



Metropolitan Public Comment San Diego County Water Authority, March 23 Administration and Finance Committee

Good afternoon.

It is good to be back before you this afternoon. I am Meena Westford, special projects manager for the Metropolitan Water District of Southern California. I wish to provide feedback on staff's February 23 presentation to the Imported Water Committee. Among other incorrect and misleading information, in that presentation staff made the incorrect statement that Metropolitan does not conduct long-range financial planning. That is simply not the case. I would like to walk you through Metropolitan's long range financial planning process and how our updates are more frequent than that of the Water Authority. We refer to this as our Ten-Year Financial Forecast, and I am attaching the latest Forecast for you to review.

As you know, Metropolitan sets its budget and rates every two years, for the following two years. But also as part of this process, Metropolitan engages in long-range financial forecasting. Staff projects long-term capital spending based on our long-term capital plan. We look at State Water Contract costs long term based on detailed information provided by the state as well as our own forecasts of power costs. We look at Colorado River power projections in a similar detailed manner. Water Resources Management develops future forecasts of demands. We look at planned future capital expenditures of the State Water Project and factor them in as well. We look at every facet of our budget and make careful, calibrated, detailed forecasts of where Metropolitan finances are heading for the decade ahead. The Ten-Year Financial Forecast is then included in the biennial budget document.

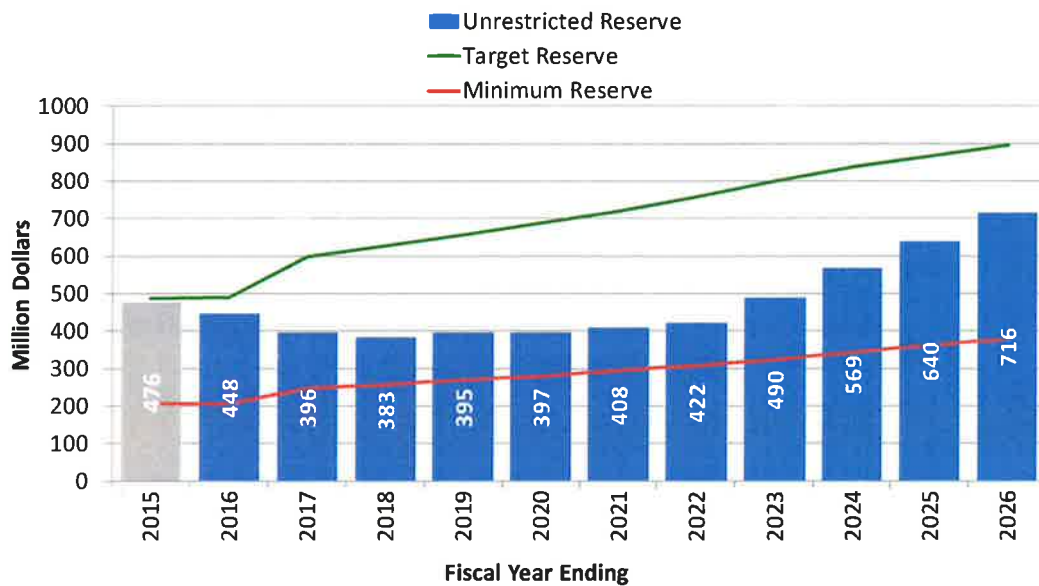
We incorporate ten-year forecasting into our biennial budget process for a sound financial reason. This is the way to give our Board of Directors clear information and guidance on where Metropolitan finances are heading long-term based on the budget and rates they establish. Further, throughout the two years after the budget is set, we update the Board monthly about water sales and quarterly on a broader set of expenditure projections to maintain solid management practices on an ongoing basis.

In contrast the San Diego County Water Authority produces a long-range financial planning document that is entirely separate from its budget process. This forecast is conducted on a much less frequent basis than Metropolitan's long-range financial forecasting. We think that incorporating long-range financial forecasting into each and every budget cycle, every two years, has been a sound practice and has helped keep Metropolitan on sound financial footing. For Water Authority staff to state that Metropolitan has no long-range financial planning is incorrect and is refuted by each and every Metropolitan budget. Thank you.

TEN-YEAR FINANCIAL FORECAST

The ability to ensure a reliable supply of high quality water for Metropolitan’s 26 member agencies depends on Metropolitan’s ongoing ability to fund operations and maintenance, maintain and augment local and imported water supplies, fund replacements and refurbishment of existing infrastructure, and invest in system improvements. This ten-year plan builds on the biennial budget to support long range resource, capital investment and operational planning. As such, it includes a forecast of future costs and the revenues necessary to support operations and investments in infrastructure and resources that are derived from Metropolitan’s planning processes while conforming to Metropolitan’s financial policies. These financial policies, which address reserve levels, financial indicators, and capital funding strategies, ensure sound financial management and fiscal stability for Metropolitan.

Projected Financial Indicators



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Ave Rate Increase	1.5%	1.5%	4.0%	4.0%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
Sales, MAF	1.90	1.63	1.70	1.70	1.75	1.75	1.75	1.75	1.80	1.80	1.80	1.80
Rev. Bond Cvg	2.7	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.3	2.4	2.6	2.7
Fixed Chg Cvg	2.4	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5
PAYGO, \$M	210	284*	120	120	120	120	120	123	127	130	133	137

* includes PVID land purchases

The figure above summarizes the financial metrics of the Ten-Year Financial Forecast. Metropolitan projects that the fixed charge coverage ratio will meet the board-established targets throughout the ten-year period. Revenue bond coverage will meet target in FY 2021/22. Reserve levels will be above minimums as established by board policy; PAYGo expenditures are set at a level that is consistent with the board policy adopted in 2014 that PAYGo expenditures would be funded from revenues, with the proposed amount set at

60 percent of the Capital Investment Plan (CIP); and projected rate increases are adequate to cover costs with moderated changes from one year to another.

The estimated overall rate increases result from increasing investments for the State Water Project (SWP) and the California Water Fix, investments in reliability through conservation and local resources, investments to maintain the conveyance and distribution system, and increasing operating and maintenance costs. Annual expenditures are expected to increase from \$1.7 billion in FY 2016/17 to \$2.4 billion by FY 2025/26, or an annual average increase of about 4.0 percent. Metropolitan's share of the costs for the California Water Fix is expected to increase to about \$246 million by FY 2025/26. During this same period, capital investments are expected to be about \$2.1 billion. To finance these capital investments, the ten-year forecast anticipates funding \$1.2 billion of the CIP from water sales revenues, or PAYGo. The balance of the CIP, or \$0.9 billion, would be financed by issuing revenue bond debt, either fixed or variable.

