

STATE WATER PROJECT

OVERVIEW

The State Water Project (SWP), managed and operated by the Department of Water Resources (DWR), is the largest state-built, multipurpose, user-financed water project in the country. It was designed and built primarily to deliver water, but also provides flood control, generates power for pumping, is used for recreation, and enhances habitat for fish and wildlife. The SWP provides irrigation water to 750,000 acres of farmland, mostly in the San Joaquin Valley, and provides municipal and industrial water to approximately 25 million of California's estimated 37 million residents.

The SWP consists of a complex system of dams, reservoirs, power plants, pumping plants, canals and aqueducts to deliver water. Water from rainfall and snowmelt runoff is captured and stored in SWP conservation facilities and then delivered through SWP transportation facilities to water agencies and districts located throughout the Upper Feather River, Bay Area, Central Valley, Central Coast, and Southern California. Metropolitan receives water from the SWP through the California Aqueduct, which is 444 miles long. The budgeted costs for the SWP are as follows:

SWP Cost Summary, \$ millions

	2014/15 Actual	2015/16 Budget	2016/17 Proposed	Change from 2015/16	2017/18 Proposed	Change from 2016/17
Delta Water Charge: Capital	\$35.0	\$22.1	\$39.2	\$17.1	\$39.4	\$0.2
Delta Water Charge: OMP&R	68.7	56.5	102.1	45.6	105.3	3.3
Transportation Capital	122.9	147.9	137.3	(10.6)	139.8	2.5
Transportation OMP&R	145.4	128.2	177.4	49.2	184.0	6.6
Power, Variable	116.3	187.0	155.3	(31.7)	162.8	7.5
Power, OAPF	22.5	9.8	9.6	(0.2)	5.8	(3.8)
Credits	(72.5)	(36.3)	(38.6)	(2.3)	(37.9)	0.7
SWP Total ¹	\$438.3	\$515.0	\$582.3	\$67.3	\$599.4	\$17.1
SWC Dues	\$3,260	\$4,545	\$4,266	\$(279)	\$4,616	\$350
Acre-feet delivered	579,000	927,000	865,350	(61,650)	881,850	16,500

¹ Does not include Departmental costs reflected elsewhere in this Budget.

Annually, the DWR reviews and redetermines the water supply and financial aspects of the SWP as required by the SWC. This results in the annual Statement of Charges to the Contractors for each calendar year. The information that supports the Statement of Charges is published by the DWR as Appendix B to the appropriate Bulletin 132 (i.e., the Statement of Charges for Calendar Year 2016 is supported by Appendix B to Bulletin 132-15). DWR does not charge rates for water service. It does not develop a revenue requirement and then develop rates based on projected billing determinants for a calendar year. Rather, DWR apportions

its costs to the Contractors based on their proportionate share of estimated supply costs (Delta Water Charge) and transportation costs (Transportation Charge).

Metropolitan's budgeted SWP costs are based on the 2016 Statement of Charges and supporting Appendix B. Power costs are estimated by Metropolitan assuming a 50 percent allocation and use of the Central Valley storage programs.

STATE WATER CONTRACT

All water supply-related capital expenditures and operations, maintenance, power and replacement (OMP&R) costs associated with the SWP conservation and transportation facilities are paid for by 29 agencies and districts, known collectively as the State Water Contractors (Contractors). Through Calendar Year 2012, Metropolitan has paid about 60 percent of the total payments to DWR by all Contractors. Metropolitan's financial records show that total accumulated amounts paid under the SWC are \$10.7 billion through fiscal year 2013/14. Metropolitan's SWC expires on December 31, 2035.

The Contractors have long-term contracts with DWR for the delivery of SWP water and use of the SWP transportation facilities. Metropolitan signed the first State Water Contract (SWC) on November 4, 1960, and received its first delivery of SWP water in 1972. Metropolitan has a contractual right to a proportionate share of the project water that DWR determines is available for allocation to the Contractors. This determination is made each year based on existing supplies in storage, forecasted hydrology, and other factors. Available project water is then allocated to the Contractors in proportion to the amounts set forth in Table A of their SWCs (Table A Allocation). Under its SWC, Metropolitan is entitled to roughly 46% of the annual Table A Allocation.

Since inception, the SWC provided Contractors the ability to use the SWP to convey non-SWP water under certain circumstances. Specifically, Article 18(c)(2) of the original SWC addresses situations where there is a shortage in the supply of water made available under the contract and states "[T]he District, at its option, shall have the right to use any of the project transportation facilities which by reason of such permanent shortage in the supply of project water to be made available to the District are not required for delivery of project water to the District, to transport water procured by it from any other source: [p]rovided, [t]hat such use shall be within the limits of the capacities provided in the project transportation facilities for service to the District under this contract". However, Article 18(c)(2) only applied in the event of a permanent shortage was declared by DWR and it was unclear on how costs would be charged for using SWP facilities to transport nonproject water. In 1994, the Contractors and DWR negotiated the Monterey Amendment to the SWC, including Article 55, which made explicit that the Contractors' rights to use the portion of the SWP conveyance system necessary to deliver water to them (their "reaches") also includes the right to convey non-SWP water at no additional cost as long as capacity exists. Power for the conveyance of non-SWP water is charged at the SWP melded power rate. The Monterey Amendments also expanded the ability to carryover SWP water in SWP storage facilities, allowed Contractors to store water in groundwater storage facilities outside a Contractor's service area for later use, and permitted certain Contractors to borrow water from terminal reservoirs. These amendments, approved by Metropolitan's Board in 1995, offered the means for individual Contractors to increase supply reliability through water transfers and storage outside their service areas.

The SWC is predominantly a 'take-or-pay' agreement, with Contractors paying most water conservation and transportation costs regardless of the amount of water delivered. The charges to the Contractors include a SWP supply charge (Delta Water Charge) and a SWP transportation charge (Transportation Charge). The Delta Water Charge recovers both Capital and OMP&R costs for those facilities that conserve and create the actual water supply of the SWP. The Delta Water Charge is based on Contractors' cumulative Table A Allocations, and is paid regardless of whether Contractors receive any Table A Allocations in a given year.

The Transportation Charge recovers the costs associated with the various aqueduct reaches that deliver project water to the Contractors. The Capital and fixed OMPR portions of the SWP Transportation Charge recover costs from the Contractors based on their proportionate use of facilities. Unlike the Delta Water Charge, which is uniform for a unit of Table A water, the allocation of these portions of the Transportation Charge will vary based on the aqueduct segments needed to deliver water to a specific Contractor. The further a Contractor is from the Delta and the greater its capacity in the transportation facilities, the greater its allocation of the Capital and fixed OMPR Transportation Charges. The capacity of the SWP to deliver water decreases with distance from the Banks Pumping Plant, located in the Sacramento-San Joaquin Delta, as water is delivered to Contractors through the South Bay Aqueduct and the Coastal Branch Aqueduct, and to turnouts in the San Joaquin Valley and Southern California. Payment of the Transportation Charge entitles Contractors to the right to use their capacity in the SWP facilities for transportation of SWP or non-SWP water, on a space available basis, under the SWC. A Contractor that participates in the repayment of a particular reach, or segment of the SWP, has already paid the costs of using that reach for the conveyance of water supplies through the Transportation Charge. On average, Metropolitan pays about 63 percent of SWP transportation costs.

In addition to the charges for water supply and transportation facilities discussed above, DWR also charges for the power needed to deliver project water throughout the system. Two charges recover these power costs: the variable OMPR portion of the Transportation Charge (Variable Charge) and the Off Aqueduct Power Facilities (OAPF) charge. Because the SWC are cost recovery contracts, DWR invoices Contractors on an estimated basis for any calendar year, and then provides credits in later years once cost true-ups are finished.

The Variable Charge includes the annually estimated cost of purchased power including capacity and energy, cost of SWP power generation facilities, program costs to offset annual fish losses at the Banks Pumping Plant, purchased transmission services, and credits for sales of ancillary services and excess SWP system power sales. The Variable Charge is calculated on the basis of the energy required to pump an acre-foot of water to its take-out point multiplied by the system energy rate, less energy from the recovery generation plants. The system energy rate is a system-wide average rate calculated as the net cost of energy--total costs less revenues--divided by the net energy required to pump all water. That rate is applied to each acre-foot of water delivered to SWP customer based on the power required to pump the water to designated delivery points on the system. DWR can adjust the system energy rate as the calendar year progresses in order to reflect actual costs

The OAPF charge recovers the debt service and environmental remediation costs of power generation facilities not on the aqueduct, namely Reid Gardner Unit 4 and debt service associated with the South Geysers and Bottle Rock geothermal plants. The OAPF rate is calculated as the total annual estimated costs divided by the total energy required to pump all water. Recovery energy is not considered in this calculation. Each contractor's charge is the OAPF rate times the energy required to pump the contractor's water order.

The SWP uses low-cost hydroelectric and recovery generation resources, but they only provide about 50 percent of the SWP energy needs in an average water year. The SWP relies on the wholesale market and contractual resources with exposure to market price volatility for as much as 30 to 35 percent of its needs, using other contractual resources to fill in the difference.

The SWP energy required to move water to Metropolitan is related to the transportation on the East Branch through Devil Canyon and on the West Branch through Castaic. Because Metropolitan moves the largest amount of water on the SWP and Metropolitan's delivery points on the East and West Branch are at or near the southern extreme of the SWP, Metropolitan pays approximately 70 percent of the SWP power costs.

