  
 ETIWANDA RESERVOIR - EXTEND OUTLET STRUCTURE  
 FACILITY AND PROCESS RELIABILITY ASSESSMENT  
 FILTER ISOLATION GATE AND BACKWASH CONTROL WEIR COVERS MODULES 1- 6  
 FLOWMETER MODIFICATION - LAKE SKINNER INLET, ETIWANDA EFFLUENT & WADSWORTH CROSS CHANNEL  
 FOOTHILL FEEDER ADEN AVE. REHABILITATION  
 FOOTHILL FEEDER CARBON FIBER REPAIR  
 FOOTHILL FEEDER CATHODIC PROTECTION  
 FOOTHILL FEEDER POWER PLANT EXPANSION  
 FOOTHILL FEEDER REPAIR @ SANTA CLARITA RIVER  
 FOOTHILL HYDROELECTRIC RUNNER REPLACEMENT  
 FOOTHILL PCS - UNINTERRUPTIBLE POWER SOURCE SYSTEMS INSTALLATION  
 FOOTHILL PCS FLOOD PUMP INSTALLATION DESIGN DOCUMENTATION  
 FOOTHILL PCS INTERNAL VALVE LINERS UPGRADE  
 FUTURE SYSTEM RELIABILITY PROGRAM  
 GARVEY RESERVOIR - HYPOCHLORITE FEED SYSTEM  
 GARVEY RESERVOIR - INSTALL HYPOCHLORINATION STATIONS  
 GARVEY RESERVOIR - LOWER ACCESS PAVING ROAD & DRAINS  
 GARVEY RESERVOIR HYPOCHLORITE FEED SYSTEM  
 GENE & IRON POOLS  
 GENE AIR CONDITIONING SYSTEM REPLACEMENT  
 GENE MESS HALL AIR CONDITIONING UNIT  
 GENE SPARE PARTS WAREHOUSE IMPROVEMENTS  
 GLENDALE 01 SERVICE CONNECTION REHAB  
 GREG AVE PCS FACILITY REHABILITATION  
 GREG AVENUE CONTROL STRUCTURE VALVE REPLACEMENT  
 GREG AVENUE PCS CONTROL BUILDING INTERIOR REHABILITATION  
 HINDS GARAGE ASBESTOS SHEETING REPLACEMENT  
 HYDROELECTRIC PLANT CARBON DIOXIDE (CO2) FIRE SUPPRESSION SYSTEM MODIFICATIONS  
 IAS PROJECTS - CPA  
 IAS PROJECTS - DVL-SKINNER  
 IAS PROJECTS - MILLS SUPPLY RELIABILITY  
 INLAND PCSUST REMOVAL & AST INSTALLATION  
 INSTALL MOTION SENSORS IN NEW EXPANSION  
 INSTALL TEST LEADS AT FOUR LOCATIONS  
 INSULATION JOINT TEST STATIONS  
 IRON MOUNTAIN - TRANSFORMER OIL TANK RELOCATION  
 JENSEN DISTRIBUTION SYSTEM - REPLACEMENT OF AREA CONTROL SYSTEMS - CONTRACT # 1396  
 JENSEN FILTRATION PLANT - AUTOMATION OF EXISTING WASHWATER/SLUDGE PROCESSING  
 JENSEN FILTRATION PLANT - EJECTOR NOISE ABATEMENT

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

## Description

Distribution Facilities (continued)

JENSEN FILTRATION PLANT - FIRE SYSTEM FOR NAOCI SYSTEM  
 JENSEN FILTRATION PLANT - FIRE WATER LOOP PRESSURE UPGRADE  
 JENSEN FILTRATION PLANT - ICC ASBESTOS ABATEMENT  
 JENSEN FILTRATION PLANT - INSTALL INFLUENT SCUPPER GATES  
 JENSEN FILTRATION PLANT - MODIFICATIONS AT WASHWATER INTERCONNECTION  
 JENSEN FILTRATION PLANT - PRESSURE INDICATION AT COOLING WATER PUMPS  
 JENSEN FILTRATION PLANT - RELOCATE AMMONIA  
 JENSEN FILTRATION PLANT - REPLACE ADMINISTRATION BUILDING AIR CONDITIONING  
 JENSEN FILTRATION PLANT - ROAD RECONSTRUCTION  
 JENSEN FILTRATION PLANT - SANDBLASTING BOOTH PURCHASE & INSTALLATION  
 JENSEN FILTRATION PLANT - TRAVELING BRIDGE RETROFIT MODULE 2 & 3  
 JENSEN FILTRATION PLANT - WTP PROTECTION BOLLARDS  
 LA VERNE FACILITIES - BRIDGEPORT E-2-PATH  
 LA VERNE FACILITIES - ENERGY CONSERVATION ECM1 - 10  
 LA VERNE FACILITIES - EXPANSION OF THE SANITARY SEWER  
 LA VERNE FACILITIES - HAZARDOUS WASTE STORAGE  
 LA VERNE FACILITIES - MAIN TRANSFORMERS REPLACEMENT  
 LA VERNE FACILITIES - MATERIALS TESTING LABORATORY  
 LA VERNE FACILITIES - REPLACEMENT OF FLOCCULATOR STUB SHAFT - BASINS 1 & 2  
 LA VERNE MACHINE SHOP - AIR CONDITIONING UNIT REPLACEMENT  
 LA VERNE MACHINE SHOP - REPAIR HORIZONTAL BORING MILL  
 LA-35 DISCHARGE STRUCTURE REPAIRS  
 LAKE MATHEWS - CONSTRUCTION OF BACKUP COMPUTER FACILITIES  
 LAKE MATHEWS - DIVERSION TUNNEL WALKWAY REPAIR  
 LAKE MATHEWS - FACILITY WIDE EMERGENCY WARNING AND PAGING SYSTEM  
 LAKE MATHEWS - FOREBAY MCC ROOF IMPROVEMENT  
 LAKE MATHEWS - MAIN DAM TOE SEEPAGE COLLECTION  
 LAKE MATHEWS - MULTIPLE SPECIES MANAGER'S OFFICE & RESIDENCE  
 LAKE MATHEWS - RENOVATION OF BLDGS. 8 & 15, GENERAL ASSEMBLY & ADMIN. BLDG. OFFICE AREAS  
 LAKE MATHEWS - RETROFIT LOWER ENTRANCE GATE SWING ARM  
 LAKE MATHEWS FOREBAY MCC ROOF IMPROVEMENT  
 LAKE MATHEWS MAIN DAM TOE SEEPAGE COLLECTION  
 LAKE MATHEWS RETROFIT LOWER ENTRANCE GATE SWING ARM  
 LAKE PERRIS BYPASS PIPELINE EXPLORATION  
 LAKE PERRIS EMERGENCY STANDBY GENERATOR AND TRANSFER SWITCH REPLACEMENT  
 LAKE SKINNER - AERATOR AIR COMPRESSOR REPLACEMENT  
 LAKE SKINNER - OUTLET TOWER VALVE REHABILITATION  
 LAKE SKINNER - REPLACEMENT AERATOR RING  
 LAKE SKINNER AERATOR AIR COMPRESSOR REPLACEMENT  
 LAKE SKINNER EAST BYPASS SCREENING STRUCTURES  
 LAKE SKINNER WEST BYPASS SCREENING STRUCTURE  
 LAKEVIEW PIPELINE - REPLACE VACUUM/AIR RELEASE  
 LAKEVIEW PIPELINE CATHODIC PROTECTION SYSTEM  
 LOWER FEEDER - CATHODIC PROTECTION  
 LOWER FEEDER WR 33 - AREA REPAIR AND REMEDIATION  
 MAGAZINE CANYON CANOPY  
 MAGAZINE CANYON-ISOLATION GATE JACKING FRAME  
 MAPES LAND ACQUISTION  
 MICROWAVE COMMUNICATION SITES BUILDING UPGRADE  
 MIDDLE CROSS FEEDER CATHODIC PROTECTION  
 MIDDLE FEEDER - CATHODIC PROTECTION SYSTEMS  
 MIDDLE FEEDER - NORTH CATHODIC PROTECTION SYSTEM

