



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

4/14/2020 Board Meeting

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**8-1**

**Subject**

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Approve the proposed biennial budget for fiscal years 2020/21 and 2021/22, which includes the Capital Investment Plan and revenue requirements for fiscal years 2020/21 and 2021/22, and ten-year forecast; adopt resolutions fixing and adopting the water rates and charges for calendar years 2021 and 2022; and adopt the resolution finding that for fiscal years 2020/21 and 2021/22, the ad valorem property tax rate limitation of Metropolitan Water District Act Section 124.5 is not applicable because it is essential to Metropolitan's fiscal integrity to collect ad valorem property taxes in excess of the limitation; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

**Executive Summary**

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Over the past four months, Metropolitan's Board of Directors, the Finance and Insurance (F&I) Committee of the Board, and Metropolitan's member agencies have been reviewing and evaluating Metropolitan's proposed biennial budget and revenue requirements, and the rates, charges and ad valorem (AV) property tax revenue necessary to support the revenue requirements. The ten-year forecast of costs and overall rates has also been reviewed, including implications of potential near-term actions on long-term revenue requirements.

The 2018/19 fiscal year represented the lowest water sales for Metropolitan in nearly 40 years. That resulted in collection of nearly \$200 million less than budgeted. This would necessitate a rate increase proposal of 8-12 percent to maintain business as usual. Over the past four months, staff has worked with the Board on a number of measures to reduce the proposed budget such as reducing the capital program, maintaining flat staffing level, refinancing of existing debt, and capping certain programs. Importantly, the Board acted to suspend collection of the Water Stewardship Rate for this budget period and fund demand management programs with unspent funds previously collected by the Water Stewardship Rate. These steps collectively resulted in a recommended proposal to increase rates by 5 percent in both 2021 and 2022.

After the Board completed Workshop #3 on March 10, 2020, COVID-19 spread throughout the United States and the world. The World Health Organization declared a COVID-19 pandemic on March 11, 2020. Stay-at-home orders, other social distancing directives, and state-of-emergency orders went into effect within Metropolitan's service area, throughout California, and throughout the nation. Utility retailers, including some member agencies of Metropolitan and agencies that purchase water from them, anticipate their customers are likely to be adversely impacted financially. Those impacts may result in the inability to pay utility bills, which would also create financial stress on Metropolitan's member agencies. The extent of the financial impact to be caused by the COVID-19 pandemic is unknown at this time, as is the relief measures the federal and state governments may provide to assist in such impacts. But it is clear that the financial impact to our region and beyond will be significant and far-reaching.

Given the state of uncertainty at this time, a number of directors have asked staff to prepare alternatives that would result in lower rate increases. As the Board is aware, we have also received several letters from member agencies and their agencies asking Metropolitan to look at alternative rate proposals. Additionally, Metropolitan is already seeing delay in continuing some Capital Investment Plan (CIP) work, which is anticipated to continue into the next biennial budget cycle. These and other changed circumstances affect certain assumptions previously made in the proposed budget, rates, and charges. Accordingly, staff has prepared two alternative proposals for the Board's consideration.

The budget, rates, and charges recommended and provided to the Board on January 31, 2020, were discussed in workshops and public hearings since then. The recommendation consisted of:

1. The Proposed Biennial Budget for fiscal year (FY) 2020/21 and FY 2021/22 (Proposed Biennial Budget) and the associated ten-year forecast (Ten-Year Forecast), and the resulting revenue requirements for FY 2020/21 and FY 2021/22 (**Attachment 1**).
2. The proposed rates and charges through the adoption of: (a) the resolution fixing and adopting water rates to be effective on January 1, 2021, and January 1, 2022 (**Attachment 3**); (b) the resolution to fix and adopt the Readiness-to-Serve Charge (RTS) effective January 1, 2021 (**Attachment 4**); and (c) the resolution to fix and adopt the Capacity Charge, effective January 1, 2021 (**Attachment 5**).
3. The resolution finding that the ad valorem property tax rate limitation in Section 124.5 of the Metropolitan Water District Act (MWD Act) is not applicable because it is essential to Metropolitan's fiscal integrity to collect AV property taxes in excess of the limitation (**Attachment 6**).

**Option 1** is an updated recommendation, given recent developments. The recommendations recognize the anticipated reduced expenditures in the CIP due to the COVID-19 impact on projects, and also the changing anticipated demand in treated and untreated water due to PFAS (Per- and Polyfluoroalkyl Substances) issues. It is anticipated that potential detection of PFAS in groundwater will result in decreased untreated water demand for groundwater replenishment and more treated water demand for potable use. Option 1 provides overall rate increases of 3 percent in CY 2021 and 4 percent in CY 2022, compared to the 5 percent increases per year previously proposed. To achieve the lower overall rate increases, Option 1 makes the following modifications to the original Proposed Biennial Budget:

- 50 thousand acre-feet (TAF) untreated water sales projections are shifted to treated water sales as a result of the impact PFAS and PFOS will likely have on demand for replenishment water.
- CIP expenditures are reduced \$25 million in FY 2020/21 with an updated assumption that only 80 percent of planned spending will be completed in FY 2020/21, given the likely impacts of COVID-19 on scheduling of construction work.
- PAYGO funding is reduced to 55% in FY 2020/21.

The lower overall rates for CY 2021 and CY 2022 are projected to necessitate higher rate increases in CY 2024 and CY 2025 than previously presented in the Ten-Year Forecast.

**Option 2** provides another alternative to address the potential impacts of COVID-19. Option 2 makes the same modifications as Option 1. However, Option 2 delays the rate increase until July 1, 2021. Current 2020 rates and charges are extended through June 30, 2021, with the exception of the Water Stewardship Rate, which will not be extended beyond December 31, 2020, per prior Board action. **As a result, water rates would be lower than revenue requirements for the first six months of 2021, while costs would continue to increase, resulting in a \$79 million draw on unrestricted reserves in FY 2020/21.** Further, revenue bond coverage and fixed charge coverage in Option 2 are projected to be at very low levels in FY 2020/21, both below 1.3 times.

The cost of service methodology and supporting data for these updated options remain unchanged. Calculations change to reflect the updated assumptions specified herein. Therefore, Metropolitan will publish an updated Budget, Cost of Service Report, Engineer's Report, and Resolutions to reflect the specific option adopted by the Board.

Notice of the proposed budget, rates, charges, review of the applicability of the AV property tax limitation, and of the public workshops and hearings, was provided to the member agencies, the Board, and the public in advance of the budget, rates, and charges process. All documents provided to the Board in connection with the actions proposed in this board letter have been posted online, along with other supporting and background material and any comments received by Metropolitan, at:

<http://www.mwdh2o.com/WhoWeAre/Pages/FY-2020-21-and-2021-22-CY-2021-22.aspx> and  
<http://www.mwdh2o.com/WhoWeAre/Mission/Pages/review-applicability-of-property-tax-limit.aspx>.

## Description

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### THE UPDATED PROPOSED BIENNIAL BUDGET (Attachment 1 and Recent Modifications)

#### Funding of Strategic Priorities

The General Manager's Business Plan for FYs 2020/21 and 2021/22 sets out Metropolitan's strategic priorities for the biennium. These priorities, explained in more detail in the Departmental Expenditures section of the Proposed Biennial Budget document (**Attachment 1**), are summarized below:

Resiliency is about making sure our staff, systems, and infrastructure are strong and can return to service quickly in a business interruption. For example, are we prepared for an extended drought, a major earthquake, or other large-scale disruption to routine business operations? The focus in this budget is on training, leadership development, and other efforts to support succession planning to strengthen and increase the diversity in the workforce, and on capital expenditures to build infrastructure reliability and redundancy.

Sustainability is about charting a long-term course that addresses some of the challenges before us: climate change, aging infrastructure, contaminants of emerging concern, and affordability of water supplies.

Innovation is about continuing Metropolitan's long tradition of creatively solving difficult challenges. A recent Water Research Foundation report highlighted Metropolitan as one of the most impactful water utilities in the nation. This is in large part due to our skilled and dedicated staff. As the workforce changes, it is very important that we actively engage new employees by sharing Metropolitan's history of regional cooperation; its diverse, inclusive, and fair culture; discussing the challenges ahead and how we will overcome them; and most importantly, soliciting their innovative ideas about how Metropolitan can continuously improve its operations and business processes.

#### Financial Policies

Several financial policies or goals underlie the biennial budget and rate-setting process, such as achieving and maintaining good coverage levels and setting current-year operating revenues (PAYGO) funding levels. Coverage levels are important because they help maintain strong credit ratings and access to the capital markets at low cost. Metropolitan senior lien debt is currently rated by three credit rating agencies: S&P, Fitch, & Moody's. Metropolitan's current ratings are AAA from S&P, AA+ from Fitch, and Aa1 from Moody's.

The Board has adopted a revenue bond debt service coverage target of 2.0 times and a fixed charge coverage target of 1.2 times. Revenue bond debt service coverage is one primary indicator of credit quality and is calculated by dividing net operating revenues by debt service. Over the updated ten-year forecast, Metropolitan's revenue bond coverage ratio decreases initially, but is expected to achieve the 2.0 times target by FY 2024/25. In addition, Metropolitan also measures total coverage of all fixed obligations after payment of operating expenditures. Metropolitan's fixed charge coverage ratio target is 1.2 times. The original Ten-Year Forecast (included in **Attachment 1**) projected that Metropolitan's fixed charge coverage ratio would be at least 1.5 times over the ten-year period, which helps maintain favorable credit ratings and access to the capital markets at low cost. Under the updated Option 1, the fixed charge coverage ratio is also at least 1.5 times over the ten-year period. However, under the updated Option 2, the fixed charge coverage ratio is estimated to be only 1.25 times for FY 2020/21, rising to 1.6 times in FY 2021/22.

In FY 2020/21, the updates to the Proposed Biennial Budget anticipate that 55 percent of our capital expenditures will be paid from operating revenues or PAYGO, with 45 percent of the CIP funded from debt.

#### Key Assumptions

For the upcoming biennium, Metropolitan made the following assumptions for the Proposed Biennial Budget, and some have been updated with the proposed modifications:

**Water transactions projection:** Current hydrologic conditions are no longer cyclical and predicting the current trend has become more challenging. To accurately reflect the current conditions and projected future trends, water transactions (a term that includes sales, exchanges, and wheeling) are projected to be 1.60 million acre-feet (MAF) for FY 2020/21 and 1.60 MAF for FY 2021/22. No wheeling transactions are projected in that period. The FYs 2020/21 and 2021/22 projections assume an average year hydrology and

reflect the expectation that demands will trend lower due to consumer response to the previous drought and continued conservation initiatives. These assumptions remain unchanged.

**State Water Project (SWP) and Colorado River:** For FYs 2020/21 and 2021/22, Metropolitan's SWP supplies are projected to be 1.06 MAF each year. This is based on a 50 percent SWP allocation and accounts for the utilization of Metropolitan's SWP and Colorado River supply programs. For FYs 2020/21 and 2021/22, Colorado River diversions are projected to be 745 thousand acre-feet (TAF) and 733 TAF, respectively. These assumptions remain unchanged.

**Capital Investment Plan:** Expenditures for the CIP will be managed by focusing on projects that are critical to maintaining water quality, reliability, and safety. The CIP reflects the focus on addressing aging infrastructure and compliance with regulatory requirements. Included in the CIP planned expenditures are also expenditures related to the minor capital projects program, which were previously separately approved and appropriated by the Board.

The CIP planned spending for the biennial period totals approximately \$500 million. Under the new options, expenditures are adjusted to 80 percent of planned spending in the first fiscal year but increased again to 90 percent of planned spending in the second fiscal year. In the original proposal, expenditures were assumed at 90 percent of planned spending for both fiscal years. Accordingly, the Metropolitan Fiscal Years 2020/21 and 2021/22 Cost of Service Report (2020 Cost of Service Report) uses \$450 million for the originally proposed rates and charges, but the revised rates and charges use \$200 million for FY 2020/21 and \$225 million for FY 2021/22 for a total of \$425 million for the proposed rates and charges over two years.

**Operations and Maintenance (O&M):** The FY 2020/21 budget includes \$542.2 million for O&M, including labor and benefits, water treatment chemicals, power, solids handling, professional services, and operating equipment purchases. The FY 2021/22 budget includes \$562.8 million for O&M, including labor and benefits, water treatment chemicals, power, solids handling, professional services, and operating equipment purchases. Under the new options, the O&M budget will be revised to reflect the modifications in the assumptions.

**Rates, Charges, and Ad Valorem Property Tax Revenue:** The Proposed Biennial Budget document (**Attachment 1**) and revenue requirements originally proposed assume the Board: (i) adopts the proposed rates and charges with overall increases of 5 percent; (ii) finds that the AV tax limitation of Metropolitan Water District Section 124.5 limitation is not applicable for the biennial period; and (iii) maintains the AV property tax rate at its current level when the rate is set in August of 2020 and 2021. The new options propose modified rate increases, as specified in this board letter, but the modifications do not change the recommendations that it is essential to fiscal integrity to maintain the current AV property tax rate.<sup>1</sup>

If the rates, charges, and Section 124.5 finding are not adopted as proposed under either of the options in this board letter, the Board would need to waive the requirements of Administrative Code Section 4304 to adopt rates by April and direct staff to return to the Board at its regular May or June 2020 meeting with a revised proposed biennial budget, revenue requirements, and rates and charges to produce the necessary revenue.

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<sup>1</sup> Limiting the tax rate pursuant to Section 124.5 would result in a rate that exceeds the maximum number of decimal places that can be processed by some county tax assessors. The county tax assessor for the County of San Bernardino has advised its software system cannot process a tax rate lower than the current four decimal places.



## Budget Appropriations

Appropriations for the Operating Budget, Debt Service, and CIP under all of the original Proposed Biennial Budget document and the updated options are shown on the following table.

**Table 1: FY 2020/21 and FY 2021/22 Proposed Operating and CIP Appropriations, in million dollars**

	Original	Updated
<b>2020/21 Appropriations</b>		
Operating Budget*	\$ 1,385.4	\$ 1,387.4
Debt Service	298.7	298.7
CIP**	250.0	250.0
<b>2020/21 Total</b>	<b>1,934.1</b>	<b>1,936.1</b>
<b>2021/22 Appropriations</b>		
Operating Budget*	1,421.5	1,423.5
Debt Service	307.0	307.0
CIP**	250.0	250.0
<b>2021/22 Total</b>	<b>1,978.5</b>	<b>1,980.5</b>
<b>Total Biennium</b>		
Operating Budget*	2,806.9	2,810.9
Debt Service	605.7	605.7
CIP**	500.0	500.0
<b>Grand Total</b>	<b>\$ 3,912.6</b>	<b>\$ 3,916.6</b>

\* Includes Conservation appropriation of \$43M per year. The annual Conservation expenditures are estimated to be \$25M per year.

\*\* CIP appropriation is \$500M over the biennium and will be subject to a separate Board action following the approval of the Budget.

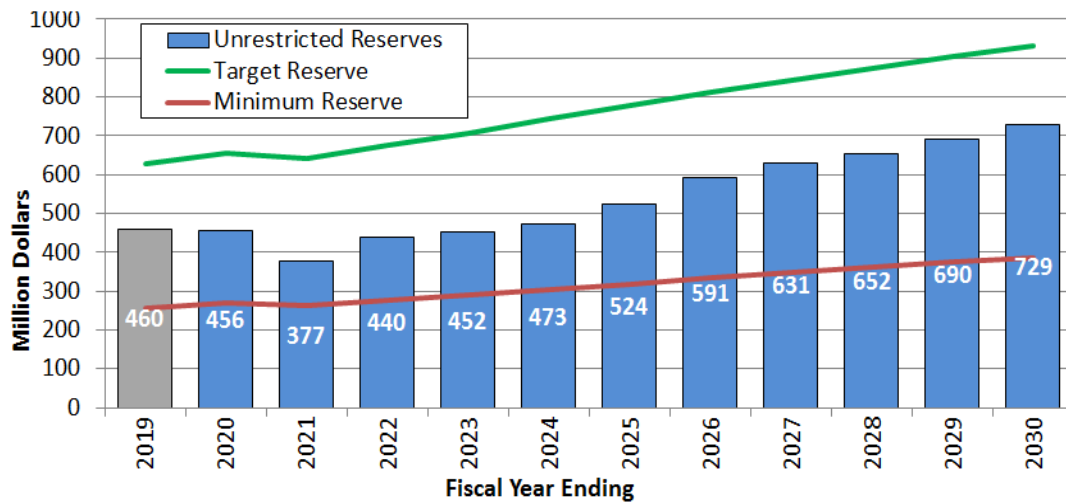
- The Operating Budget Appropriation is for Metropolitan O&M and operating equipment, power costs on the Colorado River Aqueduct, SWC operations, maintenance, power and replacement costs, and SWC capital charges; demand management programs including the local resources and Conservation Credits Program; and costs associated with supply programs, for FYs 2020/21 and 2021/22; the continuing debt service appropriation for FY 2020/21 and FY 2021/22 is for debt service on Metropolitan general obligation and revenue bonds.
- The appropriation of \$500 million to fund the CIP for FYs 2020/12 and 2021/22 will be presented in a separate board letter following the approval of the Biennial Budget.

## TEN-YEAR FORECAST (Attachment 1 and Recent Modifications)

The Proposed Biennial Budget document (**Attachment 1**) sets the foundation for consistent, reasonable rate increases over the ten-year planning period. Overall rate increases from FY 2022/23 through FY 2029/30 are projected to range from 3.0 to 5.0 percent each year in the original Ten-Year Financial Forecast presented in **Attachment 1**.



**Figure 4: Projected Rate Increases, Reserves and Financial Indicators, Ten-Year Forecast – Option 2**



	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Overall Rate Inc.</b>	3.0%	3.0%	5.0%	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
<b>Water Transactions, MAF*</b>	1.42	1.55	1.60	1.60	1.60	1.64	1.69	1.74	1.74	1.74	1.75	1.75
<b>Rev. Bond Cvg</b>	1.4	1.5	1.3	1.7	1.6	1.9	2.1	2.2	2.1	2.1	2.2	2.3
<b>Fixed Chg Cvg</b>	1.4	1.4	1.3	1.6	1.7	1.8	1.9	1.9	1.8	1.7	1.7	1.7
<b>PAYGO, \$M</b>	126	30	110	135	180	210	210	210	210	210	210	210

**COST OF SERVICE ANALYSIS**

The detailed 2020 Cost of Service Report provides the analysis to support the proposed rates and charges, based on the methodology approved by the Board since 2001. The following provides a summary of the cost of service (COS) analysis, which was reviewed in the Board workshops. Both Options are supported by the methodology and analysis in the COS Report. Metropolitan will update the calculations in the COS Report to reflect the corresponding modifications and the Option approved by the Board. An updated COS Report will be published accordingly and provided to the Board.

**Cost of Service Analysis, FYs 2020/21 and 2021/22**

All proposed water rates and charges to support the estimated revenue requirements, after consideration of revenue offsets (such as property tax revenue, interest income, and miscellaneous income), were developed using the COS methodology previously approved by the Board and implemented since the Board adopted the current rate structure in October 2001.

Metropolitan, a wholesaler, provides two types of services to its member agencies: full-service water service (treated or untreated) and wheeling service. Metropolitan has one class of customers: its member agencies. The level of rate unbundling in Metropolitan’s rate structure provides transparency to show that rates and charges recover only the costs associated with functions involved in the applicable service and that no cross-subsidy of costs exists. Metropolitan’s COS process and resulting unbundled rate structure ensures that its wholesale customers pay for only those services they elect to receive.

The COS process resulting in the proposed rates and charges is consistent with industry principles, as detailed in **Attachment 2**, Metropolitan’s 2020 Cost of Service Report. The process is generally described below.

**Estimated Revenue Requirements**

To support Metropolitan’s Proposed Biennial Budget, Ten-Year Forecast, and financial planning, as well as the updated proposals, the revenue requirements for each option are shown below in Table 2 and supported by rates and charges in each of the proposed options.

**Table 2: Estimated Revenue Requirements for Both Options for FYs 2020/21 and 2021/22 in millions of dollars\***

Fiscal Year Ending	Original	Option 1	Option 2
<b>2020/21</b>	1,644	1,622	1,621
<b>2021/22</b>	1,708	1,708	1,709

\* Net of revenue offsets

**Proposed Rates and Charges for CYs 2021 and 2022 (As Originally Proposed)**

The originally proposed overall rate increase of 5.0 percent effective January 1, 2021, and January 1, 2022, is appropriate to cover the costs in the Proposed Biennial Budget document for FYs 2020/21 and 2021/22, meet financial policy guidelines with the exception of revenue bond coverage, and maintain steady rates for the future. The originally proposed increases to rates and charges ensured that Metropolitan continues to make progress towards meeting all coverage targets. The specific elements of the originally proposed rate increase effective January 1, 2021, and January 1, 2022, are shown in Table 4, “Current and Proposed Rates and Charges.” The rates and charges for FY 2020/21 are based on the estimated revenue requirements of \$1.64 billion shown in Table 1. The existing rates, which were effective January 1, 2020, and the proposed rates under a 5.0 percent increase, effective January 1, 2021, would generate combined revenue of \$1.60 billion for FY 2020/21 based on total transactions of 1.60 MAF, of which 50 percent is treated full-service water, 276 TAF is untreated exchange agreement water, and the remainder is untreated full-service water.

The originally proposed rates and charges for FY 2021/22 are based on the estimated revenue requirements of \$1.71 billion shown in Table 1. Projected revenues from the originally proposed rates and charges in FY 2021/22 are \$1.71 billion on total transactions of 1.60 MAF, of which 50 percent is treated full-service water, 281 TAF is untreated exchange agreement water, and the remainder is untreated full-service water.

**Table 3: Current and Originally Proposed Rates and Charges – Originally Proposed Biennial Budget**

Rates & Charges Effective January 1st	Current	Proposed	% Change	Proposed	% Change
	2020	2021		2022	
Tier 1 Supply Rate (\$/AF)	\$208	\$246	18%	\$247	0%
Tier 2 Supply Rate (\$/AF)	\$295	\$285	(3%)	\$285	0%
System Access Rate (\$/AF)	\$346	\$374	8%	\$397	6%
Water Stewardship Rate (\$/AF)*	\$65	-	(100%)	-	
System Power Rate (\$/AF)	\$136	\$160	18%	\$170	6%
Full Service Untreated Volumetric Cost (\$/AF)					
Tier 1	\$755	\$780	3%	\$814	4%
Tier 2	\$842	\$819	(3%)	\$852	4%
Treatment Surcharge (\$/AF)	\$323	\$351	9%	\$369	5%
Full Service Treated Volumetric Cost (\$/AF)					
Tier 1	\$1,078	\$1,131	5%	\$1,183	5%
Tier 2	\$1,165	\$1,170	0%	\$1,221	4%
Readiness-to-Serve Charge (\$M)	\$136	\$136	0%	\$144	6%
Capacity Charge (\$/cfs)	\$8,800	\$11,200	27%	\$12,500	12%
Overall Rate Increase			5%		5%

\*The Water Stewardship Rate is not proposed to be collected in CYs 2021 and 2022. The Board directed staff to use the FY 2019/20 fiscal-year-end balance of the Water Stewardship Fund to fund demand management, and not to collect the Water Stewardship Rate or any other rate or charge to fund demand management costs, during the biennial period. The Water Stewardship Rate will continue to be collected through the end of CY 2020, which will also add to the available Water Stewardship Fund balance. Should demand management costs exceed available funds, staff will seek further direction from the Board.

The following tables 4 and 5 show the rates and charges under the updated Options 1 and 2.

**Table 4: Current and Proposed Rates and Charges - Option 1**

Rates & Charges Effective January 1st	Current	Proposed	% Change	Proposed	% Change
	2020	2021		2022	
Tier 1 Supply Rate (\$/AF)	\$208	\$243	17%	\$243	0%
Tier 2 Supply Rate (\$/AF)	\$295	\$285	(3%)	\$285	0%
System Access Rate (\$/AF)	\$346	\$373	8%	\$389	4%
Water Stewardship Rate (\$/AF)*	\$65	-	(100%)	-	
System Power Rate (\$/AF)	\$136	\$161	18%	\$167	4%
Full Service Untreated Volumetric Cost (\$/AF)					
Tier 1	\$755	\$777	3%	\$799	3%
Tier 2	\$842	\$819	(3%)	\$841	3%
Treatment Surcharge (\$/AF)	\$323	\$327	1%	\$344	5%
Full Service Treated Volumetric Cost (\$/AF)					
Tier 1	\$1,078	\$1,104	2%	\$1,143	4%
Tier 2	\$1,165	\$1,146	(2%)	\$1,185	3%
Readiness-to-Serve Charge (\$M)	\$136	\$130	(4%)	\$140	8%
Capacity Charge (\$/cfs)	\$8,800	\$10,700	22%	\$12,200	14%
Overall Rate Increase			3.0%		4.0%

\*The Water Stewardship Rate is not proposed to be collected in CYs 2021 and 2022. The Board directed staff to use the FY 2019/20 fiscal-year-end balance of the Water Stewardship Fund to fund demand management, and not to collect the Water Stewardship Rate or any other rate or charge to fund demand management costs, during the biennial period.

**Table 5: Current and Proposed Rates and Charges - Option 2**

Rates & Charges Effective January 1st	Current	Proposed	Proposed	% Change	Proposed	% Change
	2020	Jan 2021	July 2021		2022	
Tier 1 Supply Rate (\$/AF)	\$208	\$208	\$250	20%	\$250	0%
Tier 2 Supply Rate (\$/AF)	\$295	\$295	\$285	(3%)	\$285	0%
System Access Rate (\$/AF)	\$346	\$346	\$379	10%	\$400	6%
Water Stewardship Rate (\$/AF)*	\$65	-	-	(100%)	-	
System Power Rate (\$/AF)	\$136	\$136	\$164	21%	\$172	5%
Full Service Untreated Volumetric Cost (\$/AF)						
Tier 1	\$755	\$690	\$793	5%	\$822	4%
Tier 2	\$842	\$777	\$828	(2%)	\$857	4%
Treatment Surcharge (\$/AF)	\$323	\$323	\$333	3%	\$354	6%
Full Service Treated Volumetric Cost (\$/AF)						
Tier 1	\$1,078	\$1,013	\$1,126	4%	\$1,176	4%
Tier 2	\$1,165	\$1,100	\$1,161	(0%)	\$1,211	4%
Readiness-to-Serve Charge (\$M)	\$136	\$136	\$132	(3%)	\$145	10%
Capacity Charge (\$/cfs)	\$8,800	\$8,800	\$10,900	24%	\$12,600	16%
Overall Rate Increase				5.0%		5.0%

\*The Water Stewardship Rate is not proposed to be collected in CYs 2021 and 2022. The Board directed staff to use the FY 2019/20 fiscal-year-end balance of the Water Stewardship Fund to fund demand management, and not to collect the Water Stewardship Rate or any other rate or charge to fund demand management costs, during the biennial period.