Planning is necessary for Metropolitan to successfully fund the many investments necessary to meet the challenges facing the region over the next ten years with manageable rate increases. Among the more significant challenges are:

- Investing in the elements of the 2015 IRP Update to ensure reliable water supplies for Metropolitan's service area and preparing for uncertainty.
- Continuing to provide supply reliability through a diversified portfolio of actions to stabilize and maintain imported supplies.
- Meeting future growth through increased water conservation and the development of new local supplies, while protecting existing supplies, to achieve higher retail water use efficiency, in compliance with state policy.
- Pursuing a comprehensive transfer and exchange strategy.
- Building storage in wet and normal years to manage risks and drought.
- Funding an estimated \$2.1 billion capital program that provides projects meeting water quality, reliability, stewardship and information technology directives.

ASSUMPTIONS FOR THE TEN-YEAR FORECAST

The following table summarizes key assumptions that underlie the ten-year forecast.

Fiscal Year Ending	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Sales, MAF	1.70	1.70	1.75	1.75	1.75	1.75	1.80	1.80	1.80	1.80
CRA diversions, MAF	1.01	1.04	1.06	1.08	1.07	1.06	1.06	1.06	1.06	1.04
SWP allocation, %	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
CIP, \$M	200	200	200	200	200	205	211	217	222	228
PAYGO, \$M	120	120	120	120	120	123	127	130	133	137
Conservation, \$M	27	32	38	38	38	38	38	38	38	38
CA Water Fix, \$M	-	-	20	38	63	96	133	169	206	246
Inflation, %	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%
Interest on investments, %	1.25%	1.30%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%
Interest rate, fixed bonds, %	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Interest rate, variable bonds, %	0.45%	0.80%	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%

Metropolitan's principal sources of water supplies are the SWP and the Colorado River. Metropolitan receives water delivered from the SWP under State Water Contract (SWC) provisions, including contracted supplies, use of carryover storage in San Luis Reservoir, and surplus supplies. Metropolitan holds rights to a basic apportionment of Colorado River water and has priority rights to an additional amount depending on availability of surplus supplies. The Supply Programs supplement these SWP and Colorado River supplies. The SWP and Colorado River sources derive from two different hydrologic regions, which have helped buffer shortages. The ten-year forecast assumes an average hydrology on both regions. Together with Metropolitan's Supply Programs, dry periods in either region can be managed.

The CIP has been further reduced from prior forecasts to maintain affordability throughout the ten-year period, reduce debt service, and provide headroom to absorb the additional costs of the California Water Fix. CIP projects have been carefully reviewed, scored and ranked to ensure that only the projects necessary to deliver water reliably and safely while meeting all regulatory requirements are included.

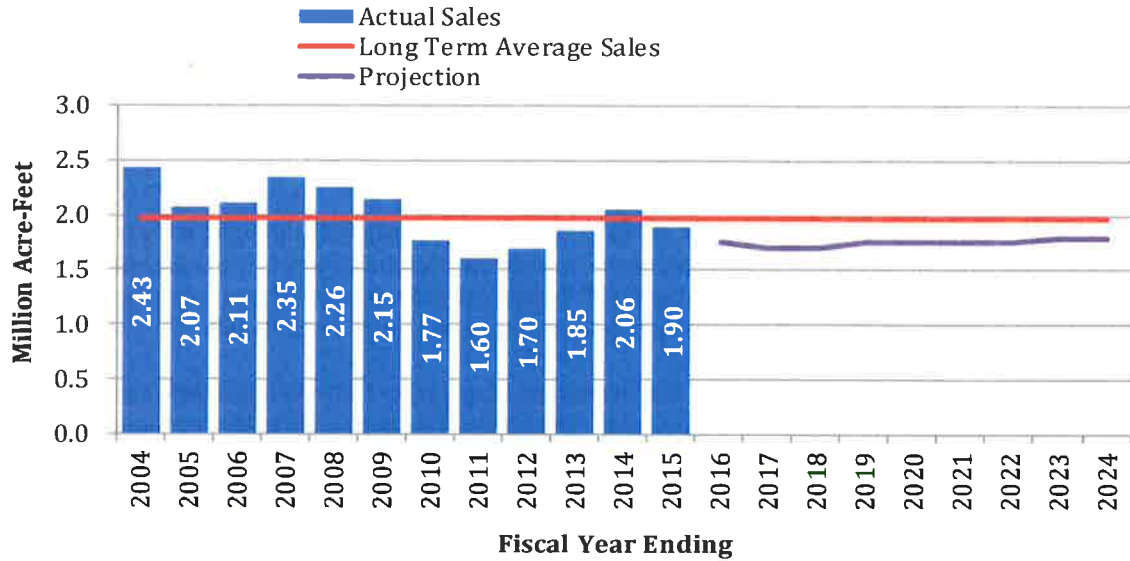
The inflation factor is based on forecasts by economists and is applied to Metropolitan's O&M expenses, including labor, chemicals, and other O&M expenses. The interest rate applicable to Metropolitan's investment portfolio is based on an analysis of the current forward curve for investments over a ten-year period. This interest rate forecast informs the interest rate applicable to variable rate bonds. The interest rate for fixed rate bonds is also based on forecasts.

WATER SALES FORECAST

Water sales revenue provides approximately 80 percent of the revenues necessary to support Metropolitan's capital and operating costs. The 2015 IRP Update provides the basis for the water sales forecast over the ten years. It is expected that demand for Metropolitan supplies will remain relatively flat over the ten-year period, from 1.70 million acre-feet in 2016/17 to 1.85 million acre-feet by 2025/26. This forecast includes the San Diego County Water Authority exchange agreement (exchange agreement) water deliveries. The 2015 IRP Update contemplates continued investment in local resources and retail and regional conservation measures to meet state policy regarding water use efficiency. By 2025/26, conservation and water efficiency initiatives will result in a further reduction of regional water use by an estimated 163,000 acre-feet, which reflect efforts to meet state policy to reduce per capita retail water use by 20 percent by 2020. Local resource augmentation will result in approximately 157,000 acre-feet of additional local supply, including production already anticipated from existing programs. These local supplies and increased conservation and water use efficiency reduce the need to import water and reduce expected water sales by Metropolitan.

The figure below shows historic and forecast water sales, including the exchange agreement water. Long-term, Metropolitan's sales have averaged just under 2.0 million acre-feet. As noted above, expected sales are forecast to be below this average at 1.85 million acre-feet by 2025/26. Under changed economic, climatic and hydrologic conditions, sales over the next ten years could range between 1.5 million acre-feet and 2.0 million acre-feet 80 percent of the time.

Water Sales, MAF



SOURCES OF FUNDS

Revenues

Through 2025/26, receipts from rates and charges, which include the RTS, Capacity Charge and water sales revenues, collected from the member agencies will account for approximately 92 percent of total revenues. Total revenues are projected to increase from about \$1.6 billion in 2016/17 to \$2.5 billion in 2025/26. This increase is almost entirely attributed to increases in water rates and charges.