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

## Description

*Distribution Facilities (continued)*

MIDDLE FEEDER NORTH CATHODIC PROTECTION SYSTEM  
 MILLS COMBINED FILTER EFFLUENT MIXING BAFFLE WALL RETROFIT  
 MILLS FILTRATION PLANT - ADMINISTRATION BUILDING INSTALL  
 MILLS FILTRATION PLANT - CONSTRUCT V DITCH  
 MILLS FILTRATION PLANT - INFLUENT CONTROL STRUCTURE LADDER UPGRADE  
 MILLS FILTRATION PLANT - INVESTIGATION TO RELOCATE ACCESS ROAD  
 MILLS FILTRATION PLANT - MAINTENANCE CENTER BACKUP GENERATOR RELOCATION  
 MILLS FILTRATION PLANT - REPLACEMENT OF AREA CONTROL SYSTEMS  
 MINOR CAP 08/09 PLACEHOLDER  
 MINOR CAPITAL PROJECTS PROGRAM 07/08 - REMAINING FUNDS  
 MWD ROAD GUARDRAIL  
 NITROGEN STORAGE STUDY  
 NORTH PORTAL OF HOLLYWOOD TUNNEL  
 NORTH REACH CONSTRUCTION / INSPECTION / CM  
 NORTH REACH CONSTRUCTION/ASBUILT  
 NORTH REACH ENVIRONMENTAL - CONSTRUCTION  
 NORTH REACH FINAL DESIGN & ADV/NTP  
 NORTH REACH POST DESIGN / ASBUILT  
 NORTH REACH PROGRAM MANAGEMENT - CONSTRUCTION  
 OAK ST. PCS ROOF REPLACEMENT  
 OC 44 SERVICE CONNECTIONS & EOC#2 METER ACCESS ROAD REHAB  
 OC FEEDER STA 1920+78 BLOWOFF STRUCTURE & RIP-RAP REPAIRS  
 OC-71 FLOW CONTROL FACILITY  
 OC-88 - SECURITY FENCING AT PUMP PLANT  
 OC-88 EMERGENCY STANDBY GENERATOR UPGRADE STUDY  
 OC-88 PUMP PLANT AIR COMPRESSOR UPGRADE  
 OLINDA PRESSURE CONTROL STRUCTURE  
 ON-CALL RESOURCES MANAGEMENT APPLICATION  
 OPERATIONS CONTROL CENTER AT EAGLE ROCK  
 OPERATIONS SCOPING STUDY  
 ORANGE COUNTY - 88 PUMP PLANT AIR COMPRESSOR UPGRADE  
 ORANGE COUNTY - 88 SECURITY FENCING AT PUMP PLANT  
 ORANGE COUNTY FEEDER INSPECTION  
 ORANGE COUNTY FEEDER INTERNAL INSPECTION STUDY  
 ORANGE COUNTY FEEDER PRESSURE CONTROL STRUCTURES  
 ORANGE COUNTY FEEDER SCHEDULE 37SC CATHODIC PROTECTION  
 ORANGE COUNTY FEEDER STA 1920+78 BLOWOFF STRUCTURE & RIP-RAP REPAIRS  
 ORANGE COUNTY RESERVOIR - INSTALL HYPOCHLORINATION STATIONS  
 ORANGE COUNTY RESERVOIR - PIEZOMETERS & SEEPAGE MONITORING AUTOMATION  
 OXIDATION DEMONSTRATION PLANT CONTROL SYSTEM REPLACEMENT  
 PALOS ALTOS FEEDER - 108TH ST.  
 PALOS VERDES FEEDER PCS - VALVE REPLACEMENT  
 PALOS VERDES RESERVOIR - INSTALL HYPOCHLORINATION STATIONS  
 PC-1 EFFLUENT OPEN CHANNEL TRASH RACK  
 PC-1 EFFLUENT OPEN CHANNEL TRASH RACK PROJECT  
 PERIMETER FENCING AT PLACERITA CREEK  
 PERMANENT LEAK DETECTION/PIPELINE MONITORING SYSTEM  
 PERRIS PCS - UNINTERRUPTIBLE POWER SOURCE SYSTEMS INSTALLATION  
 PERRIS PCS ROOF REHAB  
 PERRIS PUMPBACK COVER  
 PERRIS VALLEY PIPELINE - DESIGN-BUILD (EMWD)  
 PERRIS VALLEY PIPELINE - GENERAL

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

**Description*****Distribution Facilities (continued)***

PERRIS VALLEY PIPELINE - NORTH REACH  
 PERRIS VALLEY PIPELINE - RESERVED FOR STAGE II DESIGN / BUILD  
 PERRIS VALLEY PIPELINE - SOUTH REACH  
 PERRIS VALLEY PIPELINE - STUDY  
 PERRIS VALLEY PIPELINE - TIE-IN (WMWD)  
 PERRIS VALLEY PIPELINE - VALVES  
 PERRIS VALLEY PIPELINE DESIGN-BUILD (EMWD)  
 PERRIS VALLEY PIPELINE NORTH REACH  
 PERRIS VALLEY PIPELINE SOUTH REACH  
 PERRIS VALLEY PIPELINE TIE-IN (WMWD)  
 PERRIS VALLEY PIPELINE VALVES  
 PLACENTIA RAILROAD LOWERING PROJECT  
 PLACERITA CREEK PERIMETER FENCING  
 PLANT INFLUENT REDUNDANT FLOW METERING AND SPLITTING  
 PRESTRESSED CONCRETE CYLINDER PIPE - PHASE 2  
 PRESTRESSED CONCRETE CYLINDER PIPE -PHASE 3  
 PUDDINGSTONE SPILLWAY CROSS CONNECTION  
 RED MOUNTAIN HEP FLOOD DAMAGE  
 RED MTN COMM. TOWER & METER STRUCTURE  
 RELOCATION OF ORANGE COUNTY FEEDER  
 RELOCATION OF PORTION OF ORANGE COUNTY FEEDER (MWD'S SHARE)  
 REMAINING PORTIONS  
 REPAIRS TO THE LA-35 DISCHARGE STRUCTURE  
 REPLACE 2 FIRE & DOMESTIC WATER SYSTEM  
 REPLACE COMMUNICATION LINE TO THE SAN GABRIEL CONTROL TOWER  
 REPLACE COPPER GROUNDWIRES ON DESERT HIGH VOLTAGE TRANSMISSION TOWERS  
 REPLACE VALVE POSITION INDICATORS  
 RIALTO FEEDER BROKEN BACK REPAIR  
 RIALTO FEEDER VALVE STRUCTURE  
 RIALTO FEEDER, REPAIRS AT SELECT LOCATIONS, STUDY  
 RIALTO PIPELINE - CONSTRUCTION PHASE 1  
 RIALTO PIPELINE - CONSTRUCTION PHASE 2  
 RIALTO PIPELINE IMPROVEMENTS  
 RIALTO PIPELINE IMPROVEMENTS - CONSTRUCTION  
 RIALTO PIPELINE IMPROVEMENTS - CONSTRUCTION PHASE III  
 RIALTO PIPELINE IMPROVEMENTS - DESIGN PHASE 2  
 RIALTO PIPELINE IMPROVEMENTS - DESIGN PHASE 3  
 RIALTO PIPELINE IMPROVEMENTS - FINAL DESIGN  
 RIALTO PIPELINE IMPROVEMENTS - VALVE PROCUREMENT  
 RIALTO PIPELINE IMPROVEMENTS PHASE 1 FINAL DESIGN  
 RIALTO PIPELINE REPAIRS AT STATION 3198+44  
 ROBERT B. DIEMER FILTRATION PLANT - LAND ACQUISITION  
 ROOF REPLACEMENT AT SOTO ST. FACILITY  
 SAN DIEGO CANAL - EAST & WEST BYPASS SCREENING STRUCTURES STUDY  
 SAN DIEGO CANAL - ELECTRICAL VAULT & CONDUCTOR REPLACEMENT  
 SAN DIEGO CANAL - FENCING  
 SAN DIEGO CANAL - INSTALL ACOUSTIC FLOW METER  
 SAN DIEGO CANAL - PIEZOMETER  
 SAN DIEGO CANAL - REPLACE SODIUM BISULFATE TANK  
 SAN DIEGO CANAL - SEEPAGE STUDY