## PROCESS

The updated proposed biennial budget, rates, charges, and Section 124.5 determinations are proposed to the Board following an extensive process of presentations and review, and staff's updates pursuant to recent developments. In September 2019, staff began the process of identifying and collecting information to prepare the proposal. The process with the Board, member agencies, and the public took place between January and April 2020 as follows:

Information Board Letter	January 31, 2020
Workshop #1	February 10, 2020
Notice to Member Agencies of Proposed Rates and Charges, and Public Hearings	February 12, 2020
Notice to Legislature of Public Hearings	February 24, 2020
Workshop #2	February 25, 2020
Workshop #3	March 9, 2020
Public Hearings	March 10, 2020
Review and Recommendation by Finance and Insurance Committee	April 13, 2020
Board Action	April 14, 2020

In addition to the Board process, staff presented information to its member agencies at the monthly Member Agency Managers meetings. Following this process, and having received and evaluated all comments, this board letter proposes the Board approve the proposed biennial budget, including the CIP, and rates and charges, as updated to reflect recent developments, and the Section 124.5 determination.

### Modifications to Attached Resolutions

The attached resolutions reflect the proposal in Option 1. For Option 2, Resolutions 3 and 4 would be further revised as follows:

#### Attachment 3 – Rates Resolution:

- **Section 1** will be revised to add a **Section 1.a.** to state, “The currently effective rates and charges adopted in Resolution 9234, 9235, and 9236 on April 10, 2018, remain effective until June 30, 2021, with the exception of the Water Stewardship Rate;”
- **Section 1** will be revised to add a **Section 1.b.** to adopt the rates and charges proposed in Option 2, effective July 1, 2021
- **Section 1** will be modified to add a conclusion that, “Metropolitan delays the effective date of the adopted rates and charges to assist its member agencies in addressing the financial stress that may result from non-payment of retail utility bills. The Board further authorizes staff to use up to \$79 million in unrestricted reserves to offset the revenue deficiency that may be caused by the delayed implementation of the new rates and charges.”

#### Attachment 4 – RTS Resolution:

- **Section 4** will be modified to reflect the RTS Charge from January 1, 2021, through June 30, 2020, will be extended at the amount and shares currently effective. The RTS Charge effective July 1, 2021, to December 31, 2021, will reflect the amount and shares proposed under Option 2.

- **Section 4** will further be revised to add a conclusion that, “Metropolitan delays the collection of the RTS Charge to assist its member agencies in addressing the financial stress that may result from non-payment of retail utility bills.”

## **Policy**

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Metropolitan Water District Act Section 61: Ordinances, Resolutions and Orders

Metropolitan Water District Act Section 124.5: Ad Valorem Tax Limitation

Metropolitan Water District Act Section 130: General Powers to Provide Water Services

Metropolitan Water District Act Section 133: Fixing of Water Rates

Metropolitan Water District Act Section 134: Adequacy of Water Rates; Uniformity of Rates

Metropolitan Water District Act Section 134.5: Water Standby or Availability of Service Charge

Metropolitan Water District Administrative Code 4301: Cost of Service and Revenue Requirement

Metropolitan Water District Administrative Code Section 4304: Apportionment of Revenues and Setting of Water Rates

Metropolitan Water District Administrative Code Section 5107: Biennial Budget Process

Metropolitan Water District Administrative Code Section 5200(b): Funds Established

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 51828, dated December 10, 2019, the Board directed staff to: (1) use the 2019/20 fiscal-year-end balance of the Water Stewardship Fund to fund all demand management costs in the proposed Biennial Budget; and (2) not incorporate the Water Stewardship Rate or any other rate or charge to recover demand management costs, with the proposed rate and charges for CYs 2021 and 2022.

## **California Environmental Quality Act (CEQA)**

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### **CEQA determination for Options #1 and #2:**

The proposed action is not defined as a project under CEQA (Public Resources Code Section 21065, State CEQA Guidelines Section 15378) because the proposed action will not cause either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment and involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not defined as a project because it involves the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines). Additionally, if it can be seen with certainty that there is no possibility that the proposed action in question may have a significant effect on the environment, the proposed action is not subject to CEQA (Section 15061(b)(3) of the State CEQA Guidelines). Finally, for those anticipated projects listed in the budget that may require subsequent board approval, a CEQA review will be carried out, and if appropriate, environmental documentation for such projects will be prepared and processed in accordance with CEQA and the State CEQA Guidelines.

### **CEQA determination for Option #3:**

None required



## Board Options

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### Option #1

- a. Approve the FY 2020/21 and FY2021/22 Proposed Biennial Budget document, with the following modifications:
  - Revise FY2020/21 budget to fund the CIP pursuant to a 55/45 PAYGO/debt ratio and change sales projections by shifting 50 TAF of untreated water sales projections to treated water sales projections.
  - Revise projected FY 2020/21 CIP expenditures to 80 percent of planned spending in FY 2020/21.
- b. Appropriate \$2,810.9 million for Metropolitan O&M and operating equipment, power costs on the Colorado River Aqueduct, SWC operations, maintenance, power and replacement costs and SWC capital charges; demand management programs including the local resources and Conservation Credits Program; and costs associated with supply programs, for FYs 2020/21 and 2021/22.
- c. Appropriate as a continuing appropriation, \$605.7 million for FY 2020/21 and FY 2021/22 debt service on Metropolitan general obligation and revenue bonds.
- d. Authorize the use of \$245 million in operating revenues to fund the Capital Investment Plan for FYs 2020/21 and 2021/22.
- e. Determine that the revenue requirements to be paid from rates and charges are \$1,622 million in FY 2020/21 and \$1,708 million in FY 2021/22.
- f. Approve the Ten-Year Financial Forecast, as shown in Figure 3.
- g. Approve water rates effective January 1, 2021, and January 1, 2022, as shown in Table 4 above.
- h. Adopt the Resolution Fixing and Adopting Water Rates To Be Effective January 1, 2021 and 2022 for Table 4, in the form of **Attachment 3**.
- i. Adopt the Resolution Fixing and Adopting A Readiness-To-Serve Charge Effective January 1, 2021 as shown in Table 4, in the form of **Attachment 4**.
- j. Adopt the Resolution Fixing and Adopting A Capacity Charge Effective January 1, 2021 as shown in Table 4, in the form of **Attachment 5**.
- k. Adopt the Resolution Finding that for FYs 2020/21 and 2021/22 the Ad Valorem Property Tax Rate Limitation in Section 124.5 of the Metropolitan Water District Act is not applicable because it is Essential to Metropolitan's Fiscal Integrity to Collect Ad Valorem Tax Rate in Excess of that Limitation, in the form of Attachment 6.

**Fiscal Impact:** The proposed budget, rates, and charges, as modified to reflect changes in assumptions relating to CIP expenditures, CIP financing, and shift in treated water demands, together with the continued AV property tax rate, and other income, are projected to produce the revenue required to meet Metropolitan's expenses. Revenue bond coverage and fixed charge coverage are lower in FYs 2020/21 through FY 2023/24 than they were in the original presented to the Board. However, Metropolitan anticipates delays in CIP projects due to the COVID-19 pandemic will reduce projected CIP expenditures in FY 2020/21.

### Option #2

- a. Approve FY 2020/21 and FY 2021/22 Proposed Biennial Budget document, with the following modifications:
  - Draw of unrestricted reserve in the amount of \$79 million to offset the revenue deficit caused by the delay in the collection of increased rates and charges.
  - Revise FY2020/21 budget to fund the CIP pursuant to a 55/45 PAYGO/debt ratio and change sales projections by shifting 50 TAF of untreated water sales projections to treated water sales projections.
  - Revise projected FY 2020/21 CIP expenditures to 80 percent of planned spending.
- b. Appropriate \$2,810.9 million for Metropolitan O&M and operating equipment, power costs on the Colorado River Aqueduct, SWC operations, maintenance, power and replacement costs and SWC capital charges; demand management programs including the local resources and Conservation Credits Program; and costs associated with supply programs, for FYs 2020/21 and 2021/22.

- c. Appropriate as a continuing appropriation, \$605.7 million for FY 2020/21 and FY 2021/22 debt service on Metropolitan general obligation and revenue bonds.
- d. Authorize the use of \$245 million in operating revenues to fund the Capital Investment Plan for FYs 2020/21 and 2021/22.
- e. Determine that the revenue requirements to be paid from rates and charges are \$1,621 million in FY 2020/21 and \$1,709 million in FY 2021/22.
- f. Approve the Ten-Year Financial Forecast, as shown in Figure 4.
- g. Extend the currently applicable rates and charges, with the exception of the Water Stewardship Rate, to June 30, 2021 and approve water rates effective January 1, 2021, and January 1, 2022, as shown in Table 5 above.
- h. Adopt the Resolution Fixing and Adopting Water Rates To Be Effective January 1, 2021 and 2022 for Table 5, in the form of **Attachment 3** and as modified in this Letter.
- i. Adopt the Resolution Fixing and Adopting A Readiness-To-Serve Charge Effective January 1, 2021 as shown in Table 5, in the form of **Attachment 4** and as modified in this Letter.
- j. Adopt the Resolution Fixing and Adopting A Capacity Charge Effective January 1, 2021 as shown in Table 5, in the form of **Attachment 5** and as modified in this Letter.
- k. Adopt the Resolution Finding that for FYs 2020/21 and 2021/22 the Ad Valorem Property Tax Rate Limitation in Section 124.5 of the Metropolitan Water District Act is not applicable because it is Essential to Metropolitan's Fiscal Integrity to Collect Ad Valorem Tax Rate in Excess of that Limitation, in the form of **Attachment 6**.

**Fiscal Impact:** Significant draw on unrestricted reserves in the amount of \$79 million to offset the revenue deficit caused by the delay in the collection of increased rates and charges; revenue bond coverage and fixed charge coverage drop below 1.3 times in FY 2020/21. Reduction in projected CIP expenditures could result in delay of projects in FY 2020/21.

### Option #3


Do not approve the Proposed Biennial Budget, the revenue requirements, rates, charges, or the Section 124.5 determination; and waive the requirement of Administrative Code Section 4304 to adopt rates by April for staff to revise the budget, rates, and charges, consistent with Board direction, and present revisions to the Board in May or June of 2020.

**Fiscal Impact:** The fiscal impact of any revisions to the proposals in this board letter must be evaluated when made.

**Staff Recommendation**

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Option #1

  
\_\_\_\_\_  
Katano Kasaine  
Assistant General Manager/  
Chief Financial Officer

4/4/2020  
Date

  
\_\_\_\_\_  
Jeffrey Kightlinger  
General Manager

4/4/2020  
Date

**Attachment 1 – Proposed Biennial Budget FY 2020/21 and FY 2021/22**

**Attachment 2 – Metropolitan Water District of Southern California, Fiscal Years 2020/21 and FY 2021/22 Cost of Service Report for Proposed Water Rates and Charges**

**Attachment 3 – Resolution Fixing and Adopting Water Rates to be Effective January 1, 2021 and 2022**

**Attachment 4 – Resolution Fixing and Adopting a Readiness-To-Serve Charge Effective January 1, 2021**

**Attachment 5 – Resolution Fixing and Adopting a Capacity Charge Effective January 1, 2021**

**Attachment 6 – Resolution Finding that for Fiscal Years 2020/21 and 2021/22 the Ad Valorem Property Tax Limitation in Section 124.5 of the Metropolitan Water District Act is not Applicable Because it is Essential to Metropolitan’s Fiscal Integrity to Collect Ad Valorem Property Taxes in Excess of that Limitation**



METROPOLITAN WATER DISTRICT



# Proposed Biennial Budget

Fiscal Years  
2020/21 and  
2021/22

**Uniquely Metropolitan:  
Maintaining Regional  
Reliability**



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
Award*

PRESENTED TO

**Metropolitan Water District of Southern California  
California**

For the Fiscal Year Beginning

**July 1, 2018**

*Christopher P. Morrill*

Executive Director



## MWD AT A GLANCE

### ORGANIZATION

**Authority:** The Metropolitan Water District Act (California Statutes 1927).

**Incorporated:** Dec. 6, 1928.

**First Board Meeting:** Dec. 29, 1928.

**Mission:** To provide Metropolitan's service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

**Imported Water Sources:** Colorado River and California State Water Project.

**Service Area:** About 5,200 square miles in Los Angeles, Orange, San Diego, Riverside, San Bernardino and Ventura counties.

**Population Served:** Approximately 19 million.

**Member Agencies:** 26.

**Founding Cities (December 1928):** Anaheim, Beverly Hills, Burbank, Colton\*, Glendale, Los Angeles, Pasadena, San Bernardino\*, San Marino, Santa Ana and Santa Monica.

\* Withdrew in 1931.

**Subsequent Member Agency Cities:** Cities of Fullerton (joined 1931), Long Beach (1931), Torrance (1931), Compton (1931), and San Fernando (1971).

**Municipal Water Districts:** West Basin MWD (1948), Inland Empire Utilities Agency (1950), Three Valleys MWD (1950), Eastern MWD (1951), MWD of Orange County (1951), Foothill MWD (1953), Central Basin MWD (1954), Western MWD (1954), Calleguas MWD (1960), Las Virgenes MWD (1960), and Upper San Gabriel Valley MWD (1963), **County Water Authority:** San Diego (1946).

### GOVERNANCE

**Board of Directors:** 38. Each member agency is entitled to at least one director; additional directors are based on the agency's assessed valuation. Board meetings are generally held on the second Tuesday of each month. Check [www.mwdh2o.com](http://www.mwdh2o.com) for meeting times and agendas.

### FACILITIES

**Colorado River Aqueduct:** 242 miles from Lake Havasu to Lake Mathews, Riverside.

**Construction:** Began 1933, completed 1939; CRA and regional distribution system operational 1941.

**Capacity:** 1.3 million acre-feet<sup>†</sup> annually.

**Pumping Plants (east to west):** Whitsett Intake (lift 291 ft.); Gene (303 ft.); Iron Mountain (144 ft.); Eagle Mountain (438 ft.); Julian Hinds (441 ft.); Total lift 1,617 feet.

**Siphons:** 144, totaling 29 miles.

**Tunnels:** 29, totaling 92 miles.

**Canals:** 63 miles.

**Conduits and Pipeline:** 58 miles.

**Design Capacity:** 1,605 cubic feet per second.

**Water Treatment Plants:** Joseph Jensen, Granada Hills (capacity 750 million gallons per day); Robert A. Skinner, Winchester (630 mgd); F.E. Weymouth, La Verne (520 mgd); Robert B. Diemer, Yorba Linda (520 mgd); and Henry J. Mills, Riverside (220 mgd)

**Reservoirs:** Diamond Valley Lake, Hemet, capacity 810,000 AF; Lake Mathews, Riverside, 182,000 AF; Lake Skinner, Winchester, 44,000 AF; Copper Basin, Gene, 24,200 AF; Gene Wash, Gene, 6,300 AF; Live Oak, La Verne, 2,500 AF; Garvey, Monterey Park, 1,600 AF; Palos Verdes, Rolling Hills, 1,100 AF; and Orange County, Brea, 212 AF.

**Total Reservoir Storage Capacity:** 1,072,000 AF

**Distribution System:** 830 miles of pipelines and tunnels; about 400 connections to member agencies.

**Hydroelectric Plants:** 16; nameplate capacity 131 megawatts.

**State Water Project:** Metropolitan participates in the State Water Project, with rights to use the facilities and an allocation of water.

### SUPPLY, DELIVERIES AND WATER TRANSACTIONS

**Average Daily Delivery:** 4,900 AF (5-year avg. as of Dec. 31, 2015).

**Record Daily Delivery:** 9,872 AF on June 28, 1994.

**Record Annual Water Transactions:** 2.5 million AF in 1990.

**Unit Price (full service):** Effective Jan. 1, 2020, rates are \$1,078 per AF for treated water, and \$755 per AF for untreated water. Effective Jan. 1, 2021, rates are \$1,131 per AF (treated) and \$780 per AF (untreated), and effective Jan. 1, 2022, rates are \$1,183 per AF (treated) and \$814 per AF (untreated).

**Budgeted Water Transactions Assumption:** 1.60 MAF for FY 2020/21 and 1.60 MAF in FY 2021/22.

### FINANCE AND ADMINISTRATION

**Water Revenue Bond Ratings:** Standard & Poor's AAA; Moody's Aa1; Fitch AA+.

**Budget:** July 1, 2020 – June 30, 2021: \$1,934 billion

July 1, 2021 – June 30, 2022: \$1,979 billion

**Capital Projects:** \$250 million (FY 2020/21)

\$250 million (FY 2021/22)

**Employees:** 1,907 budgeted regular employees FY 2020/21 (full-time equivalent positions); 1,907 employees (FTEs) FY 2021/22

**Fund Sources:** Water rates and charges, 77%; fund withdrawals, 9%; taxes, 7%; hydroelectric sales and miscellaneous income, 2%; other, 5% (Biennial Budget FY 2020/21, FY 2021/22).

**Uses of Funds:** State Water project payments, 29%; operations & maintenance, 26%; debt service, 14%; construction, 11%; fund deposits, 10%; demand management programs, 2%; supply programs, 3%; and Colorado River power, 3%; other, 2% (Biennial Budget FY 2020/21, FY 2021/22).

<sup>†</sup>Acre-foot=325,851.4 gallons

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# **GENERAL MANAGER'S TRANSMITTAL LETTER**

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To be provided in adopted budget document

(Pages 1 thru 8)

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## DISTRICT OVERVIEW

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### District Profile

The Metropolitan Water District of Southern California (Metropolitan) is a metropolitan water district created in 1928 under authority of the Metropolitan Water District Act (California Statutes 1927, Chapter 429, as reenacted in 1969 as Chapter 209, as amended (the Act)). Metropolitan has 26 member public agencies and its primary purpose is to provide its members with a reliable wholesale water supply service for domestic and municipal uses. To do so, Metropolitan imports water from the Colorado River and Northern California. Metropolitan also helps its member agencies develop increased water conservation, recycling, storage and other local resource programs.

Metropolitan is authorized to develop, store, and distribute water for domestic and municipal purposes and other beneficial uses if excess water is available, and may provide, generate, and deliver electric power within or without the state for the purpose of developing, storing, and distributing water. All powers, privileges and duties vested in or imposed upon Metropolitan are exercised and performed by and through its Board of Directors. Metropolitan is governed by a 38-member Board of Directors representing the 26 member agencies. Metropolitan directors are selected by their respective member agencies and some of those directors also serve on the governing body of their member agency. Board and committee meetings are open to the public and are broadcast on the Internet through Metropolitan's website, [www.mwdh2o.com](http://www.mwdh2o.com). A schedule of Board and committee meetings, as well as current and archived Board materials, is available at the same website.

Metropolitan was established to obtain an allotment of Colorado River water and to construct and operate the 242-mile Colorado River Aqueduct (CRA), which runs from an intake at Lake Havasu on the California-Arizona border, to an endpoint at Metropolitan's Lake Mathews reservoir in Riverside County. Metropolitan owns and operates an extensive portfolio of capital facilities including the CRA, 16 hydroelectric facilities, nine reservoirs, 830 miles of large-scale pipes, and five water treatment plants.

In 1960, Metropolitan, followed by other public agencies, signed a long-term contract with the state Department of Water Resources (DWR) to participate in the State Water Project (SWP). The SWP is the largest state-built, user-financed water supply and transportation project in the country. Its facilities were constructed with several general types of financing, the repayment of which is made by the 29 agencies and districts that participate in the SWP through long-term contracts (the State Water Contractors). The State Water Contractors also pay for the operations, maintenance, power, and replacement (OMP&R) costs of the SWP, as the State Water Contracts are the basis for all SWP construction and ongoing operations and DWR manages and operates the SWP. As the largest of the now 29 contractors, Metropolitan is entitled to slightly less than half of all SWP supplies. Water supplies from the SWP are conveyed to Metropolitan via the SWP's 444-mile California Aqueduct, which was made possible pursuant to Metropolitan's State Water Contract. The SWP serves urban and agricultural agencies from the San Francisco Bay area to Southern California.

To secure additional supplies, Metropolitan also has groundwater banking partnerships and water transfer arrangements within and outside of its service area. Metropolitan also provides financial incentives to its member agencies for local investments in water management projects and programs. An increasing percentage of Southern California's water supply comes from these local resources, including conservation, water recycling and recovered groundwater.

To pay for its costs, the Act authorizes Metropolitan to: levy property taxes within its service area; establish water rates; collect charges for water standby and service availability; incur general obligation bonded indebtedness and issue revenue bonds, notes and short-term revenue certificates; execute contracts; and

exercise the power of eminent domain for the purpose of acquiring property. In addition, Metropolitan's Board is authorized to establish terms and conditions under which additional areas may be annexed to Metropolitan's service area.

## Mission

The mission of Metropolitan is to provide its 5,200-square-mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

## Core Values

Metropolitan's core values include the following:

- Integrity
- Stewardship
- Diversity
- Open Communication
- Leadership
- Teamwork

## Metropolitan Service Area

Metropolitan's service area comprises approximately 5,200 square miles and includes portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura. When Metropolitan began delivering water in 1941, its service area consisted of approximately 625 square miles. Its service area has increased by 4,500 square miles since that time. The expansion was primarily the result of annexation of the service areas of additional member agencies. Metropolitan has historically provided between 40 and 60 percent of the water used annually within its service area.

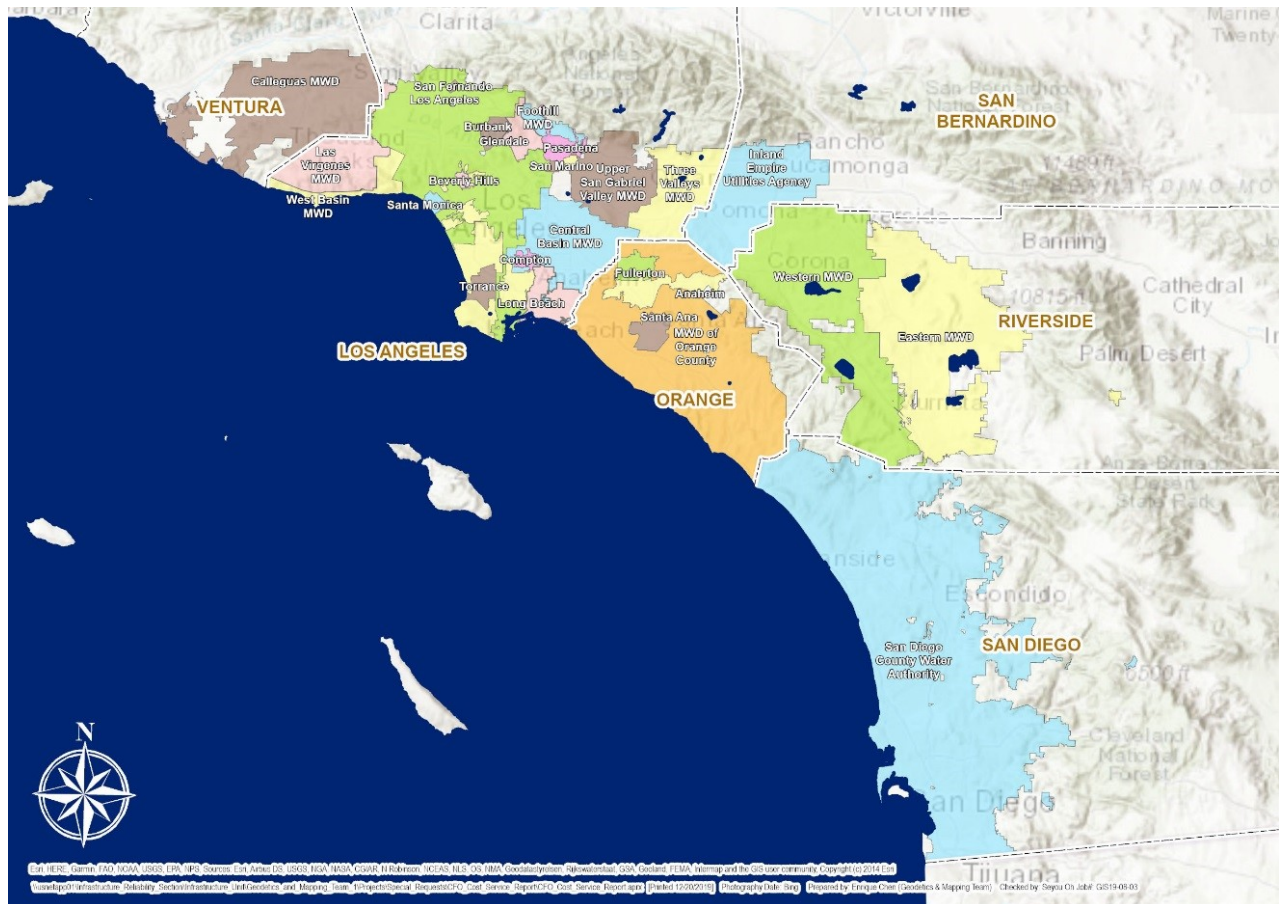
The area served by Metropolitan represents the most densely populated and heavily industrialized portions of Southern California. Metropolitan estimates that approximately 19 million people lived in Metropolitan's service area in 2019, based on official estimates from the California Department of Finance and on population distribution estimates from the Southern California Association of Governments (SCAG) and the San Diego Association of Governments (SANDAG). Population projections prepared by SCAG in 2012 and SANDAG in 2013, as part of their planning process to update regional transportation and land use plans, show expected population growth of about 18 percent in Metropolitan's service area between 2010 and 2035.

The economy of Metropolitan's service area is exceptionally diverse. In 2018, the economy of the six counties which contain Metropolitan's service area had a gross domestic product larger than all but twelve nations of the world. The Six County Area economy ranked between South Korea (\$1.62 trillion) and Australia (\$1.43 trillion), with an estimated gross domestic product (GDP) of \$1.54 trillion. The Six County Area's gross domestic product in 2018 was larger than all states except California, Texas, and New York.