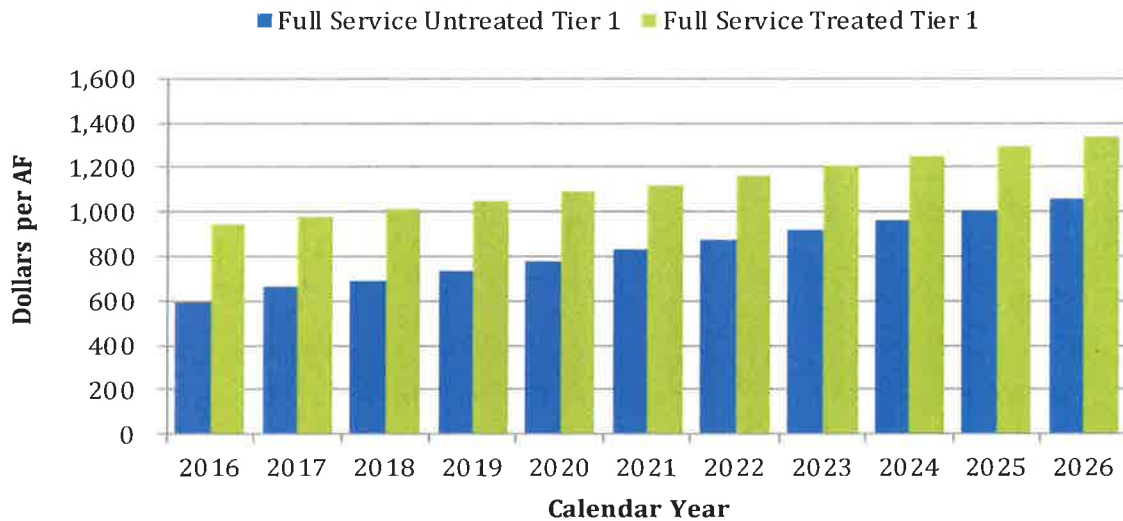
Water Rates and Charges

The table below shows the estimated unbundled water rates and charges under the current rate structure. Components of the rate structure may increase at different rates depending on the costs recovered. The full-service treated Tier 1 water rate is estimated to be approximately \$1,344 per acre-foot by January 1, 2026, compared to \$942 per acre-foot on January 1, 2016, an average increase of 3.6 percent per year over the ten-year period.

Rates & Charges Effective January 1st	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Tier 1 Supply Rate (\$/AF)	\$156	\$201	\$209	\$214	\$226	\$238	\$245	\$250	\$261	\$273	\$285
Tier 2 Supply Rate (\$/AF)	\$290	\$295	\$295	\$295	\$295	\$295	\$295	\$295	\$295	\$295	\$295
System Access Rate (\$/AF)	\$259	\$289	\$299	\$320	\$335	\$358	\$383	\$412	\$440	\$469	\$499
Water Stewardship Rate (\$/AF)	\$41	\$52	\$55	\$59	\$60	\$61	\$61	\$62	\$62	\$62	\$62
System Power Rate (\$/AF)	\$138	\$124	\$132	\$145	\$162	\$178	\$187	\$193	\$198	\$204	\$210
Full Service Untreated Volumetric Cost (\$/AF)											
Tier 1	\$594	\$666	\$695	\$738	\$783	\$835	\$876	\$917	\$961	\$1,008	\$1,056
Tier 2	\$728	\$760	\$781	\$819	\$852	\$892	\$926	\$962	\$995	\$1,030	\$1,066
Treatment Surcharge (\$/AF)	\$348	\$313	\$320	\$315	\$309	\$288	\$288	\$288	\$288	\$288	\$288
Full Service Treated Volumetric Cost (\$/AF)											
Tier 1	\$942	\$979	\$1,015	\$1,053	\$1,092	\$1,123	\$1,164	\$1,205	\$1,249	\$1,296	\$1,344
Tier 2	\$1,076	\$1,073	\$1,101	\$1,134	\$1,161	\$1,180	\$1,214	\$1,250	\$1,283	\$1,318	\$1,354
Readiness-to-Serve Charge (\$M)	\$153	\$135	\$140	\$143	\$148	\$156	\$168	\$182	\$196	\$211	\$228
Capacity Charge (\$/cfs)	\$10,900	\$8,000	\$8,700	\$9,000	\$9,300	\$9,700	\$10,000	\$10,500	\$11,100	\$11,100	\$11,300

The following figure shows the volumetric cost per acre-foot for Tier 1 Full Service untreated water and Tier 1 Full Service treated water. A proposal will be presented to the Board for consideration to address fixed cost recovery of Treatment costs which are currently recovered through a volumetric rate.

Volumetric Cost, \$ AF



Property tax revenue is expected to increase from \$98.3 million in FY 2016/17 to \$120.1 million in FY 2025/26. This projection assumes the Board maintains the ad valorem tax rate at .0035 percent of assessed valuations, by suspending the limit under MWD Act Section 124.5, and assessed value increases by 2.5 percent per year. By FY 2025/26 almost all of the revenues are used to pay SWP costs, which would include Metropolitan’s share of the California Water Fix costs.

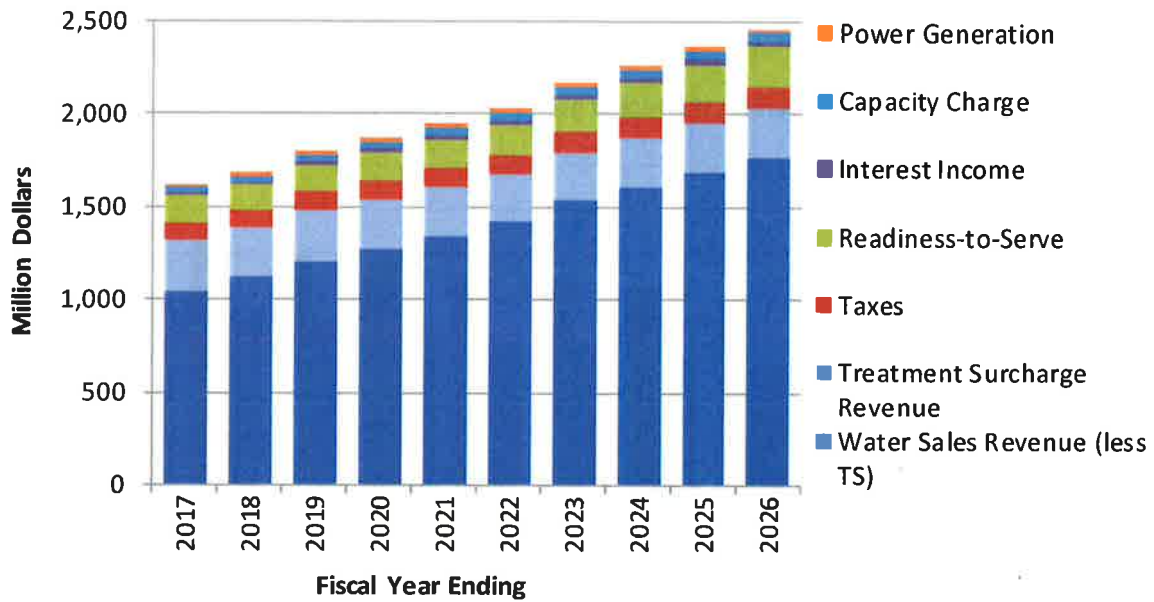
Power sales from Metropolitan’s hydroelectric power recovery plants are projected to average about \$18.5 million per year over this ten-year period. Metropolitan has 16 small hydroelectric plants on its distribution system. The combined generating capacity of these plants is approximately 122 MW. These revenues are dependent on the amount of water that flows through Metropolitan’s distribution system and the price paid. Power from some of the plants is sold under existing contracts that are priced significantly higher compared to the prices currently being offered for renewable power.