Cost of SWP Power for Metropolitan Terminal Delivery Points, \$ per Acre-Foot

	CY 2011 DWR	CY 2012 DWR	CY 2013 DWR	CY 2014 DWR	CY 2015 Preliminary	CY 2016 Estimated	CY 2017 Estimated
East Branch	\$197.34	\$224.27	\$230.27	\$280.07	\$241.17	\$206.33	\$205.08
West Branch	\$170.79	\$210.93	\$215.61	270.03	\$226.58	\$196.19	\$195.05

The SWP energy costs are impacted by the energy policies of the state of California. The SWP is acquiring renewable resources, primarily solar to date, to meet its obligation to reduce greenhouse gas emissions. The SWP energy costs are also impacted by the increasing cost of using the California Independent System Operator's (CAISO) grid to deliver power from its generating sources and the wholesale power market to its pumping loads. The SWP does not own high voltage transmission facilities and must use the CAISO grid to move power; the SWP is the largest payer of the CAISO transmission access rates. Finally, the SWP has an obligation to acquire and surrender emissions allowances for the generating facilities the SWP owns, primarily the Lodi Energy Center.

In total, Metropolitan paid 55 percent of the total SWP charges in Calendar Year 2014.

BUDGET HIGHLIGHTS

The budget for the SWP is increasing due to higher costs for salaries and benefits, rehabilitation and replacement expenditures, maintenance of aging infrastructure, and fish restoration agreement costs. Power costs are projected to be lower due to: higher water deliveries which spread fixed power costs over a larger usage base; lower market costs for natural gas, wholesale power, and cap-and-trade emissions allowances; and a recent favorable environment for negotiating renewable power contracts.

COLORADO RIVER AQUEDUCT

OVERVIEW

Metropolitan was established to obtain an allotment of Colorado River water, and its first mission was to construct and operate the Colorado River Aqueduct (CRA). The CRA consists of 5 pumping plants, 450 miles of high voltage power lines, 1 electric substation, 4 regulating reservoirs, and 242 miles of aqueducts, siphons, canals, conduits and pipelines terminating at Lake Mathews in Riverside County. Metropolitan first delivered CRA water in 1941 to its member agencies.

Metropolitan owns, operates, and manages the Colorado River Aqueduct. Metropolitan is responsible for operating, maintaining, rehabilitating, and repairing the CRA, and is responsible for obtaining and scheduling energy resources adequate to power pumps at the CRA's five pumping stations.

Under its contracts with the federal government, Metropolitan has a fourth priority to 550,000 acre-feet per year of Colorado River water, less certain use by higher priority holders and Indian tribes. Metropolitan also holds a fifth priority for an additional 662,000 acre-feet per year that exceeds California's 4.4 million acre-foot per year basic apportionment, 38,000 acre-feet under the sixth priority during the term of the Colorado River Water Delivery Agreement, and another 180,000 acre-feet per year when surplus flows are available. Metropolitan can obtain water under the fourth, fifth, and sixth priorities from:

- Water unused by the California holders of priorities 1 through 3;
- Water saved by extraordinary conservation programs, crop rotation, and water supply program; or,
- When the U.S. Secretary of the Interior makes available:
 - o Surplus water, Intentionally Created Surplus water, and/or
 - o Water apportioned to, but unused by, Arizona and Nevada.

CRA Cost Summary¹, \$ millions

	2014/15 Actual	2015/16 Budget	2016/17 Proposed	Change from 2015/16	2017/18 Proposed	Change from 2016/17
CRA Power	\$39.6	\$36.5	\$46.6	\$10.1	\$54.4	\$7.8
CRA Dues ²	\$0.6	\$0.6	\$0.7	\$0.1	\$0.7	\$0
Acre-feet delivered	1,185,493	876,000	857,100	(18,900)	881,850	24,750

¹ Does not include Departmental costs reflected elsewhere in this Budget

²Six Agency and Colorado River Authority of California

Budgeted CRA Power costs represent expenditures for the Hoover and Parker contracts and market power purchases to support budgeted CRA water deliveries.

CRA COSTS FOR TRANSPORTATION AND SUPPLY

Metropolitan incurs capital and operations and maintenance expenditures to support the CRA activities. The direct costs of the CRA activities include labor, materials and supplies, outside services to provide repair and maintenance, and professional services. The CRA activities benefit from Water Systems Operations support services and management supervision, as well as Administrative and General activities of Metropolitan. Metropolitan finances past, current and future capital improvements on the CRA, and capitalizes those improvements as assets. The costs of Metropolitan's capital financing activities are apportioned to service functions, such as the CRA.

The costs of the CRA supply portfolio developed by Metropolitan are paid by Metropolitan. The CRA supply portfolio is supported by Water Resource Management labor, materials and supplies. The CRA supply portfolio activities benefit from Water Resource Management support services and management supervision, as well as Administrative and General activities of Metropolitan. Metropolitan finances past, current and future capital improvements associated with the CRA supply portfolio capital assets and has capitalized these investments as Participation Rights.

Accordingly, the CRA costs for transportation and supply are reflected in the Departmental and General District Requirements budgets

CRA COST FOR POWER

Metropolitan currently has four basic sources of power available to meet CRA energy requirements: Hoover Power, Parker Power, Benefit Energy from Southern California Edison (SCE), and wholesale purchases from entities in the Western United States. Each source is obtained at different unit prices

Cost of CRA Power Sources, \$ per Megawatt-hour (MWh)

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Hoover ¹	\$16.81	\$17.26	\$18.60	\$29.74	\$15.84
Parker ¹	\$20.13	\$17.27	\$9.33	\$12.41	\$13.55
SP15, off-peak ²	\$23.73	\$23.44	\$33.15	\$40.24	\$33.15
SP15, on-peak ³	\$37.53	\$33.45	\$45.38	\$50.90	\$40.68

¹Information from Annual Reports for years 2011, 2012, 2013, 2014, and 2015

²SP15, off-peak price, described below, is used to determine the market value of Benefit Energy. Benefit Energy is available to Metropolitan for use only during off-peak hours. Thus, to the extent Benefit Energy is not available to meet Metropolitan's off-peak energy needs, Metropolitan must purchase off-peak power.

³SP15, on-peak, described below, is used to determine the market value of Metropolitan's sales of excess energy, if any. SP15 on-peak is also used to determine the pumping costs associated with pumping non-Metropolitan water through the CRA system, unless otherwise provided by contract.

Under a contract between the United States, Department of Energy, Western Area Power Administration, and Metropolitan, Metropolitan currently has a right to approximately 247 megawatts (MW) of capacity at the Hoover Power Plant, which is about 12 percent of the total generating capacity. Metropolitan has an annual firm energy entitlement of 1,291 megawatt-hours (MWh) (904 MWh in summer and 387 MWh in winter), which is about 28 percent of the total Boulder Canyon Project (Hoover) firm energy allocations. This contract expires in 2017; a follow-on contract is in the process of negotiations. Hoover Power Plant generation is cost-

based. Metropolitan acquired the benefits of the low-cost, federally funded hydroelectric plant in order to cost-effectively deliver Metropolitan's Colorado River water to its member agencies.

Under a contract among the United States, Department of the Interior, Bureau of Reclamation (Reclamation) and Metropolitan, Metropolitan funded the total cost of construction of Parker Dam and incidental facilities, and 50 percent of the construction cost of the Parker Powerplant. By providing the funding contribution, Metropolitan is entitled in perpetuity to 50 percent of the capacity and energy of the four Parker generating units, which is approximately 60 MW of capacity. Parker power is also cost-based. Like Hoover power, Metropolitan acquired the benefits of the low-cost, federally funded hydroelectric plant in order to cost-effectively deliver Metropolitan's Colorado River water to its member agencies.

Metropolitan has a Service and Interchange Agreement (Agreement) with SCE that provides services and benefits to both parties. The Agreement expires in 2017. Under the Agreement, SCE can dispatch Metropolitan's Hoover Dam and Parker Dam power entitlements and utilize excess transmission capacity on Metropolitan's CRA transmission system. SCE in return must meet Metropolitan's CRA energy and reliability requirements on a continuous basis. SCE must also provide Benefit Energy, the amount of which is determined annually, at no cost to Metropolitan for the benefits SCE receives.

Benefit Energy is the energy SCE provides to Metropolitan in consideration of the benefits SCE receives under the Service and Interchange Agreement. There is no charge for this energy. The amount of Benefit Energy available annually depends on the amount of water diverted through the CRA, and thereby the amount of energy used. Because SCE is obligated to meet the energy and reliability requirements of the CRA, SCE benefits if the CRA is not operating at full capacity. The relationship between the amount of Benefit Energy provided and pumping load is inverse: the more Metropolitan pumps, the less Benefit Energy SCE provides. Therefore, under a high diversion scenario, Metropolitan receives slightly less Benefit Energy to meet pumping loads than would be realized under a lower diversion scenario. The minimum amount of Benefit Energy provided annually by SCE is 200,000 MWh. The contract sets maximum and minimum amounts of Benefit Energy that can be allocated monthly. Benefit Energy can only be used to meet off-peak energy requirements. A follow-on contract to the Service and Interchange Agreement is in the process of negotiations.