The climate in Metropolitan's service area ranges from moderate temperatures throughout the year in the coastal areas to hot and dry summers in the inland areas. Annual rainfall in an average year has historically been approximately 13 to 15 inches along the coastal area, up to 20 inches in foothill areas and less than 10 inches inland.

## Service Area Map

The map below shows the area served by Metropolitan. It includes parts of six of the ten counties that comprise Southern California (Six County Area) consisting of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. Although these counties comprise Metropolitan's service area, Metropolitan's territory does not encompass all of the area within each of the six counties.



## Summary of Recent Trends and Outlook for the Six County Area Economy

The national economy is in the ninth year of economic expansion. GDP growth since the third quarter of 2014 is shown below. GDP growth in the 2nd and 3rd quarters of 2019 declined to near 2%. Reported job growth averaged 189,000 per month in 2017, 204,000 per month in 2018 and 179,000 per month so far in 2019. Recent job growth has resulted in average hourly earnings rising by 3.0% over the 12 months ending October 2019 and the unemployment rate declining to 3.6% in October 2019.

On October 20, 2019, the Federal Reserve Bank lowered the federal funds rate to between 1.5% and 1.75% - the third decline in 2019. At the same time the Federal Reserve Bank signaled no more rate changes are currently planned in the near term. Inflation is now averaging close to 2% on an annual basis and wage gains have risen to about 3% on an annual basis.

The national economy faces potential slowing in the coming years from three factors - the possibility of continuing higher tariffs, a decline in labor force growth from baby boomer retirements, and slowing world economic growth. The UCLA national forecast is shown below with declining GDP and job growth in 2020 and 2021. Congressional Budget Office forecasts GDP growth of 2.1% in 2020, 1.7% for 2021-2024 and 1.8% for 2024-2029.



The Six County Area has regained all the jobs lost during the recession and more. Year-over-year job gains continued into 2019 with year-over-year gains ranging from a high of 2.3% in Riverside-San Bernardino metro area to a low of 0.4% in Ventura County. Job growth for the entire Six County Area for the 12 month ending September 2019 was 139,000 jobs or a gain of 1.5% compared to a 1.9% increase in jobs for the state and 1.5% for the nation for the comparable period. Unemployment rates in the Six County Area have declined sharply between 2010 and September 2019. In September 2019 unemployment rates ranged from a low of 2.4% in Orange County to a high of 4.5% in Los Angeles County.

California and the Six County Area are experiencing growth in both domestic and foreign visitors. Hotel rates and occupancy are increasing in the Six County Area and the same is true for employment in the hotel and amusement park sectors. In 2018 Los Angeles County set tourism records for the fourth year in a row in visitors, 50 million up 3.1% over 2017, according to data from the Los Angeles Tourism and Convention Board. In 2018 passenger travel at Los Angeles International Airport was up 3.5% to 87.5 million trips to set an all-time record. Air passenger travel at the major airports in the Six County Area reached record levels in 2018 and is up 1.9% through August 2019 to 135.3 million trips led by gains at Burbank, Ontario and San Diego airports.

Population growth in the Six County Area since 2000 compared with previous decades. Population growth slowed after 2005 as high housing prices and large job losses contributed to larger levels of out-migration to other areas of California and other states. Population growth averaged 160,000 between 2010 and 2018 according to the California Department of Finance (DOF) estimates, and growth slowed in the past three years. The Six County Area had 22.3 million residents in 2018, approximately 56% of the State's population.

Income, taxable sales and assessed valuation in the Six County Area increased since 2013 along with record levels in foreign trade and film permits. Gains in income, taxable sales and assessed valuation are all outpacing the growth in consumer price indices in the Six County Area all of which are helping local government revenue growth.

Long-term job growth is driven by the Six County Area's economic base—those sectors that sell most of their goods and services in national and world markets outside of the Six County Area. Recent projections by the Center for Continuing Study of the California Economy (CCSCE), the Southern California Association of Governments (SCAG) and the San Diego Association of Governments (SANDAG) report that the Six County Area will see job growth that slightly exceeds the national average during the next 10 to 30 years, led by gains in Professional and Business Services, Wholesale Trade, Tourism and Entertainment and Health Care.

For more demographic and economic information for Metropolitan's service area or the Six County Area, please refer to the Service Area Economy section, which includes information on:

- Job growth trends
- Construction activity
- Housing trends
- Assessed valuation
- International Trade
- Income & Wages
- Population
- Economic structure and long term prospects

## Strategic Plan Summary

The General Manager submits to the Board of Directors a business plan containing the General Manager's key priorities for the coming year for review and approval.

Three strategic priorities support Metropolitan's mission for fiscal years 2020/21 and 2021/22:

Strategic Priority #1: Resiliency

Strategic Priority #2: Sustainability

Strategic Priority #3: Innovation

For more detail on the GM's strategic priorities, please refer to the General Manager's Transmittal Letter.

The General Counsel, General Auditor and Ethics Officer also submit to the Board of Directors a business plan containing their department's key priorities for the coming year for review and approval.

The groups within the General Manager department submit their business plans to the General Manager annually for review and approval. These business plans include a group mission statement and Objectives and Actions to support the relevant General Manager's strategic priorities.

## Performance Indicators

Metropolitan has developed a series of performance measures that are used to measure and maintain mission-critical processes as well as support internal decision making. These include financial, water quality, human resource, legislative, outreach, etc. measures which are closely aligned with Metropolitan's business plans, key priorities and objectives.

Please see the Operating Expenditures section for Metropolitan's performance measures including fiscal year results and targets.

## Organization Structure

### Member Agencies

The following table lists the 26 member agencies of Metropolitan which include 11 municipal water districts, 14 cities and one county water authority.

<b>Municipal Water Districts</b>	<b>Cities</b>	<b>County Water Authority</b>
Calleguas	Anaheim	San Diego
Central Basin	Beverly Hills	
Eastern	Burbank	
Foothill	Compton	
Inland Empire Utilities Agency	Fullerton	
Upper San Gabriel Valley	Glendale	
Western of Riverside County	Long Beach	
Las Virgenes	Los Angeles	
Orange County	Pasadena	
Three Valleys	San Fernando	
West Basin	San Marino	
	Santa Ana	
	Santa Monica	
	Torrance	

### Board of Directors

Metropolitan is governed by a 38-member Board of Directors. Each member public agency is entitled to have at least one representative on the Board, plus an additional representative for each full five percent of the total assessed valuation of property in Metropolitan's service area that is within the member public agency. Changes in relative assessed valuation do not terminate any director's term. In 2019, California Assembly Bill 1220 (Garcia) amended the Act to provide that "A member public agency shall not have fewer than the number of representatives the member public agency had as of January 1, 2019." Accordingly, the Board may, from time to time, have more than 38 directors.

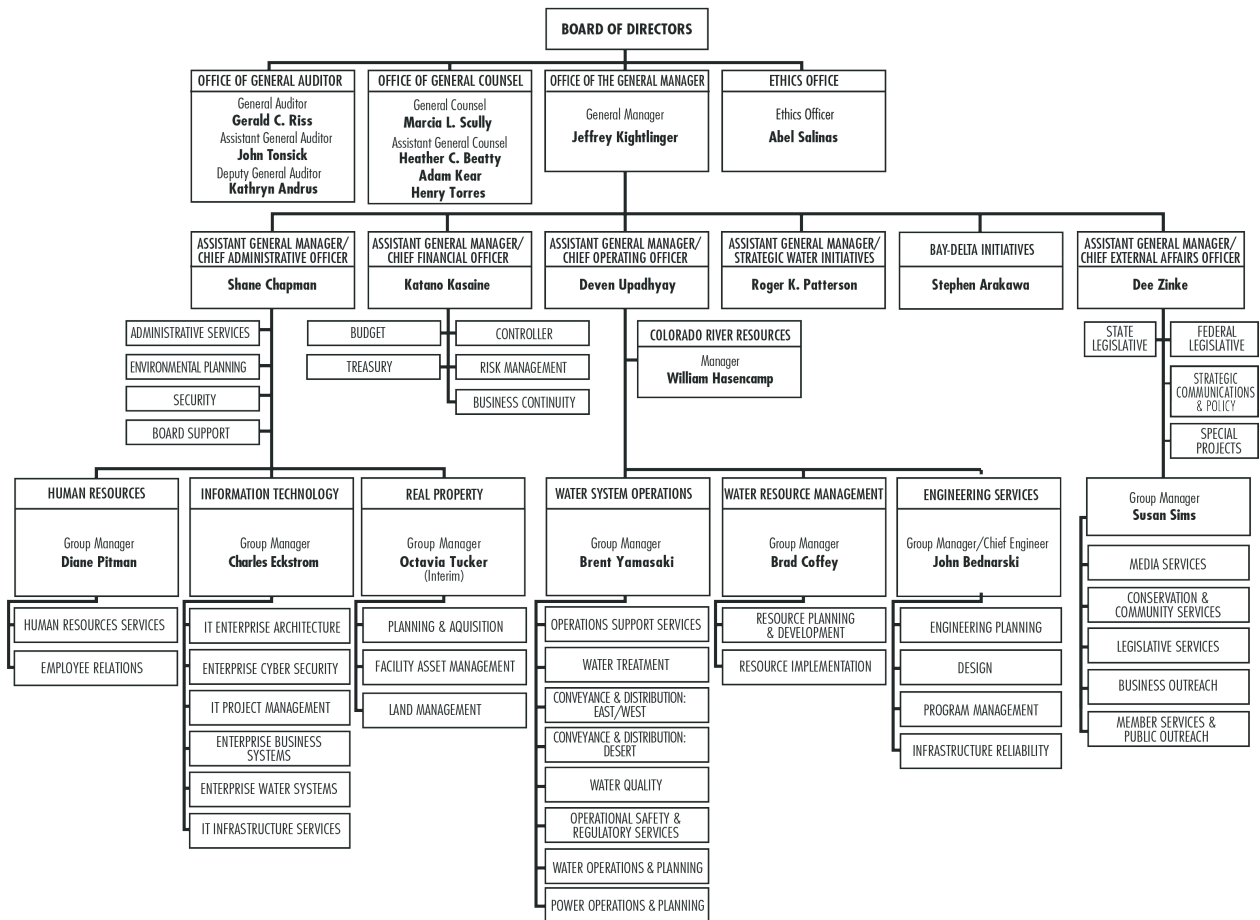
The Board includes business, professional and civic leaders. Directors serve on the Board without compensation from Metropolitan. Voting is based on assessed valuation, with each member agency being entitled to cast one vote for each \$10 million or major fractional part of \$10 million of assessed valuation of property within the member agency, as shown by the assessment records of the county in which the member agency is located. The Board administers its policies through the Metropolitan Water District Administrative Code (the Administrative Code), which the Board adopted in 1977. The Board periodically amends the Administrative Code to reflect new policies or changes in existing policies that occur from time to time.

Metropolitan’s day-to-day management is under the direction of its General Manager, who serves at the pleasure of the Board, as do Metropolitan’s General Counsel, General Auditor, and Ethics Officer.

**Organization Chart**

A larger version is provided on the inside back cover of the Biennial Budget document.

**METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA**



Updated as of January 22, 2020

## Metropolitan Senior Management

Jeffrey Kightlinger	General Manager
Marcia Scully	General Counsel
Gerald Riss	General Auditor
Abel Salinas	Ethics Officer
Katano Kasaine	Assistant General Manager/Chief Financial Officer
Deven Upadhyay	Assistant General Manager/Chief Operating Officer
Shane Chapman	Assistant General Manager/Chief Administrative Officer
Roger Patterson	Assistant General Manager/Strategic Water Initiatives
Dee Zinke	Assistant General Manager/Chief External Affairs Officer
Rosa Castro	Board Administrator

## Workforce

Metropolitan's budget is for 1,907 regular full-time employees. Most Metropolitan employees are represented by the American Federation of State, County and Municipal Employees (AFSCME), Local 1902; the Management and Professional Employees Association (MAPA), Local 1001; the Supervisors Association; and the Association of Confidential Employees (ACE). The four bargaining units represent approximately 99 percent of Metropolitan's employees. The remaining one percent is unrepresented.

## Offices

Metropolitan's headquarters are located at 700 N. Alameda St., Los Angeles, California 90012. Metropolitan has legislative offices in Sacramento and Washington D.C.



## Financial Organization

### Fund Structure and Descriptions (from Metropolitan's Administrative Code)

To provide for accountability of public moneys in accordance with applicable federal and state law and regulations and Board policies, the following funds active or prospectively active have been established in the Treasury of the District:

- **General Fund** (Fund No. 1001, established 1929).
  - Moneys not specifically allocated or appropriated may be placed in this fund and used for general purposes of the District.
  - Expenditures for reimbursable work and water conservation capital and indirect costs under the contract with Imperial Irrigation District are paid from this fund.
- **Replacement and Refurbishment Fund** (Fund No. 5001, established 1988).
  - Used to finance certain capital program expenditures from current revenues in accordance with Section 5109, subject to the conditions contained in Section 5202(b).
- **State Contract Fund** (Fund No. 5701, established 1960).
  - Used for the payment of capital charges under the State Water Contract, including the capital charges for off-aqueduct power facilities, subject to the conditions contained in Section 5201(d).
- **Special Tax Fund** (Fund No. 5702, established 1951).
  - Annexation fees (cash payments and special tax collections) are deposited in this fund and transferred to the State Contract Fund to pay a portion of State Water Contract capital charges.
- **Water Revenue Fund** (Fund No. 1002, established 1975).
  - Receipts from water sales are deposited in this fund and are transferred to various other funds in accordance with revenue bond covenants and Board resolutions to pay in order of priority:
    1. Operation and maintenance expenditures;
    2. Principal of, premium, if any, and interest on the Prior Lien Waterworks Revenue Bonds and any required deposits into any reserve funds or accounts therefore;
    3. The interest on and bond obligation of Subordinate Lien Water Revenue Bonds and Parity Obligations issued pursuant to Master Resolution 8329 (the Master Resolution) adopted by the Board on July 9, 1991 and any Supplemental Resolutions thereto;
    4. All other payments required for compliance with the Master Resolution, and any Supplemental Resolutions;
    5. Principal of and interest on Commercial Paper Notes and other amounts due a provider of a liquidity facility;

6. Deposits into the Water Standby Charge Fund in accordance with resolutions imposing such charges; and
  7. Any other obligations which are charges, liens, or encumbrances upon or payable from net operating revenues.
    - Moneys remaining at the end of each month, after the foregoing transfers, are transferred to the Revenue Remainder Fund.
- **Operation and Maintenance Fund** (Fund No. 1003, established 1975).
    - Used to pay all operation and maintenance expenditures, including State Water Contract operation, maintenance, power and replacement charges, subject to the conditions contained in Section 5201 (f).
  - **Revenue Remainder Fund** (Fund No. 1004, established 1975).
    - Used to maintain working capital and may be used for any lawful purpose by the District, subject to the conditions contained in Section 5202.
  - **Water Rate Stabilization Fund** (Fund No. 5501, established 1987).
    - Used to reduce future water revenue requirements or, as directed by the Board, for other lawful purposes, in accordance with Section 5202.
  - **Water Treatment Surcharge Stabilization Fund** (Fund No. 5502, established 1988).
    - Used to mitigate required increases in the surcharge for water treatment or, as directed by the Board, for other lawful purposes, in accordance with Section 5202.
  - **Revolving Construction Fund** (Fund No. 5003, established 1988).
    - Capital expenditures made from this fund are to be reimbursed from proceeds of security sales to the extent such expenditures are authorized uses of debt proceeds under the Act, subject to the conditions and restrictions contained in Section 5201(g).
  - **Employee Deferred Compensation Fund** (Fund No. 6003, established 1976).
    - Compensation deferred by employees under Section 457 of the Internal Revenue Code of 1986, as amended, is deposited in this fund and is withdrawn in accordance with Articles 2 and 3 of Chapter 7 of Division VI of this Administrative Code.
  - **Iron Mountain Landfill Closure/Postclosure Maintenance Trust Fund** (Fund No. 6005, established 1990).
    - Used as a trust fund to maintain moneys sufficient to cover the costs of closure and postclosure maintenance of the District's solid waste landfill facility at Iron Mountain, in accordance with regulations of the California Integrated Waste Management Board, and subject to the conditions contained in Section 5201(l).
  - **Water Standby Charge Fund** (Fund No. 1005, established 1992).
    - Used to separately hold revenues attributable to water standby charges; amounts deposited in this fund are used exclusively for the purpose for which the water standby charge was authorized.



- **Water Transfer Fund** (Fund No. 1007, established 1995).
  - Used for moneys set aside for the purchase of water through transfers or similar arrangements, and for the costs of filling the Eastside Reservoir Project.
- **Self-Insured Retention Fund** (Fund No. 1008, established 1999).
  - Used to separately hold amounts set aside for emergency repairs and claims against the District as provided in Section 5201(o).
- **Lake Matthews Multi Species Reserve Trust Fund** (Fund 6101, established 1997.)
  - Used as set forth in agreement between Metropolitan and the Riverside County Habitat Conservation Agency for the Multi Species Reserve.
- **Other Funds to be established for bond issues, notes or other obligations of the District**
  - There shall be established in the Treasury of the District such funds and accounts as are required pursuant to bond covenants, tax and non-arbitrage certificates, bond counsel letters of instruction and related documents, to provide for accountability of District funds and compliance with applicable federal and state law and regulations. Such funds and accounts shall be established for each issue of bonds, notes or other obligations of the District as required in the respective bond or note resolution and closing documents.
- **Water Stewardship Fund** (Fund No. 1009 established 2005).
  - Used to collect revenue from the Water Stewardship Rate and to pay costs associated with water recycling, seawater desalination, conservation, brackish water desalination, or other demand management programs. These funds can also be used to fund administrative costs associated with these programs. Funds may be used as directed by the Board, for other lawful purposes, in accordance with Section 5201(p) and Section 5202(d).

## Financial Reporting

Metropolitan prepares its financial reports in conformity with generally accepted accounting principles (GAAP). The Office of the Chief Financial Officer prepares, at the conclusion of each fiscal year, the Comprehensive Annual Financial Report (CAFR) in compliance with principles and standards for financial reporting set forth by the Governmental Accounting Standards Board (GASB).

## Budgetary and Accounting Basis

The budget is developed and monitored on a modified accrual basis. This means that revenues and expenses are recognized in the period they are earned and incurred regardless of whether cash has been received or disbursed. Differences between the basis of budgeting and the financial statements are minimal. Depreciation and amortization will not be recorded and payments of debt service will be recorded when due and payable. The modified-accrual basis of accounting provides a better match of revenues and expenses for budgeting and reporting.

## Financial Planning

In conjunction with the development of the Biennial Budget, Metropolitan prepares a ten-year forecast (Ten-Year Financial Forecast). The ten-year forecast supports long range resource, capital investment and operational planning. It includes a forecast of future costs and the revenues necessary to support operations and investments in infrastructure and resources that are derived from the most recent Integrated Resources Plan and other planning processes.

To support Metropolitan's Biennial Budget, Ten-Year Financial Forecast, and financial planning, revenue requirements are evaluated to determine the level of rate adjustments required for the upcoming budget year. To the extent possible, increases in rates are adjusted to avoid large fluctuations.

## Financial, Administrative and Operating Policies

Metropolitan establishes policies and resolutions to comply with the stipulations set forth in the Metropolitan Water District Act and Administrative Code.

The following policies are included in the appendices as a reference:

### Metropolitan Water District Administrative Code:

- §. 2431. Duties and Functions
- §. 4301(a). Cost of Service and Revenue Requirement
- §. 4304. Apportionment of Revenues and Setting of Water Rates
- §. 5101. Investment of Surplus Funds
- §. 5107. Biennial Budget Process
- §. 5108. Appropriations
- §. 5109. Capital Funding from Current Revenues
- §. 5114 (a). Reporting Requirements of the Treasurer
- §. 5200. Funds Established
- §. 5201. Restricted Funds
- §. 5202. Fund Parameters
- §. 5203. Indirect Credit of District
- §. 5204. Compliance with Fund Requirements and Bond Indenture Provisions

#### Metropolitan Water District Act:

- §. 61: Ordinances, Resolutions and Orders
- §. 123: Borrowing, Limitation
- §. 124: Taxes, Levy & Limitation
- §. 124.5: Ad Valorem Tax Limitation
- §. 130: General Powers to Provide Water Service
- §. 133: Fixing of Water Rates
- §. 134: Adequacy of Water Rates; Uniformity of Rates
- §. 134.5: Water Standby or Availability of Service Charge
- §. 239.2: Limitation on Amount of Revenue Bonds

#### Other:

- Operating policy F-01. Operating, Expensed and Capital Equipment
- Operating policy F-07. Capitalization & Retirement of Plant Assets
- Statement of Investment Policy

§. 61. **Ordinances, Resolutions and Orders** grants the Board authority to make and pass ordinances, resolutions and orders.

§. 123. **Borrowing, Limitation** grants authority to a district to borrow money and incur indebtedness and issue bonds with limitation.

§. 124. **Taxes, Levy & Limitation** grants authority to a district to levy and collect taxes on all property within the district with limitation.

§. 124.5. **Ad Valorem Tax Limitation** sets forth the restrictions of a district in levying ad valorem property tax on taxable property tax within the district.

§. 130. **General Powers to Provide Water Service** sets forth the general powers of a district to provide water services.

§. 133. **Fixing of Water Rates** grants the Board authority to fix water rates.

§. 134. **Adequacy of Water Rates; Uniformity of Rates** sets forth the requirements of the Board in ensuring adequacy and uniformity of water rates.

§. 134.5 **Water Standby or Availability of Service Charge** grants the Board authority to impose a water standby charge or availability of service charge within the district.

§. 239.2. **Limitation on Amount of Revenue Bonds** sets forth limitation on amount of revenue bonds that can be issued.

§. 2431. **Duties and Functions** sets forth the duties and functions of the Engineering and Operations Committee, including studying, revising and making recommendations with regard to the District's Capital Investment Program and appropriations for capital projects.

§. 4301(a). **Cost of Service and Revenue Requirement** sets forth the revenue requirement for fixing rates for water and that such rates and charges shall reflect the costs of the District's major operational functions.

§. 4304. **Apportionment of Revenues and Setting of Water Rates** sets forth the process, requirements and timeline in which the water rates and charges are ultimately adopted by the Board.

§. 5101. **Investment of Surplus Funds** delegates to the Treasurer of the District the authority to invest or to reinvest funds of the District subject to the terms and conditions set forth in Section 5101.

§. 5107. **Biennial Budget Process** sets forth the process, requirements and timeline in which the Biennial Budget must be submitted to and adopted by the Board.

§. 5108. **Appropriations** sets forth the process and requirements for which appropriations must be approved, authorized, amended or closed.

§. 5109. **Capital Funding from Current Revenues** sets forth the requirements for funding capital from current revenues.

§. 5114(a). **Reporting Requirement of the Treasurer** sets forth the requirement of the Treasurer to render a Statement of Investment Policy for the following year, to be considered for approval by the Board.

§. 5200. **Funds Established** sets forth the active or prospectively active funds that have been established in the Treasury of the District.

§. 5201. **Restricted Funds** sets forth the conditions under which cash and securities are held in the various ledger funds.

§. 5202. **Fund Parameters** sets forth the parameters for the minimum cash and securities to be held in the various ledger funds as of June 30 of each year.

§. 5203. **Indirect Credit of District** gives the Chief Executive Officer authority to negotiate with the Department of Water Resources on the basis of using the indirect credit of the District to finance State Revenue Bonds.

§. 5204. **Compliance with Fund Requirements and Bond Indenture Provisions** sets forth the conditions under which the Chief Executive Officer assures annual compliance with minimum fund requirements and with the provisions of the covenants for all outstanding District bond issues during the preceding fiscal year.

**Operating policy F-01. Operating, Expensed and Capital Equipment** governs the purchase, assignment, tracking, maintenance and retirement of operating, expensed and capital equipment.

**Operating Policy F-07. Capitalization & Retirement of Plant Assets** establishes the policies governing the capitalization and retirement of plant assets.

**Statement of Investment Policy.** Per Section 5114 of the Administrative Code, the Treasurer is required to render a Statement of Investment Policy for the following fiscal year for approval by the Board and to obtain the Board's annual delegation of authority to the Treasurer to make investments on behalf of Metropolitan.

## Budget Process

The budget process provides an opportunity to align shorter-term Objectives and Actions in the department and group level business plans to Metropolitan's longer-term Mission, Values, and Strategic Priorities and the needs of our member agencies. Each even numbered year, under the direction of the General Manager, a Biennial Budget is prepared for Metropolitan operations covering the following two fiscal years. The Board does have the opportunity to amend the budget as it sees fit to changing fiscal and climatic changes.

The budget is presented to the Board for consideration and adoption in April in order to align it with the adoption of water rates also approved in April. This permits incorporation of approved O&M budget expenditures into the Revenue Requirements process, which facilitates the setting of water rates. The Board and member agencies conduct extensive reviews of and provide significant input to the budget over three months from January to April. This year's budget review process included board workshops on February 10, February 25, March 9, March 24, a public hearing on March 10, and several other presentations and caucuses with member agencies, with final approval occurring at the April 14 Board meeting.

The O&M budget is presented in an organizational format and is described in terms of its scope of work, personnel requirements, and allocation by expense category. The budget serves to identify the resource requirements for the actions and tasks each group will engage in to support the General Manager's Business Plan. The overall emphasis, consistent with Metropolitan's mission, has been on providing high quality and reliable water supplies at a fair and competitive price and in an environmental and economically responsible way.

### Balanced Budget

Metropolitan considers the budget to be balanced when the sources of funds equals the uses of funds. That is, budgeted operating revenues, and on occasion the use of water rate stabilization funds, are equal to or greater than budgeted operating expenditures including debt service, and ending fund balances meet minimum policy levels. Rates and charges are set to ensure that revenues are sufficient to recover the total cash needs in a given fiscal year.