Benefits from the hydroelectric plants’ environmental attributes including the Renewable Energy Credits (RECs) are included in the existing contracts and for the Etiwanda Power Plant. Renewable Portfolio standard (RPS) California Energy Commission certification for the DVL units was received in 2009; the associated RECs are sold on an unbundled basis.

Interest income is projected to increase from \$13.6 million in FY 2016/17 to \$28.3 million in FY 2025/26 as a result of increased balances and higher average returns of 1.25 percent to 1.7 percent from FY 2016/17 to FY 2025/26. Metropolitan earns interest on invested fund balances and uses this income to reduce the costs that must be recovered through rates and charges. These invested funds also act as a partial hedge against changes in interest rates on Metropolitan’s variable rate debt obligations. Interest income will vary over the ten-year forecast period as interest rates and cash balances available for investments will fluctuate. Miscellaneous income includes items like leases and late fees and is forecasted to increase from \$12.0 million in FY 2016/17 to \$15 million in FY 2025/26.

Forecasted revenues by major category are shown in the figure below.

Revenue Forecast, \$ millions



Other Funding Sources

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

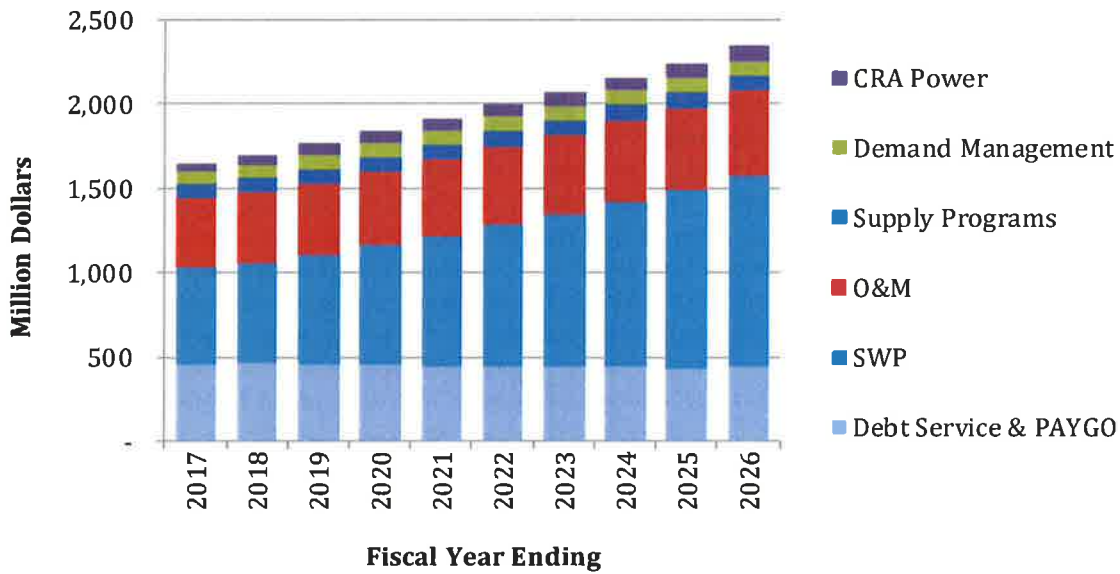
USES OF FUNDS

Over the next ten years, total annual expenditures are projected to range from \$1.7 billion to \$2.4 billion.

Expenses

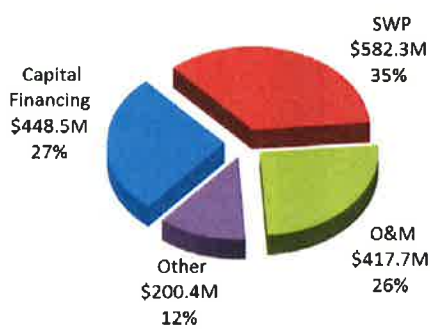
Expenses are grouped into six major categories: SWP, O&M, demand management programs, CRA power costs, supply programs, and capital financing. The first figure below illustrates the general trends in expenses over the ten-year period from FY 2016/17 to FY 2025/26. The second figure following shows the comparison of FY 2016/17 to FY 2025/26 in terms of the contribution of expenses to the total.