Metropolitan's current basic resource mix is very cost effective but is not sufficient to pump Metropolitan's Colorado River water supplies in all years. For that reason, Metropolitan is required to purchase supplemental power to transport Colorado River water supplies in some years. As a result, Metropolitan requires that any party seeking to transport non-Metropolitan water through its Colorado River Aqueduct to purchase, or arrange for Metropolitan to purchase, the power supplies required to pump that water. The amount of power required to pump an acre-foot of water through the CRA is 2,000 kilowatt-hours. The additional pumping would also reduce the amount of Benefit Energy available to Metropolitan under the Service and Interchange Agreement with SCE. To compensate for this loss of Benefit Energy to Metropolitan, an additional 317 kilowatt-hours per acre-foot of water pumped must be provided to Metropolitan. Finally, any Colorado River water that is pumped through Metropolitan's CRA is diverted above Parker Dam and cannot generate energy for Metropolitan's use at the Parker Powerplant. To compensate for this loss, an additional 32 kilowatt-hours per acre-foot are required to make Metropolitan whole for undertaking to pump non-Metropolitan water through the CRA that would otherwise have flowed through the Parker Powerplant. In total, 2,349 kilowatt-hours (or 2.349 megawatt-hours) of energy must be provided to Metropolitan to convey each acre-foot of non-Metropolitan water supplies through the CRA.

Supplemental power can be purchased and transmitted to Metropolitan to pump non-Metropolitan water through the CRA. The market rate for electric energy prices is regularly tracked and published for various regions in California. Metropolitan uses the Platt's Market Report index and the California Independent System Operator (CAISO) Open Access Same-time Information System (OASIS) Day-Ahead Locational Marginal Price as reflective of the supplemental power costs for electric energy used for its pumping plants

on the CRA. The regional index applicable to energy sold for use on the CRA is designated as “South-of-Path 15”, or SP15.

Any party seeking to pump non-Metropolitan water through the CRA would have to purchase, or arrange for Metropolitan to purchase on its behalf, supplemental power. The market cost for purchases of power for the CRA is reflected in the SP15 index published by Platt’s Market Report or the CAISO OASIS Day-Ahead Locational Marginal Price. Because Metropolitan utilizes the pumping capacity on the CRA for its own water supplies during off-peak hours to minimize its costs, the pumping of non-Metropolitan water would occur during on-peak hours and the on-peak price index published in Platt’s Market Report or the CAISO OASIS Day-Ahead Locational Marginal Price is indicative of the price that would be paid to pump non-Metropolitan water.

Metropolitan from time to time sells excess energy into the wholesale market and realizes revenues, which offset the total cost of energy as reflected in the System Power Rate. If Metropolitan were to deliver additional water through the CRA, these sales become a lost opportunity. The on-peak price index published in Platt’s Market Report or the CAISO OASIS Day-Ahead Locational Marginal Price is indicative of the price that Metropolitan could realize by selling excess energy.

South-of-Path 15 On-Peak Energy Prices, \$/MWh

	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015
January	\$ 37.13	\$ 28.73	\$ 46.15	\$ 49.53	\$ 35.70
February	\$ 38.13	\$ 29.05	\$ 46.45	\$ 71.85	\$ 31.88
March	\$ 32.72	\$ 24.85	\$ 51.39	\$ 52.06	\$ 30.73
April	\$ 36.01	\$ 29.33	\$ 56.34	\$ 51.19	\$ 29.03
May	\$ 34.91	\$ 31.36	\$ 51.49	\$ 51.85	\$ 28.11
June	\$ 36.98	\$ 31.43	\$ 47.77	\$ 50.90	\$ 37.01
July	\$ 41.20	\$ 36.46	\$ 51.74	\$ 53.18	\$ 39.27
August	\$ 42.25	\$ 44.32	\$ 45.44	\$ 50.47	\$ 39.02
September	\$ 41.53	\$ 41.99	\$ 48.91	\$ 51.49	\$ 38.00
October	\$ 34.78	\$ 42.81	\$ 42.82	\$ 49.06	\$ 35.55
November	\$ 34.49	\$ 39.84	\$ 44.13	\$ 49.28	\$ 30.22
December	\$ 32.59	\$ 38.77	\$ 52.14	\$ 41.80	\$ 29.83

MWh = megawatt-hour, or 1,000 kilowatt-hours

As key contracts expire in 2017, namely Hoover and the SCE Service and Interchange Agreement, Metropolitan’s resource mix and costs will likely change. Metropolitan has an obligation to acquire and surrender emissions allowances for the generation that is imported into California. As these factors continue to develop, Metropolitan may face increased exposure to both on- and off-peak wholesale energy prices.

BUDGET HIGHLIGHTS

The budget for the CRA power is increasing due to expiration of the SCE Service and Interchange Agreement and the loss of Benefit Energy. Benefit Energy is replaced by market purchases, which increases the operating costs.

SUPPLY PROGRAMS

OVERVIEW

Metropolitan's principal sources of water supplies are the State Water Project (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 also holds rights to a basic apportionment of Colorado River water and has priority rights to an additional amount from the Colorado River depending on availability of surplus supplies. The Supply Programs supplement these SWP and Colorado River supplies. The budgeted costs for the Supply Programs are as follows:

Supply Programs Cost Summary, \$ millions

	2014/15 Actual	2015/16 Budget	2016/17 Proposed	Change from 2015/16	2017/18 Proposed	Change from 2016/17
Supply Programs ¹	\$94.3	\$75.3	\$78.7	\$3.4	\$81.7	\$3.0

¹ Does not include Departmental costs reflected elsewhere in this Budget.

Budgeted Supply Programs costs represent opportunities and actions associated with a 50 percent SWP allocation and deliveries on the CRA of 857.1 to 881.9 thousand acre-feet (TAF). On the SWP, Supply Program expenditures support maximizing storage capabilities of the Central Valley storage programs, utilizing transfer and exchange programs recently executed, and bringing the balance into the region. On the CRA, the expenditures support the Palo Verde Irrigation District land following program and the Imperial Irrigation District/Metropolitan Conservation Program, as well as other programs to conserve and develop supplies.

SUPPLY PROGRAMS HAVE BEEN DEVELOPED TO CONVEY ON THE SWP TRANSPORTATION SYSTEM

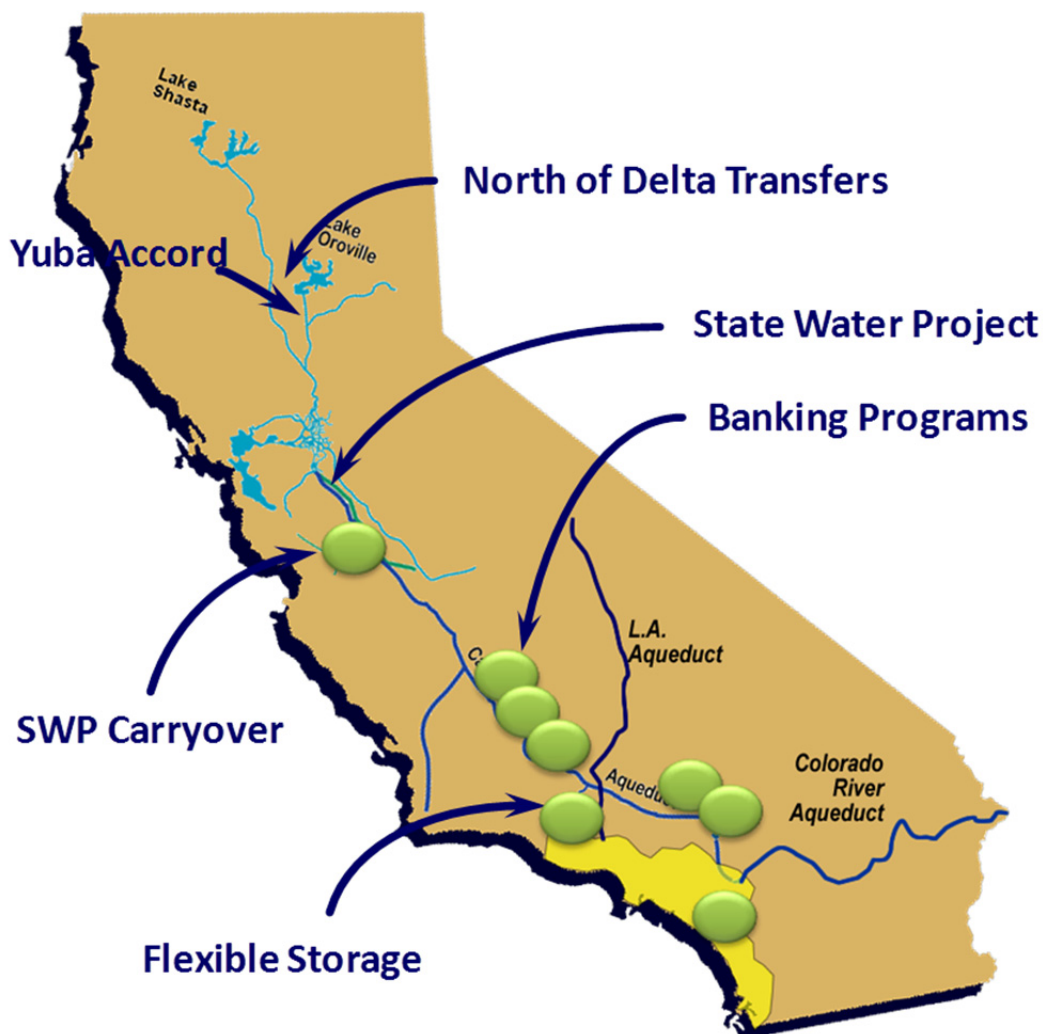
Since inception, the SWC provided Contractors the ability to use the SWP to convey non-SWP water under certain circumstances. Specifically, Article 18(c)(2) of the original SWC addresses situations where there is a shortage in the supply of water made available under the SWC and states, "[T]he District, at its option, shall have the right to use any of the project transportation facilities which by reason of such permanent shortage in the supply of project water to be made available to the District are not required for delivery of project water to the District, to transport water procured by it from any other source: [p]rovided, [t]hat such use shall be within the limits of the capacities provided in the project transportation facilities for service to the District under this contract". However, Article 18(c)(2) only applied in the event a permanent storage was declared by DWR and it was unclear on how costs would be charged for using SWP facilities to transport nonproject water. In 1994, the Contractors and DWR negotiated the Monterey Amendment to the SWC, including Article 55, which made explicit that the Contractors' rights to use the portion of the SWP conveyance system necessary to deliver water to them (their "Reaches") also includes the right to convey non-SWP water at no additional cost as long as capacity exists. Power for the conveyance of non-SWP water is charged at the SWP melded power rate. The Monterey Amendment also expanded the ability to carry over SWP water in SWP storage facilities, allowed participating Contractors to borrow water from terminal

reservoirs, and allowed Contractors to store water in groundwater storage facilities outside a Contractor's service area for later use.