### Budget Calendar

Due Date	Activity
June - November	Identification of major maintenance and capital projects and CIP Evaluation Team review of new and continuing projects.
August – November	Budget instructions issued to all groups. Personnel complements are developed including full-time, part-time, temporary, and overtime estimates. Group managers bring proposed budget presentations to senior management.
November	CIP Evaluation Team completes review of project proposals for the CIP. O&M budgets, CIP estimates, and operating equipment budgets are developed. Senior management reviews and makes final recommendations on group budgets.
December	Group budgets are revised as necessary. Proposed budget is finalized and materials and presentations are developed for presentation to the Board of Directors.
January – April	Proposed budget is presented to the Board of Directors and member agency managers. Proposed group and department budgets are presented to the relevant Board committees. Proposed annual budget workshops are conducted with the full Board and budget estimates are revised as necessary.
April	Finance and Insurance Committee recommends action on the Biennial Budget. Board of Directors takes action on adoption of the Biennial Budget.

Starting in the summer, the groups identify needed major maintenance and new capital projects and develop cost estimates. In August, the budget guidelines and a calendar of budget process deadlines are issued to group, assistant group, and section managers by Budget and Financial Planning staff outlining major budget priorities consistent with the General Manager's Business Plan, staffing and operational objectives.

The development phase begins with overall program formulation and identification of individual projects, staffing, and equipment needs. Personnel budgets, including requests for temporary and part-time help, are then prepared and professional services requirements are identified. All requests for personnel, equipment purchases, and projects must be submitted with formal justifications, which address a standard set of questions developed by Budget and Financial Planning staff.

Each organization is required to identify the extent to which its proposed budget supports the General Manager's strategic priorities as outlined in the Business Plan. This information is later used to update the Business Plan in the late spring in an iterative process.

The procedures for preparation of each element of the budget are outlined below.

### Labor and Professional Services Budget

The labor budget consists of regular full-time payroll, overtime, premium pay, and part-time and temporary employees. The professional services budget consists of planned payments to outside consultants for specialized skills. Personnel complements reflect the staffing of on-going work with regular employees rather than temporary employees or consultants. In addition, each group provides detailed information on consultant, overtime, and temporary employee usage. This enables senior management to examine the level and types of resources being committed to the business plan strategic priorities and make appropriate determinations for the allocation of labor resources.

Adjustments to the proposed budget are made following the review by senior management and the General Manager.

### Equipment Budgets

Operating equipment is any equipment, machine, vehicle, tool, or other item that is portable, costs more than \$5,000, and has an anticipated useful life of at least five years. Expensed equipment is similar to operating equipment except that it costs less than \$5,000. All operating equipment is tracked while the tracking of expensed equipment is required for only certain classes of equipment (e.g., workstation/laptop computers, communications equipment, etc.).

The justification for equipment requests includes a description of the item, where it will be used, what it will be used for, and whether or not the item is new or a replacement. If the item is a replacement, the frequency of downtime and cost of repair of the old item versus purchasing a new one must be provided. If the item is required equipment for expanded functions or additional personnel, this must also be explained. A cost/benefit analysis is performed for equipment costing more than \$40,000.

Depending on the nature of the equipment, the requests may be evaluated by several groups. For example, each group manager and the fleet equipment coordinator review vehicle requests.

## Finance Department Responsibilities

### Treasury and Debt Management

- Recommend procedures for revenue collection, payment of approved demands, reporting and other actions associated with the prudent management of Metropolitan's financial resources.
- Provide for the issuance of debt to fund the capital investment plan.

### Controller and Accounting Operations

- Prepare monthly expenditure and revenue reports.
- Prepare periodic reports on the status of expenditures, revenues, investments and actions taken to ensure the financial stability of Metropolitan.
- Prepare and present information on financial trends to facilitate evaluation of Metropolitan's financial position and identify conditions requiring management attention.

### Budget and Financial Planning

- Support the development of the Strategic Plan that includes projections of short range and long range financial needs, and recommend methods for meeting those needs.
- Support the development of annual water rates and charges, Metropolitan's biennial operating and capital investment plan and ten year forecast.
- Prepare Metropolitan's proposed biennial operating budget and budget documents.
- Prepare budget performance reports on a monthly, quarterly, semi-annual and annual basis.
- Develop procedures and controls to monitor and assure compliance with the budget.
- Assist departments throughout the year with their budgets and financial issues.
- Prepare financial projections, schedules of rates and charges, tax rate proposals and other financial materials.

### Other Department Responsibilities

#### Engineering

- Prepare Metropolitan's capital investment plan and CIP budget document.

### General Manager Responsibilities

- Review and present to the Board of Directors long range plans, budgets and revisions, schedules of rates and charges, payments of financial demands and other financial transactions, as necessary.
- Prepare annual business plan containing General Manager's key priorities for the coming year.
- Implement emergency financial procedures within approved limits, when necessary.

## Budgetary Controls

Budget requests are evaluated at several management levels. Managers and staff review budget requests during each phase of the budget process. Each request for a new project, additional personnel, or piece of operating equipment is scrutinized by each group and further reviewed by Budget and Financial Planning staff during the budget process.

All budget submittals are reviewed collectively by the group and section managers. Only those items that are deemed appropriate to support the initiatives of the General Manager's Business Plan are included in the budget recommendation.

Once the budget is completed, the expenditures for each group are monitored on a monthly basis to ensure that the groups do not exceed the authorized operating budget for the fiscal year or biennial period, unless approved by the General Manager.

## Budget Adjustments

The budget may be amended in the mid-cycle biennial review or when overall expenditures are anticipated to significantly exceed estimates. A report outlining the reasons for increasing the budget appropriation is prepared and submitted to the Board of Directors for consideration. The Board of Directors must approve any increases in the overall budget appropriations.

## Capital Investment Plan (CIP)

The Capital Investment Plan (CIP) communicates the capital priorities of Metropolitan for the next two fiscal years. Within the Ten Year Financial Forecast, the CIP projects have been carefully reviewed, scored and ranked to ensure water reliability and safety while meeting all regulatory requirements.

### Structure

The highest level of the CIP structure is Program. Programs are comprised of one or more Project Groups.

There are 13 capital programs which include:

- System Flexibility/Supply Reliability
- Water Quality/Oxidation Retrofit
- Colorado River Aqueduct (CRA) Reliability
- Treatment Plant Reliability
- Distribution System Reliability
- Dams & Reservoirs Improvements
- Right of Way & Infrastructure Protection
- District Housing & Property Improvements
- Prestressed Concrete Cylinder Pipe (PCCP) Reliability
- Minor Capital Projects
- Cost Efficiency & Productivity
- System Flexibility/Supply Reliability
- Regional Recycled Water Program

Definitions of the 13 capital programs can be found in the Capital Investment Plan Section of this budget book.



## Preparation

The Capital Investment Plan (CIP) is prepared as part of Metropolitan's biennial budget process.

The CIP is updated to provide an overview of the financial, design, and construction status of existing projects on a quarterly basis, as well as proposals for new projects on an annual basis. All projects are reviewed and prioritized on a biennial basis by the CIP Evaluation Team.

When the need for a project is recognized, a justification is prepared which provides information regarding the expected benefits, how the work will be accomplished, the consequences of not approving the project, alternative levels of effort and cost to accomplish the project, a discussion of the impact of the project on future O&M costs, and a cost estimate for the project.

Capital projects include new facilities, betterments, and replacements that cost at least \$50,000 and have an anticipated useful life of at least five years. In the case of information technology capital projects, the cost must exceed \$250,000 and the resulting asset must have an anticipated useful life of at least three years.

The projects that comprise the proposed CIP have been identified from many Metropolitan studies of projected water needs as well as ongoing monitoring and inspections, condition assessments, and focused vulnerability studies. Staff continues to study operational demands of aging facilities and has made recommendations for capital projects that will maintain infrastructure reliability and ensure compliance with all applicable water quality regulations, and building, fire, and safety codes. Staff has also studied business and operations processes and proposed projects that will improve efficiency and provide future cost savings. Additionally, several projects have been identified and prioritized to provide flexibility in system operations to address uncertain supply conditions from the Colorado River and the State Water Project.

Capital projects can be further differentiated into two general categories: major capital and minor capital projects. Major capital projects cost at least \$400,000 and are described in the CIP under their respective Programs. Projects described in the CIP are funded and authorized to proceed under the General Manager's authority unless Board approval is otherwise required in accordance with Metropolitan's Administrative Code. Minor capital projects cost between \$50,000 and \$400,000 and are not individually described in the CIP. Minor capital projects are identified throughout each fiscal year and are funded and implemented under the General Manager's authority.

Additional information on project budgeting can be found in the Capital Investment Plan Section of this budget book.

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## BIENNIAL BUDGET SUMMARY

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### APPROPRIATIONS

The FY 2020/21 proposed appropriation of \$1,934.1 million is comprised of \$1,385.4 million or 71.6% percent for operations expense, \$298.7 million or 15.4% percent for debt service expense, and \$250.0 million or 12.9% percent for the Capital Investment Plan expenses (CIP). The FY 2021/22 proposed appropriation of \$1,978.5 million is comprised of \$1,421.5 million or 71.8% percent for operations expense, \$307.0 million or 15.5% percent for debt service expense, and \$250.0 million or 12.6% percent for the CIP expenses. The table below provides a comparison of FY 2020/21 and FY 2021/22 and illustrates the total proposed appropriations for the operating, debt service and CIP expenses.

#### FY 2020/21 and FY 2021/22 Operating and Capital Appropriations, \$ millions

Proposed Budget	2020/21 Proposed	2021/22 Proposed	Total Biennium
Operating Budget *	\$1,385.4	\$1,421.5	\$2,806.9
Debt Service	298.7	307.0	605.7
CIP **	250.0	250.0	500.0
<b>Grand Total</b>	<b>\$1,934.1</b>	<b>\$1,978.5</b>	<b>\$3,912.6</b>

\* Includes Conservation appropriation of \$43M per year. The annual Conservation expenditures are estimated to be \$25M per year.

\*\* CIP appropriation is \$500M over the biennium. CIP expenditures are estimated to be \$225M per year.

The Biennial Budget for FY 2020/21 and FY 2021/22 provides funding for Metropolitan's strategic priorities while meeting most financial policy guidelines, with overall rate increases of 5.0 percent in each year of the Biennial Budget. The overall rate increases of 5.0 percent are consistent with the long term rate projections of 3 to 5 percent, and reflect the current environment of lower water demands as Southern California is coming off of a record wet year and local supplies are robust.

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

## FUND SUMMARY

The following tables show fund balance, and projected revenues and expenses for Metropolitan for each fiscal year of the Biennial Budget.

### FY 2020/21 Fund Summary, \$ millions

Fiscal Year Ending June 30th, 2021

(\$ in Millions)	All Funds	Operating Funds	Debt Service and Construction Funds	Reserve Funds (1)	Other Funds (2)
<b>Beginning of Year Balance</b>	<b>1,280.0</b>	<b>452.5</b>	<b>205.0</b>	<b>456.5</b>	<b>166.1</b>
<b>USES OF FUNDS</b>					
<b>Expenses</b>					
State Water Contract	640.8	640.8	—	—	—
Supply Programs	68.7	68.7	—	—	—
Colorado River Power	52.2	52.2	—	—	—
Debt Service	298.7	5.7	293.0	—	—
Demand Management (3)	48.5	48.5	—	—	—
Regional Recycled Water Program (planning costs)	15.0	15.0	—	—	—
Departmental O&M	502.6	502.6	—	—	—
Treatment Chemicals, Sludge & Power	31.6	31.6	—	—	—
Other O&M	7.9	7.9	—	—	—
Sub-total Expenses	1,666.1	1,373.1	293.0	—	—
<b>Capital Investment Plan (4)</b>	<b>225.0</b>	<b>30.0</b>	<b>195.0</b>	<b>—</b>	<b>—</b>
<b>Fund Deposits</b>					
R&R and General Fund	135.0	30.0	105.0	—	—
Revenue Bond Construction	9.3	—	9.3	—	—
Interest for Construction & Trust Funds	0.2	—	0.2	—	—
Increase in Required Reserves	41.3	43.6	5.2	(7.5)	—
Sub-total Fund Deposits	185.8	73.6	119.7	(7.5)	—
<b>TOTAL USES OF FUNDS</b>	<b>2,076.9</b>	<b>1,476.7</b>	<b>607.7</b>	<b>(7.5)</b>	<b>—</b>
<b>SOURCES OF FUNDS</b>					
<b>Revenues</b>					
Taxes	139.9	132.7	7.3	—	—
Interest Income	18.0	7.2	3.2	5.8	1.7
Power Sales	20.8	20.8	—	—	—
Fixed Charges (RTS & Capacity Charge)	171.6	171.6	—	—	—
Water Revenue (5)	1,423.6	1,423.6	—	—	—
Miscellaneous Revenue	19.9	19.9	—	—	—
Bond Proceeds	99.3	—	99.3	—	—
Sub-total Revenues	1,893.1	1,775.8	109.8	5.8	1.7
<b>Fund Withdrawals</b>					
R&R and General Fund	135.0	30.0	105.0	—	—
Water Stewardship Fund	22.6	—	—	—	22.6
Decrease in Rate Stabilization Fund	26.2	—	—	26.2	—
Sub-total Fund Withdrawals	183.7	30.0	105.0	26.2	22.6
<b>TOTAL SOURCES OF FUNDS</b>	<b>2,076.9</b>	<b>1,805.8</b>	<b>214.8</b>	<b>32.0</b>	<b>24.3</b>
<b>Inter-Fund Transfers</b>	<b>—</b>	<b>(329.1)</b>	<b>392.9</b>	<b>(39.5)</b>	<b>(24.3)</b>
<b>End of Year Balance</b>	<b>1,282.1</b>	<b>496.1</b>	<b>219.6</b>	<b>422.8</b>	<b>143.5</b>

Totals may not foot due to rounding.

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

(2) includes Water Stewardship, Water Treatment Stabilization and Trust Funds.

(3) includes Conservation estimated expenditure of \$25M. The Conservation appropriation is \$43M.

(4) estimated CIP expenditures are \$225M. The CIP appropriation is \$250M.

(5) includes water sales, exchanges and wheeling

## FY 2021/22 Fund Summary, \$ millions

Fiscal Year Ending June 30th, 2022

(\$ in Millions)	All Funds	Operating Funds	Debt Service and Construction Funds	Reserve Funds (1)	Other Funds (2)
<b>Beginning of Year Balance</b>	<b>1,282.1</b>	<b>496.1</b>	<b>219.6</b>	<b>422.8</b>	<b>143.5</b>
<b>USES OF FUNDS</b>					
<b>Expenses</b>					
State Water Contract	654.4	654.4	—	—	—
Supply Programs	61.2	61.2	—	—	—
Colorado River Power	57.6	57.6	—	—	—
Debt Service	307.0	6.1	300.9	—	—
Demand Management (3)	52.5	52.5	—	—	—
Regional Recycled Water Program (planning costs)	15.0	15.0	—	—	—
Departmental O&M	522.9	522.9	—	—	—
Treatment Chemicals, Sludge & Power	32.8	32.8	—	—	—
Other O&M	7.2	7.2	—	—	—
Sub-total Expenses	1,710.4	1,409.5	300.9	—	—
<b>Capital Investment Plan (4)</b>	<b>225.0</b>	<b>30.0</b>	<b>195.0</b>	<b>—</b>	<b>—</b>
<b>Fund Deposits</b>					
R&R and General Fund	135.0	30.0	105.0	—	—
Treatment Surcharge Stabilization Fund	6.7	—	—	—	6.7
Interest for Construction & Trust Funds	0.3	—	0.3	—	—
Increase in Required Reserves	62.5	38.9	9.1	14.5	—
Increase in Rate Stabilization Fund	34.6	—	—	34.6	—
Sub-total Fund Deposits	239.1	68.9	114.4	49.1	6.8
<b>TOTAL USES OF FUNDS</b>	<b>2,174.6</b>	<b>1,508.4</b>	<b>610.3</b>	<b>49.1</b>	<b>6.8</b>
<b>SOURCES OF FUNDS</b>					
<b>Revenues</b>					
Taxes	140.1	131.8	8.2	—	—
Interest Income	18.2	7.8	3.4	6.0	1.1
Power Sales	21.9	21.9	—	—	—
Fixed Charges (RTS & Capacity Charge)	181.9	181.9	—	—	—
Water Revenue (5)	1,491.4	1,491.4	—	—	—
Miscellaneous Revenue	20.5	20.5	—	—	—
Bond Proceeds	89.4	—	89.4	—	—
Sub-total Revenues	1,963.4	1,855.4	101.0	6.0	1.1
<b>Fund Withdrawals</b>					
R&R and General Fund	135.0	30.0	105.0	—	—
Bond Funds for Construction	0.6	—	0.6	—	—
Water Stewardship Fund	75.6	—	—	—	75.6
Sub-total Fund Withdrawals	211.2	30.0	105.6	—	75.6
<b>TOTAL SOURCES OF FUNDS</b>	<b>2,174.6</b>	<b>1,885.4</b>	<b>206.6</b>	<b>6.0</b>	<b>76.7</b>
<b>Inter-Fund Transfers</b>	<b>—</b>	<b>(376.9)</b>	<b>403.6</b>	<b>43.2</b>	<b>(69.9)</b>
<b>End of Year Balance</b>	<b>1,310.0</b>	<b>535.0</b>	<b>228.4</b>	<b>471.9</b>	<b>74.7</b>

Totals may not foot due to rounding.

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

(2) includes Water Stewardship, Water Treatment Stabilization and Trust Funds.

(3) includes Conservation estimated expenditure of \$25M. The Conservation appropriation is \$43M.

(4) estimated CIP expenditures are \$225M. The CIP appropriation is \$250M.

(5) includes water sales, exchanges and wheeling

## SOURCES OF FUNDS

Total Sources of FY 2020/21 and FY 2021/22 Funds, \$ millions

	2019/20 Budget	2020/21 Proposed	2021/22 Proposed	2019/20 Budget Compared to 2020/21 Proposed	2020/21 Proposed Compared to 2021/22 Proposed
<b>SOURCES OF FUNDS</b>					
Revenues					
Taxes	118.1	139.9	140.1	21.9	0.1
Interest Income	18.1	18.0	18.2	(0.1)	0.2
Power Sales	19.1	20.8	21.9	1.7	1.2
Fixed Charges (RTS & Capacity Charge)	165.8	171.6	181.9	5.9	10.3
Water Revenues (1)	1,528.5	1,423.6	1,491.4	(104.9)	67.8
Miscellaneous Revenue	11.5	19.9	20.5	8.4	0.5
Bond Proceeds and Reimbursements	79.4	99.3	89.4	19.9	(9.9)
<b>Sub-total Revenues</b>	<b>1,940.4</b>	<b>1,893.1</b>	<b>1,963.4</b>	<b>(47.2)</b>	<b>70.2</b>
Fund Withdrawals					
R&R and General Fund	120.0	135.0	135.0	15.0	—
Bond Funds for Construction	0.6	—	0.6	(0.6)	0.6
Water Stewardship Fund	—	22.6	75.6	22.6	53.0
Decrease in Water Rate Stabilization Fund	—	26.2	—	26.2	(26.2)
<b>Sub-total Fund Withdrawals</b>	<b>120.6</b>	<b>183.7</b>	<b>211.2</b>	<b>63.2</b>	<b>27.5</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>2,060.9</b>	<b>2,076.9</b>	<b>2,174.6</b>	<b>15.9</b>	<b>97.7</b>

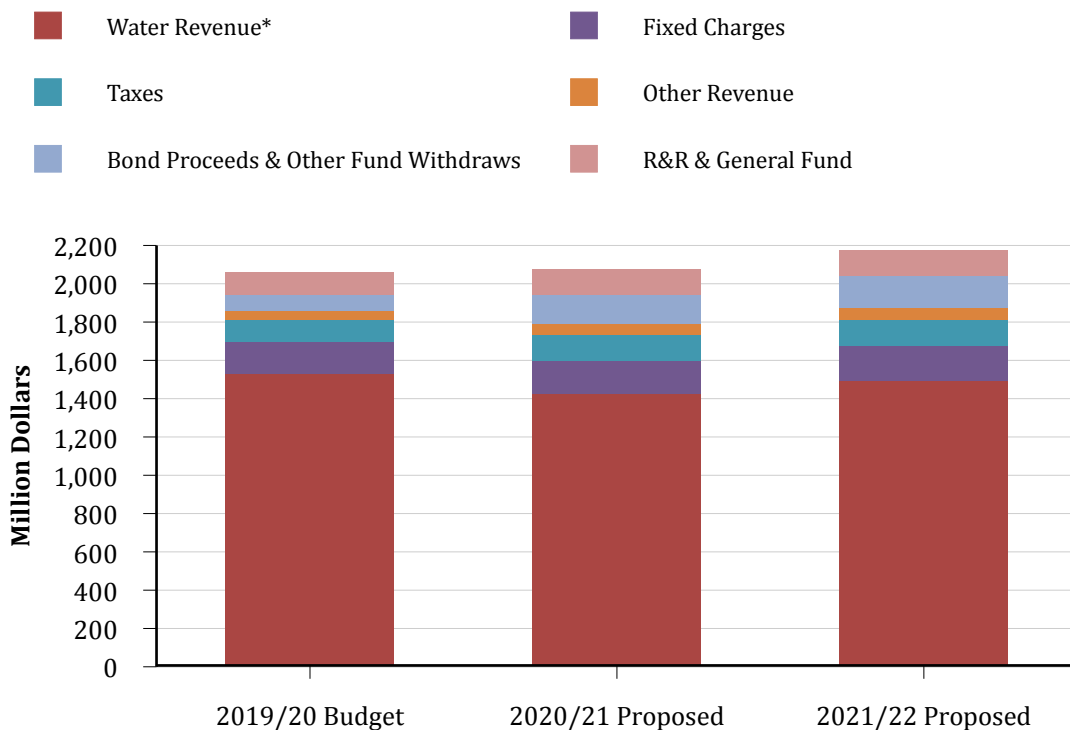
Totals may not foot due to rounding.

(1) includes water sales, exchanges and wheeling

## OPERATING REVENUE

Estimated revenues from water rates, fixed charges (Readiness-To-Serve Charge and Capacity Charge), taxes and annexation fees, and other miscellaneous income (interest income, power recovery, etc.) are projected to be \$1.79 billion for FY 2020/21 and \$1.87 billion for FY 2021/22. For FY 2020/21, this is \$67.3 million less than the FY 2019/20 budget, and for FY 2021/22, this is \$80.2 million more than FY 2020/21. The decrease in revenues for FY 2020/21 is due to lower water transactions in calendar year 2021. For FY 2021/22, the revenue is higher due to higher water rates and charges in calendar year 2021 and calendar year 2022. In addition, the forecast assumes the ad valorem tax rate is maintained at 0.0035 percent of assessed valuations. A description of each revenue source is included in the Glossary of Terms.

### Sources of Funds FY 2020/21 and FY 2021/22, \$ millions

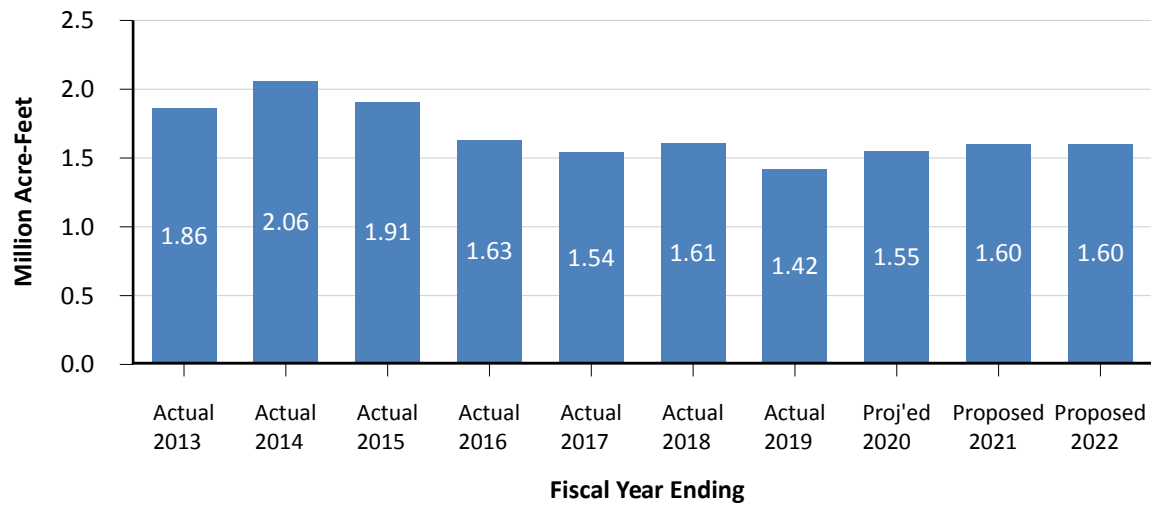


\* includes water sales, exchanges and wheeling

### Water Revenues

Revenues from water transactions are budgeted at \$1,423.6 million in FY 2020/21 and \$1,491.4 million in FY 2021/22. Water rates and charges are proposed to increase by 5.0 percent overall effective January 1, 2021 and 5.0 percent overall effective January 1, 2022. Water transactions for each FY 2020/21 and FY 2021/22 are estimated to be 1.6 million acre-feet (MAF), a decrease of 150 thousand acre-feet (TAF) from the FY 2019/20 budget. Water transactions are forecasted to be lower than the FY 2019/20 budget as southern California is coming off of a record wet year and local supplies are robust. The lower water transactions projection also reflects the expectation that demands will trend lower due to consumer response to the previous drought and continued conservation initiatives.

### Water Transactions Trend, MAF



The FY 2020/21 fiscal year water transactions include 1.32 MAF of full-service sales, of which 800 TAF (or 50 percent) are treated water sales, and 276 TAF of exchange water to the San Diego County Water Authority (SDCWA) pursuant to the 2003 Amended and Restated Exchange Agreement (exchange water). The FY 2021/22 fiscal year water transactions include 1.32 MAF of full-service sales, of which 800 TAF (or 50 percent) are treated water sales, and 281 TAF of exchange water. No wheeling transactions are projected in the biennium period. The figure above shows the trend of water transactions.

### Taxes and Annexation Fees

Revenues from taxes, which will be used to pay voter-approved debt service on general obligation bonds and a portion of the capital costs of the SWP, are estimated to be \$139.9 million in FY 2020/21 and \$140.1 million in FY 2021/22.

The ad valorem tax rate is assumed to remain at the current level of 0.0035 percent of assessed value in both fiscal years; assessed valuations are projected to increase by 2.5 percent each fiscal year.