Expenditure Forecast, \$ millions

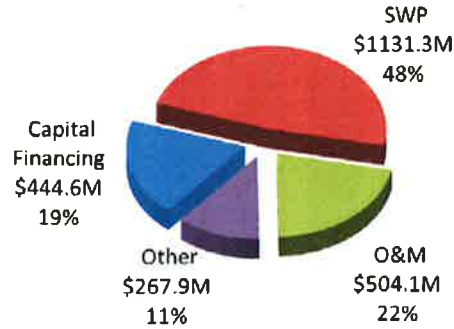


Expenditure Forecast, Contribution by Major Area

FY 2016/17: \$1.65B



FY 2025/26: \$2.35B



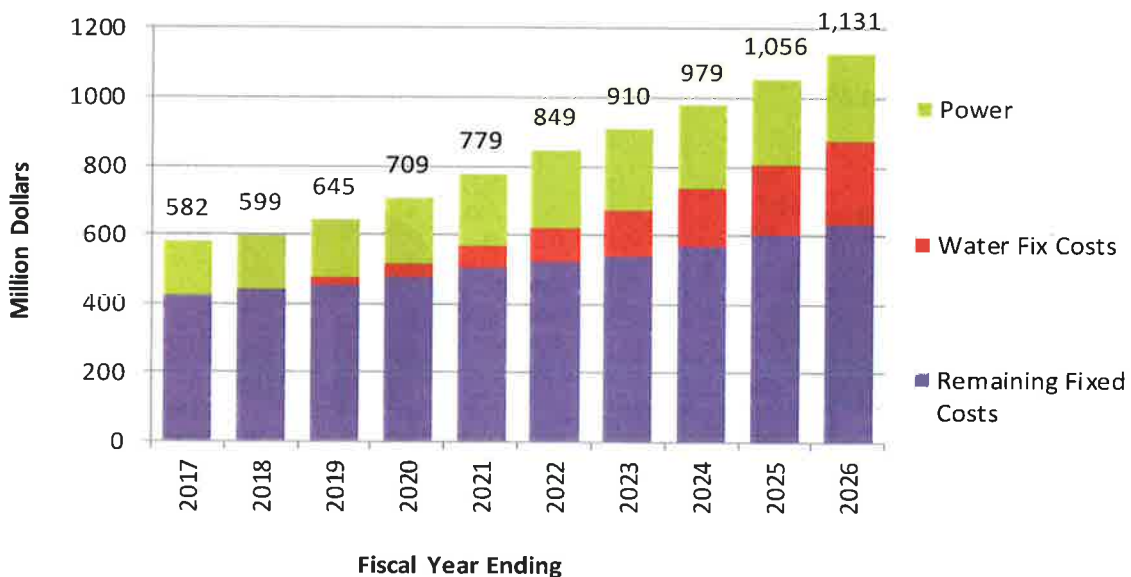
State Water Project

Metropolitan is one of 29 agencies that contract with the State of California for service from the SWP. Metropolitan is obligated to pay its share of the capital and minimum operations, maintenance, power, and replacement charges of the SWP regardless of the amount of water actually received. In addition, Metropolitan pays the power costs to convey the water. The ten-year forecast assumes that SWC annual costs, including power, will increase from \$582 million in FY 2016/17 to \$1,131 million in 2015/26, as shown in the figure below. SWC costs account for 35 percent of Metropolitan's expenditures in FY 2016/17, growing to 47 percent in FY 2025/26, primarily due to the California Water Fix costs. These costs account for \$246 million in FY 2025/26. Water supply benefits from the California Water Fix are realized outside the ten-year period of the forecast, as are operations, maintenance and energy costs. The remainder of the fixed costs is based upon information provided by the Department of Water Resources, and is associated with Transportation Capital and Minimum Operations & Maintenance, and the Delta Water Supply Capital and Minimum Operations & Maintenance. Variable SWP power costs are projected to gradually increase over the ten-year period.

Power costs will vary depending on the price of electricity, total system deliveries, storage operations, and the amount of water pumped on the SWP. SWP variable power costs are projected to increase about 6.2 percent per year over the ten-year forecast period. Increasing costs affecting the SWP include the cost of emissions allowances, adding renewable energy to the SWP power portfolio, and using the California Independent System Operator grid to transmit power from generation sources to the SWP load locations. The SWP owns generating resources, including the Hyatt complex, recovery generation units on the Aqueduct, and a contract for power from the Kings River Conservation District's Pine Flat generating facility. The SWP is a participant in the Lodi Energy Center, a natural gas-fired combined cycle generating facility located in Lodi, California, and operated by the Northern California Power Agency. The SWP has acquired renewable resources. Additional resources necessary to meet the balance of the project's energy requirements are obtained from the wholesale energy market, which exposes the SWP to wholesale energy market price volatility. Net flows through the SWP that incur power are expected to average about 1.0 MAF per year.

The total SWC costs are shown in the figure below. The SWP is described under the General District Requirements section of the Biennial Budget.

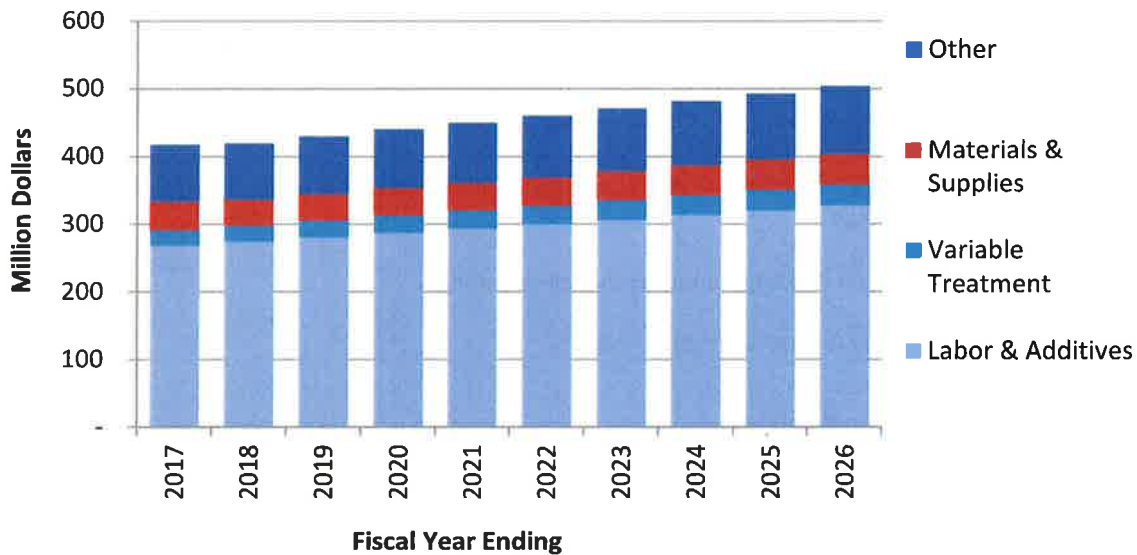
SWP Forecast, \$ millions



Operations and Maintenance

O&M costs in FY 2025/26 are projected to be \$504 million. This represents an average annual increase of 2.1 percent from FY 2016/17. During this time frame, inflation is assumed to be 2.25 percent. The ten-year forecast assumes Metropolitan continues to fully fund the annual required contribution to meet future retiree medical costs (Other Post-Employment Benefits, or OPEB) and retirement benefits.

Figure 14. O&M Forecast, \$ millions



Demand Management

Demand management costs include funding for the Local Resource Programs (LRP) and the Conservation Credit Program (CCP) and are projected to increase from \$75.1 million in FY 2016/17 to \$84.5 million in FY 2025/26. The LRP costs are projected to be fairly flat over the ten-year period at about \$45.0 million per year. As the yield from existing LRP projects receiving incentives decreases, new projects are expected to receive funding. The CCP costs are projected to increase from \$27.0 million in FY 2016/17 to \$38 million in FY 2018/19, and remain flat through the remainder of the ten-year period. This program provides continued funding of residential, commercial, and outdoor conservation programs.

Demand Management programs are described under the General District Requirements section of the Biennial Budget.

CRA Power Costs

CRA Power costs are projected to increase from \$46.6 million in FY 2016/17 to \$89.7 million in FY 2025/26. Power costs will vary depending on the price of electricity, Metropolitan's resource portfolio to meet electricity needs, storage operations, and the amount of water pumped on the CRA. Due to the expiration of the SCE Service and Interchange Agreement, Metropolitan will be buying more supplemental power and will have exposure to market prices.

Power costs are described under the General District Requirements section of the Biennial Budget. Colorado River diversions are expected to average about 1.0 MAF over the ten-year period, slightly more than deliveries as water is stored.

Supply Programs

Supply programs increase slightly over the ten-year period from \$78.7 million in FY 2016/17 to \$93.7 million in FY 2025/26. The estimates represent expenditures for expected conditions. If extreme weather conditions are experienced, these cost estimates could be much higher or lower. If higher than normal demand is coupled with lower than normal supply, supply program costs could be significantly higher.