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

## Description

**Distribution Facilities (continued)**

SAN DIEGO CANAL SEEPAGE STUDY  
SAN DIEGO CANAL WEST BYPASS TRASH RACK  
SAN DIEGO PIPELINE #4 VALVE REPLACEMENT  
SAN DIEGO PIPELINE NO. 6 - BLOW-OFF VALVE REPLACEMENT  
SAN DIEGO PIPELINE 5 & LAKE SKINNER OUTLET REPAIR  
SAN DIEGO PIPELINE NO. 3 BYPASS  
SAN DIEGO PIPELINE NO. 6 - RIVERSIDE BRANCH - ETIWANDA FACILITY/DROP INLET STRUCTURE  
SAN DIEGO PIPELINE NO. 6 - RIVERSIDE BRANCH - PLEASANT PEAK, COMMUNICATIONS  
SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL CONSTRUCTION - AS BUILT  
SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL COST OF RIGHT OF WAY (OPTIONAL PORTAL SITE)  
SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL ENVIRONMENTAL CONSTRUCTION  
SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL ENVIRONMENTAL PRELIMINARY DESIGN  
SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL PRELIMINARY DESIGN  
SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL PROGRAM MANAGEMENT  
SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL RIGHT OF WAY PRELIMINARY DESIGN  
SAN DIEGO PIPELINE NO. 6 - CONTRACT NO.1 SAN DIEGO CANAL TO MOUNT OLYMPUS  
SAN DIEGO PIPELINE NO. 6 - CONTRACT NO.2 MOUNT OLYMPUS TUNNEL & PORTALS  
SAN DIEGO PIPELINE NO. 6 - NORTH REACH CONSTRUCTION - AS BUILT  
SAN DIEGO PIPELINE NO. 6 - NORTH REACH ENVIRONMENTAL - CONSTRUCTION  
SAN DIEGO PIPELINE NO. 6 - NORTH REACH ENVIRONMENTAL PRELIMINARY DESIGN  
SAN DIEGO PIPELINE NO. 6 - NORTH REACH FINAL DESIGN & ADV/NTP  
SAN DIEGO PIPELINE NO. 6 - NORTH REACH POST DESIGN  
SAN DIEGO PIPELINE NO. 6 - NORTH REACH PRELIMINARY DESIGN  
SAN DIEGO PIPELINE NO. 6 - NORTH REACH PROGRAM MANAGEMENT - CONSTRUCTION  
SAN DIEGO PIPELINE NO. 6 - NORTH REACH PROGRAM MANAGEMENT - DESIGN  
SAN DIEGO PIPELINE NO. 6 - NORTH REACH RIGHT OF WAY FINAL DESIGN  
SAN DIEGO PIPELINE NO. 6 - NORTH REACH RIGHT OF WAY PRELIMINARY DESIGN  
SAN DIEGO PIPELINE NO. 6 - NORTHERN PIPELINE COST OF RIGHT OF WAY  
SAN DIEGO PIPELINE NO. 6 - NORTHERN REACH ENVIRONMENTAL FINAL DESIGN  
SAN DIEGO PIPELINE NO. 6 - PIPELINE/TUNNEL STUDY - DESIGN  
SAN DIEGO PIPELINE NO. 6 - PIPELINE/TUNNEL STUDY - ENVIRONMENTAL  
SAN DIEGO PIPELINE NO. 6 - PIPELINE/TUNNEL STUDY - PROJECT MANAGEMENT  
SAN DIEGO PIPELINE NO. 6 - PIPELINE/TUNNEL STUDY - RIGHT OF WAY  
SAN DIEGO PIPELINE NO. 6 - PROJECT MANAGEMENT  
SAN DIEGO PIPELINE NO. 6 - RIGHT OF WAY  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH - PROGRAM MANAGEMENT  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH / TUNNEL STUDY  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH CONSTRUCTION / AS BUILT  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH COST OF RIGHT OF WAY  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH ENVIRONMENTAL - CONSTRUCTION  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH ENVIRONMENTAL FINAL DESIGN  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH ENVIRONMENTAL PRELIMINARY DESIGN  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH FINAL DESIGN/ADV  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH PRELIMINARY DESIGN  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH RIGHT OF WAY FINAL DESIGN  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH RIGHT OF WAY PRELIMINARY DESIGN  
SAN DIEGO PIPELINE NO. 6 - SOUTH REACH TUNNEL ALIGNMENT ANALYSIS  
SAN DIEGO PIPELINE NO. 6 AREA STUDY  
SAN DIEGO PIPELINE NO. 6 ENVIRONMENTAL MITIGATION  
SAN DIEGO PIPELINE NO.4 & AULD VALLEY PIPELINE CARBON FIBER REPAIR STUDY  
SAN DIEGO PIPELINE NOS. 1AND 3 - VALVE REPLACEMENT