### Fixed Charges

Fixed charges include the Capacity Charge and Readiness-to-Serve Charge. In FY 2020/21, these charges are estimated to generate \$35.6 million and \$136.0 million, respectively. In FY 2021/22, these charges are estimated to generate \$41.9 million and 140.0 million, respectively. In total this represents a \$5.8 million increase from the FY 2019/20 to FY 2020/21 budget, and a \$10.3 million increase from the FY 2020/21 to the FY 2021/22 budget. Fixed charges are increasing in FY 2020/21 due to higher peak demands on the distribution system. Fixed charges are increasing in FY 2021/22 due to increases in capital financing costs.

### All Other Revenue

Revenues from hydroelectric and CRA power sales are estimated to be \$20.8 million for FY 2020/21 and \$21.9 million for FY 2021/22. FY 2020/21 is higher than the FY 2019/20 budgeted amount of \$19.1 million due to higher wholesale prices.

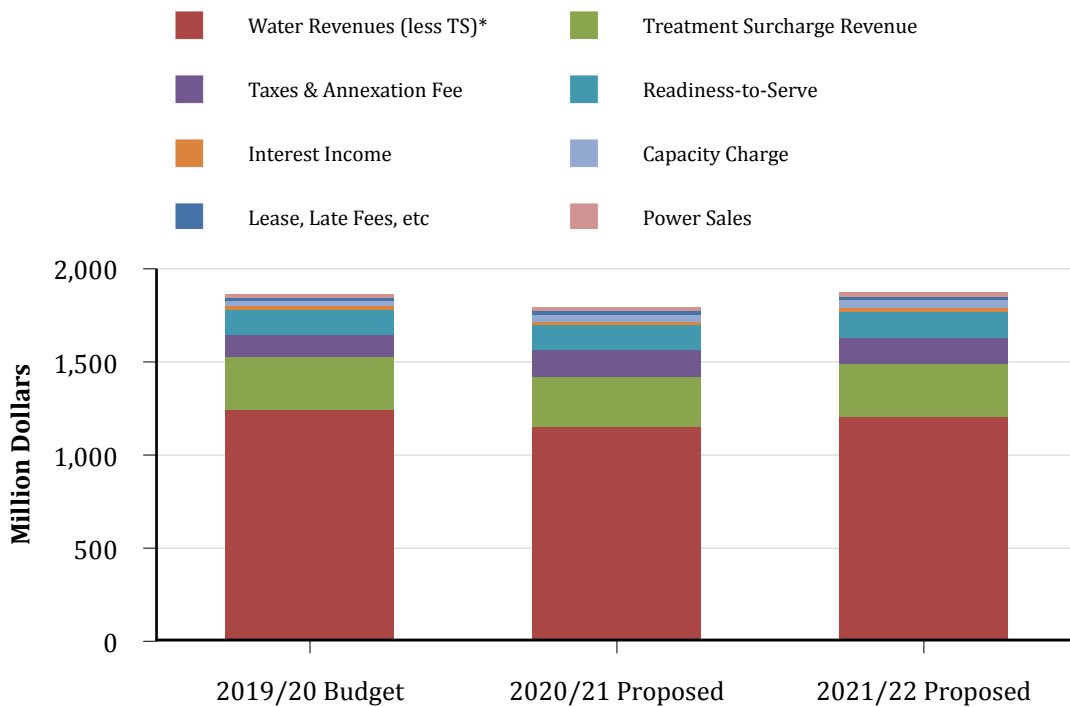
Miscellaneous revenues, which includes items such as interest income, lease revenues, and water transactions with non-member agencies, are estimated to total \$37.9 million for FY 2020/21 and \$38.7 million for FY



2021/22 , higher than the FY 2019/20 budgeted amounts of \$29.6 million, mainly due to increased water transactions with non-member agencies.

A summary of operating revenues is shown in the graph below.

### Operating Revenues, \$ millions



\* includes water sales, exchanges and wheeling

## CAPITAL FUNDING

The FY 2020/21 and FY 2021/22 Capital Investment Plan (CIP) will be funded with bond proceeds and current operating revenues (PAYGO). It is anticipated that Metropolitan will issue new revenue bonds of \$100 million in FY 2020/21 and \$90 million in FY 2021/22 to fund a portion of the CIP. The remaining CIP expenditures will be funded with revenue funded capital of \$135 million in FY 2020/21 and \$135 million in FY 2021/22.

Please refer to the section on debt financing for additional details on debt funding of capital projects.

## Capital Funding Source Descriptions

### New Bond Issues

Metropolitan has the ability to issue long-term bonds to fund its capital programs. The proceeds of the bond sales can be used to pay for capital expenses over several years. The repayment of the bonds is generally over 30 years and is paid from water revenues.

## Revenue Funded Capital

Annual capital expenses that are not paid from debt funding, grants, or loans must be paid from revenues, either from current year revenues or from the R&R fund, if funds exist.

## USES OF FUNDS

Total uses of funds are \$2.1 billion for FY 2020/21 and \$2.2 billion for FY 2021/22. The table and graph below show the breakdown of expenditures and other obligations that make up the Uses of Funds.

### Total Uses of FY 2020/21 and FY 2021/22 Funds, \$ millions

	2019/20 Budget	2020/21 Proposed	2021/22 Proposed	2019/20 Budget Compared to 2020/21 Proposed	2020/21 Proposed Compared to 2021/22 Proposed
<b>USES OF FUNDS</b>					
Expenses					
State Water Contract (1)	589.5	615.8	629.4	26.3	13.6
Supply Programs	54.4	68.7	61.2	14.3	(7.5)
Delta Conveyance planning costs	13.0	25.0	25.0	12.0	—
Regional Recycled Water Program planning costs	—	15.0	15.0	15.0	—
Colorado River Power	52.9	52.2	57.6	(0.7)	5.3
Debt Service	330.9	298.7	307.0	(32.2)	8.3
Demand Management (2)	85.8	48.5	52.5	(37.3)	4.0
Departmental O&M	461.7	502.6	522.9	40.9	20.3
Treatment Chemicals, Sludge & Power	27.7	31.6	32.8	3.9	1.1
Other O&M	7.0	7.9	7.2	0.9	(0.7)
<b>Sub-total Expenses</b>	<b>1,623.0</b>	<b>1,666.1</b>	<b>1,710.4</b>	<b>43.1</b>	<b>44.4</b>
Capital Investment Plan (3)	200.0	225.0	225.0	25.0	—
Fund Deposits					
R&R and General Fund	120.0	135.0	135.0	15.0	—
Revenue Bond Construction	—	9.3	—	9.3	(9.3)
Water Stewardship Fund	4.8	—	—	(4.8)	—
Treatment Surcharge Stabilization Fund	16.5	—	6.7	(16.5)	6.7
Interest for Construction & Trust Funds	0.2	0.2	0.3	—	0.1
Increase in Required Reserves	41.3	41.3	62.5	—	21.2
Increase in Water Rate Stabilization Fund	55.2	—	34.6	(55.2)	34.6
<b>Sub-total Fund Deposits</b>	<b>238.0</b>	<b>185.8</b>	<b>239.1</b>	<b>(52.1)</b>	<b>53.3</b>
<b>TOTAL USES OF FUNDS</b>	<b>2,060.9</b>	<b>2,076.9</b>	<b>2,174.6</b>	<b>15.9</b>	<b>97.7</b>

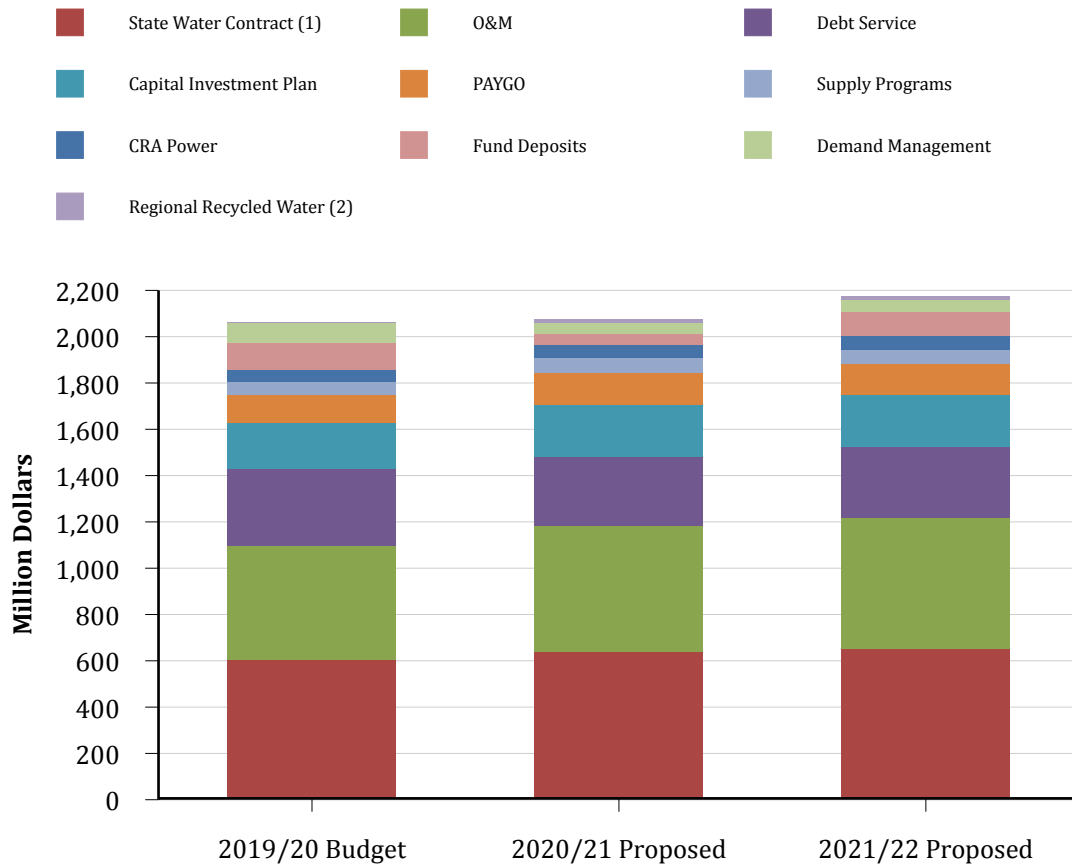
Totals may not foot due to rounding.

(1) without Delta conveyance planning costs

(2) The annual Conservation expenditures are estimated to be \$25M per year. The Conservation appropriation is \$43M per year.

(3) CIP expenditures are estimated to be \$225M per year. The CIP appropriation is \$500M over the biennium.

Total Uses of FY 2020/21 and FY 2021/22 Funds, \$ millions



(1) includes Delta conveyance planning costs  
 (2) only includes program planning costs

Colorado River Aqueduct Power

CRA power costs are projected to be \$52.2 million in FY 2020/21 and \$57.6 million in FY 2021/22 based on diversions of approximately 745 TAF in FY 2020/21 and 733 TAF in FY 2021/22. FY 2020/21 is \$0.7 million lower than the FY 2019/20 budget due to lower diversions at Intake. FY 2021/22 is \$5.3 million higher than FY 2020/21 due to a new greenhouse gas charge to be collected by the California Air Resources Board.

Please refer to the section on the CRA for additional details on this expense.

State Water Project

State Water Contract (SWC) expenditures, not including the Delta conveyance planned contribution described below, are budgeted at \$615.8 million for FY 2020/21 and \$629.4 million in FY 2021/22. This is based on Metropolitan's supplies of 1,063 TAF in FY 2020/21 and 1,059 TAF in FY 2021/22. SWP power costs are expected to be \$211.0 million for FY 2020/21 and \$216.2 million for FY 2021/22. Power costs are higher than FY 2019/20 budget due to higher water deliveries and a projected increase in the California Independent System Operator (ISO) transmission access charge (TAC) by the State Water Contractors.

The forecasted amount for SWP expenditures reflects incorporation of rate management credits into the forecast. Rate management credits result from a provision of the State Water Contract that provides for the

reduction of capital charges based on differences between the Department of Water Resources' collections from the SWP contractors and the actual amounts paid for capital-related charges.

The total State Water Contract expenditure budget of \$640.8 for FY 2020/21 and \$654.4 for FY 2021/22 includes Metropolitan's planned contribution of \$25 million per year for Delta conveyance project planning activities.

Please refer to the section on the SWP for additional details on this expense.

### Regional Recycled Water Program Planning Costs

The FY 2020/21 and FY 2021/22 budget includes funding for planning costs for the potential Regional Recycled Water Program at \$15 million per year for preparation of a programmatic environmental impact report. This is the next step before the Board will be fully informed and ready to make a decision on whether to proceed with further investments in this potential project.

### Demand Management Costs

Demand management includes conservation programs, programs to incentivize the development of local water resources, Future Supply Actions Program, and the Stormwater Pilot Program. Metropolitan provides financial incentives to its member agencies for the development of local projects such as water recycling and groundwater recovery projects through the Local Resource Program (LRP). Metropolitan also provides financial incentives for the development of conservation programs. Demand Management is budgeted at \$48.5 million for FY 2020/21 and \$52.5 million in FY 2021/22.

Please refer to the section on Demand Management for additional details on this expense.

### Supply Programs

Metropolitan's two principal sources of supply draw from two different watersheds. This has allowed Metropolitan to draw more heavily on one source in the event the other is experiencing a drought. To further ensure regional supply reliability, Metropolitan has developed a portfolio of additional supply programs on both watersheds. Total expenditures are budgeted at \$68.7 million for FY 2020/21 and \$61.2 million in FY 2021/22.

Please refer to the section on the Supply Programs for additional details on this expense.

## OPERATIONS AND MAINTENANCE

The FY 2020/21 O&M budget, including operating equipment purchases, is \$542.2 million. This is \$45.8 million, or 9.2% percent, higher than the FY 2019/20 budget of \$496.4 million. The FY 2021/22 O&M budget is \$562.8 million, an increase of \$20.6 million, or 3.8% percent, over the FY 2020/21 budget.

Departmental Budget by Organization (without operating equipment, succession planning labor pool and overhead credit), \$ millions



## Operations and Maintenance Budget by Organization, \$ thousands

Departmental Units	2019/20 Budget	2020/21 Proposed	2021/22 Proposed	2019/20 Budget vs. 2020/21 Proposed	% Change	2020/21 Proposed vs. 2021/22 Proposed	% Change
Office of the General Manager	\$5,224.1	\$5,550.6	\$5,769.5	\$326.4	6.2%	\$218.9	3.9%
Water System Operations w/o Variable Treatment	217,290.8	232,169.6	243,917.9	14,878.9	6.8%	11,748.3	5.1%
Water Resource Management	25,066.0	24,371.3	25,346.2	(694.7)	(2.8%)	974.9	4.0%
Engineering Services	33,865.0	38,382.5	40,425.6	4,517.5	13.3%	2,043.1	5.3%
Bay Delta Initiatives	10,246.2	10,095.9	9,709.4	(150.3)	(1.5%)	(386.5)	(3.8%)
Office of Chief Administrative Officer	34,281.9	38,057.0	38,653.5	3,775.1	11.0%	596.5	1.6%
Information Technology	43,661.5	47,653.4	49,640.0	3,991.9	9.1%	1,986.6	4.2%
Real Property	28,447.1	30,553.4	29,878.1	2,106.3	7.4%	(675.3)	(2.2%)
Human Resources	12,881.5	14,277.1	14,868.3	1,395.6	10.8%	591.2	4.1%
Chief Financial Officer	25,198.1	27,949.2	28,833.2	2,751.0	10.9%	884.1	3.2%
External Affairs	27,577.0	27,867.1	28,858.3	290.2	1.1%	991.1	3.6%
<b>Subtotal - General Manager's Department</b>	<b>463,739.3</b>	<b>496,927.1</b>	<b>515,900.1</b>	<b>33,187.8</b>	<b>7.2%</b>	<b>18,973.0</b>	<b>3.8%</b>
General Counsel	15,202.3	16,003.0	17,752.3	800.7	5.3%	1,749.3	10.9%
Office of the General Auditor	3,855.0	4,521.7	4,750.2	666.7	17.3%	228.4	5.1%
Ethics Department	1,448.4	1,621.4	1,679.9	173.0	11.9%	58.5	3.6%
Overhead Credit from Construction	(22,554.0)	(23,436.3)	(24,203.5)	(882.3)	3.9%	(767.2)	3.3%
Succession Planning Labor Pool	—	7,000.0	7,000.0	7,000.0	NA	—	NA
<b>Total Departmental Budget</b>	<b>461,691.0</b>	<b>502,636.9</b>	<b>522,878.9</b>	<b>40,946.0</b>	<b>8.9%</b>	<b>20,242.0</b>	<b>4.0%</b>
Operating Equipment	6,955.4	7,878.5	7,153.4	923.1	13.3%	(725.1)	(9.2%)
Variable Treatment	27,713.9	31,639.4	32,770.6	3,925.4	14.2%	1,131.2	3.6%
<b>GRAND TOTAL</b>	<b>\$496,360.3</b>	<b>\$542,154.8</b>	<b>\$562,802.9</b>	<b>\$45,794.5</b>	<b>9.2%</b>	<b>\$20,648.2</b>	<b>3.8%</b>

Totals may not foot due to rounding

The table above depicts the distribution of the departmental O&M by organization without the overhead credit, succession planning labor pool and operating equipment. Including treatment costs, the Water System Operations (WSO) group accounts for 48 percent of the total departmental budget for FY 2020/21 and FY 2021/22. Information Technology is the second largest departmental expenditure area, accounting for 9 percent of the total departmental budget for FY 2020/21 and FY 2021/22. A summary of the O&M budget by organization is shown in the table above. The table below summarizes the O&M budget by expenditure type. A more detailed discussion of significant factors impacting the O&M budget follows.

## FY 2020/21 and FY 2021/22 Operations &amp; Maintenance Annual Budget by Expenditure Type, \$ thousands

	2019/20 Budget	2020/21 Proposed	2021/22 Proposed	2019/20 Budget vs. 2020/21 Proposed	2020/21 Proposed vs. 2021/22 Proposed
Salaries & Benefits (1)	\$322,637.6	\$354,161.1	\$373,823.0	\$31,523.5	\$19,661.8
Chemicals, Sludge and Power (2)	27,713.9	31,639.4	32,770.6	3,925.4	1,131.2
Outside Services	52,638.1	56,534.4	56,436.7	3,896.3	(97.7)
Materials & Supplies (3)	27,510.2	31,714.9	33,058.7	4,204.7	1,343.7
Other	58,905.1	60,226.4	59,560.6	1,321.4	(665.8)
Operating Equipment	6,955.4	7,878.5	7,153.4	923.1	(725.1)
<b>Total</b>	<b>496,360.3</b>	<b>542,154.8</b>	<b>562,802.9</b>	<b>45,794.5</b>	<b>20,648.2</b>

Totals may not foot due to rounding

(1) includes succession planning labor pool and overhead credit for construction.

(2) costs associated with treatment only.

(3) without chemicals associated with treatment plants.

## FY 2020/21 O&amp;M Budget Highlights

The FY 2020/21 O&M budget includes \$542.2 million for labor and benefits, water treatment chemicals, power, and solids handling, materials and supplies, professional services, and operating equipment purchases. This is \$45.8 million, or 9.2 percent, higher than the FY 2019/20 budget of \$496.4 million.

**Salaries and Benefits:** Labor costs, not including those charged to construction are \$354.2 million. This is \$31.5 million, or 9.8 percent, higher than the FY 2019/20 budget of \$322.6 million. Key increases include negotiated labor increases of \$14.1 million, or 44.8 percent of the increase; a succession planning labor pool of \$7.0 million, or 22.2 percent of the increase; increases in retirement, medical and other benefits of \$5.4 million, or 17.1 percent of the increase; and temporary labor increases of \$2.9 million or 9.0 percent of the increase.

The FY 2020/21 budget includes 1,907 regular full time positions which are flat from the FY 2019/20 budget and 43 district temporary full-time equivalents (FTEs) which are increasing by 20 net positions for a total of 1,950 authorized positions.

Over the biennium a total of 14 district temporary positions will be added to support increased recruitment, enhanced security, land management, and maintenance efforts, enhanced business process and business systems support, and ongoing succession planning efforts. Twenty district temporary positions will be added in the first year of the budget but 6 district temporary positions will be phased out in the second year with the completion of temporary work assignments.

The budget recognizes the importance of sound succession planning and continued training and development of the workforce with a \$7 million succession planning labor pool included in each FY 2020/21 and FY 2021/22 budget for advance recruitment, apprenticeship and internship programs.

**Outside Services:** Outside Services are anticipated to increase by \$3.9 million primarily as a result of enhanced security, land management, and maintenance efforts; a comprehensive rate restructuring study; increased environmental and regulatory compliance and monitoring such as the Surface Mining & Reclamation Act (SMARA); and critical cybersecurity, cloud and IT infrastructure services.

**Materials & Supplies:** Materials & Supplies is increasing by \$4.2 million primarily as a result of software licensing and support, and land management and maintenance efforts. Metropolitan has adopted a Cloud First strategy for business applications. As systems are moved to the cloud, software license costs that were previously captured as capital are now expensed as O&M per accounting requirements. In the long term, moving and hosting business applications in the cloud will prove to be more cost effective, and provide for greater operational flexibility and resiliency.

**Other O&M and Operating Equipment:** Chemicals, solids, and power reflect the cost of the water treatment process and are anticipated to increase by \$3.9 million in FY 2020/21, driven by an increase in treated water deliveries and chemical prices. The FY 2020/21 budget reflects an increase in the contribution by Metropolitan to advance efforts on collaborative science through various State, Federal and other agencies of about \$0.5 million. In addition, the FY 2020/21 budget reflects an increase of about \$0.8 million related to property taxes and the fees paid to the Department of Safety of Dams (DSOD). Operating equipment is higher by \$0.9 million primarily due to the replacement of critical survey equipment and end-of-life IT infrastructure.

### FY 2021/22 O&M Budget Highlights

The FY 2021/22 O&M budget is \$562.8 million, an increase of \$20.6 million, or 3.8 percent, compared to the FY 2020/21 budget. This increase is primarily due to negotiated labor increases and increases in retirement, medical and other benefits. The increase in chemical costs and software licensing and support is offset by a decrease in property maintenance and operating equipment costs.

**Salaries and Benefits:** The FY 2021/22 O&M labor budget is about \$19.7 million or 5.6 percent higher than the FY 2020/21 budget. Negotiated labor increases represent \$15.5 million, or 78.7 percent of the increase. Increases in retirement, medical and other benefits represent \$5.5 million, or 27.7 percent of the increase. The remaining \$1.3 million decrease, or 6.4 percent, is primarily attributable to a reduction in the number of temporary labor positions from the FY 2020/21 budget.

FY 2021/22 regular full time positions are flat with the FY 2020/21 budget but district temporary positions are decreasing by 6 net positions. As a result FY 2021/22 total authorized positions are decreasing from 1,950 to 1,944.

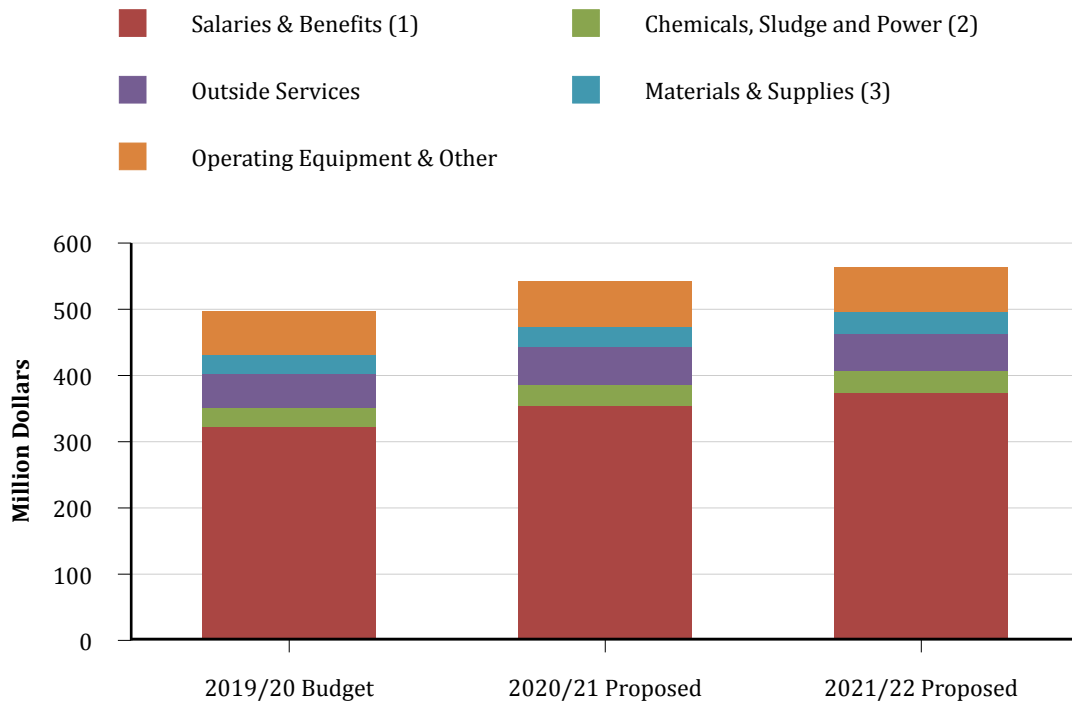
**Outside Services:** Outside Services are anticipated to decrease by \$0.1 million. A reduction in property maintenance costs are being offset by an increase in outside services related to the potential Regional Recycled Water Program (RRWP) and desert infrastructure and communication services.

**Materials & Supplies:** Materials & Supplies is increasing by \$1.3 million primarily as a result of District software licensing and support, and materials and supplies related to the potential Regional Recycled Water Program.

**Other O&M and Operating Equipment:** The cost of chemicals, power, and sludge disposal incurred in the water treatment process is anticipated to increase slightly by \$1.1 million in FY 2021/22 due primarily to inflationary pressures on chemical costs. Other O&M is lower due primarily to the completion of the PC replacement and seismic headquarters relocation projects in FY 2020/21 offset by increases in taxes and permits and desert infrastructure and communication services. Operating equipment is lower by \$0.7 million from FY 2020/21 due primarily to a reduction in IT infrastructure and survey equipment needs.



Departmental Budget by Expenditure Type, \$ millions



(1) includes succession planning labor pool and overhead credit for construction.