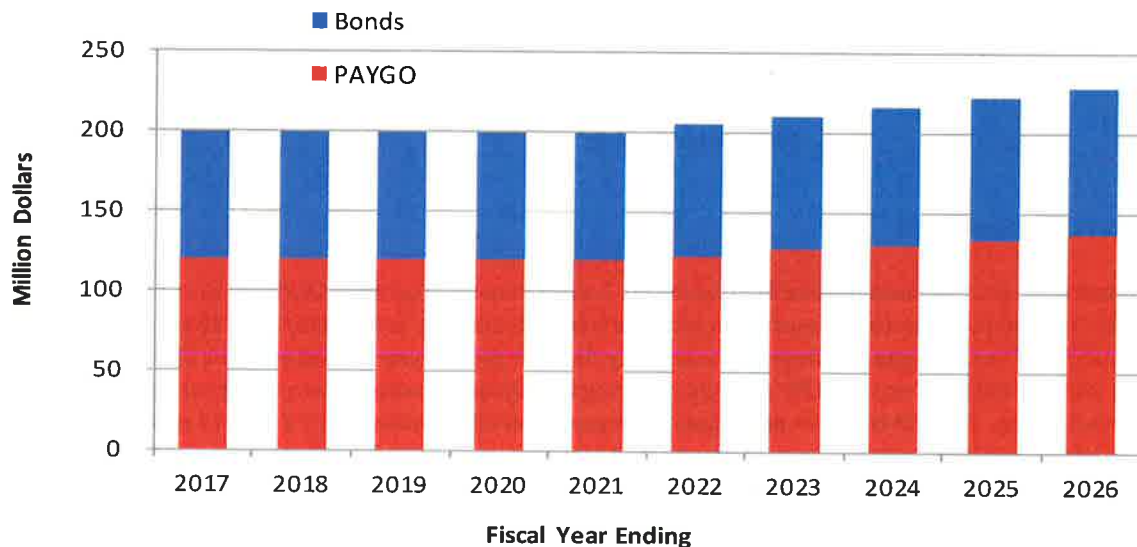
A description of Metropolitan's Supply Programs is provided under the General District Requirements section of the Biennial Budget.

Capital Investment Plan

The ten-year projected CIP through FY 2025/26 is estimated at \$2.1 billion. The CIP continues to reflect the deferral of facility expansion projects. The CIP focuses on projects that enhance reliability while focusing on necessary refurbishment and replacement of aging infrastructure. Accordingly the O&M impact from the resulting CIP is negligible. Without this emphasis on repair and replacement of aging facilities O&M expenses could potentially be much higher.

The following figure shows the funding source for the ten-year CIP.

CIP Ten-Year Forecast and Funding Sources, \$ millions



Capital Financing Options

The CIP will be funded from a combination of bond proceeds and operating revenues. In order to mitigate increases in water rates, provide financial flexibility, and support Metropolitan's high credit ratings including maintaining revenue bond debt service and fixed charge coverage ratios, it is anticipated that 60 percent of the CIP will be funded from current revenues, or PAYGo. This level of PAYGo funding is appropriate given that a significant portion of future CIP projects has been identified as R&R projects. This level of PAYGo also ensures that Metropolitan meets its coverage targets by generating a margin of revenues over operating and debt expenditures. The additional revenue required to meet Metropolitan's revenue bond debt service coverage target of 2.0 times and fixed charge coverage of 1.2 times is available to fund the CIP. PAYGo funding throughout the ten-year horizon of the planning period ensures that current customers are always

contributing funds towards the capital investments they are benefiting from, and not deferring these costs entirely to future generations of ratepayers.

Bond funded expenditures will include a combination of variable and fixed rate debt. Debt has been structured to mitigate near-term rate impacts and smooth out long-term debt service. The principal advantage of variable rate debt is the opportunity for a lower interest cost. Normally, short-term interest rates are lower than long-term interest rates for debt of comparable credit quality. If interest rates remain constant, Metropolitan will generally have significantly lower interest costs on variable rate debt than on fixed rate debt, even after remarketing and liquidity facility costs. Also, if interest rates decline, Metropolitan will benefit from lower interest costs without the necessity or cost of a refunding. If interest rates rise, variable rates could stay lower than the fixed rate originally avoided, and the longer the variable rate debt is outstanding at favorable spreads, the higher the break-even point becomes on fixed rate debt. Variable rate debt is used to mitigate interest costs over the long term, and provides a natural hedge against changes in investment earnings: when interest rates are high, interest costs on variable rate debt is higher but so are earnings from Metropolitan's investment portfolio. When interest rates are low, interest earnings are lower, but so are variable rate interest costs.

Fixed rate debt holders generally require some form of "call protection." Typically, fixed rate bonds are only redeemable a given number of years after their issuance and if the issuer pays a prepayment premium. Because the interest rate on variable rate debt is periodically reset, call protection is not important to variable rate debt holders. Variable rate debt, therefore, may generally be prepaid without premium on any date on which the interest rate is changed or on any interest payment date.

However, variable rate debt does have risks. These risks include:

- Rising interest rates. Because future interest rates are unknown, the costs of capital improvements financed with variable rate debt are more difficult to estimate for revenue planning purposes. Significant interest rate increases could cause financial stress.
- Liquidity facility renewal risk. Variable rate debt normally requires a liquidity facility to protect the investors and issuers against "puts" of a large portion or all of the debt on a single day. Liquidity facilities generally do not cover the full term of the debt. If an issuer's credit declines or the liquidity facility capacity is not available, the issuer runs the risk of not being able to obtain an extension or renewal of the expiring liquidity facility. In that event, the issuer may have to retire the debt or convert it to fixed rate debt.

In the last several years, Metropolitan has issued self-liquidity debt. Metropolitan is irrevocably committed to purchase all self-liquidity bonds tendered pursuant to any optional or mandatory tender to the extent that remarketing proceeds are insufficient and no standby bond purchase agreement or other liquidity facility is in effect. Metropolitan's obligation to pay the purchase price of any tendered self-liquidity bonds is an unsecured, special limited obligation of Metropolitan payable from net operating revenues. In addition, Metropolitan's investment policy permits it to purchase tendered self-liquidity bonds as an investment for its investment portfolio. So, while Metropolitan is only obligated to purchase tendered self-liquidity bonds from net operating revenues, it may use the cash and investments in its investment portfolio to purchase tendered self-liquidity bonds. Metropolitan has not secured any liquidity facility or letter of credit to pay the purchase price of any tendered self-liquidity bonds; however, Metropolitan has entered into revolving credit agreements with which it may make borrowings for the purpose of paying the purchase price of self-liquidity bonds.