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

**Description*****Distribution Facilities (continued)***

SAN DIMAS HEP BATTERY BANK AND GENERATOR BREAKER  
SAN DIMAS PCS - UNINTERRUPTIBLE POWER SOURCE SYSTEMS INSTALLATION  
SAN FRANCISQUITO PIPELINE BLOW OFF STRUCTURE, STA 287+70, ACCESS ROAD CONSTRUCTION  
SAN GABRIEL TOWER SLIDE GATE REHABILITATION  
SAN JACINTO #1 AND #2 CASA LOMA FAULT CROSSING STRUCTURE UPGRADE  
SAN JOAQUIN RELIEF STRUCTURE FOR EASTERN ORANGE COUNTY FEEDER #2  
SAN JOAQUIN RELIEF STRUCTURE FOR EASTR OC FDR #2  
SAN JOAQUIN RESERVOIR, INSTALL BULKHEAD  
SANTA ANA RIVER BRIDGE SEISMIC RETROFIT  
SANTA MONICA FEEDER RELOCATION  
SANTA MONICA FEEDER STATION 495+10 REHABILITATION  
SANTIAGO LATERAL REPLACE MOTOR - OPERATED VALVE  
SANTIAGO LATERAL STA 216+40 BUTTERFLY VALVE REPLACEMENT  
SANTIAGO TOWER ACCESS ROAD IMPROVEMENT  
SCADA SYSTEM HARDWARE UPGRADE  
SCADA SYSTEM NT SOFTWARE UPGRADE  
SCADA SYSTEM SUPPORT PROGRAMS  
SD AND CASA LOMA CANALS LINING  
SD CANAL EAST & WEST BYPASS SCREENING STRUCTURES STUDY  
SD CANAL REPLACE SODIUM BISULFITE TANK  
SD PIPELINE 3 CULVERT ROAD REHAB  
SD PIPELINE 3,4, AND 5 PROTECTIVE COVER  
SD PIPELINE 4 EXPLORATORY EXCAVATION  
SD PIPELINE 5 EXPLORATORY EXCAVATION  
SD PIPELINES 3 AND 5 REMOTE CONTROL BYPASS STRUCTURE GATES AND ISOLATION VALVES  
SECOND LOWER & SEPULVEDA FEEDERS SCI DRAIN STATIONS  
SECOND LOWER CROSS FEEDER - VALVE PROCUREMENT  
SECOND LOWER CROSS FEEDER CONSTRUCTION  
SECOND LOWER CROSS FEEDER FINAL DESIGN  
SECOND LOWER FEEDER - INSTALL LINER  
SECOND LOWER FEEDER CURRENT MITIGATION REFURBISHMENT  
SECOND LOWER FEEDER PCCP REPAIRS  
SELECTED PRESSURE REPLACE VALVE POSITION INDICATORS  
SEPULVEDA FEEDER CORROSION/INTERFERENCE MITIGATION, STATION 950+00 TO 1170+00  
SEPULVEDA FEEDER REPAIRS AT 3 SITES  
SEPULVEDA FEEDER STATION 2002+02 TO 2273+28 STRAY CURRENT INTERFERENCE MITIGATION  
SEPULVEDA FEEDER STRAY CURRENT MITIGATION REFURBISHMENT  
SEPULVEDA PCS - PERIMETER ASPHALT REPAIRS  
SERVICE CONNECTION LV-01 UPGRADES  
SIMULATION AND MODELING APPLICATION FOR REAL TIME OPERATIONS SMART OPS  
SKINNER BRANCH - AIR INJECTION MODIFICATIONS TO RED MOUNTAIN POWER PLANT  
SKINNER BRANCH - CASA LOMA CANAL  
SKINNER BRANCH - CASA LOMA SIPHON BARREL ONE  
SKINNER BRANCH - CATWALK FOR TRAVELING MAINTENANCE BRIDGE FOR  
SKINNER BRANCH - FABRICATE & REPLACE THE STEMS, NUTS & KEYS  
SKINNER BRANCH - REPAIR MODULE 1 AND 2 FLOCCULATORS BRIDGES  
SKINNER DISTRIBUTION SYSTEM - CONTRACT # 1396  
SKINNER FILTRATION PLANT - CHLORINE MASS FLOW METERS  
SKINNER FILTRATION PLANT - EFFLUENT WATER QUALITY BLDG  
SKINNER FILTRATION PLANT - ELEVATED SLAB IN SERVICE BLDG 1

TABLE 3

## CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS

## Description

*Distribution Facilities (continued)*

SKINNER FILTRATION PLANT - FERRIC CHLORIDE RETROFIT  
 SKINNER FILTRATION PLANT - INSULATING FLANGES AT PLANT 1 BUTTERFLY VALVES  
 SKINNER FILTRATION PLANT - LOADING RAMPS AT AND PC-1  
 SKINNER FILTRATION PLANT - MODULES 1 & 2 TRAVELING BRIDGES SOLIDS PUMPS  
 SKINNER FILTRATION PLANT - ON-LINE FILTER PROCESS  
 SKINNER FILTRATION PLANT - PERIMETER FENCING  
 SKINNER FILTRATION PLANT - REPLACE AIR COMPRESSOR  
 SKINNER FILTRATION PLANT - REPLACEMENT FOR WETCELL BATTERY AND INVERTER  
 SKINNER FILTRATION PLANT - REPLACEMENT OF AREA CONTROL SYSTEMS  
 SKINNER FILTRATION PLANT - SAMPLE LINE FOR INFLUENT CONDUIT # 2  
 SKINNER FILTRATION PLANT - SCADA SERVERS RELOCATION  
 SKINNER FILTRATION PLANT - THICKENERS PUMPS REPLACEMENT  
 SKINNER FILTRATION PLANT SEISMIC  
 SKINNER INSULATING FLANGES AT PLANT 1 BUTTERFLY VALVES  
 SKINNER REPLACEMENT FOR WETCELL BATTERY AND INVERTER  
 SKINNER SCADA SERVERS RELOCATION  
 SKINNER SOLIDS HANDLING SYSTEM CONVEYOR ACCESS STAIRS  
 SKINNER WTP PERIMETER FENCING  
 SMART-OPS (FORMERLY RTOS)  
 SOTO STREET FACILITY - BUILDING SEISMIC UPGRADE  
 SOTO STREET FACILITY - REPLACE HEATING  
 SOTO STREET FACILITY - ROOF REPLACEMENT  
 SOUTH REACH / TUNNEL STUDY  
 SOUTH REACH CONSTRUCTION/ASBUILT - FUTURE UNAPPROPRIATED  
 SOUTH REACH DESIGN - FUTURE/UNAPPROPRIATED  
 SOUTH REACH ENVIRONMENTAL - FUTURE/UNAPPROPRIATED  
 SOUTH REACH FEASIBILITY STUDY  
 SOUTH REACH PROJECT MANAGEMENT - FUTURE/UNAPPROPRIATED  
 SOUTH REACH RIGHT OF WAY - FUTURE/UNAPPROPRIATED  
 SPECIAL SERVICE BRANCH - REPLACE PLATE BENDING  
 ST. JOHN'S CANYON CHANNEL EROSION MITIGATION  
 SYSTEM RELIABILITY PROGRAM  
 TREATED WATER CROSS CONNECTION PREVENTION - FINAL DESIGN & CONSTRUCTION  
 TREATED WATER CROSS CONNECTION PREVENTION - UNFUNDED WORK  
 TWO-WAY RADIO ENHANCEMENT - EMERGENCY SERVICES, FIRE CONTROL, EVACUATION & BLDG. MAINT.  
 TWO-WAY RADIO ENHANCEMENT FOR EMERGENCY SERVICES, FIRE CONTROL, EVACUATION AND BLDG. MAINTENANCE  
 UNDER GROUND STORAGE TANK DISPENSER SPILL CONTAINMENT & REMEDIATION  
 UPGRADE SUNSET GARAGE  
 UPPER FEEDER - SANTA ANA RIVER BRIDGE REPAIRS  
 UPPER FEEDER GATE REHABILITATION  
 UPPER FEEDER SANTA ANA RIVER DISCHARGE PAD  
 UPPER FEEDER SERVICE CONNECTIONS UPGRADES  
 UPS SYSTEMS INSTALLATION AT FOOTHILL PCS  
 UPS SYSTEMS INSTALLATION AT PERRIS CONTROL STRUCTURE  
 UPS SYSTEMS INSTALLATION AT SAN DIMAS PCS  
 UTILITY BUSINESS ARCHITECTURE (OBJECT MAPPING/MODELING)  
 VALLEY & LOS ANGELES DISTRIBUTION VALVE POSITION DISPLAY UPGRADE  
 VALVE PROCUREMENT  
 VIDEO CONFERENCE SYSTEM UPGRADE  
 VIDEOCONFERENCING UPGRADE  
 WADSWORTH PUMPING PLANT CONDUIT REPAIR AND PROTECTION  
 WATER DELIVERY SYSTEM AUTOMATION