These amendments, approved by Metropolitan's Board in 1995, offered the means for individual Contractors to increase supply reliability through water transfers, and storage outside their service areas.

Since adoption of the 1996 Integrated Resources Plan (IRP) and subsequent updates, Metropolitan has developed and actively managed a portfolio of supplies to convey through the California Aqueduct. Metropolitan submits delivery schedules to DWR for these supplies, and alters these schedules throughout the year based on changes in the availability of SWP and Colorado River water. The figure below shows the geographic location of the portfolio of supplies that Metropolitan has developed to be conveyed through the SWP since adoption of the Monterey Amendment and the 1996 IRP. These resources extend from north of the Delta to Southern California.

California Aqueduct Portfolio of Supplies

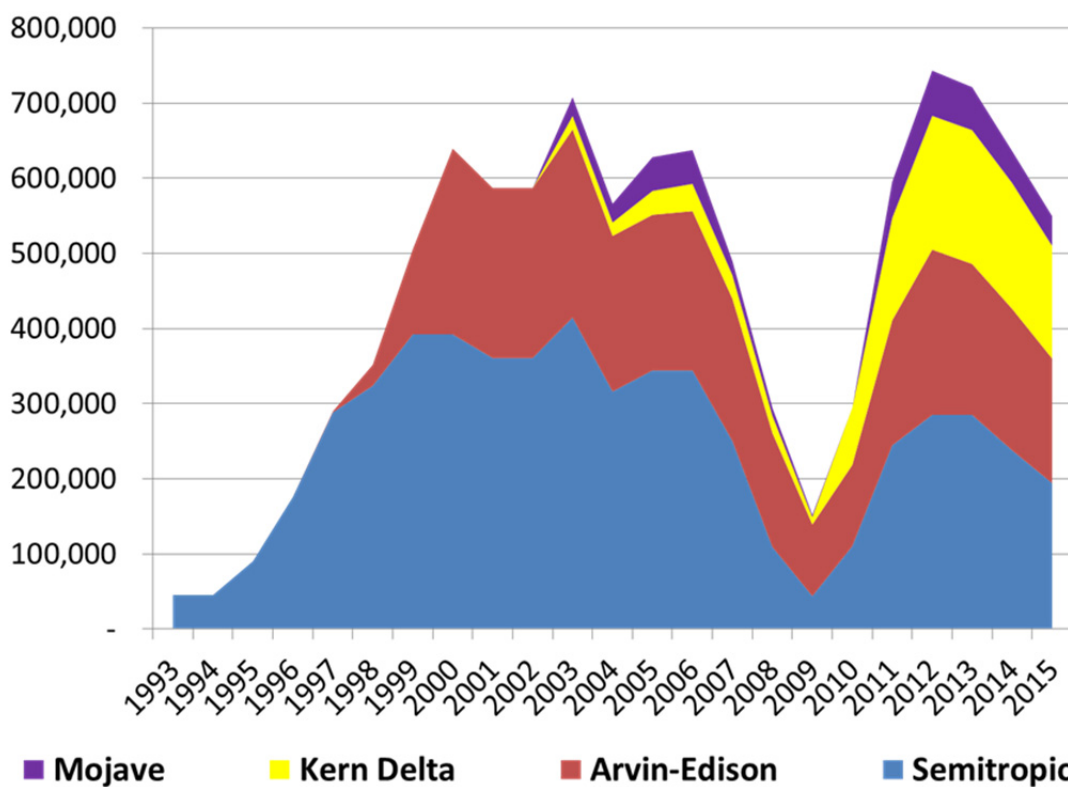


Since the Monterey Amendment, Metropolitan has secured one-year water transfer supplies through Metropolitan-only purchases, buyer coalition-purchases, and Governor Drought Water Banks. The most recent years in which these one-year transactions occurred were 2008 through 2010, 2013 and 2015. No purchases were made in 2011 or 2012 due to favorable water supply conditions. Most of the sellers were Sacramento Valley water users who are not Contractors. Other Contractors obtained one-year water transfers during this timeframe as well.

In addition to the one-year water transfers, Metropolitan purchases long-term water transfer supplies through the Yuba Accord. The Yuba Accord has provided water to enhance SWP and CVP water supply reliability by offsetting Delta export reductions and providing dry year water supplies for participating SWP and CVP contractors. This water is Yuba River water developed by Yuba County Water Agency (YCWA) making reservoir releases or by YCWA’s member units substituting groundwater for their surface water supplies; it is not SWP water.

Metropolitan also has developed groundwater storage agreements that allow Metropolitan to store available supplies in the Central Valley for return later. Metropolitan enters into agreements with DWR to deliver water supplies from the SWP facilities to these storage programs. Metropolitan enters into agreements for introduction of local supplies to return these water supplies to the SWP system for delivery to Metropolitan. The year-end balances of Metropolitan’s SWP storage activities are shown in the graph below.

SWP Groundwater Storage Programs year-end balance, acre-feet



- **Mojave Storage Program:** under the agreement, Mojave Water Agency provides groundwater banking and exchange transfers to allow Metropolitan to store up to 390,000 acre-feet for later return. The agreement allows Metropolitan to annually withdraw Mojave Water Agency’s SWP contractual amounts, after accounting for local needs.
- **Kern Delta Storage Program:** under the agreement, Kern Delta Water District provides groundwater banking and exchange transfer to allow Metropolitan to store up to 250,000 acre-feet of SWP water in wet years and take up to 50,000 acre-feet annually during droughts. The water is returned by direct groundwater pump-in or by exchange of surface water supplies.

- **Arvin-Edison Storage Program:** under the agreement, Arvin-Edison Water Storage District stores water on behalf of Metropolitan. Up to 350,000 acre-feet can be stored; Arvin-Edison is obligated to return up to 75,000 acre-feet of stored water in any year to Metropolitan, upon request. The water is returned by direct groundwater pump-in and exchange of SWP supplies.
- **Semitropic Storage Program:** under the agreement, Metropolitan stores water in the groundwater basin underlying land within the Semitropic Water Storage District. The maximum storage capacity is 350,000 acre-feet. As of December 2014, the minimum annual yield to Metropolitan is 34,700 acre-feet, and the maximum annual yield is 236,200 acre-feet depending on the available unused capacity and the SWP allocation. The water is returned by direct groundwater pump-in and exchange of SWP supplies.
- **Antelope Valley East Kern (AVEK) Storage and Exchange Program:** under the agreement, AVEK provides at least 30,000 acre-feet over ten years of its unused SWP Table A amount to Metropolitan and Metropolitan, at its discretion, would return half of the exchange water to AVEK at the Banks pumping plant. Under the Storage Program, Metropolitan, at its discretion, could store at least 30,000 acre-feet of its SWP Table A amount or other supplies in the Antelope Valley Groundwater Basin in an account designated for Metropolitan.

Metropolitan has developed exchanges and transfers with other Contractors to enhance supply flexibility. Some of these agencies have extensive groundwater supplies and are willing to exchange their SWP supplies.