(2) costs associated with treatment only.

(3) without chemicals associated with treatment plants.

The figure above summarizes the total departmental O&M budget by expenditure type, of which about 65 percent is for salaries and benefits in both FY 2020/21 and FY 2021/22.

## STAFFING PLAN

Total regular full time positions of 1,907 remain flat over the biennium. Including temporary positions, total authorized positions for FY 2020/21 and FY 2021/22 are 1,950 and 1,944 positions respectively. Total personnel increase by 20 district temporary positions (rounded) in FY 2020/21 and decrease by 6 district temporary positions (rounded) to a total in FY 2021/22.

Over the biennium, positions dedicated to O&M work are expected to increase by one regular full time position with the shift of a position from capital work, and by 14 district temporary positions to support increased recruitment, enhanced security, land management and maintenance efforts, enhanced business process and business systems support, and ongoing succession planning efforts.

The personnel complement is shown in the following tables.

### Regular and Temporary Positions

	2018/19 Budget	2019/20 Budget	2020/21 Proposed	2021/22 Proposed	2019/20 Budget vs. 2020/21 Proposed	2020/21 Proposed vs. 2021/22 Proposed
Regular Full Time Positions	1,900	1,907	1,907	1,907	—	—
District Temporary Positions	22	23	43	37	20	(6)
<b>Total</b>	<b>1,922</b>	<b>1,930</b>	<b>1,950</b>	<b>1,944</b>	<b>20</b>	<b>(6)</b>

Totals may not foot due to rounding.

\* restated FY 2019/20 to reflect 2 positions subsequently authorized by the board for the General Counsel and Audit departments.

### O&M and Capital Staffing Levels

	2019/20 Budget	2020/21 Proposed	2021/22 Proposed
<b>O&amp;M Positions</b>			
Regular Full Time Positions	1,622	1,622	1,623
District Temporary Positions	21	41	35
<b>Total O&amp;M</b>	<b>1,643</b>	<b>1,663</b>	<b>1,658</b>
<b>Capital Positions</b>			
Regular Full Time Positions	285	285	284
District Temporary Positions	2	2	2
<b>Total Capital</b>	<b>287</b>	<b>287</b>	<b>286</b>
<b>GRAND TOTAL</b>	<b>1,930</b>	<b>1,950</b>	<b>1,944</b>

Totals may not foot due to rounding.

## CAPITAL INVESTMENT PLAN

Estimated expenditures for the Capital Investment Plan (CIP) which includes Minor Capital Projects are \$225.0 million in both FY 2020/21 and FY 2021/22, or \$450 million over the biennium. The proposed budget assumes that CIP expenditures will be 90 percent of planned spending of \$500 million, or \$450 million, over the biennium. CIP expenditures are anticipated to be funded by current operating revenues (i.e., PAYGO) and by issuing new revenue bonds. FY 2020/21 estimated expenditures for CIP are \$25.0 million higher than FY 2019/20 CIP estimated expenditures.

The largest area of expenditures in the FY 2020/21 and FY 2021/22 CIP is Infrastructure Reliability. It is currently anticipated that infrastructure expenditures will continue to grow as more facilities reach the end of their service life and require rehabilitation and refurbishment.

The CIP is discussed in more detail in the CIP supplemental volume.

### Cash Funded Capital

Overall, the CIP is anticipated to be funded 60 percent by current operating revenues (PAYGO). The PAYGO funding for FY 2020/21 and FY 2021/22 is budgeted at \$135.0 million in each fiscal year.

### Debt Funded Capital

Overall, the CIP is anticipated to be funded 40 percent by revenue bond proceeds. New debt issues are planned in FY 2020/21 in the amount of \$100 million, and in FY 2021/22 in the amount of \$90 million. Given construction funds expected to be available at the beginning of the biennial budget period and planned PAYGO amounts, these bond issues should provide sufficient funds to meet CIP expenditures over the two years.

### Debt Service

For FY 2020/21 and FY 2021/22, Metropolitan plans to issue new revenue bond debt as described above. Debt service payments in FY 2020/21 are budgeted at \$298.7 million and \$307.0 million in FY 2021/22.

Please refer to the section on Capital Financing for additional details on this expense.

## FUND BALANCES AND RESERVES

Metropolitan operates as a single enterprise fund for financial statements and budgeting purposes. Through its Administrative Code, Metropolitan identifies a number of accounts, which are referred to as funds, to separately track uses of monies for specific purposes as summarized in the table below.

The FY 2020/21 budget forecasts a \$33.7 million decrease in reserves by June 30, 2021 and includes the Water Rate Stabilization Fund (WRSF) and the Revenue Remainder Fund. In addition, the Treatment Surcharge Stabilization Fund (TSSF) and the Water Stewardship Fund (WSF) are projected to decrease by \$22.6 million.

The FY 2021/22 budget forecasts a \$49.1 million increase in reserves by June 30, 2022 and includes the WRSF and the Revenue Remainder Fund. In addition, the TSSF is projected to increase by \$6.7 and the WSF is projected to decrease by \$75.6 million.

Fund balances are budgeted to be \$1.28 billion at June 30, 2021. Of that total, \$751.2 million is restricted by bond covenants, contracts, or board policy, and 530.8 million is unrestricted. Fund balances are budgeted to be \$1.31 billion at June 30, 2022. Of that total, \$798.9 million is restricted by bond covenants, contracts, or board policy, and 511.1 million is unrestricted.

On June 30, 2021, the minimum and target levels for the reserve funds are estimated to be \$262.0 million and \$642.3 million, respectively. Based on projected revenues and expenditures, it is estimated that the balance in the WRSF and Revenue Remainder Fund will total about \$422.8 million, about \$160.8 million over the minimum level.

On June 30, 2022, the minimum and target levels for the reserve funds are estimated to be \$276.5 million and \$675.0 million, respectively. Based on projected revenues and expenditures, it is estimated that the balance in the WRSF and Revenue Remainder Fund will total about \$471.9 million, about \$195.4 million over the minimum level.

### Projected Fund Balances, \$ millions

	Restricted	Designated	Unrestricted	Total
<b>2020/21 Proposed</b>				
Operating Funds	426.1	—	—	426.1
Debt Service Funds	197.6	—	—	197.6
Construction Funds	17.7	4.4	—	22.1
Reserve Funds (1)	—	—	422.8	422.8
Rate Stabilization Funds (2)	—	103.6	—	103.6
Trust and Other Funds	109.9	—	—	109.9
<b>Total June 30, 2021</b>	<b>751.2</b>	<b>108.0</b>	<b>422.8</b>	<b>1,282.1</b>
<b>2021/22 Proposed</b>				
Operating Funds	465.0	—	—	465.0
Debt Service Funds	206.7	—	—	206.7
Construction Funds	17.3	4.4	—	21.7
Reserve Funds (1)	—	—	471.9	471.9
Rate Stabilization Funds (2)	—	34.7	—	34.7
Trust and Other Funds	109.9	—	—	109.9
<b>Total June 30, 2022</b>	<b>798.9</b>	<b>39.2</b>	<b>471.9</b>	<b>1,310.0</b>

Totals may not foot due to rounding.

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

(2) includes Water Stewardship Fund and Treatment Surcharge Stabilization Fund

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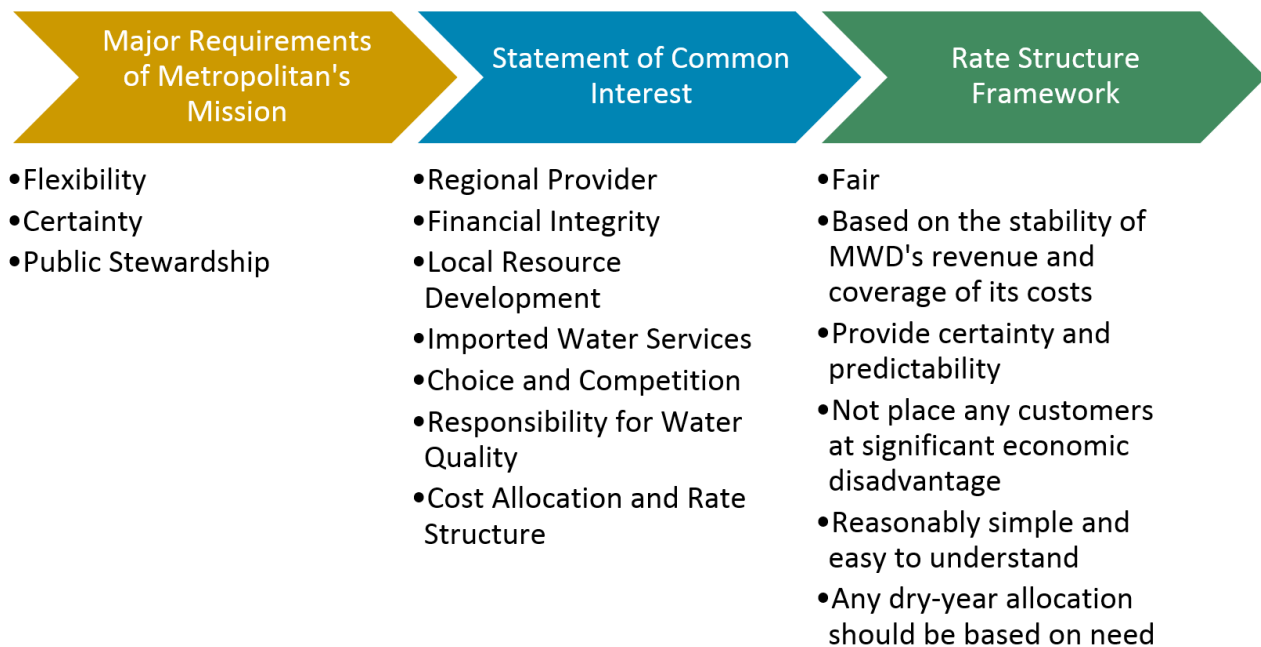
## RATE STRUCTURE OVERVIEW

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### Framework

The Rate Structure Framework evolved through a comprehensive strategic planning process initiated in 1998. As depicted in the following figure, the first step of the process was to identify the “Major Requirements of Metropolitan’s Mission,” which was reflected in the Strategic Plan Policy Principles. The Statement of Common Interests formed the basis of Metropolitan’s strategic plan to address these mission requirements. One of the most important common interests was “Cost Allocation and Rate Structure.” In determining the most appropriate Cost of Service (COS) and rate structure, a set of pricing objectives, or guiding rate principles, was developed. These guiding rate principles defined Metropolitan’s Rate Structure Framework by which various COS and rate-setting methodologies could be evaluated.

### Development of the Rate Structure Framework



The strategic planning process which established the foundation of the Rate Structure Framework is discussed below.

### Major Requirements of Metropolitan’s Mission

As one of the first steps in the strategic planning process in 1998, the Board developed a list of three mission requirements in its Metropolitan vision statement - flexibility, certainty, and public stewardship:

- **Flexibility.** Metropolitan is aware of the legislative and economic pressures which make flexibility in providing water services for a changing demand and in a competitive water market paramount. Fair compensation for wheeling through Metropolitan's conveyance systems is an essential element of Southern California's developing market.
- **Certainty.** The certainty that Metropolitan's water supply is reliable and that the COS is appropriate is of utmost importance to member agencies and their retailers who are endeavoring to provide not only water, but value to the residents in their service area.
- **Public Stewardship.** As public stewards of much of Southern California's water supply, Metropolitan and its member agencies are responsible for making certain that the water is provided in a cost-effective and environmentally sound manner.

### Statement of Common Interests

From the strategic planning mission requirements, the Board developed a list of seven areas of common interest that formed the major focus elements of the Metropolitan strategic plan:

- **Regional provider.** This area includes the concerns of protecting regional infrastructure and providing service during drought periods. Regional water must be provided to meet the needs of the member agencies, and water supplies must be equitably allocated during drought periods based on the Water Surplus and Drought Management Plan principles.
- **Financial integrity.** It is a common interest of the members for Metropolitan to assure the financial integrity of the agency in all aspects of its operations.
- **Local resource development.** Metropolitan supports local resources development by working in partnership with its member agencies and by providing member agencies with financial incentives for water conservation and for local projects.
- **Imported water service.** Metropolitan is responsible for providing imported water to meet the committed needs of its member agencies.
- **Choice and competition.** After Metropolitan provides imported water for the member agencies' committed demands, a member agency can choose the most cost-effective additional water supplies for its customers. These choices include either Metropolitan, local resource development, market transfers, or some combination of these secondary options. Metropolitan and its member agencies can decide how to provide these additional supplies collaboratively while balancing local, imported, and market opportunities with affordability.
- **Responsibility for water quality.** Metropolitan must advocate source water quality and implement in-basin water quality for the imported water it supplies. This is necessary to guarantee compliance with primary drinking water standards and to meet the water quality requirements for water recycling and ground water replenishment.
- **Cost allocation and rate structure.** The framework for a revised rate structure will be established to address allocation of costs, financial commitment, unbundling of services, and fair compensation for services including wheeling, peaking, growth, and others.

## Rate Structure Framework

A major element of common interest was “*Cost Allocation and Rate Structure.*” In addressing this element a set of pricing objectives, or guiding rate principles, had to be developed to evaluate alternative COS and rate setting approaches, or methodologies. As a result, the Board adopted a set of rate principles which was defined as the *Rate Structure Framework*. The Rate Structure Framework provided the principles for the Strategic Planning Steering Committee to develop a preferred rate structure. The Rate Structure Framework includes the following principles:

- The rate structure should be *fair*;
- It should be based on the *stability* of Metropolitan’s revenue and coverage of its costs;
- It should provide certainty and predictability;
- It should not place any customers at *significant economic disadvantage*;
- It should be reasonably *simple and easy to understand*; and
- Any dry-year allocation should be *based on need*.

The 2001 COS and rate structure was adopted by the Board to address the Rate Structure Framework.

## RATE STRUCTURE DESIGN

The elements of the rate structure, and the rates and charges for calendar year 2020, 2021, and 2022 are summarized in Table 14.

Table 14. Rate Elements

Rate Design Elements	Functional Costs Recovered	Type of Charge	2020	2021	2022
Tier 1 Supply Rate	Supply, Drought Storage	Volumetric (\$/af)	\$208	\$246	\$247
Tier 2 Supply Rate	Reflects cost of transfers from north of the Delta	Volumetric (\$/af)	\$295	\$285	\$285
System Access Rate	Conveyance/Distribution (Average Capacity), portion of Regulatory/Emergency Storage	Volumetric (\$/af)	\$346	\$374	\$397
Water Stewardship Rate	Demand Management	Volumetric (\$/af)	\$65	—	—
System Power Rate	Power on CRA and SWP	Volumetric (\$/af)	\$136	\$160	\$170
Treatment Surcharge	Treatment	Volumetric (\$/af)	\$323	\$351	\$369
Capacity Charge	Peak Distribution Capacity, portion of Regulatory Storage	Fixed (\$/cfs)	\$8,800	\$11,200	\$12,500
Readiness-to-Serve Charge	Available Conv. & Dist. Capacity, Emergency Storage	Fixed (\$M)	\$136	\$136	\$144

\*Rates and Charges effective January 1st

## Supply Rates

### Purpose

The rate structure recovers supply costs through a two-tiered price structure. The amount of water a member agency may purchase at the lower Tier 1 Supply Rate, which is water within a member agency's Tier 1 maximum, is established by either a purchase order agreement or calculated as 60% of its Revised Base Firm Demand.

#### *Tier 1 Supply Rate*

The Tier 1 Supply Rate is a volumetric rate charged on Metropolitan's water sales that are within a member agency's Tier 1 maximum. The Tier 1 Supply Rate supports a regional integrated approach through the uniform, postage stamp rate. The Tier 1 Supply Rate is calculated as the amount of the total revenue requirement functionalized as supply divided by the estimated amount of Tier 1 water sales.

#### *Tier 2 Supply Rate*

The Tier 2 Supply Rate is a volumetric rate that reflects Metropolitan's cost of purchasing water transfers north of the Delta. The Tier 2 Supply Rate is charged on Metropolitan water sales that exceed a member agency's Tier 1 maximum. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation.

### Implementation

Because the Tier 1 maximum is set at a total member agency level and not at a meter level, all system water delivered will be billed at the Tier 1 Supply Rate. Any water delivered that exceeds the Tier 1 maximum will be billed an additional amount equivalent to the difference between the Tier 2 and Tier 1 Supply Rates.

For member agencies without purchase orders and member agencies with purchase orders that accrue a cumulative Tier 2 obligation at the end of year five of the purchase order, the Tier 2 Supply Rate will be applied in the month where the Tier 1 maximum is surpassed on all applicable deliveries. Otherwise, any obligation to pay the Tier 2 Supply Rate will be calculated over the ten-year period, consistent with the calculation of any purchase order commitment obligation.

### Benefits

The use of the two-tiered structure for Supply Rates provides several benefits including (1) efficient resource management, and (2) clear price signals to accommodate a water transfer market.

## System Access Rate (SAR)

### Purpose

The SAR recovers the costs of Conveyance, Distribution, and Storage that is used on an average annual basis through a uniform, volumetric rate. All member agencies pay the SAR for access to conveyance and distribution capacity in the Metropolitan system.

### Implementation

The SAR is charged for each acre-foot of water transported by Metropolitan, regardless of the ownership of the water being transported. All users (member agencies and third-party wheelers) using the Metropolitan system to transport water pay the same SAR for the use of the system conveyance and distribution capacity used to meet average annual demands.



As explained further below, the rate for wheeling service which has included the SAR is inapplicable in calendar years 2021 and 2022.

### Benefits

The SAR benefits include: (1) support of a regional approach; (2) accommodates a water transfer market that does not unfairly advantage one user over another; (3) provides a clear linkage between costs and benefits; and (4) establishes a simple approach to recovering the costs of conveyance and distribution functions.

### Water Stewardship Rate (WSR)

#### Purpose

The WSR provided a dedicated source of funding for Metropolitan's demand management function through a uniform, volumetric rate recovered through the end of calendar year 2020. Metropolitan's demand management operations functions include past and future conservation and local resources projects. Because of the uniform benefits conferred on all system users by investments in conservation and local resources, all users of Metropolitan's conveyance and distribution system paid the WSR except for exchange deliveries to SDCWA in calendar years 2018 through 2020.

#### Implementation

The WSR was charged to each acre-foot of water delivered by Metropolitan through the end of calendar year 2020, regardless of the water being transported, except for the noted exchange deliveries. All system users benefit from avoided system infrastructure costs through conservation and local resources development, and from the system capacity made available by investments in Demand Management Programs like Metropolitan's Conservation Program and Local Resources Program. Therefore, all users paid the WSR through the end of calendar year 2020, except on water delivered to SDCWA pursuant to the exchange agreement in calendar years 2018, 2019, and 2020.

Metropolitan's Board suspended the billing and collection of the WSR for calendar years 2018, 2019, and 2020 on exchange deliveries pending Metropolitan's completion of a cost allocation study of its demand management costs. Having completed the demand management cost allocation process, in December 2019 Metropolitan's Board directed staff: (1) to incorporate the use of the 2019/20 fiscal-year-end balance of the Water Stewardship Fund to fund all demand management costs in the proposed FY 2020/21 and 2021/22 biennial budget; and (2) to not incorporate the WSR, or any other rates or charges to recover demand management costs, with the proposed rates and charges for CYs 2021 and 2022. This decision provided the Board additional time to consider a rate design alternative for recovery of future demand management costs.

Therefore, as a result of this Board decision, the WSR is not incorporated in this COS analysis and Report. The full-service rate will not include the WSR element during the biennial period. Further, because the rate at Metropolitan Administrative Code Section 4405(b) for wheeling service to member agencies for a period of up to one year-as defined in Sections 4119 and 4405(a)-includes the Water Stewardship Rate, the rate for wheeling service at Section 4405(b) is deemed inapplicable during that period. Any wheeling service to any member agency pursuant to Section 4405(a) will be provided at a price for the transaction to be agreed upon by Metropolitan and the member agency (as is already the case for wheeling of over one year to member agencies and wheeling of any duration to third parties).

## System Power Rate (SPR)

### Purpose

The SPR recovers the costs of energy required to pump water to Southern California through the SWP and CRA. The cost of power is recovered through a uniform, volumetric rate.

### Implementation

The SPR is applied to all deliveries of Metropolitan water to member agencies. Under Metropolitan Administrative Code Section 4405(b), member agencies pay for actual cost (not system average) of power needed to move the water for wheeling transactions under Section 4405(a). Therefore, the SPR is not applicable to wheeling arrangements. However, as explained above, the rate for wheeling service at Section 4405(b) is not applicable during the biennial time period. Still, it is anticipated that charges for wheeling by any party will include the actual costs of power needed to move water and not the SPR. For example, a third-party wheeling water through the California Aqueduct would pay the variable power cost associated with using the SWP transportation facilities.

### Benefits

The primary benefit of the SPR is that it clearly identifies Metropolitan's average cost of power.

## Treatment Surcharge

### Purpose

The Treatment Surcharge recovers all of the costs of providing treatment capacity and operations through a uniform, volumetric rate per acre-foot of treated water transactions.

### Implementation

The Treatment Surcharge is charged to all treated water transactions.

### Benefits

There are several benefits provided by the treatment surcharge, including that (1) only treated water users pay for the costs of treatment, and (2) by averaging the costs of providing treated water service over the entire system the regional economies of scale are preserved.

## Capacity Charge

### Purpose

The Capacity Charge recovers the costs incurred to provide peak capacity within the Distribution System. The Capacity Charge also provides a price signal to encourage agencies to reduce peak demands on the Distribution System and to shift demands that occur during the May 1 through September 30 period into the October 1 through April 30 period, resulting in more efficient utilization of Metropolitan's existing infrastructure and deferring capacity expansion costs.

### Implementation

Each member agency will pay the Capacity Charge per cubic feet per second (cfs) based on a three-year trailing peak (maximum) day demand, measured in cfs. Each member agency's peak day is likely to occur on different days; therefore this measure approximates peak week demands on Metropolitan.

## Benefits

The Capacity Charge provides several benefits including (1) increasing the overall efficiency of water use, (2) improving the fair allocation of costs among member agencies based upon the demand imposed by each agency, and (3) providing a source of fixed revenue.

## Readiness–To–Serve Charge (RTS)

### Purpose

The RTS recovers the cost of the portion of system that is available to provide emergency service and available capacity during outages and hydrologic variability.

### Implementation

The RTS is a fixed charge that is allocated among the member agencies based on a ten-fiscal-year rolling average of firm demands. Water transfers and exchanges are included for purposes of calculating the ten-year rolling average. The SDCWA Exchange Water transactions are excluded from the calculation of the ten-year rolling average per the terms of the Amended and Restated Agreement between the Metropolitan Water District of Southern California and the San Diego County Water Authority for the Exchange of Water. The Standby Charge is collected at the request of some member agencies that have elected to use the charge as a direct offset to the member agency's RTS obligation.

### Benefits

The RTS provides two major benefits, which includes (1) a better matching of costs and benefits, and (2) a SAR that recovers only those costs associated with providing average annual service.

## Purchase Order Option

The current rate structure allows member agencies to choose to purchase water from Metropolitan by means of a Purchase Order. Purchase Orders are voluntary agreements that determine the amount of water that a member agency can purchase at the Tier 1 Supply Rate. They allow member agencies to purchase a greater amount of water at the lower Tier 1 Supply Rate than would otherwise be authorized by the Administrative Code. In exchange for the higher Tier 1 Maximum, the member agency commits to purchase a specific amount of water (based on past purchase levels) over the term of the agreement. Such agreements allow member agencies to manage costs and provide Metropolitan with a measure of secure revenue.

In November 2014, the Metropolitan Board approved new Purchase Orders effective January 1, 2015 through December 31, 2024 (the "Purchase Order Term"). Twenty-one of the twenty-six member agencies have Purchase Orders, which commit the member agencies to purchase a minimum amount of supply from Metropolitan (the "Purchase Order Commitment").

The key terms of the Purchase Orders include:

- A ten-year term, effective January 1, 2015 through December 31, 2024;
- A higher Tier 1 limit based on the Base Period Demand, determined by the member agency's choice between (1) the Revised Base Firm Demand, which is the highest fiscal year purchases during the 13-year period of fiscal year 1989/90 through fiscal year 2001/02, or (2) the highest year purchases in the most recent 12-year period of fiscal year 2002/03 through 2013/14. The demand base is unique for each member agency, reflecting the use of Metropolitan's system water over time;

- An overall purchase commitment by the member agency based on the Demand Base period chosen, times ten to reflect the ten-year Purchase Order term. Those agencies choosing the more recent 12-year period may have a higher Tier 1 Maximum and commitment. The commitment is also unique for each member agency.
- The opportunity to reset the Base Period Demand using a five-year rolling average;
- Any obligation to pay the Tier 2 Supply Rate will be calculated over the ten-year period, consistent with the calculation of any Purchase Order commitment obligation; and
- An appeals process for agencies with unmet purchase commitments that will allow each acre-foot of unmet commitment to be reduced by the amount of production from a local resource project that commences operation on or after January 1, 2014.

Member agencies that do not have Purchase Orders in effect are subject to Tier 2 Supply Rates for amounts exceeding 60 percent of their base amount (equal to the member agency's highest fiscal year demand between 1989-90 and 2001-02) annually.

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# UNDERSTANDING THE LAYOUT OF THE DEPARTMENTAL BUDGET

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## DEPARTMENTAL/GROUP BUDGET

The Departmental Section provides detailed information about the Operations and Maintenance (O&M) budget of each group and department and consists of the following:

### Mission

Describes, at a high level, the scope of the organization's functions.

### Programs

Describes the organizations roles and responsibilities by program or section and provides a summary organizational chart.

### Goals & Objectives

Summarizes the goals & objectives each organization proposes to accomplish in the upcoming fiscal years.

### O&M Financial Summary

Provides a summary of the organization's O&M budgets. For FY 2018/19 and FY 2019/20, O&M expenditures are identified by expense categories such as salaries and benefits, professional services, and "other" expenditures and incorporate the group objectives.

### Expense Category

Category	Description
<i>Salaries and Benefits</i>	Labor costs and fringe benefits for Metropolitan's regular, district temporary, and agency temporary employees. Total salaries and benefits, direct charges to capital, and O&M salaries are shown.
<i>Professional Services</i>	All costs associated with work performed by outside contractors and consultants.
<i>Operating Equipment</i>	Costs associated with the purchase of capitalized portable equipment, including automobiles, trucks, servers, and other applicable portable equipment.
<i>Other</i>	Cost of purchasing chemicals, materials and supplies, reprographics, travel, telephone, and other necessary items for effective operation of Metropolitan. A breakdown has been provided to itemize those expense categories that are five percent or more of the "other" category.