<b>TABLE 3</b>	
<b>CONVEYANCE AND DISTRIBUTION SYSTEM BENEFITS</b>	
<b>Description</b>	
<i><b>Distribution Facilities (continued)</b></i>	
WATER PLANNING APPLICATION	
WATER QUALITY - REMOTE MONITORING	
WATER QUALITY LABORATORY BUILDING EXPANSION	
WATER QUALITY MONITORING AND EVENT DETECTION SYSTEM	
WATER TREATMENT PROCESS OPTIMIZATION	
WEST COAST FEEDER - CATHODIC PROTECTION SYSTEMS	
WEST VALLEY AREA STUDY	
WEST VALLEY FEEDER NO. 1 ACCESS ROADS AND STRUCTURES IMPROVEMENTS	
WEST VALLEY FEEDER NO. 1 VALVE STRUCTURE MODIFICATIONS	
WESTERN REGION PLUMBING RETROFIT	
WEYMOUTH DISTRIBUTION SYSTEM - REPLACEMENT OF AREA CONTROL SYSTEMS - CONTRACT #1396	
WEYMOUTH FILTRATION PLANT - 140" EFFLUENT CONDUIT ROOF REPAIR	
WEYMOUTH FILTRATION PLANT (WFP) - AREA CONTROL SYSTEM REPLACEMENT	
WFP - ASPHALT REHABILITATION	
WFP - BASIN SLUDGE PUMP FLUSHING	
WFP - COMPRESSED AIR SYSTEM IMPROVEMENT	
WFP - DOMESTIC WATER PUMP UPGRADE	
WFP - DRY POLYMER	
WFP - EFFLUENT CHLORINE INJECTION	
WFP - LAND ACQUISITION	
WFP - PURCHASE OF REAL PROPERTY	
WFP - REPAIR TO BLDG # 1	
WFP - REPLACE ACTUATORS/OPERATORS/ MOTORS FOR EFFLUENT VALVE CONVERSION FILTER BEDS 1-24	
WFP - WASHWATER RECLAMATION (WWRP)	
YORBA LINDA FDR STA 924+11 PORTAL ACCESS	
YORBA LINDA FEEDER - STA 924+11 PORTAL ACCESS	
YORBA LINDA FEEDER BYPASS	
<i><b>Sub-total Distribution facilities benefits</b></i>	<b>\$ 53,792,470</b>
<i><b>Total Conveyance and Distribution facilities benefits</b></i>	<b>\$ 124,620,270</b>

**TABLE 4**  
**option 1**  
**FISCAL YEAR 2012/13**  
**ESTIMATED READINESS-TO-SERVE CHARGE REVENUE**

Member Agency	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2000/01 - FY2009/10	RTS Share	6 months @ \$125 million per year (7/12-12/12)	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2001/02 - FY2010/11	RTS Share	6 months @ \$146 million per year (1/13-6/13)	Total RTS Charge FY 2012/13
Anaheim	21,453	1.14%	833,647	21,892	1.20%	874,467	1,708,114
Beverly Hills	12,375	0.66%	480,892	12,041	0.66%	480,955	961,847
Burbank	12,976	0.69%	504,231	12,605	0.69%	503,496	1,007,726
Calleguas MWD	112,722	6.00%	4,380,223	111,069	6.08%	4,436,612	8,816,835
Central Basin MWD	62,741	3.34%	2,438,042	61,810	3.38%	2,468,969	4,907,011
Compton	3,038	0.16%	118,049	2,832	0.15%	113,104	231,152
Eastern MWD	93,655	4.99%	3,639,328	94,101	5.15%	3,758,857	7,398,185
Foothill MWD	11,419	0.61%	443,743	11,169	0.61%	446,135	889,878
Fullerton	10,006	0.53%	388,820	10,225	0.56%	408,419	797,239
Glendale	22,919	1.22%	890,618	21,707	1.19%	867,077	1,757,695
Inland Empire Utilities Agency	62,036	3.30%	2,410,631	61,330	3.36%	2,449,824	4,860,455
Las Virgenes MWD	23,019	1.23%	894,496	22,730	1.24%	907,956	1,802,453
Long Beach	36,496	1.94%	1,418,187	35,737	1.96%	1,427,490	2,845,677
Los Angeles	318,284	16.94%	12,368,085	302,313	16.54%	12,075,810	24,443,895
Municipal Water District of Orange County	230,828	12.29%	8,969,677	227,364	12.44%	9,081,986	18,051,664
Pasadena	23,256	1.24%	903,694	22,799	1.25%	910,708	1,814,403
San Diego County Water Authority	473,945	25.23%	18,416,886	449,537	24.60%	17,956,656	36,373,541
San Fernando	119	0.01%	4,609	125	0.01%	4,973	9,582
San Marino	983	0.05%	38,210	972	0.05%	38,806	77,016
Santa Ana	12,950	0.69%	503,201	13,464	0.74%	537,812	1,041,013
Santa Monica	12,674	0.67%	492,511	12,284	0.67%	490,661	983,172
Three Valleys MWD	71,638	3.81%	2,783,741	70,981	3.88%	2,835,302	5,619,043
Torrance	20,288	1.08%	788,369	19,931	1.09%	796,119	1,584,488
Upper San Gabriel Valley MWD	16,779	0.89%	652,018	19,031	1.04%	760,173	1,412,191
West Basin MWD	138,880	7.39%	5,396,682	135,862	7.43%	5,426,974	10,823,655
Western MWD	73,122	3.89%	2,841,411	73,618	4.03%	2,940,661	5,782,071
<b>MWD Total</b>	<b>1,878,601</b>	<b>100.00%</b>	<b>\$ 73,000,000</b>	<b>1,827,524</b>	<b>100.00%</b>	<b>\$ 73,000,000</b>	<b>\$ 146,000,000</b>

Totals may not foot due to rounding

**TABLE 4**  
**option 2**  
**FISCAL YEAR 2012/13**  
**ESTIMATED READINESS-TO-SERVE CHARGE REVENUE**

<b>Member Agency</b>	<b>Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2000/01 - FY2009/10</b>	<b>RTS Share</b>	<b>6 months @ \$125 million per year (7/12-12/12)</b>	<b>Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2001/02 - FY2010/11</b>	<b>RTS Share</b>	<b>6 months @ \$142 million per year (1/13-6/13)</b>	<b>Total RTS Charge FY 2012/13</b>
Anaheim	21,453	1.14%	833,647	21,892	1.20%	850,509	1,684,156
Beverly Hills	12,375	0.66%	480,892	12,041	0.66%	467,778	948,670
Burbank	12,976	0.69%	504,231	12,605	0.69%	489,701	993,932
Calleguas MWD	112,722	6.00%	4,380,223	111,069	6.08%	4,315,061	8,695,284
Central Basin MWD	62,741	3.34%	2,438,042	61,810	3.38%	2,401,326	4,839,368
Compton	3,038	0.16%	118,049	2,832	0.15%	110,005	228,054
Eastern MWD	93,655	4.99%	3,639,328	94,101	5.15%	3,655,875	7,295,202
Foothill MWD	11,419	0.61%	443,743	11,169	0.61%	433,912	877,655
Fullerton	10,006	0.53%	388,820	10,225	0.56%	397,230	786,050
Glendale	22,919	1.22%	890,618	21,707	1.19%	843,321	1,733,939
Inland Empire Utilities Agency	62,036	3.30%	2,410,631	61,330	3.36%	2,382,705	4,793,336
Las Virgenes MWD	23,019	1.23%	894,496	22,730	1.24%	883,081	1,777,577
Long Beach	36,496	1.94%	1,418,187	35,737	1.96%	1,388,380	2,806,568
Los Angeles	318,284	16.94%	12,368,085	302,313	16.54%	11,744,966	24,113,051
Municipal Water District of Orange County	230,828	12.29%	8,969,677	227,364	12.44%	8,833,165	17,802,842
Pasadena	23,256	1.24%	903,694	22,799	1.25%	885,757	1,789,452
San Diego County Water Authority	473,945	25.23%	18,416,886	449,537	24.60%	17,464,693	35,881,578
San Fernando	119	0.01%	4,609	125	0.01%	4,837	9,446
San Marino	983	0.05%	38,210	972	0.05%	37,743	75,953
Santa Ana	12,950	0.69%	503,201	13,464	0.74%	523,078	1,026,278
Santa Monica	12,674	0.67%	492,511	12,284	0.67%	477,219	969,729
Three Valleys MWD	71,638	3.81%	2,783,741	70,981	3.88%	2,757,623	5,541,363
Torrance	20,288	1.08%	788,369	19,931	1.09%	774,307	1,562,677
Upper San Gabriel Valley MWD	16,779	0.89%	652,018	19,031	1.04%	739,346	1,391,364
West Basin MWD	138,880	7.39%	5,396,682	135,862	7.43%	5,278,290	10,674,971
Western MWD	73,122	3.89%	2,841,411	73,618	4.03%	2,860,095	5,701,505
<b>MWD Total</b>	<b>1,878,601</b>	<b>100.00%</b>	<b>73,000,000</b>	<b>1,827,524</b>	<b>100.00%</b>	<b>71,000,000</b>	<b>144,000,000</b>