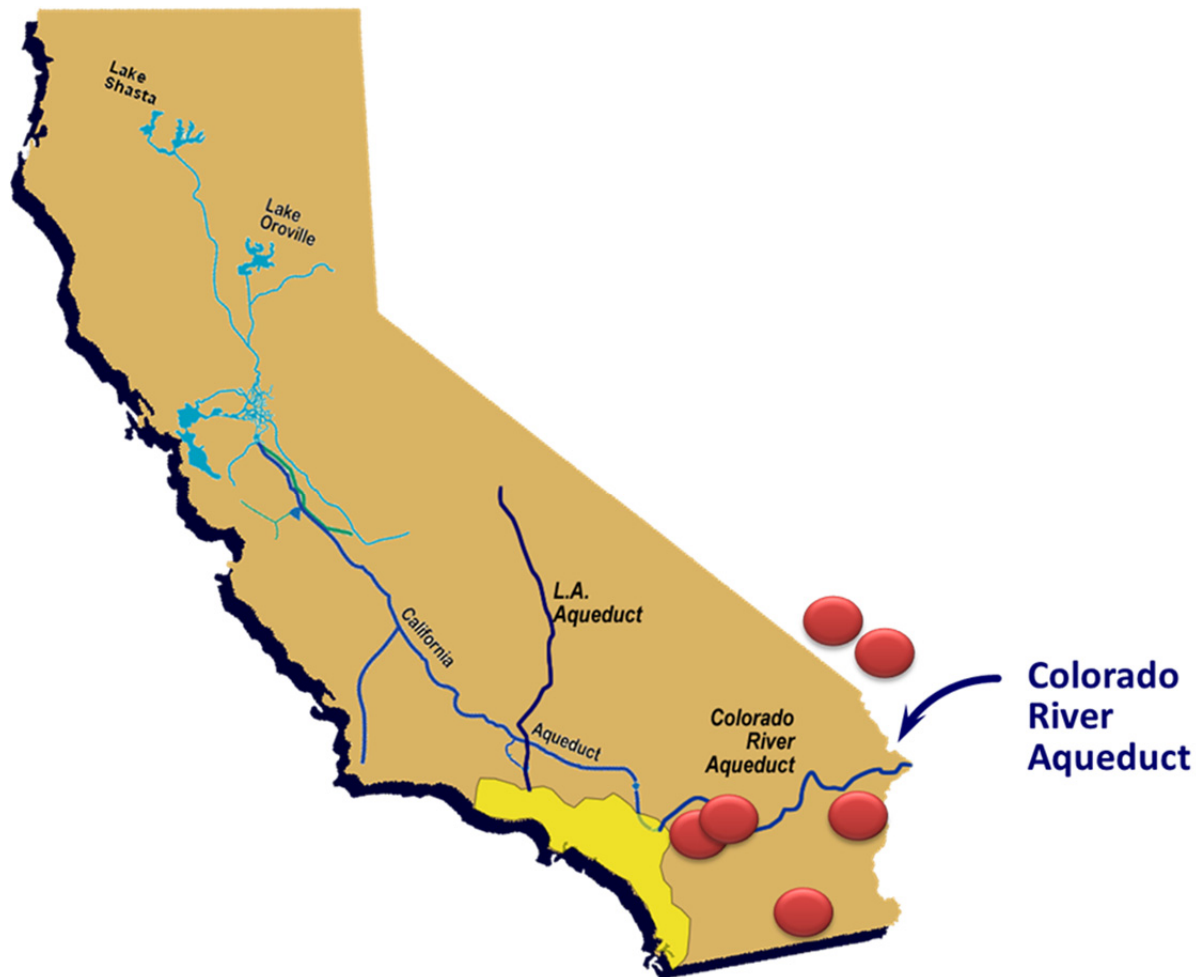
- **San Bernardino Valley Municipal Water District:** under the agreement, Metropolitan can exchange up to 11,000 acre-feet on an annual basis with the return negotiated.
- **San Gabriel Valley Water District:** under this agreement, Metropolitan delivers treated water to a San Gabriel Valley Water District subagency in exchange for twice as much untreated SWP supplies delivered into the groundwater basin that supplies this agency and Metropolitan subagencies. Metropolitan can purchase at least 5,000 acre-feet per year, in excess of the unbalanced exchange amount. There are no fees to put water into storage, or take water out of the storage account. This program has the potential to increase Metropolitan's reliability by providing 115,000 acre-feet through 2035.
- **Desert Water Agency/Coachella Valley Water District Advance Delivery Program:** under this program, Metropolitan delivers Colorado River water to the Desert Water Agency (DWA) and Coachella Valley Water District (CVWD) in exchange for those agencies' SWP Contract Table A allocations to be delivered to Metropolitan at a later date. In addition to their Table A supplies, DWA and CVWD can take delivery of SWP supplies available under Article 21 of the SWC and the Turn-back Pool Program, and non-SWP supplies separately acquired by each agency. These non-SWP supplies have included Yuba Accord water, drought water bank water, and San Joaquin Valley water. Thus the availability of other water sources allows DWA and CVWD to exchange their Table A supplies with Metropolitan. By delivering enough water in advance to cover Metropolitan's exchange obligations, Metropolitan is able to receive DWA and CVWD's available SWP supplies in years in which Metropolitan's supplies are insufficient without having to deliver an equivalent amount of Colorado River water.

SUPPLY PROGRAMS HAVE BEEN DEVELOPED TO CONVEY ON THE CRA

Since adoption of the 1996 Integrated Resources Plan (IRP) and subsequent updates, Metropolitan has developed and actively manages a portfolio of supplies to convey through the CRA, and as owner and operator, determines the delivery schedule of those resources throughout the year based on changes in the availability of SWP and Colorado River water. The figure below shows the geographic location of the portfolio

of supplies that Metropolitan has developed for diversion into the CRA since adoption of the 1996 IRP. These resources extend from Lake Mead to Southern California.

Colorado River Aqueduct Portfolio of Supplies



- Imperial Irrigation District/Metropolitan Conservation Program: Under a 1988 Conservation Agreement, Metropolitan has funded water efficiency improvements within the Imperial Irrigation District's (IID) service area in return for the right to divert the water conserved by those investments. Metropolitan provided funding for IID to construct and operate a number of conservation projects that have conserved up to 109,460 acre-feet of water per year that has been provided to Metropolitan. In 2015, 107,820 acre-feet of conserved water is being made available by IID to Metropolitan. Execution of the Quantification Settlement Agreement (QSA) and other agreement amendments resulted in changes in the availability of water under the program. As a result of a 2014 IID-Metropolitan letter agreement, the amount to be made available by IID has been quantified at 105,000 acre-feet per year beginning in 2016. Metropolitan is guaranteed at least 85,000 acre-feet per year, with the remainder of the conserved water being made available to CVWD, if needed under the 1989 Approval Agreement as amended.
- Palo Verde Land Management, Crop Rotation, and Water Supply Program: Under this program, participating landowners in the Palo Verde Irrigation District (PVID) are paid to reduce water use by not irrigating a portion of their land. A maximum of 29 percent of the participating lands within the Palo Verde Valley can be fallowed in any given year. This program saves up to 133,000 acre-feet of water in certain years, and a minimum of 33,000 acre-feet per year. The term of the program is 35 years. Fallowing began on January 1, 2005. In March 2009, Metropolitan and PVID entered into a supplemental emergency fallowing

program within PVID that provided for the fallowing of additional acreage in 2009 and 2010. Since 2005, as much as 148,600 acre-feet of water was saved. The volume of water that becomes available to Metropolitan is governed by the QSA and the Colorado River Water Delivery Agreement. Under these agreements:

- o Metropolitan must reduce its consumptive use of Colorado River water by that volume of consumptive use by PVID and holders of Priority 2 that is greater than 420,000 acre-feet in a calendar year, or
- o Metropolitan may increase its consumptive use of Colorado River water by that volume of consumptive use by PVID and holders of Priority 2 that is less than 420,000 acre-feet in a calendar year.

In both cases, each acre-foot of reduced consumptive use by PVID is an additional acre-foot that becomes available to Metropolitan.

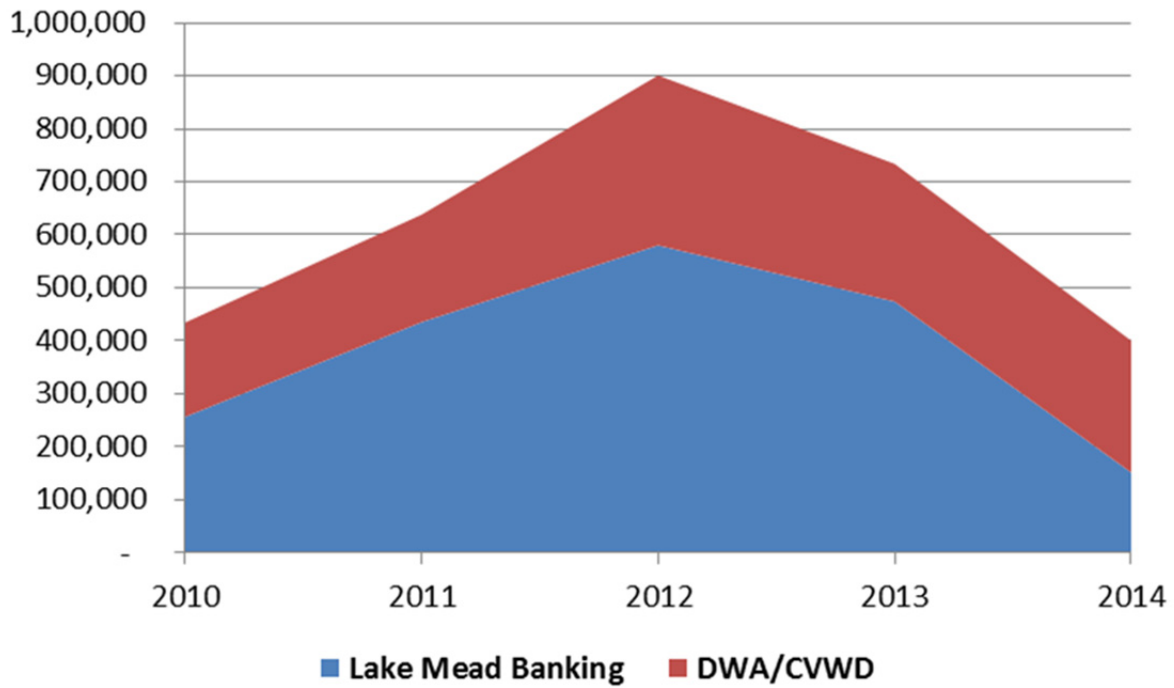
- All-American and Coachella Canal Lining Projects: Metropolitan takes delivery of 16,000 acre-feet of water annually as a result of the All-American and Coachella Canal Lining Projects. In the future, that water will be made available for the benefit of the La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido and the Vista Irrigation District, upon completion of a water rights settlement among those parties and the United States.
- Southern Nevada Water Authority and Metropolitan Storage and Interstate Release Agreement: Under this 2004 agreement and a related Operational Agreement, additional Colorado River water supplies are made available to Metropolitan when there is space available in the CRA to receive the water, subject to a request by Southern Nevada Water Authority (SNWA) for Metropolitan to reduce its Colorado River water order to return a portion of this water. In 2009, 2012, and 2015, Metropolitan, the Colorado River Commission of Nevada, and SNWA amended the related Operational Agreement. The agreements can be terminated upon 90 days' notice following the return of the water stored by Metropolitan.
- Lower Colorado Water Supply Project: Under a contract among Metropolitan, the City of Needles, and the United States Bureau of Reclamation, Metropolitan receives annually exchange water unused by the City of Needles and other entities who have no rights or insufficient rights to use Colorado River water in California. The beneficiaries of the project, including the City of Needles, receive water exchanged for groundwater pumped from wells into the All-American Canal. Metropolitan makes payments to a trust fund to develop a replacement project or to desalt the groundwater should the groundwater become too saline for discharge into the All-American Canal.
- Lake Mead Storage Program: In December 2007, Metropolitan entered into agreements to set forth the guidelines under which Intentionally Created Surplus (ICS) water is developed, and stored in and delivered from Lake Mead. The amount of water stored in Lake Mead, created through extraordinary conservation, system efficiency, or tributary conservation methods, is available for delivery in a subsequent year, with extraordinary conservation ICS subject to a one-time deduction and evaporation losses. Extraordinary conservation methods used by Metropolitan to date are water saved by fallowing in the Palo Verde Valley, projects implemented with IID in its service area, and groundwater desalination. The guidelines concerning the operation of the Colorado River system reservoirs provide the ability for agencies to create "System Efficiency ICS" through the development and funding of system efficiency projects that save water that would otherwise be lost from the Colorado River. Metropolitan has participated in two projects to create System Efficiency ICS:
 - o Drop 2 (Warren H. Brock) Reservoir: Metropolitan contributed funds toward the Bureau of Reclamation's construction of an 8,000 acre-foot off-stream regulating reservoir near Drop 2 of the All-American Canal in Imperial County. This reservoir conserves about 70,000 acre-feet of water per year by capturing and storing otherwise non-storable flow. In return for its funding, Metropolitan