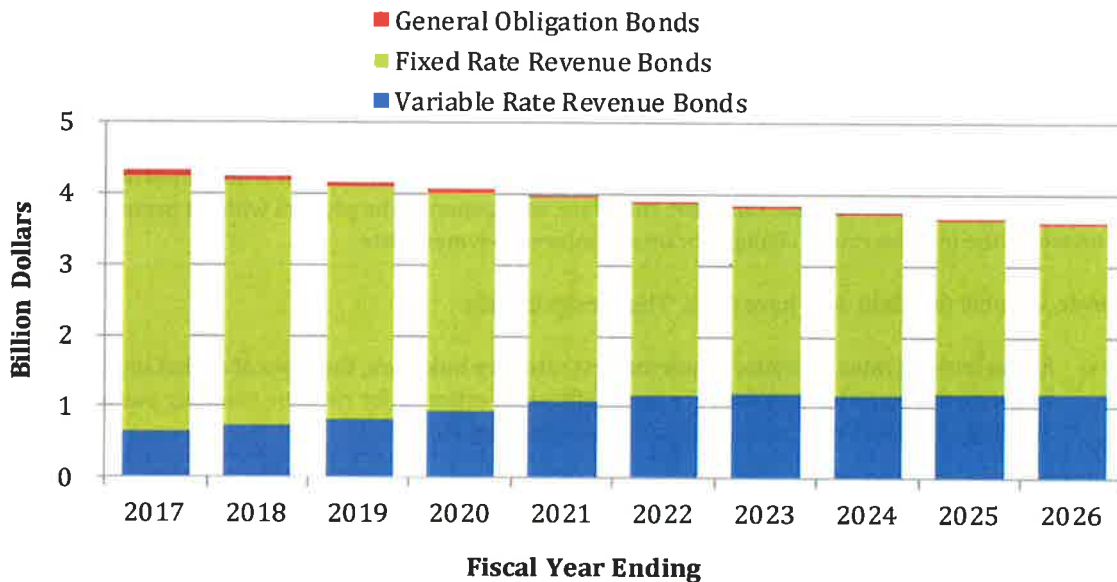
Sales of variable rate debt issues are more complex than fixed rate debt issues. Larger issuers often issue a portion of their debt as variable rate debt. Also, if construction costs are uncertain a borrower can use variable rate debt initially and convert to fixed rate debt in the amount needed after construction is completed.

Debt Financing

It is anticipated that there will be about \$2.1 billion of capital expenditures over the ten-year period. Of this, \$0.9 billion, or 40 percent of future capital expenditures, are anticipated to be funded by debt proceeds. Outstanding bond debt, including revenue and GO bonds, as of December 31, 2015 is \$4.35 billion. The net assets of Metropolitan at June 30, 2015 were \$6.9 billion. Metropolitan may not have outstanding revenue bond debt in amounts greater than 100 percent of its equity. As of June 30, 2015, the debt to equity ratio was 63 percent.

Total outstanding debt is illustrated below. Total outstanding debt is estimated to be \$3.6 billion by FY 2025/26.

Outstanding Debt, \$ billions

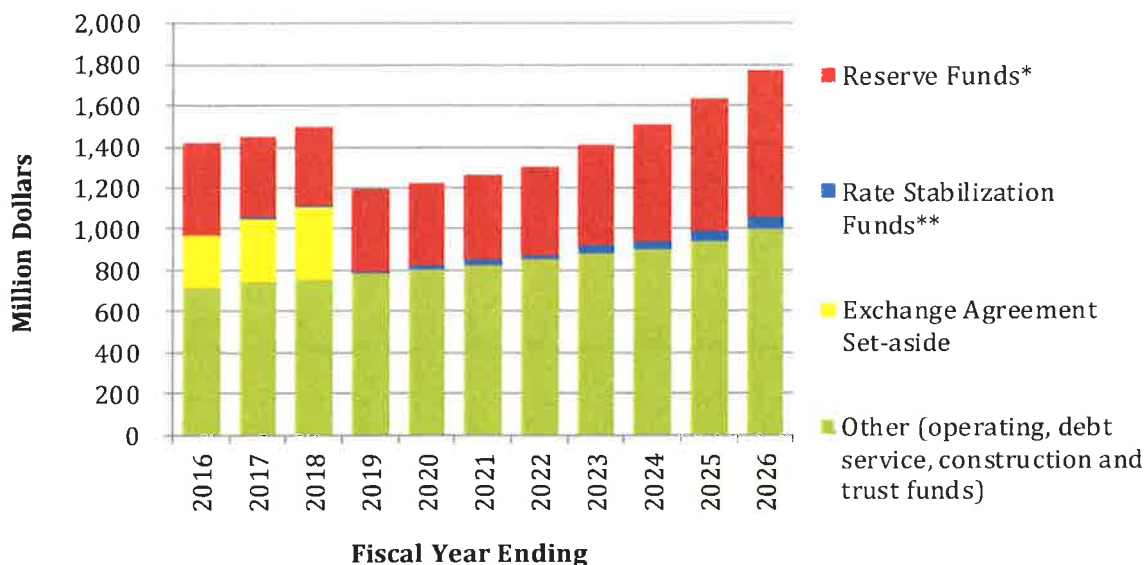


Metropolitan's variable rate debt as a percentage of total revenue bond debt is projected to increase to 31 percent over this time period as fixed rate debt is retired and new variable rate debt is issued. The appropriate amount of variable rate debt will continue to be monitored and adjusted depending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

FUND BALANCES AND RESERVES

As shown in the figure below, over the next ten years total fund balances are projected to increase to \$1.8 billion in FY 2025/26. The Exchange Agreement Set-aside designated fund is no longer needed after 2018 by which time all appeals in the SDCWA v MWD litigation are expected to be decided.

End of Year Fund Balances, \$ millions



* Includes Water Rate Stabilization Fund and Revenue Remainder Fund. Working capital borrowings have been used, in part, to replace revenues that have been deposited to the Exchange Agreement Set-aside Designated Fund.

** Includes Water Stewardship Fund and Treatment Surcharge Stabilization Fund.

FINANCIAL RATIOS

Revenue bond debt service coverage is one primary indicator of credit quality, and is calculated by dividing net operating revenues by debt service. Revenue bond debt service coverage measures the amount that net operating revenues exceed or "cover" debt service payments over a period of time. Higher coverage levels are preferred since they indicate a greater margin of protection for bondholders. For example, a municipality with 2.0 times debt service coverage has twice the net operating revenues required to meet debt service payments. The ten-year forecast projects that Metropolitan's revenue bond coverage ratio achieves 2.0 times during the last half of the period. Metropolitan's minimum coverage policy is vital to continued strong credit ratings and low cost bond funding.

In addition to revenue bond debt service coverage, Metropolitan also measures total coverage of all fixed obligations after payment of operating expenditures. This additional measure is used primarily because of Metropolitan's recurring capital costs for the State Water Contract. Rating agencies expect that a financially sound utility consistently demonstrate an ability to fund all recurring costs, whether they are operating expenditures, debt service payments or other contractual payments. The ten-year forecast projects that Metropolitan's fixed charge coverage ratio is at least 1.2 times over the ten-year period. These levels help maintain strong credit ratings and access to the capital markets at low cost, and provides PAYGo funding for the CIP.