Totals may not foot due to rounding

**TABLE 4**  
**option 3**  
**FISCAL YEAR 2012/13**  
**ESTIMATED READINESS-TO-SERVE CHARGE REVENUE**

<b>Member Agency</b>	<b>Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2000/01 - FY2009/10</b>	<b>RTS Share</b>	<b>6 months @ \$125 million per year (7/12-12/12)</b>	<b>Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2001/02 - FY2010/11</b>	<b>RTS Share</b>	<b>6 months @ \$145 million per year (1/13-6/13)</b>	<b>Total RTS Charge FY 2012/13</b>
Anaheim	21,453	1.14%	833,647	21,892	1.20%	868,477	1,702,124
Beverly Hills	12,375	0.66%	480,892	12,041	0.66%	477,661	958,553
Burbank	12,976	0.69%	504,231	12,605	0.69%	500,047	1,004,278
Calleguas MWD	112,722	6.00%	4,380,223	111,069	6.08%	4,406,224	8,786,447
Central Basin MWD	62,741	3.34%	2,438,042	61,810	3.38%	2,452,058	4,890,100
Compton	3,038	0.16%	118,049	2,832	0.15%	112,329	230,378
Eastern MWD	93,655	4.99%	3,639,328	94,101	5.15%	3,733,111	7,372,439
Foothill MWD	11,419	0.61%	443,743	11,169	0.61%	443,079	886,822
Fullerton	10,006	0.53%	388,820	10,225	0.56%	405,622	794,442
Glendale	22,919	1.22%	890,618	21,707	1.19%	861,138	1,751,756
Inland Empire Utilities Agency	62,036	3.30%	2,410,631	61,330	3.36%	2,433,044	4,843,675
Las Virgenes MWD	23,019	1.23%	894,496	22,730	1.24%	901,737	1,796,234
Long Beach	36,496	1.94%	1,418,187	35,737	1.96%	1,417,712	2,835,900
Los Angeles	318,284	16.94%	12,368,085	302,313	16.54%	11,993,099	24,361,184
Municipal Water District of Orange County	230,828	12.29%	8,969,677	227,364	12.44%	9,019,781	17,989,458
Pasadena	23,256	1.24%	903,694	22,799	1.25%	904,471	1,808,165
San Diego County Water Authority	473,945	25.23%	18,416,886	449,537	24.60%	17,833,665	36,250,550
San Fernando	119	0.01%	4,609	125	0.01%	4,939	9,548
San Marino	983	0.05%	38,210	972	0.05%	38,541	76,750
Santa Ana	12,950	0.69%	503,201	13,464	0.74%	534,128	1,037,329
Santa Monica	12,674	0.67%	492,511	12,284	0.67%	487,301	979,811
Three Valleys MWD	71,638	3.81%	2,783,741	70,981	3.88%	2,815,883	5,599,623
Torrance	20,288	1.08%	788,369	19,931	1.09%	790,666	1,579,035
Upper San Gabriel Valley MWD	16,779	0.89%	652,018	19,031	1.04%	754,966	1,406,984
West Basin MWD	138,880	7.39%	5,396,682	135,862	7.43%	5,389,803	10,786,484
Western MWD	73,122	3.89%	2,841,411	73,618	4.03%	2,920,519	5,761,930
<b>MWD Total</b>	<b>1,878,601</b>	<b>100.00%</b>	<b>73,000,000</b>	<b>1,827,524</b>	<b>100.00%</b>	<b>72,500,000</b>	<b>145,500,000</b>

Totals may not foot due to rounding

**TABLE 5**  
**FISCAL YEAR 2012/13**  
**ESTIMATED STANDBY CHARGE REVENUE**

<b>Member Agencies</b>	<b>Total Parcel Charge</b>	<b>Number Of Parcels Or Acres</b>	<b>Gross Revenues (Dollars) <sup>1</sup></b>
Anaheim	\$ 8.55	68,942	\$ 589,454
Beverly Hills	-	-	-
Burbank	14.20	29,144	413,842
Calleguas MWD	9.58	260,512	2,495,708
Central Basin MWD	10.44	340,385	3,553,623
Compton	8.92	18,128	161,701
Eastern MWD	6.94	405,546	2,814,487
Foothill MWD	10.28	30,402	312,530
Fullerton	10.71	34,493	369,415
Glendale	12.23	44,843	548,426
Inland Empire Utilities Agency	7.59	252,852	1,919,146
Las Virgenes MWD	8.03	57,658	462,993
Long Beach	12.16	92,006	1,118,795
Los Angeles	-	-	-
Municipal Water District of Orange County <sup>2</sup>	10.09	714,540	7,340,407
Pasadena	11.73	38,860	455,823
San Diego County Water Authority	11.51	1,102,179	12,686,086
San Fernando	7.87	5,120	40,293
San Marino	8.24	4,973	40,977
Santa Ana	7.88	54,102	426,325
Santa Monica	-	-	-
Three Valleys MWD	12.21	151,406	1,848,673
Torrance	12.23	40,537	495,766
Upper San Gabriel Valley MWD	9.27	211,473	1,960,355
West Basin MWD	-	-	-
Western MWD	9.23	378,414	3,492,761
<b>MWD Total</b>		<b>4,336,515</b>	<b>\$ 43,547,586</b>

(1) Estimates per FY2011/12 applied amounts

(2) Adjusted for inclusion of Coastal MWD

Note: Totals may not foot due to rounding.



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_

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**RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA  
FIXING AND ADOPTING  
A CAPACITY CHARGE  
EFFECTIVE JANUARY 1, 2013**

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WHEREAS, the Board of Directors (“Board”) of The Metropolitan Water District of Southern California (“Metropolitan”), pursuant to Sections 133, 134 and 134.5 of the Metropolitan Water District Act (the “Act”), is authorized to fix such rate or rates for water as will result in revenue which, together with revenue from any water standby or availability of service charge or assessment, will pay the operating expenses of Metropolitan, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by Metropolitan, and provide for the payment of the interest and principal of its bonded debt; and

WHEREAS, the capacity charge is a fixed fee imposed (on a dollar per cubic-foot-per-second basis) on member agencies on the amount of capacity used by such member agency and is designed to recover the cost of providing peaking capacity within the distribution system; and