received 100,000 acre-feet of water that was stored in Lake Mead, and has the ability to receive up to 25,000 acre-feet of water in any single year. Besides the additional water supply, the new reservoir adds to the flexibility of Colorado River operations.

- o Yuma Desalting Plant: Metropolitan contributed to a one-year pilot operation of the Plant at one-third capacity to provide data regarding the long-term operation of the Plant. Metropolitan's yield from the pilot run of the project was 24,397 acre-feet.
- o In November 2012, Metropolitan executed agreements in support of a program to augment Metropolitan's Colorado River supply between 2013 and 2017 through an international pilot project in Mexico. Metropolitan's total share of costs will be \$5 million for 47,500 acre-feet of project supplies. The costs will be paid between 2015 and 2017, and the conserved water will be credited to Metropolitan's intentionally-created surplus water account no later than 2017. In December 2013, Metropolitan and IID executed an agreement under which IID will pay half of Metropolitan's program costs, or \$2.5 million, in return for half of the project supplies, 23,750 acre-feet.
- Hayfield Groundwater Storage Program: This program will allow Metropolitan to store Colorado River water in the Hayfield Groundwater Basin in eastern Riverside County for future withdrawal and delivery to the CRA. Drought conditions in the Colorado River watershed have resulted in a lack of surplus supplies for storage. When water supplies become more plentiful, Metropolitan may pursue this program and develop storage capacity of about 400,000 acre-feet.
- Desert Water Agency/Coachella Valley Water District/Metropolitan Water Exchange and Advance Delivery Programs: under these programs, Metropolitan delivers Colorado River water to the DWA and CVWD, in advance of the exchange for their SWP supplies. By delivering enough water in advance to cover Metropolitan's exchange obligations, Metropolitan is able to receive DWA and CVWD's available SWP supplies in years in which Metropolitan's supplies are insufficient without having to deliver an equivalent amount of Colorado River water.

The year-end balances of Metropolitan's CRA storage programs are shown in the graph below.

CRA Storage Programs year-end balance, acre-feet



BUDGET HIGHLIGHTS

The budget for the Supply Programs increases slightly over the budget period compared to FY 2015/16. This reflects the assumption of a 50 percent allocation on the SWP and approximately 857.1 to 881.9 TAF on the CRA over the same three budget periods.

DEMAND MANAGEMENT

OVERVIEW

Demand Management costs are Metropolitan's expenditures for funding local water resource development programs and water conservation programs. These demand management programs incentivize the development of local water supplies and the conservation of water to reduce the reliance on imported water. These programs are implemented after the service connection between Metropolitan and its member agencies and, as such, do not add any water to the quantity Metropolitan obtains from other sources. Rather, the effect of these downstream programs is to produce a local supply of water for the local agencies.

Demand Management programs also reduce the use of and burden on Metropolitan's distribution and conveyance system, which, in turn, helps reduce the capital, operating, maintenance and capital improvement costs associated with these facilities. For example, local water resource development and conservation has deferred the need to build additional infrastructure such as the Central Pool Augmentation Project and the San Diego Pipeline No. 6. Overall, the decrease in demand resulting from these projects is estimated to defer the need for projects between four and twenty-five years at a savings of between \$324 and \$910 million. The programs also free up capacity in Metropolitan's system to convey both Metropolitan water and water from other non-Metropolitan sources.

The budgeted costs for Demand Management are as follows:

Demand Management Cost Summary¹, \$ millions

	2014/15 Actual	2015/16 Budget	2016/17 Proposed	Change from 2015/16	2017/18 Proposed	Change from 2016/17
Conservation Credits Program	\$134.4	\$20.0	\$27.0	\$7.0	\$32.0	\$5.0
Local Resources Program	\$35.8	\$41.7	\$43.7	\$2.0	\$41.9	\$(1.8)
Future Supply Actions		0	\$4.4	\$4.4	\$2.0	\$(2.4)

¹ Does not include Departmental costs reflected elsewhere in this Budget.

Budgeted Demand Management costs reflect increasing the financial commitment for the Conservation Credits Program and maintaining the financial incentives for existing contracts under the Local Resources Program.

In addition to Metropolitan's own objectives, Metropolitan also pursues local water resource development because it has uniquely been directed to do so by the state Legislature. In 1999, then Governor Davis signed Senate Bill (SB) 60 (Hayden) into law. SB 60 amended the Metropolitan Water District Act to direct Metropolitan to increase conservation and local resource development. No other water utility in California, public or private, has been specifically identified by the state Legislature and directed to pursue water conservation and local water resource development.

Metropolitan's Demand Management programs also support the region's compliance with the requirements of SB X7-7. In 2009, the state Legislature passed SB X7-7, which was enacted to reduce urban per capita water use by 20 percent by December 31, 2020. Urban retail water suppliers are not eligible for state water grants or loans unless they comply with the water conservation requirements of the legislation. Demand Management programs help the region achieve urban per capita water use reductions.

Demand Management costs also support the Strategic Plan Policy Principles approved by Metropolitan's Board on December 14, 1999. These principles embody the Board's vision that Metropolitan is a regional provider of wholesale water services. In this capacity, Metropolitan is the steward of regional infrastructure and the regional planner responsible for coordinated drought management and the collaborative development of additional supply reliability and necessary capacity expansion. Through these regional services, Metropolitan ensures a baseline level of reliability and quality for service in its service area.

DEMAND MANAGEMENT PROGRAMS REDUCE RELIANCE ON IMPORTED WATER

Metropolitan increased the emphasis on Demand Management programs after the devastating drought of the early 1990's. Metropolitan's 1996 Integrated Resources Plan identified the Preferred Resource Mix as the resource plan that achieved the region's reliability goal of providing the full capability to meet all retail-level demands during all foreseeable hydrologic events, represented the least-cost sustainable resources plan, met the region's water quality objectives, was balanced and diversified and minimized risks, and was flexible, allowing for adjustments should future conditions change.

The Preferred Resource Mix included locally developed water supplies and conservation, and recognized that regional participation was important to achieve their development. Additional imported supplies frequently have relatively lower development costs, but can create a large cost commitment for regional infrastructure to transport and store those imported supplies. On the other hand, local projects, like those designed to recycle water or increase groundwater production, may have higher development costs but require little or no additional infrastructure to distribute water supplies to customers. This trade-off between relatively lower-cost imported supplies requiring large regional infrastructure investments and relatively higher-cost local supply development requiring less additional local infrastructure was an important consideration in the development of the Preferred Resource Mix. A strategy of aggressively investing in imported water supply would lead to higher costs for the region because of the larger investments required in infrastructure. Since 1996, the Integrated Resources Plan has been updated twice, in 2004 and 2010, reaffirming long-term sustainability of the region's water supply through implementation of conservation and local resource development.

DEMAND MANAGEMENT PROGRAMS REDUCE DEMANDS AND BURDENS ON METROPOLITAN'S SYSTEM

Demand Management programs decrease and avoid operating and maintenance and capital improvement costs, such as costs for repair of and construction of additional or expanded water conveyance, distribution, and storage facilities. The programs also free up capacity in Metropolitan's system to convey both Metropolitan water and water from other non-Metropolitan sources.