Ten-Year Financial Forecast, Sources and Uses of Funds, \$ millions

Fiscal Year Ending	2017 Proposed	2018 Proposed	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
SOURCES OF FUNDS										
Revenues										
Taxes	98.3	100.5	102.8	105.1	107.4	109.8	112.3	114.8	117.4	120.1
Interest Income	13.6	12.4	19.1	19.8	20.5	21.1	22.3	24.1	26.1	28.3
Hydro Power	15.3	21.6	22.2	22.7	22.4	21.8	23.1	23.3	21.8	22.3
Fixed Charges (RTS & Capacity Charge)	182.3	172.7	178.8	184.0	192.0	203.5	218.2	234.5	250.3	266.7
Treatment Surcharge Revenue	272.9	261.3	275.6	273.1	261.9	251.2	259.0	258.1	257.3	256.6
Water Sales Revenue (less TS)	1,032.3	1,114.2	1,197.7	1,259.9	1,335.5	1,413.3	1,528.1	1,601.8	1,679.5	1,760.7
Miscellaneous Revenue	12.0	12.1	12.4	12.8	13.3	13.7	14.0	14.3	14.6	15.0
Bond Proceeds	89.6	79.7	79.7	79.7	79.7	79.7	89.4	79.4	89.4	109.2
Working Capital Borrowing	46.6	47.4	-	-	-	-	-	-	-	-
Sub-total Revenues	1,763.0	1,822.0	1,888.3	1,957.3	2,032.6	2,114.1	2,266.3	2,350.3	2,456.3	2,578.9
Fund Withdrawals										
R&R and General Fund	120.0	120.0	120.0	120.0	120.0	123.0	127.0	130.0	133.0	137.0
Bond Funds for Construction	-	0.3	0.3	0.3	0.3	2.8	-	7.2	0.1	-
Treatment Surcharge Stabilization Fund *	-	3.2	-	-	-	6.3	-	-	-	4.0
Decrease in Rate Stabilization Fund	94.2	23.0	-	9.8	2.9	-	-	-	-	-
Sub-total Fund Withdrawals	214.2	146.5	120.3	130.1	123.2	132.0	127.0	137.2	133.1	141.0
TOTAL SOURCES OF FUNDS	1,977.2	1,968.5	2,008.6	2,087.4	2,155.8	2,246.1	2,393.3	2,487.5	2,589.4	2,719.9
Fiscal Year Sales & Exchange (MAF)	1.68	1.70	1.74	1.76	1.75	1.75	1.79	1.80	1.80	1.80

Totals may not foot due to rounding.
* Not affected by treatment rate structure

Fiscal Year Ending	2017 Proposed	2018 Proposed	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
USES OF FUNDS										
Expenses										
State Water Contract	582.3	599.4	645.5	708.8	778.6	849.2	910.3	978.5	1,056.2	1,131.3
Supply Programs	78.7	81.7	83.8	84.4	84.8	87.8	89.6	91.6	93.7	93.7
Colorado River Power	46.6	54.4	64.6	70.1	74.0	76.5	78.8	83.0	85.7	89.7
Debt Service	328.5	344.1	338.4	334.4	320.5	317.4	308.5	311.9	298.1	307.6
Demand Management	75.1	75.9	82.0	84.5	84.5	84.5	84.5	84.5	84.5	84.5
Departmental O&M	387.7	388.7	397.5	406.4	415.6	424.9	434.5	444.3	454.3	464.7
Treatment Chemicals, Solids & Power	24.3	24.6	26.5	27.3	27.9	28.4	30.0	30.6	31.1	31.8
Other O&M	5.6	6.4	6.6	6.7	6.9	7.0	7.2	7.3	7.5	7.7
Sub-total Expenses	1,528.8	1,575.3	1,644.7	1,722.5	1,792.6	1,875.8	1,943.3	2,031.8	2,111.3	2,210.9
Capital Investment Plan	200.0	200.0	200.0	200.0	200.0	205.4	210.9	216.6	222.5	228.5
Fund Deposits										
R&R and General Fund	120.0	120.0	120.0	120.0	120.0	123.0	127.0	130.0	133.0	137.0
Revenue Bond Construction	9.6	-	-	-	-	-	5.4	-	-	17.7
Water Stewardship Fund	-	-	-	0.8	2.4	3.4	6.9	8.4	7.3	7.7
Exchange Agreement Set-aside	46.6	47.4	-	-	-	-	-	-	-	-
Treatment Surcharge Stabilization Fund *	6.7	-	10.6	9.9	2.3	-	1.2	1.8	0.2	-
Interest for Construction & Trust Funds	0.3	0.4	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.9
Increase in Required Reserves	65.1	25.4	32.7	33.6	38.0	37.8	46.1	37.7	62.8	55.6
Increase in Water Rate Stabilization Fund	-	-	0.0	-	-	0.2	51.8	60.5	51.6	61.5
Sub-total Fund Deposits	248.4	193.2	163.9	164.9	163.2	164.9	239.0	239.1	255.7	280.5
TOTAL USES OF FUNDS	1,977.2	1,968.5	2,008.6	2,087.4	2,155.8	2,246.1	2,393.3	2,487.5	2,589.4	2,719.9

Totals may not foot due to rounding.
* Not affected by treatment rate structure

Ten-Year Financial Forecast, Coverage Ratios and Fund Balances, \$ millions

Fiscal Year Ending	2017 Proposed	2018 Proposed	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
RATIOS										
Fixed Charge Coverage	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5
Revenue Bond Coverage	1.6	1.6	1.7	1.8	1.9	2.0	2.3	2.4	2.6	2.7
Var. Rate Debt as % of Rev. Bond Debt	15%	18%	20%	23%	27%	30%	31%	32%	33%	33%
RESTRICTED FUNDS EOY balance										
General Fund	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0
Other	637.2	652.6	673.9	695.3	719.7	741.8	778.0	790.4	834.7	894.1
Sub-total Restricted Funds	746.2	761.6	782.9	804.3	828.7	850.8	887.0	899.4	943.7	1,003.1
UNRESTRICTED FUNDS EOY balance										
Reserve Funds (1)	395.9	383.1	394.7	397.3	408.3	422.0	489.8	569.1	639.8	716.2
Treatment Surcharge Stabilization Fund	6.7	3.4	14.0	23.9	26.1	19.9	21.0	22.9	23.1	19.1
Water Stewardship Fund	-	-	-	0.8	3.2	6.6	13.5	21.8	29.1	36.9
R&R Fund	-	-	-	-	-	-	-	-	-	-
General Fund	-	-	-	-	-	-	-	-	-	-
Exchange Agreement Set-aside	303.5	350.9	-	-	-	-	-	-	-	-
Sub-total Unrestricted Funds	706.1	737.4	408.7	422.0	437.7	448.5	524.3	613.8	692.1	772.1
TOTAL FUNDS	1,452.3	1,499.0	1,191.6	1,226.4	1,266.4	1,299.2	1,411.3	1,513.2	1,635.8	1,775.2

Totals may not foot due to rounding.
(1) Includes Water Rate Stabilization Fund and Revenue Remainder Fund.