WHEREAS, on January 9, 2012, the General Manager presented to the Finance and Insurance Committee of Metropolitan’s Board his proposed biennial budget for fiscal years 2012/13 and 2013/14, determination of total revenues and of revenues to be derived from water sales and firm revenue sources required during the fiscal years 2012/13 and 2013/14, and detailed reports for each fiscal year describing each of the proposed rates and charges and the supporting cost of service process, dated December 2011, that (i) describe the rate structure process and design, (ii) show the costs of major service functions that Metropolitan provides to its member agencies, (iii) classify these service functions costs based on the use of the Metropolitan system to create a logical nexus between the revenues required from each of the rates and charges, and (iv) set forth the rates and charges necessary to defray such costs; and

WHEREAS, on March 2012, following discussions of proposed revenue requirements, budget and rates by the Finance and Insurance Committee and the Board in meetings from January through February of 2012, board workshops regarding the proposed budget and future rates and charges held on January 24, February 13, as well as a presentation at the February 28, 2012 meeting of the Executive Committee, and a public hearing at the Finance and Insurance Committee meeting on March 12, 2012, Metropolitan’s Board adopted water rates and charges to be effective January 1, 2013 and January 1, 2014; and

WHEREAS, based on the feedback received from the board workshops, the General Manager presented two alternative recommendations for rates and charges on March 12, 2012, with proposed cost reductions to accommodate the Board's request for lower rate increases; and

WHEREAS, updated cost of service reports, dated March 2012, were provided for the three options included in the General Manager's recommendations for rates and charges presented to the Board on March 12, 2012; and

WHEREAS, notice of intention of Metropolitan's Board to consider and take action at its regular meeting to be held March 12, 2012, to increase Metropolitan's capacity charge for calendar year 2013 was mailed to each of Metropolitan's member public agencies; and

WHEREAS, each of the meetings of the Board were conducted in accordance with the Brown Act (commencing at Section 54950 of the Government Code), for which due notice was provided and at which quorums were present and acting throughout; and

WHEREAS, the amount of revenue to be raised by the capacity charge shall be as determined by the Board and allocation of such charges among member public agencies shall be in accordance with the method established by the Board; and

WHEREAS, the capacity charge is a charge imposed by Metropolitan upon its member agencies, and is not a fee or charge imposed upon real property or upon persons as an incident of property ownership; and

WHEREAS, Metropolitan has legal authority to impose the capacity charge as a water rate pursuant to Sections 133 and 134 of the Metropolitan Water District Act (the "Act"); and

WHEREAS, under authority of Sections 133 and 134 of the Act, the Board has the authority to fix the rate or rates for water as will result in revenue which, together with other revenues, will pay Metropolitan's operating expenses and provide for the payment of other costs, including payment of the interest and principal of Metropolitan's non-tax funded debt; and

WHEREAS, the capacity charge is intended to recover the debt service and other appropriately allocated costs to construct, operate and maintain projects needed to meet peak demands on Metropolitan's distribution system, as shown in the Report; and

WHEREAS, in the alternative under Section 134.5 of the Metropolitan Water District Act, an availability of service charge may be collected from the member public agencies within Metropolitan;

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

**Section 1.** That the Board of Directors of Metropolitan hereby fixes and adopts a capacity charge, as described below, to be effective January 1, 2013.

**Section 2.** That the capacity charge shall be in an amount sufficient to provide for payment of the capital financing costs not paid from *ad valorem* property taxes, as well as operations, maintenance and overhead costs incurred to provide peaking capacity within Metropolitan's distribution system.

**Section 3.** That such capacity charge effective January 1, 2013 shall be a water rate as specified in Section 6 (set in dollars per cubic-foot-per-second of the peak day capacity) for capacity provided to a member agency.

**Section 4.** That in the alternative, and without duplication, the capacity charge shall be an availability of service charge pursuant to Section 134.5 of the Act.

**Section 5.** That the capacity charge specified in Table 1 does not exceed the reasonable and necessary cost of providing the service for which the charge is made and is fairly apportioned to each member agency in proportion to the peak day capacity utilized by each member agency. Accordingly, the Board finds and determines that the capacity charge is a reasonable fee charged according to the burden on or benefit from the use of capacity of Metropolitan's distribution system.

**Section 6.** That the capacity charge shall be a fixed charge as shown in the following table and collected from each member agency monthly, quarterly or semiannually as agreed to by Metropolitan and the member agency.

**Table 1. Option 1: Calendar Year 2013 Capacity Charge**

AGENCY	Peak Day Demand (cfs)				3-Year Peak	Rate (\$/cfs): \$6,600 Calendar Year 2013 Capacity Charge
	(May 1 through September 30) Calendar Year					
	2009	2010	2011			
Anaheim	40.7	44.8	39.3	44.8	\$295,680	
Beverly Hills	31.0	31.2	31.5	31.5	\$207,900	
Burbank	21.6	22.3	21.4	22.3	\$147,180	
Calleguas	192.8	208.9	210.1	210.1	\$1,386,660	
Central Basin	94.7	74.2	79.2	94.7	\$625,020	
Compton	5.9	3.3	2.4	5.9	\$38,940	
Eastern	233.8	229.6	192.5	233.8	\$1,543,080	
Foothill	24.3	20.2	19.0	24.3	\$160,380	
Fullerton	37.4	32.2	27.4	37.4	\$246,840	
Glendale	56.0	49.6	49.0	56.0	\$369,600	
Inland Empire	106.1	124.2	138.0	138.0	\$910,800	
Las Virgenes	42.7	43.9	43.4	43.9	\$289,740	
Long Beach	67.2	61.2	51.5	67.2	\$443,520	
Los Angeles	698.2	525.9	329.0	698.2	\$4,608,120	
MWDOC	489.5	425.5	382.7	489.5	\$3,230,700	
Pasadena	50.2	50.5	50.6	50.6	\$333,960	
San Diego	1,055.3	949.5	760.7	1,055.3	\$6,964,980	
San Fernando	-	4.1	1.6	4.1	\$27,060	
San Marino	3.5	4.2	1.3	4.2	\$27,720	
Santa Ana	16.4	20.0	20.0	20.0	\$132,000	
Santa Monica	25.0	24.3	21.1	25.0	\$165,000	
Three Valleys	132.7	139.4	122.7	139.4	\$920,040	
Torrance	39.3	42.8	35.5	42.8	\$282,480	
Upper San Gabriel	27.6	22.9	20.4	27.6	\$182,160	
West Basin	221.3	221.2	214.6	221.3	\$1,460,580	
Western	214.4	199.5	179.3	214.4	\$1,415,040	
<b>Total</b>	<b>3,927.6</b>	<b>3,575.4</b>	<b>3,044.2</b>	<b>4,002.3</b>	<b>\$26,415,180</b>	