The purpose of Demand Management is to generate additional local resources or reduce consumption through conservation, which reduces the amount of water that must otherwise be transported through Metropolitan's system. Investments in Demand Management programs like conservation, water recycling and groundwater recovery help defer the need for additional conveyance, distribution, and storage facilities. Demand Management is an important part of Metropolitan's resource management efforts. Metropolitan's

incentives in these areas contribute to savings for all users of the system in terms of lower capital costs that would otherwise have been required to expand the system.

SB 60 DIRECTED METROPOLITAN TO EXPAND DEMAND MANAGEMENT PROGRAMS

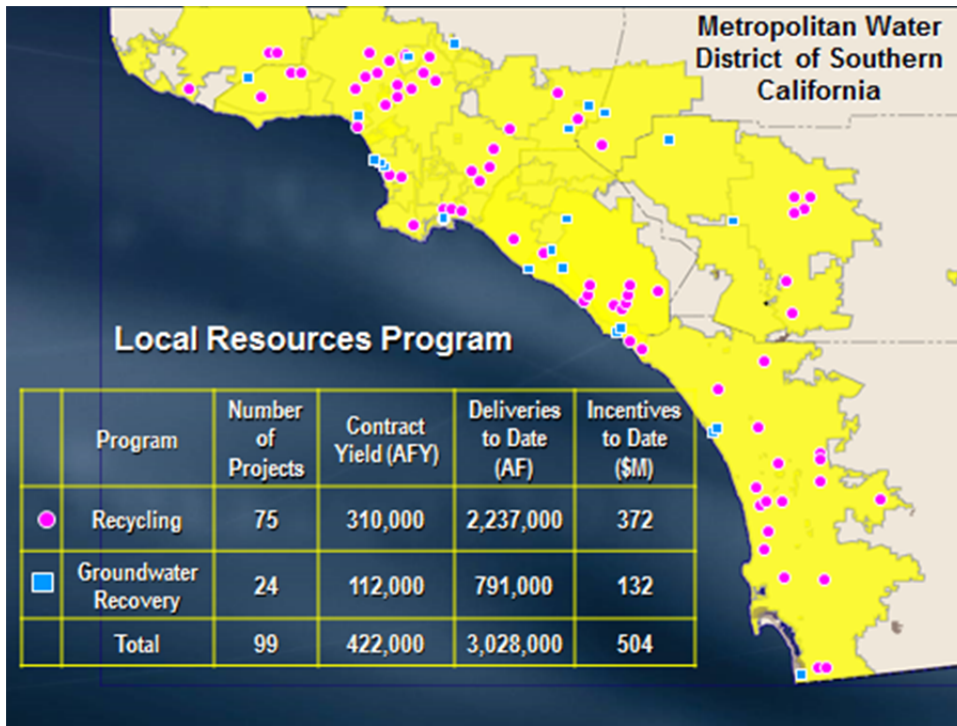
In September 1999, Governor Gray Davis signed SB 60 (Hayden) into law. SB 60 amended the Metropolitan Water District Act to direct Metropolitan to increase “sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures.” SB 60 also requires Metropolitan to hold an annual public hearing to review its urban water management plan for adequacy in achieving an increased emphasis on cost-effective conservation and local water resource development, and to invite knowledgeable persons from the water conservation and sustainability fields to these hearings. Finally, Metropolitan is required to annually prepare and submit to the Legislature a report on its progress in achieving the goals of SB 60. SB 60 specifically indicated that no reimbursement was required by legislation because Metropolitan, as a local agency, has the authority to levy service charges, fees or assessments sufficient to pay for the program or level of service mandated by SB 60. No other water utility in California, public or private, has been specifically identified by the state Legislature and directed to pursue water conservation and local water resource development.

In FY 2014/15 alone, Metropolitan’s service area achieved 1.5 million acre-feet of water savings from conservation, recycled water and groundwater recovery programs. The 1.5 million acre-feet of water savings from water management activities in fiscal year 2014/15 nearly equaled actual water sold in the same period of 1.91 million acre-feet. These savings derived from programs for which Metropolitan paid incentives, as well as code-based conservation achieved through legislation, building and plumbing codes and ordinances, and reduced consumption resulting from changes in water pricing. Cumulatively, since 1990 Metropolitan has invested almost \$1 Billion to achieve water savings.

Metropolitan’s Conservation Credits Program provides incentives to residents and businesses for use of water-efficient products and qualified water-saving activities. Rebates have been provided to residential customers for turf removal and purchasing of high-efficiency clothes washers and toilets. Rebates are also provided to businesses and institutions for water-saving devices. In fiscal year 2014/15, the Conservation Credits Program achieved 944,000 acre-feet of saved water through new and existing conservation initiatives funded with incentives and maintained through plumbing codes. Cumulatively, through fiscal year 2014/15 the Conservation Credits Program has achieved over 2.2 million acre-feet of water savings.

Metropolitan provides financial incentives through its Local Resources Program for the development and use of recycled water and recovered groundwater. The Local Resources Program consists of 75 recycling projects and 24 groundwater recovery projects located throughout Metropolitan’s service area, of which 85 projects are in operation. From the Local Resources Program’s inception in 1982 through FY 2014/15, Metropolitan has paid out about \$372 million in incentives to produce about 2.2 million acre-feet of recycled water. Metropolitan also provided approximately \$132 million to produce 791,000 acre-feet of recovered degraded groundwater for municipal use.

Local Resources Program Projects



SB X7-7 REQUIRES INCREASED CONSERVATION

SBX7-7 mandated a new requirement to lower urban per capita water use 20 percent by December 31, 2020. Enacted by the state Legislature and signed into law by Governor Schwarzenegger as part of a historic package of water reforms in November 2009, the “20x2020” plan gave local communities flexibility in meeting this target while accounting for previous efforts in conservation and recycling. The Legislature found that reducing water use through conservation and regional water resources management would result in protecting and restoring fish and wildlife habitats, reducing dependence on water through the Delta, and providing significant energy and environmental benefits. Metropolitan coordinates closely with its member agencies to achieve these targets both at a retail agency level in compliance with legislative requirements, and as a region in achieving a true 20 percent reduction in per-capita water use.

BUDGET HIGHLIGHTS

The budget for the Demand Management costs is increasing slightly when comparing the biennial budget to FY 2015/16, due primarily to increased expenditures for the Conservation Credits Program.

CAPITAL FINANCING

OVERVIEW

Capital financing costs are Metropolitan's expenditures for revenue bond debt service, General Obligation bond debt service, debt administration costs, the funding of capital expenditures from current operating revenues, or Pay-As-You-Go (PAYGo), and State Revolving Fund (SRF) Loan payments.

The budgeted costs for capital financing are as follows:

Capital Financing Cost Summary, \$ millions

	2014/15 Actual	2015/16 Budget	2016/17 Proposed	Change from 2015/16	2017/18 Proposed	Change from 2016/17
Debt Service, net of BABs Reimbursement	\$266.3	\$296.4	\$298.7	\$2.3	\$318.1	\$19.4
GO Bond Debt Service	23.4	23.3	23.3	0	18.8	(4.5)
SRF Loan	1.3	1.3	1.3	0	1.3	0
Debt Administration	2.7	3.7	5.2	1.5	5.9	0.7
PAYGo	210.2	221.0	120.0	(101.0)	120.0	0
Total¹	\$503.9	\$545.7	\$448.5	\$(97.2)	\$464.1	\$15.6

¹ Does not include Departmental costs reflected elsewhere in this Budget.

Budgeted amounts for Capital Financing represent the expenditures for existing and future debt service, anticipated debt administration costs to support the debt portfolio, and lower PAYGo amounts to support a lower Capital Investment Plan. Metropolitan generally incurs long-term debt to finance projects or purchase assets which will have useful lives equal to or greater than the related debt. Revenue supported debt can be authorized by Metropolitan's Board of Directors.

CAPITAL INVESTMENT PLAN

The Capital Investment Plan (CIP) for FY 2016/17 and FY 2017/18 is estimated to be \$200.0 million in each fiscal year. It is proposed to be funded by current operating revenues (PAYGo) and revenue bond proceeds. The FY 2016/17 CIP is \$68 million lower than the FY 2015/16 Adopted budget, and the FY 2017/18 CIP is unchanged from FY 2016/17. The largest areas of expenditures in the biennial budget are Infrastructure Reliability and Water Quality.

PAYGo Percentage of Funding, \$ millions

	2015/16 Budget	2016/17 Proposed	2017/18 Proposed
Capital Investment Plan expenses	\$267.9	\$200.0	\$200.0
Project Funding:			
New Bond Issues		110.0	80.0
Prior Bond Funds/Construction Fund		20.0	50.0
Grants and Loans Funds			
Operating Revenues (PAYGo)	221.0	120.0	120.0
R&R Fund	47.0		
PAYGo Percentage of Funding	100.0%	60.0%	60.0%

In FY 2016/17 and FY 2017/18, the percentage of capital that is funded by debt will be set at 40 percent, consistent with the FY 2014/15 and FY 2015/16 ten-year forecast for this time period. The projected average percentage of capital funded from debt will be 40 percent over the ten years of the long-range forecast.

OUTSTANDING DEBT

Metropolitan has total long-term debt outstanding of \$4.24 billion as of December 31, 2015. Metropolitan's debt issues are summarized below and discussed in detail thereafter.