### O&M Budget by Section

Provides a summary of the organization's O&M budget and personnel count by section or program.

### Personnel Summary

Provides a breakdown for the organization of total personnel involved in O&M and capital work.

### Budget Highlights

Identifies the major factors of the budget variance over the biennium as well as any significant changes by budget year.

# OFFICE OF THE GENERAL MANAGER

The Office of the General Manager manages and administers all Metropolitan activities except those functions specifically delegated by statutes and Board order to the General Counsel, General Auditor, or Ethics Officer.

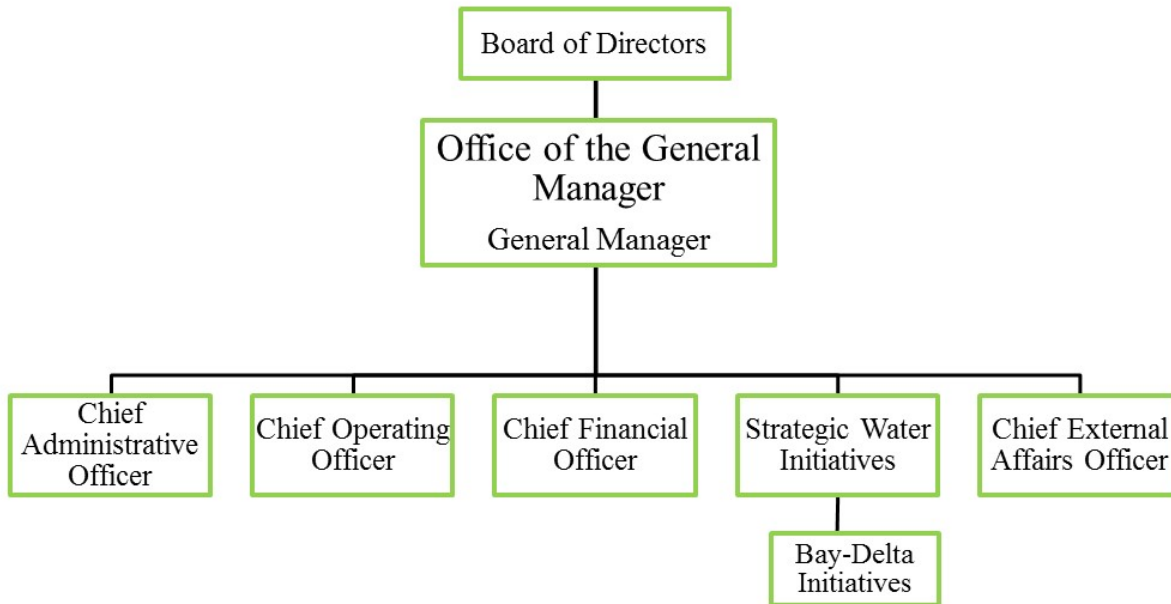
## PROGRAMS

The Office of the General Manager is responsible for the management and administration of Metropolitan's activities including the management of all matters pertaining to the business of the Board and research on actions and policies of the Board by staff for directors, member agencies, and the public.

the Office of the General Manager. It is now a separate group. Also, the Board Support Team is now under the Chief Administrative Officer.

The Board of Directors provides policy and direction as the governing body of the Metropolitan Water District.

The reporting structure of the Office of the General Manager is reflected below. In the prior biennial budget, Bay Delta Initiatives was reflected under



## GOALS AND OBJECTIVES

The following strategic priorities in the General Manager's Business Plan reflect the funding emphasis in the proposed budget and highlight items that will be the focus of Board and staff attention over the next two years.

### Strategic Priority #1: Resiliency

Resiliency is about making sure our staff, systems, and infrastructure are strong and can return to service quickly in a business interruption. For example, are we prepared for an extended drought, a major earthquake, or other large scale disruption to routine business operations? The focus in this budget is on training, leadership development, and other efforts to support succession planning to strengthen and increase the diversity in the workforce, and on capital spending to build infrastructure reliability and redundancy.

#### Succession Planning

Ultimately, Metropolitan's continued success and strength depends on a skilled and experienced workforce. The proposed biennial budget supports our succession planning efforts. We must continue to develop, train, mentor, and support staff at all levels. In 2018, roughly 50 percent of the workforce was eligible to retire. We have a successful history of filling about 90 percent of management and leadership positions and 70 percent of advanced journey positions from within the organization. The proposed biennial budget recognizes how important sound succession planning is and accounts for continued training and development of our workforce.

#### Capital Planned Spending

Capital spending includes necessary projects for replacement and refurbishment of aging infrastructure, strengthening of infrastructure to better withstand earthquakes, improvements in the redundancy and integration of systems, and replacement of end-of-life systems. Capital planned spending total \$500 million over the biennial period. Metropolitan's ability to maintain a high level of service and readiness to the member agencies underpins our resiliency.

### Strategic Priority #2: Sustainability

Sustainability is about charting a long-term course that addresses some of the challenges before us: climate change, aging infrastructure, contaminants of emerging concern, and affordability of water supplies.

#### Integrated Water Resources Plan (IRP) Update

Twenty-five years after the first IRP was adopted, the 2020 IRP Update will frame challenging policy discussions for the Board to deliberate. Fundamentally, the 2020 IRP update will define the role of imported water, local resources, and conservation to meet evolving challenges. For the first time, the IRP will contemplate a future where the region's demand for imported water may be decreasing.

#### Delta Conveyance

Stabilizing the reliability of existing supply from the State Water Project through a Delta conveyance project must remain a strong policy focus. This continued effort is supported by the proposed biennial budget. The focus over the next two years will be supporting the California Department of Water Resources as it seeks permits for a Delta conveyance project; participating in the Delta Conveyance Design and Construction Authority in its role; and continuing to put forward sound scientific research to help inform and improve Delta management decisions. The proposed budget provides \$50 million to fund Metropolitan's planned contribution for Delta conveyance project planning activities.

#### Regional Recycled Water Program

The proposed budget includes \$30 million for preparation of a programmatic environmental impact report, which is the next step before the Board will be fully informed and ready to make a decision on if, how, and when to proceed with further investments in this project.



**Metropolitan Finances**

Determining the right mix of revenues for a sustainable future was also discussed at the Board Retreat in October. There is a great deal of history and policy embedded in the design of the current rate structure, which was last looked at in its entirety starting in 1998. The reasons for changing the rate structure then are different than the reasons that may warrant a review of the rate structure today. The incentives built into the current rate structure may or may not be the most appropriate to accomplish the goals that will flow from the IRP Update. Metropolitan will begin a review of the current rate structure in 2020 with a goal of adopting any changes to the rate structure by the end of 2021.

**Strategic Priority #3: Innovation**

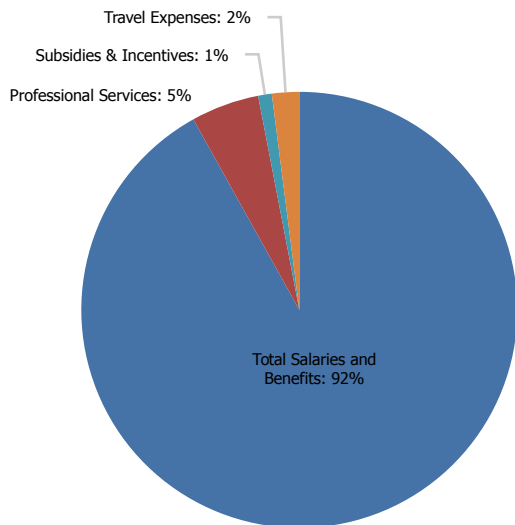
Innovation is about continuing Metropolitan's long tradition of creatively solving difficult challenges. A recent Water Research Foundation report highlighted Metropolitan as one of the most impactful water utilities in the nation. This is in large part due to our skilled and dedicated staff. As the workforce changes, it is very important that we actively engage new employees by sharing Metropolitan's history of regional cooperation, its diverse, inclusive, and fair culture; discussing the challenges ahead and how we will overcome them; and most importantly, soliciting their innovative ideas about how Metropolitan can continuously improve its operations and business processes.

## O&M FINANCIAL SUMMARY

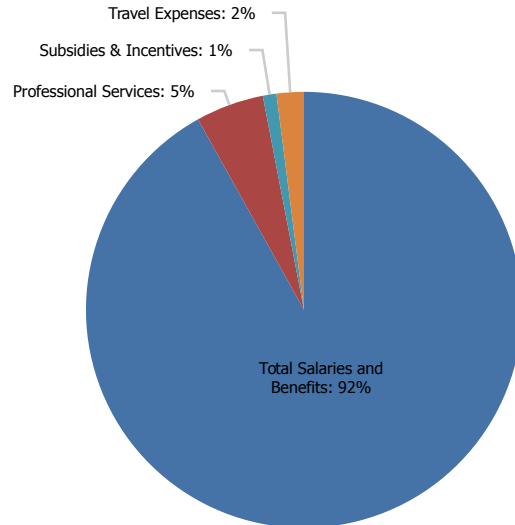
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	4,756,900	4,566,900	5,050,500	483,600	5,269,400	218,900
Direct Charges to Capital	—	—	—	—	—	—
<b>Total Salaries and Benefits</b>	<b>4,756,900</b>	<b>4,566,900</b>	<b>5,050,500</b>	<b>483,600</b>	<b>5,269,400</b>	<b>218,900</b>
% Change		(4.0%)		10.6%		4.3%
Professional Services	288,900	345,000	300,000	(45,000)	300,000	—
Conferences & Meetings	14,000	25,500	26,500	1,000	26,500	—
Materials & Supplies	6,600	16,500	11,000	(5,500)	11,000	—
Subsidies & Incentives	47,400	46,800	50,700	3,900	50,700	—
Travel Expenses	135,400	165,100	101,200	(63,900)	101,200	—
Other Accounts	20,000	58,400	10,700	(47,700)	10,700	—
<b>Total O&amp;M</b>	<b>5,269,200</b>	<b>5,224,200</b>	<b>5,550,600</b>	<b>326,400</b>	<b>5,769,500</b>	<b>218,900</b>
% Change		(0.9%)		6.2%		3.9%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE



FY 2021/22 BUDGET BY EXPENDITURE



## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	<b>13</b>	<b>13</b>	<b>13</b>	—	<b>13</b>	—
	O&M	13	13	13	—	13	—
	Capital	—	—	—	—	—	—
<b>Temporary</b>	<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>	—	<b>—</b>	—
	O&M	—	—	—	—	—	—
	Capital	—	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>13</b>	<b>13</b>	<b>13</b>	—	<b>13</b>	—
	O&M	13	13	13	—	13	—
	Capital	—	—	—	—	—	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

The Office of the General Manager’s O&M Biennial Budget is \$5.6 million in FY 2020/21 and \$5.8 million in FY 2021/22 or an increase of 6.2% and an increase of 3.9% respectively from the prior budget years. The main factors affecting these changes:

- Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.
- Non-labor expenses are decreasing by about 24% primarily in the areas of travel and professional services.

The following are the significant changes by budget year.

### FY 2020/21

#### Personnel–related issues

Total personnel count remains flat with the FY 2019/20 budget.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

#### Professional Services

The budget for professional services is decreasing due to shifting two professional services contracts to other appropriate groups.

#### Other

The budget for travel is decreasing due to trend in less required travel.

### FY 2021/22

#### Personnel–related issues

Total personnel count remains flat with the FY 2020/21 budget.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

#### Professional Services

The budget for professional services remains flat with the FY 2020/21 budget.

#### Other

The budget for travel and other O&M remains flat with the FY 2020/21 budget.

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## BAY DELTA INITIATIVES

Bay Delta Initiatives advances proposed Delta improvements and the pursuit of the best scientific research to protect and restore fish, wildlife, and the Delta's ecosystem to ensure water supply reliability.

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### PROGRAMS

Bay Delta Initiatives (BDI) is responsible for overseeing efforts to secure a reliable water supply from the State Water Project through environmental and water supply improvements in the Sacramento-San Joaquin River Delta.

BDI's core business aims to develop and pursue near- and long-term solutions that will ensure improved water quality and water supply reliability. Efforts include pursuing and providing leadership for proposed Delta improvements, environmental restoration efforts, on-going federal and state Bay-Delta regulatory permitting, studies

and research activities that promote collaborative science, opportunities to improve Delta conditions utilizing Metropolitan's Delta Islands including monitoring Delta levee's performance to ensure long-term levees integrity.

[Office of the Bay Delta Initiatives Manager](#) provides overall direction in the management of the group's initiatives and core business, implements the group's strategic priorities, oversees the financial management and budgetary processes, and ensures proper administration of its collaborative science efforts.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, BDI will focus on the following key issues:

### Delta Conveyance and EcoRestore

Provide a leadership role in pursuing the state's Proposed Delta Improvements, including the new Delta conveyance and California EcoRestore.

Continue to participate in public negotiations for the Delta conveyance cost allocation and collaborate with key stakeholders in negotiating and establishing the appropriate funding approach.

Collaborate with the Department of Water Resources and other agencies in the preparatory work for Delta conveyance environmental planning.

Continue to stay involved in Delta Conveyance Design and Construction Authority exchange of information and ideas for the consideration of project engineering and design approaches to inform the environmental review process.

Work with various agencies to identify, develop, and implement habitat restoration projects that promote the goals of California EcoRestore such as tidal marsh restoration, setback levee, fish passage improvements, and fish rescue facility.

### Regulatory, Planning, and Legislative Support

Provide policy and technical support for the processes related to State and Federal Endangered Species Act permitting for the State Water Project.

Provide policy and technical support to negotiate Voluntary Agreements with upstream and export water users to secure regulatory Water Quality Control Plan and water rights permitting by the State Water Resources Control Board.

Participate in Delta Stewardship Council processes including attending meetings, reviewing and providing comments on documents, and collaborating with water contractors and others on relevant issues that help protect the interests of Metropolitan.

Provide technical support for outreach efforts and coordination on related initiatives, and support in the review and analysis of Delta-related legislation.

### Science Development

Participate in collaborative science processes through research and studies for the protection of endangered species, management of fish and wildlife species, and the protection and enhancement of ecosystem habitat throughout the Delta for the purpose of securing water supply reliability.

Participate in the Bay-Delta science community by providing input to the Collaborative Science and Adaptive Management Program, including supporting the Collaborative Adaptive Management Team. Provide input in the review of technical work products, workplan development, and discussion of relevant issues that may influence key Delta regulations and policies.

Identify opportunities for collaboration on science related activities including attending and conducting presentations at workshops, symposiums, and conferences to promote efforts that Metropolitan has a vested interest in, and to strengthen the overall Delta science program.

Continue participating in Interagency Ecological Program (IEP) stakeholder meetings to provide updates on on-going studies, develop collaborative partnerships for future studies, and discuss strategies to implement the IEP workplan.

Continue to engage in processes related to independent scientific peer review and present scientific findings to stakeholders. Explore opportunities to publish results of scientific studies supported by Metropolitan in industry recognized publications.

Pursue collaborative partnerships with state and federal water contractors, agencies; associations; and academic institutions to promote scientific research efforts.

Manage updates and improvements related to the web-based scientific application (Bay-Delta Live) to sustain continuous open and transparent sharing of information on the complex and dynamic ecosystem of the Sacramento-San Joaquin Bay Delta for that serve as a tool for meaningful stakeholder discussions and regulatory consideration. Implement scientific research for selected pilot projects using Metropolitan's Delta Islands.

## Delta Islands Management

Collaborate with other parties to manage the Delta Islands properties and explore sustainable land management alternatives that are consistent with the state's co-equal goals of a restored Delta and a reliable water supply for California.

Continue the implementation of required Senate Bill 88 Measurement Regulations compliance actions in the Delta Islands including assessment of varying metering technologies, data collection, and further documentation of field conditions, costs, and device measuring accuracy levels.

Pursue grant funding opportunities that will help the long-term water needs of the state and meet Metropolitan board policies of developing subsidence reversal, sustainable agricultural risks, and advancing ecosystem restoration actions.

## Emergency Preparedness, Planning and Implementation

Collaborate with state and other agencies in promoting efforts that will reduce seismic risks by ensuring levees integrity.

Continue to support work being implemented by the DWR, the U. S. Army Corps of Engineers, and other parties within the Delta for advancements in emergency preparedness including operational coordination, communication, and assessment in response to potential levee breaches in the Delta region.

Closely monitor the status of California Department of Water Resources' program to acquire piles, rocks, enclosures, and other materials to ensure closure of the deepest levee breaches and for a redundant measure to rock closures in emergency conditions.

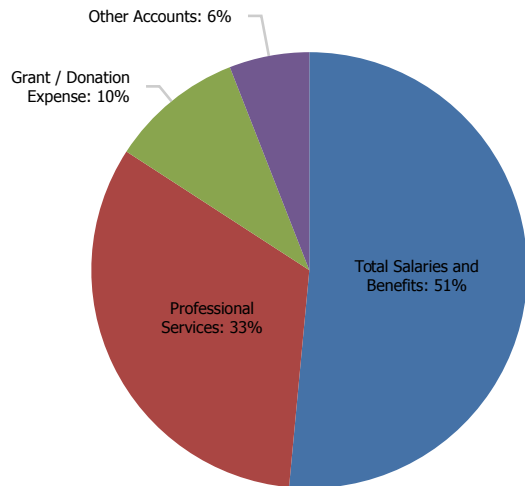
Pursue the Delta Levee Instrumentation and Monitoring Pilot Project to ensure vital assessment of levee performance in the short- and long-term to guide systematic levees safety remediation.

## O&M FINANCIAL SUMMARY

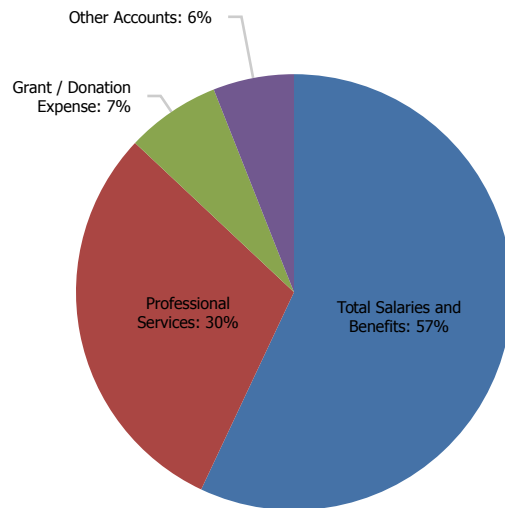
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	4,781,400	4,975,400	5,246,100	270,700	5,542,200	296,100
Direct Charges to Capital	—	(93,100)	(28,900)	64,200	—	28,900
<b>Total Salaries and Benefits</b>	<b>4,781,400</b>	<b>4,882,300</b>	<b>5,217,200</b>	<b>334,900</b>	<b>5,542,200</b>	<b>325,000</b>
% Change		2.1%		6.9%		6.2%
Professional Services	2,648,200	4,525,000	3,317,400	(1,207,600)	2,883,200	(434,200)
Equipment Expensed	5,800	2,000	185,800	183,800	243,300	57,500
Grant / Donation Expense	246,300	525,000	986,900	461,900	714,700	(272,200)
Travel Expenses	219,600	173,300	286,000	112,700	204,300	(81,700)
Other Accounts	70,100	138,600	102,700	(35,900)	121,600	18,900
<b>Total O&amp;M</b>	<b>7,971,400</b>	<b>10,246,200</b>	<b>10,096,000</b>	<b>(150,200)</b>	<b>9,709,300</b>	<b>(386,700)</b>
% Change		28.5%		(1.5%)		(3.8%)
Operating Equipment	9,600	—	—	—	—	—
<b>Total O&amp;M and Operating Equipment</b>	<b>7,981,000</b>	<b>10,246,200</b>	<b>10,096,000</b>	<b>(150,200)</b>	<b>9,709,300</b>	<b>(386,700)</b>
% Change		28.4%		(1.5%)		(3.8%)

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE



FY 2021/22 BUDGET BY EXPENDITURE





## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>—</b>	<b>17</b>	<b>—</b>
	O&M	17	17	17	—	17	—
	Capital	—	1	—	—	—	—
<b>Temporary</b>	<b>Total</b>	<b>—</b>	<b>1</b>	<b>—</b>	<b>(1)</b>	<b>—</b>	<b>—</b>
	O&M	—	1	—	(1)	—	—
	Capital	—	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>17</b>	<b>18</b>	<b>17</b>	<b>(1)</b>	<b>17</b>	<b>—</b>
	O&M	17	18	17	(1)	17	—
	Capital	—	1	—	—	—	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

The Bay Delta Initiatives' O&M Biennial Budget is \$10.1 million in FY 2020/21 and \$9.7 million in FY 2021/22 or a decrease of 1.5% and a decrease of 3.8% respectively from the prior budget years. The main factors affecting these changes:

- Staffing is decreasing by one district temporary position that was supporting emergency preparedness, planning and implementation related to ensuring the integrity of levees in the Delta. This effort is continuing with internal and consultant resources.
- Professional services reflect a decrease due to the deferral of some pilot and science studies and other near-term efforts. Some studies that may be deferred include paludiculture and regenerative pilot studies, science studies on salmon survival and hydrodynamic modeling, and other near-term efforts.
- Grant expense reflects an increase in funding to continue the advancement of efforts on collaborative science through various state, other agencies, and academic institutions.
- Equipment Expensed shows an increase in funding to allow for purchase of equipment not categorized as operating equipment for use in enhanced levee instrumentation and monitoring research in the Delta.

The following are the significant changes by budget year.

### FY 2020/21

#### Personnel-related issues

Total personnel count decreased by one district temporary position that was terminated in 2019.

Capital labor is budgeted as ten percent of one regular FTE for the Delta Islands regulatory compliance project (Senate Bill 88).

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

#### Professional Services

The budget reflects required funding for activities related to Bay Delta science, general state and federal coordination, regulatory support, Delta Islands operations, regulatory activities, modeling, emergency preparedness including levee instrumentation and monitoring, and Delta conveyance technical assistance in DWR's environmental planning.

## Grant Expense

The grant-related expense budget is for Metropolitan's cost share contributions to state, other agencies, and academic institutions that pursue studies that are of interest to Metropolitan.

The increase in grant/donation expenses could also be attributed to a surge in state grant opportunities in recent years that allow agencies to work together and provide cost shares in order to pursue studies that are of interest to all stakeholders. The studies normally run from two to three years.

## Travel Expenses

Increase in budget is intended to cover anticipated costs of round trip coach air fares, lodging, meals and various related costs for staff that are required to travel for business. Other additional travel budget is due to increased cost of lodging in Sacramento where staff normally travels. Also included are costs for staff's out of state travel for training and other trips such as those related to Colorado River activities that are supported by some Bay Delta staff.

## Equipment Expensed

The budget reflects the purchase of various pieces of survey equipment that were not categorized as operating equipment. Use of this equipment will allow for a better understanding of levee performance in the Delta, and along the Middle River Emergency Freshwater pathway, which will guide systematic levee safety remediation.

## Other

The budget is for funding District validated parking for Bay Delta Sacramento staff, subsidies and incentives, materials and supplies, training and conferences, membership and subscriptions, mainly for open-access publication of science-related manuscripts resulting from the various science studies, one vehicle lease, and communication expenses.

## FY 2021/22

### Personnel-related issues

Total personnel count remains flat from the FY 2020/21 budget.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

### Professional Services

The budget reflects a reduction in funding due to the anticipated completion of some of the efforts that are pursued from the previous year.

### Grant Expense

The budget reflects a reduction of Metropolitan funding for science cost share agreements due to anticipated completion of some efforts that started the previous year.

### Travel Expenses

The budget reflects a decrease in weekly staff travel between Los Angeles and Sacramento due to a potential shift in staff resources.

### Equipment Expensed

The budget reflects purchase of remaining survey equipment that is anticipated to be installed during this fiscal year.

### Other

The budget reflects an increase in funding for open-access publication of science-related manuscripts resulting from the studies that are anticipated to be completed during the year.

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# WATER SYSTEM OPERATIONS

Water System Operations (WSO) reliably treats and delivers high-quality water to Metropolitan's member agencies in an efficient, sustainable, and environmentally responsible manner.

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## PROGRAMS

Water System Operations treats and delivers water from the Colorado River and the State Water Project (SWP) through a raw water conveyance system, five treatment plants, and an extensive treated water distribution network. This flexible system provides reliable deliveries to the member agencies and moves available supplies and storage reserves to meet Metropolitan's mission. Water quality remains paramount and all functions focus on surpassing drinking water standards in a safe and economical way.

WSO accomplishes its mission through the following programs or sections:

**Office of the Group Manager** provides day-to-day operational management as well as strategic and organizational leadership, directing all initiatives and core business efforts of WSO. The office also provides support functions such as budgeting and administration, and coordinates and engages in regulatory and legislative activities. Additionally, a new unit has been added to provide oversight for the group on capital and operational project delivery, asset management, and member agency service connection requests.

**Operations Support Services** provides a diverse range of support to Metropolitan's core operational reliability functions and, on a reimbursable basis, to public entities such as DWR and member agencies. The Manufacturing Services unit performs fabrication, machining, coating, valve and pump refurbishment, underwater maintenance, and crane safety and certification. Construction Services unit performs general construction, large equipment transportation, equipment installation, and emergency response. The Power & Equipment Reliability unit provides maintenance services which include: predictive, preventive, and

corrective maintenance analysis for critical equipment, including all treatment plants, pumping plants, hydroelectric power plants, pressure control structures, high voltage equipment, and heating, ventilation, and air conditioning (HVAC) systems. The Fleet Services unit acquires and maintains vehicles, construction equipment, aircraft, and emergency generators.

**Water Treatment** operates and maintains five water treatment plants with a combined capacity of over 2.3 billion gallons per day. The section oversees treatment processes to ensure high-quality water is reliably produced that complies with drinking water regulations. All five treatment plants are staffed and operated 24 hours a day, seven days a week to meet about half of Metropolitan's annual deliveries. All five of the treatment plants (Jensen, Mills, Skinner, Weymouth and Diemer) have been retrofitted to use ozone as the primary disinfectant.