Totals may not foot due to rounding

**Table 2. Option 2: Calendar Year 2013 Capacity Charge**

AGENCY	Peak Day Demand (cfs)				3-Year Peak	Rate (\$/cfs): \$6,400 Calendar Year 2013 Capacity Charge
	(May 1 through September 30) Calendar Year					
	2009	2010	2011			
Anaheim	40.7	44.8	39.3	44.8	\$286,720	
Beverly Hills	31.0	31.2	31.5	31.5	\$201,600	
Burbank	21.6	22.3	21.4	22.3	\$142,720	
Calleguas	192.8	208.9	210.1	210.1	\$1,344,640	
Central Basin	94.7	74.2	79.2	94.7	\$606,080	
Compton	5.9	3.3	2.4	5.9	\$37,760	
Eastern	233.8	229.6	192.5	233.8	\$1,496,320	
Foothill	24.3	20.2	19.0	24.3	\$155,520	
Fullerton	37.4	32.2	27.4	37.4	\$239,360	
Glendale	56.0	49.6	49.0	56.0	\$358,400	
Inland Empire	106.1	124.2	138.0	138.0	\$883,200	
Las Virgenes	42.7	43.9	43.4	43.9	\$280,960	
Long Beach	67.2	61.2	51.5	67.2	\$430,080	
Los Angeles	698.2	525.9	329.0	698.2	\$4,468,480	
MWDOC	489.5	425.5	382.7	489.5	\$3,132,800	
Pasadena	50.2	50.5	50.6	50.6	\$323,840	
San Diego	1,055.3	949.5	760.7	1,055.3	\$6,753,920	
San Fernando	-	4.1	1.6	4.1	\$26,240	
San Marino	3.5	4.2	1.3	4.2	\$26,880	
Santa Ana	16.4	20.0	20.0	20.0	\$128,000	
Santa Monica	25.0	24.3	21.1	25.0	\$160,000	
Three Valleys	132.7	139.4	122.7	139.4	\$892,160	
Torrance	39.3	42.8	35.5	42.8	\$273,920	
Upper San Gabriel	27.6	22.9	20.4	27.6	\$176,640	
West Basin	221.3	221.2	214.6	221.3	\$1,416,320	
Western	214.4	199.5	179.3	214.4	\$1,372,160	
<b>Total</b>	<b>3,927.6</b>	<b>3,575.4</b>	<b>3,044.2</b>	<b>4,002.3</b>	<b>\$25,614,720</b>	

Totals may not foot due to rounding

**Table 3. Option 3: Calendar Year 2013 Capacity Charge**

AGENCY	Peak Day Demand (cfs)				Rate (\$/cfs):
	(May 1 through September 30)				\$6,500
	Calendar Year				Calendar Year 2013 Capacity Charge
	2009	2010	2011	3-Year Peak	
Anaheim	40.7	44.8	39.3	44.8	\$291,200
Beverly Hills	31.0	31.2	31.5	31.5	\$204,750
Burbank	21.6	22.3	21.4	22.3	\$144,950
Calleguas	192.8	208.9	210.1	210.1	\$1,365,650
Central Basin	94.7	74.2	79.2	94.7	\$615,550
Compton	5.9	3.3	2.4	5.9	\$38,350
Eastern	233.8	229.6	192.5	233.8	\$1,519,700
Foothill	24.3	20.2	19.0	24.3	\$157,950
Fullerton	37.4	32.2	27.4	37.4	\$243,100
Glendale	56.0	49.6	49.0	56.0	\$364,000
Inland Empire	106.1	124.2	138.0	138.0	\$897,000
Las Virgenes	42.7	43.9	43.4	43.9	\$285,350
Long Beach	67.2	61.2	51.5	67.2	\$436,800
Los Angeles	698.2	525.9	329.0	698.2	\$4,538,300
MWDOC	489.5	425.5	382.7	489.5	\$3,181,750
Pasadena	50.2	50.5	50.6	50.6	\$328,900
San Diego	1,055.3	949.5	760.7	1,055.3	\$6,859,450
San Fernando	-	4.1	1.6	4.1	\$26,650
San Marino	3.5	4.2	1.3	4.2	\$27,300
Santa Ana	16.4	20.0	20.0	20.0	\$130,000
Santa Monica	25.0	24.3	21.1	25.0	\$162,500
Three Valleys	132.7	139.4	122.7	139.4	\$906,100
Torrance	39.3	42.8	35.5	42.8	\$278,200
Upper San Gabriel	27.6	22.9	20.4	27.6	\$179,400
West Basin	221.3	221.2	214.6	221.3	\$1,438,450
Western	214.4	199.5	179.3	214.4	\$1,393,600
<b>Total</b>	<b>3,927.6</b>	<b>3,575.4</b>	<b>3,044.2</b>	<b>4,002.3</b>	<b>\$26,014,950</b>

Totals may not foot due to rounding

**Section 7.** That the capacity charge for each member public agency, the method of its calculation, cost allocations and other data used in its determination are as specified in the General Manager's recommendation on rates and charges to be effective January 1, 2013, and the corresponding cost of service report. Such recommendation and cost of service report are on file and available for review by interested parties at Metropolitan's headquarters.

**Section 8.** That the General Manager and the General Counsel are hereby authorized to do all things necessary and desirable to accomplish the purposes of this Resolution, including, without limitation, the commencement or defense of litigation.

**Section 9.** That this Board finds that the proposed capacity charge is not defined as a Project under the California Environmental Quality Act ("CEQA") since 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).

**Section 10.** That the General Manager is hereby authorized and directed to take all necessary action to satisfy relevant statutes requiring notice by publication.

**Section 11.** That the Board Executive Secretary is hereby directed to transmit a certified copy of this Resolution to the presiding officer of the governing body of each member public agency.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a Resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on April 10, 2012.

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Board Executive Secretary  
The Metropolitan Water District  
of Southern California

**Public Comments**

**Public Hearing Held March 12, 2012**

The following members of the public spoke in support of the proposed water rates and charges:

David Pettijohn, Manager of Water Resources, Los Angeles Department of Water and Power  
John Rossi, General Manager, Western Municipal Water District  
Fernando Paludi, West Basin Municipal Water District  
Paul Jones, General Manager, Eastern Municipal Water District  
Judi Erickson, Los Angeles County Business Federation  
Kate Klimow, Orange County Business Council  
Carlos Cruz, Bell Gardens Chamber of Commerce  
Steven Schuyler, Building Industry Association of Southern California  
Ken Rausch, El Monte Chamber of Commerce  
Theresa Harvey, Fullerton Chamber of Commerce  
Clayton Miller, Construction Industry Coalition on Water Quality  
Les Card, Orange County Business Council  
Carolyn Casavan, Valley Industry and Commerce Association  
Karalee Watson, Brea Chamber of Commerce  
Anne Williams, Central City Association  
Caryn Mendelbaum, Environment Now

The following members of the public spoke in opposition to the proposed water rates and charges:

Michael Hogan, Chair, San Diego County Water Authority  
Dennis Cushman, Assistant General Manager, San Diego County Water Authority  
Allen Carlisle, General Manager, Padre Dam Municipal Water District  
Lorie Zapt, Councilmember, City of San Diego  
Jim Cunningham, City of Poway  
Jim Wood, Mayor, City of Oceanside  
Alex Ruiz, Public Utilities, City of San Diego  
Gary Felien, Councilmember, City of Oceanside  
Larry Watt, Olivenhain Municipal Water District  
Rosemarie Chora, Resident, City of Oceanside  
Paul Webster, San Diego Chamber of Commerce  
Michael Bardin, Santa Fe Irrigation District  
Deana Verbeck, Helix Water District  
Jeanne Swaringer, Lakeside Water District  
Chris McKinney, City of Escondido  
Jim Smyth, Sweetwater Authority  
James Knott, Resident, City of Oceanside  
Leah Browder, General Manager, City of Poway  
Jose Lopez, Otay Water District  
Caie Dale, City of Oceanside  
Glenn Pruum, Carlsbad Municipal Water District  
Don Rodee, Oceanside Avocado Orchardist  
Eileen Costa, Resident, City of Oceanside

Mark Watton, Otay Water District  
Jim Farrara, San Diego Ratepayer  
Ernest Garrett, Ramona Ratepayer

Letters of support were received from the following agencies:

Western Municipal Water District  
Three Valleys Municipal Water District  
City of Corona Department of Water and Power  
Elsinore Valley Municipal Water District  
Rancho California Water District  
Burbank Chamber of Commerce  
Lee Lake Water District  
Redondo Beach Chamber of Commerce  
Greater Lakewood Chamber of Commerce

Letters of opposition were received from the following agencies:

City of San Diego, Mayor Jerry Sanders  
Downtown San Diego Partnership  
NAIOP San Diego  
San Diego County Water Authority

These letters and oral comments and letters submitted by speakers at the public hearing are on file in the Office of the CFO.