Outstanding Debt, \$'s, as of December 31, 2015

Issue	Debt Outstanding
Long-Term Debt:	
Water Revenue Refunding Bonds, 1993 Series A	\$86,540,000
Water Revenue Bonds, 2000 Authorization, Series B-3	88,800,000
Water Revenue Bonds, 2005 Authorization, Series C	175,000,000
Water Revenue Refunding Bonds, 2006 Series B	24,055,000
Water Revenue Bonds, 2006 Authorization, Series A	389,235,000
Water Revenue Refunding Bonds, 2008 Series A-2(1)	62,465,000
Water Revenue Refunding Bonds, 2008 Series B	126,980,000
Water Revenue Refunding Bonds, 2008 Series C	34,700,000
Water Revenue Bonds, 2008 Authorization, Series A	183,525,000
Water Revenue Refunding Bonds, 2009 Series A-2(1)	104,180,000
Water Revenue Refunding Bonds, 2009 Series B	106,690,000
Water Revenue Refunding Bonds, 2009 Series C	91,165,000
Water Revenue Bonds, 2008 Authorization, Series B	12,735,000
Water Revenue Bonds, 2008 Authorization, Series C(2)	78,385,000
Water Revenue Bonds, 2008 Authorization, Series D(2)	250,000,000
Water Revenue Refunding Bonds, 2009 Series D	58,860,000
Water Revenue Refunding Bonds, 2009 Series E	15,590,000
Water Revenue Bonds, 2010 Authorization, Series A(2)	250,000,000
Water Revenue Refunding Bonds, 2010 Series B	79,330,000
Water Revenue Refunding Bonds, 2011 Series A1-A4(1)	228,875,000
Water Revenue Refunding Bonds, 2011 Series B	35,760,000
Water Revenue Refunding Bonds, 2011 Series C	147,935,000
Water Revenue Refunding Bonds, 2012 Series A	181,180,000
Water Revenue Refunding Bonds, 2012 Series B-1 and B-2(1)	98,585,000
Water Revenue Refunding Bonds, 2012 Series C	190,600,000
Water Revenue Refunding Bonds, 2012 Series D	605,000
Water Revenue Refunding Bonds, 2012 Series E3	31,220,000
Water Revenue Refunding Bonds, 2012 Series F	59,335,000
Water Revenue Refunding Bonds, 2012 Series G	111,890,000
Special Variable Rate Water Revenue Refunding Bonds, 2013 Series D(1)	87,445,000
Special Variable Rate Water Revenue Refunding Bonds, 2013 Series E(1)	104,820,000
Water Revenue Refunding Bonds, 2014 Series A	95,935,000
Water Revenue Refunding Bonds, 2014 Series B	10,575,000
Water Revenue Refunding Bonds, 2014 Series C1-C3	30,335,000
Special Variable Rate Water Revenue Refunding Bonds, 2014 Series D(1)	63,575,000
Water Revenue Refunding Bonds, 2014 Series E	86,060,000
Water Revenue Refunding Bonds, 2014 Series G1-G5	57,840,000
Special Variable Rate Water Revenue Refunding Bonds, 2015 Series A-1 and A-2(1)	188,900,000
Water Revenue Bonds, 2015 Series A	208,255,000
Total Revenue Bonds	\$4,237,960,000
Waterworks General Obligation Refunding Bonds, 2009 Series A	\$33,485,000
Waterworks General Obligation Refunding Bonds, 2010 Series A	27,290,000
Waterworks General Obligation Refunding Bonds, 2014 Series A	49,645,000
Total General Obligation Bonds	\$110,420,000
Total Long-Term Debt:	\$4,348,380,000

(1) Outstanding variable rate obligation.

(2) Designated as "Build America Bonds" pursuant to the American Recovery and Reinvestment Act of 2009.

DEBT SERVICE

Debt Service payments in FY 2016/17 are budgeted at \$328.5 million and includes \$23.3 million in General Obligation bond debt service, \$298.7million in revenue bond debt service, \$1.3 million for SRF Loan payments, and \$5.2 million for debt administration costs.

Debt Service payments in FY 2017/18 are budgeted at \$344.1 million and include \$18.8 million in General Obligation bond debt service, \$318.1 million in revenue bond debt service, \$1.3 for SRF Loan payments, and \$5.9 million for debt administration costs. Total debt service costs in FY 2017/18 are expected to be \$15.6 million more than the FY 2016/17 payments due to new money bond issues.

Interest payments on synthetic fixed rate debt were calculated at their associated swap rates plus any spread (if known). Interest rates on variable rate debt were calculated at 0.45 percent for FY 2016/17 and 0.80 percent for FY 2017/18.

Outstanding variable rate debt on December 31, 2015 was approximately \$1.03 billion, including bonds bearing interest in the Index Mode or Flexible Index Mode, special variable rate bonds initially designated as self-liquidity bonds, and variable rate demand obligations supported by standby bond purchase agreements between Metropolitan and various liquidity providers. Of the \$1.03 billion, \$493.6 million are treated by Metropolitan as fixed rate debt by virtue of interest rate swap agreements. The remaining \$534 million of variable rate obligations represent approximately 12.6 percent of total outstanding water revenue bonds.

Going forward, Metropolitan will finance its construction program through a combination of fixed-rate debt and variable rate debt. Metropolitan intends to issue approximately \$110 million of new debt in FY 2016/17 and \$80 million of new debt in FY 2017/18.

DEBT RATINGS

Credit risk is the risk that a financial loss will be incurred if a counterparty to a transaction does not fulfil its financial obligations in a timely manner. This is measured by the assignment of a rating by a nationally recognized statistical credit rating organization. Strong credit ratings provide tangible benefits to ratepayers in the form of reduced debt service cost. A strong credit rating provides better access to capital markets, lower interest rates and better terms on debt, and access to a greater variety of debt products. Prudent financial management policies have resulted in bond ratings of AAA from Standard & Poor's, Aa1 from Moody's, and AA+ from Fitch.

DEBT POLICY AND COVERAGE

Metropolitan is subject to limitations on additional revenue bonds. Resolution 8329 (the "Master Revenue Bond Resolution"), adopted by Metropolitan's Board in 1991 and subsequently supplemented and amended, provides for the issuance of Metropolitan's revenue bonds. The Master Revenue Bond Resolution limits the issuance of additional obligations payable from Net Operating Revenues, among other things, through the requirement that Metropolitan must meet an Additional Bonds Test, as defined in the Master Revenue Bond Resolution.

The Metropolitan Act also provides two additional limitations on indebtedness. The Act provides for a limit on general obligation bonds, water revenue bonds and other indebtedness at 15 percent of the assessed value of all taxable property within Metropolitan's service area. As of December 31, 2015, outstanding general obligation bonds, water revenue bonds and other evidences of indebtedness in the amount of \$4.35 billion represented approximately 0.18 percent of the FY 2015/16 taxable assessed valuation of \$2,451 billion. The second limitation under the Act specifies that no revenue bonds may be issued, except for the purpose of refunding, unless the amount of net assets of Metropolitan as shown on its balance sheet as of the end of the last fiscal year prior to the issuance of the bonds equals at least 100 percent of the aggregate amount of revenue bonds outstanding following the issuance of the bonds. The net assets of Metropolitan at June 30,

2015 were \$6.9 billion. The aggregate amount of revenue bonds outstanding as of December 31, 2015 was \$4.24 billion.

Metropolitan has also established its own policy regarding debt management. The purpose is to maintain a balance between current funding sources and debt financing to retain Metropolitan's financing flexibility. Flexibility allows Metropolitan to use a variety of revenue or debt-financing alternatives, including issuing low-cost variable rate and other revenue supported obligations.

Metropolitan's debt management policy is to:

- Maintain an annual revenue bond debt coverage ratio of at least 2.0 times coverage;
- Maintain an annual fixed charge coverage ratio of at least 1.2 times coverage;
- Limit debt-funded capital to no more than 40 percent of the total capital program over the ten-year planning period; and
- Limit variable rate debt such that the net interest cost increase due to interest rate changes is no more than \$5 million, and limit the maximum amount of variable rate bonds to 40 percent of outstanding revenue bond debt (excluding variable rate bonds associated with interest rate swap agreements).

In order to comply with the debt management policy, Metropolitan has taken the following measures:

Revenue Bond Debt Coverage Ratio

This policy ensures that Metropolitan has sufficient annual operating revenues to pay its operating expenses and meet its debt service obligations on its revenue bonds and other senior debt. The revenue bond debt coverage ratio is defined as Metropolitan's net operating revenue (current year's operating revenue less the current year's operating expenses) divided by the current year's debt service on all revenue bonds and other senior debt. The target is 2.0 times. In FY 2016/17 and FY 2017/18, the projected debt coverage ratio is 1.60 and 1.60 times, respectively.

Fixed Charge Coverage Ratio

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 to account for Metropolitan's recurring capital costs for the State Water Contract, which are funded after debt service on revenue bonds and other parity obligations. 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. Metropolitan's fixed charge coverage ratio target is 1.2 times. In FY 2016/17 and FY 2017/18, the projected debt coverage ratio is 1.30 and 1.30, respectively. These levels help maintain strong credit ratings and access to the capital markets at low cost.

BUDGET HIGHLIGHTS

The budget for Capital Financing is decreasing from the FY 2015/16 budget due to lower CIP expenditures overall. The FY 2017/18 Capital Financing budget is higher than FY 2016/17 as new debt is issued to finance the CIP. Lower overall Capital Financing costs provide increased financial flexibility and resiliency.