**Water Conveyance and Distribution** meets delivery requirements of member agencies by moving water throughout Metropolitan's 5,200 square mile service area and performing a wide range of operations and maintenance activities to ensure system reliability. This work encompasses the Colorado River Aqueduct (CRA) system and its five pumping plants as well as the distribution system of about 830 miles of pipelines, approximately 350 service connections to member agencies, 16 hydroelectric plants, and 9 storage and regulatory reservoirs that help Metropolitan meet peak flow periods and provide dry year and emergency supply reliability. These functions are separated into two sections: one for the desert region, and one for the eastern and western regions of the service area.

**Water Quality** ensures that Metropolitan provides safe and aesthetically pleasing water through the following activities: conducting chemical and biological analyses; optimizing existing treatment processes; testing new technologies to assure compliance with current and future regulations; and providing technical expertise, laboratory services, and troubleshooting of water quality issues for Metropolitan and its member agencies. Water Quality also works to preserve and improve source water quality through rigorous watershed surveys and advocate for measures to reduce the risk of point and non-point source pollution. The section is also advancing water reuse opportunities through operations and testing at the Regional Recycled Water Advanced Purification Center.

**Water Operations and Planning** plans and implements the movement and use of water resources. These plans incorporate infrastructure and supply limitations, agency demands, changing water quality requirements, and storage program economics. Operational scenarios that encompass a broad range of potential supplies and demands are developed and refined on a weekly basis throughout the year. This process prepares WSO for a wide variety of possible outcomes as the year develops while maintaining reliable deliveries and balancing management of water storage reserves at reasonable cost.

In addition, the section programs and maintains Metropolitan's automated control system, known as the Supervisory Control and Data Acquisition (SCADA) system.

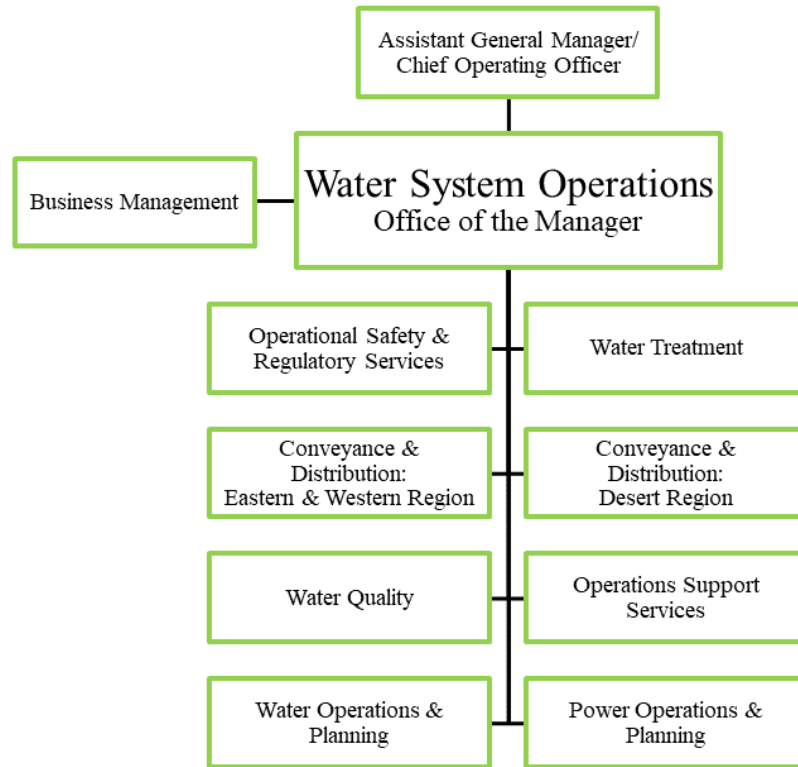
**Operational Safety and Regulatory Services** is responsible for ensuring a safe working environment for employees through programs and training, ensuring business operations are

conducted in an environmentally responsible way, and complying with all regulatory and occupational health and safety rules and requirements. The section integrates environmental, health and safety practices into Metropolitan's operations and culture with the goal of achieving a safe work place and eliminating regulatory incidents.

In addition, the section manages technical skills training for maintenance craft employees and sponsors an accredited apprenticeship program which is a cornerstone of WSO's proactive succession planning efforts. This is done by training industrial mechanics and electricians over a four-year period of classroom and hands-on instruction.

**Power Operations and Planning** plans, acquires and accounts for the energy required to operate the CRA. This activity includes energy transactions with electric utilities and marketers. The section also negotiates and manages the contracts and energy accounting of renewable energy credits and greenhouse gas allowances for 16 small hydroelectric power plants and the CRA.

In addition, the section is responsible for most wholesale energy activities including evaluation of proposed energy-related regulations and legislation; analysis of state and regional transmission plans and impacts to the CRA transmission system; and reporting on compliance with regional and national electric reliability standards. Finally, the section works closely with energy staff at DWR on energy and transmission issues for the SWP.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, WSO will focus on the following key issues:

### System Reliability

Manage and maintain the water system to ensure operational reliability for all reasonably expected demands.

Develop and distribute the annual operating plan and manage water storage to provide the greatest delivery flexibility and cost effectiveness. Build on strategies such as employing operational flexibility to mitigate future drought condition impacts on water availability.

Plan, schedule, and execute the Annual Shutdown Plan to ensure reliable operation of the water delivery system, including a strategy to manage longer shutdowns to support the refurbishment of prestressed concrete cylinder pipelines.

Maintain eight-pump flow readiness on the CRA and manage storage accounts to capture all available Colorado River supplies in concert with water supplies from other sources.

With member agency and regional partners, develop new water supplies to supplement the core SWP and Colorado River supplies including groundwater recovery, ocean desalination, and potable reuse.

Support the Regional Recycled Water Program by achieving regulatory acceptance for the process design. Conduct demonstration testing and perform optimization studies.

Support the Colorado River Aqueduct Main Pump Reliability Program, including detailed inspections of pumps, components and support systems.

Participate with the California Department of Water Resources (DWR) on value-engineering efforts to ensure cost-effective rehabilitation of SWP conveyance, pumping, and generation facilities.

Fully utilize the manufacturing shops in La Verne to maintain Metropolitan’s infrastructure reliability and support projects for DWR and the member agencies.

Partner with Engineering Services and Information Technology groups to develop and implement a comprehensive Asset Management Plan.

Partner with other groups to develop and implement an Energy Sustainability Plan that will define strategies to increase operational flexibility, and reduce energy costs and greenhouse gas emissions.

Continue the multi-year upgrade of the SCADA system to maintain and improve the ability to remotely operate the conveyance, distribution, and treatment systems.

Conduct emergency response exercises involving internal operational groups, member agencies, and other emergency response agencies.

### Workforce Development & Succession Planning

Conduct an annual Management Academy program to improve internal recruitment pool for entry-level supervisors.

Recruit and begin training a new apprentice class each year for the mechanical and electrical trades.

Provide continuing education classes for licensed water treatment and distribution operators that are tailored to Metropolitan's procedures and facilities.

### Water Quality, Environmental Protection, and Safety

Meet or surpass all drinking water standards and ensure delivery of aesthetically pleasing water.

Engage in the regulatory process to ensure full consideration of technical and economic feasibility for drinking water and environmental regulations.

Engage watershed stakeholders and regulators to ensure effective control of source water contaminants such as uranium, perchlorate, chromium, nutrients, and cyanotoxins.

Provide safety and regulatory services to ensure safe work practices and adhere to environmental and workplace health and safety regulations.

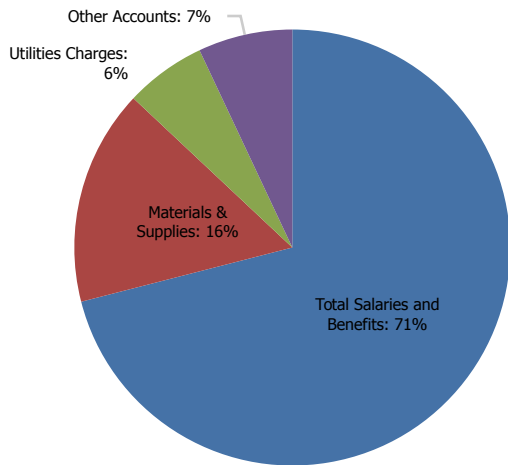
Increase monitoring of quagga mussels in the west and east branches of the State Water Project and prepare quagga mussel control plans.

## O&M FINANCIAL SUMMARY

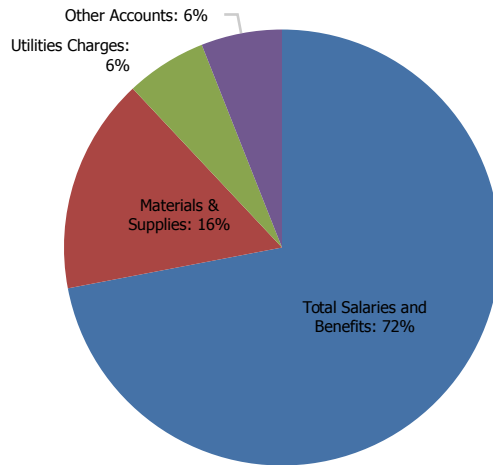
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	175,976,400	182,670,300	195,967,300	13,297,000	206,886,800	10,919,500
Direct Charges to Capital	(10,410,900)	(7,650,200)	(8,452,300)	(802,100)	(8,951,300)	(499,000)
<b>Total Salaries and Benefits</b>	<b>165,565,500</b>	<b>175,020,100</b>	<b>187,515,000</b>	<b>12,494,900</b>	<b>197,935,500</b>	<b>10,420,500</b>
% Change		5.7%		7.1%		5.6%
Professional Services	710,200	1,493,200	1,431,700	(61,500)	2,056,500	624,800
Materials & Supplies	40,392,500	38,288,000	42,691,300	4,403,300	44,231,400	1,540,100
Outside Services - Non Professional / Mainte	6,872,200	6,736,500	7,141,500	405,000	7,187,600	46,100
Utilities Charges	13,538,300	14,868,200	16,335,400	1,467,200	16,650,500	315,100
Other Accounts	10,903,600	8,598,700	8,694,100	95,400	8,627,000	(67,100)
<b>Total O&amp;M</b>	<b>237,982,300</b>	<b>245,004,700</b>	<b>263,809,000</b>	<b>18,804,300</b>	<b>276,688,500</b>	<b>12,879,500</b>
% Change		3.0%		7.7%		4.9%
Operating Equipment	4,618,800	6,000,000	5,997,700	(2,300)	6,000,000	2,300
<b>Total O&amp;M and Operating Equipment</b>	<b>242,601,100</b>	<b>251,004,700</b>	<b>269,806,700</b>	<b>18,802,000</b>	<b>282,688,500</b>	<b>12,881,800</b>
% Change		3.5%		7.5%		4.8%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE

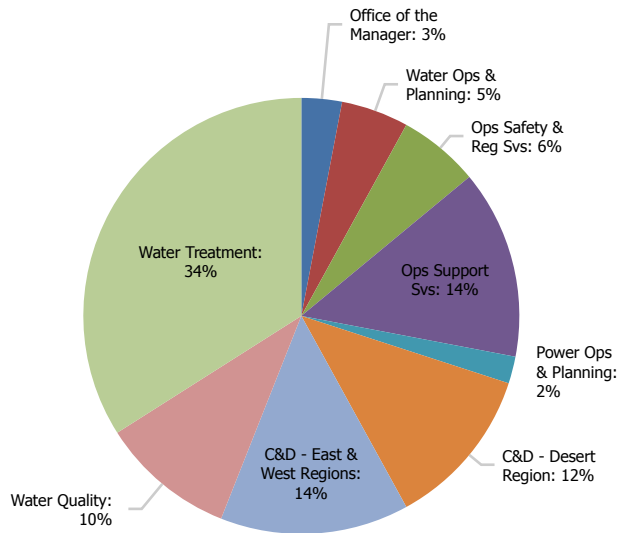


FY 2021/22 Budget by Expenditure

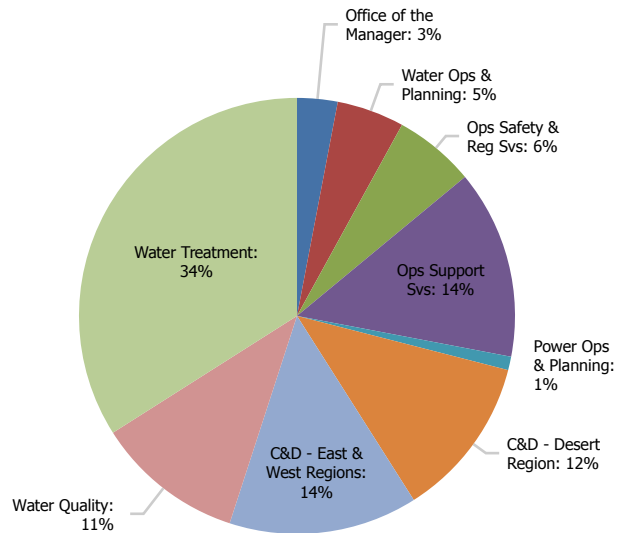


## O&M BUDGET BY SECTION

FY 2020/21 BUDGET BY SECTION



FY 2021/22 BUDGET BY SECTION



	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21	Personnel Budget		
						19/20	20/21	21/22
Office of the Manager	5,893,000	7,211,800	1,318,900	7,505,900	294,100	52	21	21
Water Operations and Planning	12,133,400	12,459,100	325,700	13,003,600	544,500	42	40	40
Operational Safety and Regulatory Services	14,827,300	15,669,900	842,600	16,414,100	744,200	55	51	51
Operations Support Services	35,900,000	37,473,900	1,574,000	39,100,800	1,626,900	120	150	150
Power Operations and Planning	3,397,800	4,037,500	639,700	4,107,800	70,300	12	12	12
C&D Section - Desert Region	28,093,800	31,160,200	3,066,400	32,961,200	1,801,100	—	134	134
C&D Section - Eastern & Western Regions	36,392,400	37,371,500	979,100	39,145,100	1,773,500	264	133	133
Water Quality	25,430,900	27,525,600	2,094,700	29,256,600	1,731,000	96	104	102
Water Treatment	82,936,200	90,899,500	7,963,300	95,193,400	4,293,900	277	267	267
<b>Total O&amp;M</b>	<b>245,004,700</b>	<b>263,809,000</b>	<b>18,804,300</b>	<b>276,688,500</b>	<b>12,879,500</b>	<b>918</b>	<b>912</b>	<b>910</b>

Totals may not foot due to rounding.



## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	<b>863</b>	<b>940</b>	<b>940</b>	<b>—</b>	<b>940</b>	<b>—</b>
	O&M	817	898	894	(3)	894	—
	Capital	46	43	46	3	46	—
<b>Temporary</b>	<b>Total</b>	<b>24</b>	<b>21</b>	<b>18</b>	<b>(3)</b>	<b>16</b>	<b>(2)</b>
	O&M	23	21	18	(3)	16	(2)
	Capital	1	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>886</b>	<b>961</b>	<b>958</b>	<b>(4)</b>	<b>956</b>	<b>(2)</b>
	O&M	839	918	912	(7)	910	(2)
	Capital	47	43	46	3	46	—

Totals may not foot due to rounding

## BUDGET HIGHLIGHTS

WSO's O&M and Operating Equipment Biennial Budget is \$269.8 million in FY 2020/21 and \$282.7 million in FY 2021/22 or an increase of 7.5% and an increase of 4.8%, respectively from the prior year budgets. The main factors affecting these changes:

- A combination of increased treated water flows, significant increases in chemical commodity prices, and higher chemical dosages needed to treat State Water Project supplies raised the expected chemical costs for water treatment.
- An increase in materials and supplies needed for the repair and maintenance of aging equipment, as well as building and construction materials needed for patrol road maintenance associated with annual storm damage.
- An increase in hazardous waste disposal costs expensed to O&M as a result of increased vendor fees.
- An increase in chemical costs and contract laboratory services to support the Regional Recycled Water Program.
- These increases are offset in part by a reduction in Laboratory Supplies.

The following are the significant changes by budget year.

### FY 2020/21

#### Personnel-Related issues

The number of regular positions remained flat from the FY 2019/20 budget, while temporary labor needs are anticipated to decrease due to the filling of vacant regular positions. Organizational changes were made to better support business objectives, including addressing aging infrastructure and major rehabilitation programs, increased regulatory and compliance requirements, new strategic initiatives as well as supporting WSO's Apprenticeship program.

A unit has been added to oversee capital and operational project delivery for the group asset management initiatives and the service connection program. The Conveyance & Distribution Section has been restructured to provide for a dedicated section manager over Desert facilities and staff.

Organizational changes were made in the Water Quality Section to prepare for new regulations addressing laboratory standards, and for development of potable reuse initiatives through

operations and testing at the Regional Recycled Water Advanced Purification Center.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

### Materials and Supplies

The budget reflects inflationary pressure anticipated on chemicals and other materials and supplies.

### Non-Professional Services

The budget reflects inflationary increases in labor and fuel costs for services provided in this category such as janitorial, pest control, and inspection services.

In addition, costs for compliance-related contract services increased for environmental and safety equipment, as well as energy regulatory compliance activities for power operations.

### Utilities Charges

The budget reflects an increase in waste disposal costs from facility R&R projects and an increase in expected electrical rates.

### Other

A switch to high capacity circuits resulted in a reduction in Communications Expenses by reducing the amount and types of communications lines needed for both data and phone traffic.

## FY 2021/22

### Personnel–Related issues

Regular personnel count for both O&M and capital work remains flat from the FY 2020/21 budget, while temporary labor needs continue to decrease due to the anticipated filling of vacant regular positions.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

### Professional Services

The budget reflects an increase in contract laboratory services for demonstration testing and monitoring at the Regional Recycled Water Advanced Purification Center.

In addition, consultant services are required to support the Asset Management program.

### Materials & Supplies

The budget reflects inflationary pressures anticipated on chemicals, fuel pricing and other materials and supplies.

### Non-Professional Services

The budget reflects inflationary increases in labor and fuel costs for services provided in this category such as janitorial, pest control, and inspection services.

In addition, costs for compliance-related contract services increased for environmental and safety equipment.

### Utilities Charges

The budget reflects an increase in waste disposal costs from facility R&R projects and an increase in expected electrical rates.

### Operating Equipment – FY 2020/21 and FY 2021/22

The operating equipment budget is maintained to replace aging fleet and heavy equipment.

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## WATER RESOURCE MANAGEMENT

Water Resource Management (WRM) plans, secures, and manages water resources to provide its member agencies with a reliable, cost-effective, and drought and climate-resilient water supply.

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### PROGRAMS

Water Resource Management manages imported water supplies; advances water-use efficiency; provides supply and demand forecasts foundational for long-term resource planning; and develops and implements timely resource programs and projects.

In addition, Water Resource Management assists member agencies in optimizing local resources to benefit the entire Metropolitan service area, and ensures Metropolitan receives a fair return on contractual investments in local and imported resources.

Water Resource Management accomplishes its mission through the following programs or sections:

**Office of the Manager** directs the group's efforts in planning, securing, and managing Metropolitan's water resources; monitors and tracks the group's business plan, financial and budgetary initiatives; and provides administrative and business process support.

**Resource Planning & Development** is responsible for providing an integrated water supply and demand forecast that will meet the needs of member agencies and reflect their

long-range planning efforts for local supplies, which sets the foundation for Metropolitan's resource mix and local supplies needed to meet demands. This section also supports the development of resource programs, projects, and infrastructure to meet projected resource targets; administers the planning process; defines strategies for meeting service area water needs, including the Integrated Water Resources Plan (IRP) and Water Surplus and Drought Management (WSDM) plan; and develops resource options, such as groundwater conjunctive use, regional recycling, stormwater and seawater desalination; as well as alternatives for short-range planning and implementation through joint action with Water System Operations.

**Resource Implementation** develops and administers water resource programs and contracts, and pursues application of new technologies and innovations. These activities focus on the Colorado River, State Water Project, water transfers, water recycling, groundwater recovery, and water conservation for the region. The Resource Implementation Section also monitors and responds to regulatory, legislative, and operational activities that may influence Metropolitan's water rights and benefits related to the quality, reliability and cost of water.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, WRM will focus on the following key issues:

### Colorado River

Complete the Colorado River Sustainability Study in preparation for negotiations of Colorado River system operations.

Protect Colorado River resources, Metropolitan’s Colorado River rights, and optimize the use of available Colorado River water.

Support participation in the Colorado River Salinity Control Forum and facilitate salinity management projects and other actions that protect and improve source water quality.

Partner with other Colorado River water delivery contractors to develop new Metropolitan supplies, including interstate and international water supply programs.

Administer Imperial Irrigation District (IID), Palo Verde Irrigation District (PVID), and proposed Bard Irrigation District agricultural conservation programs.

Work with representatives of the International Boundary and Water Commission and United States Bureau of Reclamation (USBR) to continue implementation of Minute 323 and coordinate emergency deliveries for Tijuana.

Administer contracts with Colorado River entities to make full use of Metropolitan’s supplies developed from Colorado River resources. Manage intentionally created surplus supplies to ensure maximum benefit to Metropolitan.

Develop strategies and tools for managing agricultural land holdings in the Palo Verde Valley.

### Groundwater Storage Program

Continue management of nine approved conjunctive use programs to store water for dry-year yield.

Continue facilitation of dialogue among agencies in groundwater management, recycled water production, and stormwater and flood management to enhance groundwater basin recharge.

## Legislative Review

Continue to review and provide comments and inform member agencies on proposed state and federal legislation on water resources issues related to Metropolitan's mission and WRM functions.

## Regional Resources and Water Conservation

Implement Long-Term Water Conservation Plan and new Local Resource Plan (LRP) initiatives to meet state mandated urban water use reduction targets and increase local resource and production. Pursue grant funding to supplement implementation of regional water conservation program initiatives.

Participate in local, state, and national activities leading to expanded use of recycled water and increased water-use efficiency.

Administer agreements that provide incentives for conservation, recycled water, recovered groundwater production, and support development of local resource development projects.

Conduct and fund research to advance local supply development and conservation program effectiveness.

Administer the Future Supply Actions Funding program to remove barriers to local supply production.

Implement stormwater pilot programs with the member agencies to evaluate Metropolitan's participation in stormwater projects.

Develop programs to improve water conservation in disadvantaged communities.

## Seawater Desalination

Continue to support member agency development efforts and actively participate in CalDesal regulatory and legislative initiatives.

## State Water Project

Coordinate implementation of SWP contract amendments including the SWP contract extension, water management amendment and proposed Delta conveyance facility amendment. These

contract amendments will ensure a long-term supply, and effective water management tools to manage the supply and reliability into the future.

Ensure accurate billings and influence sound financial decisions by DWR, including effective DWR energy management practices with regard to renewable energy, emissions reductions, transmission strategies, and energy acquisitions.

Continue to identify and resolve disputed charges related to annual SWP billings.

Protect SWP water, power, and financial positions under the Oroville Federal Energy Regulatory Commission (FERC) relicensing process as well as associated litigation and upcoming FERC relicensing and several DWR facilities in Southern California.

Coordinate and influence decisions for major facility rehabilitations and SWP capital projects to ensure cost-effective and reliable water supply, energy generation, and use.

Promote water quality monitoring and forecasting activities through the Municipal Water Quality Investigations program and raise awareness of potential water quality impacts from operational decisions.

## Water Supply and System Planning

Complete the 2020 IRP and Urban Water Management Plan reflecting Metropolitan's long-term water resources strategy and complete the annual reports on Metropolitan's achievements in conservation, recycling, and groundwater recharge.

Complete the annual forecast of Metropolitan demands to support revenue requirements and budget process.

Use the 2020 IRP forecasts to develop a comprehensive analysis of Metropolitan's distribution system. Identify potential spatial constraints and system improvements to reliably deliver water to member agencies during peak demands, drought, and emergency conditions.

Update emergency storage objective for in-basin protection from earthquake or other outage using revised demand forecast from IRP.

Continue to pursue development of the full-scale Regional Recycled Water Program to increase water reuse and enhance opportunities for groundwater recharge within Metropolitan's service area.

Upgrade and enhance planning tools, such as computer models for demand forecasting, resource program evaluation, and distribution system.

Participate in state water/energy nexus processes and data access initiatives.

Continue to collaborate with various agencies and stakeholders in statewide and regional water resource planning efforts, such as the California Water Plan Updates and the Integrated Regional Water Management Plans.

Continue work with the Water Utility Climate Alliance to perform case studies on climate data applications to water resources planning.

### Water Transfers, Exchanges, and Storage Programs

Continue to manage existing water transfer, exchange, and storage programs along the California Aqueduct and Colorado River Aqueduct.

Continue to evaluate the need for additional reliability by either developing new programs or modifying existing programs. Pursue additional water transfers, exchanges, and storage programs as needed.

Work with other State Water Contractors on a long-term water transfer permitting process.

### Workforce Development & Succession Planning

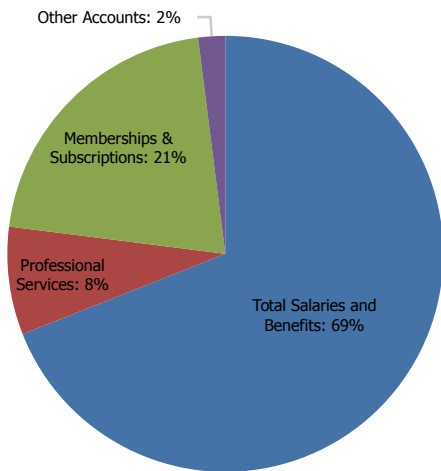
Continue to develop staff expertise in critical areas to prepare for employee retirements or departures.

## O&M FINANCIAL SUMMARY

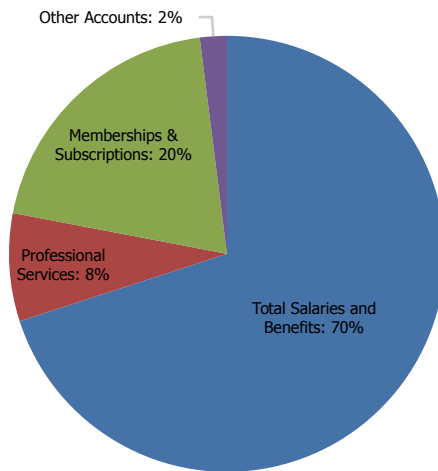
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	14,578,100	16,651,600	16,871,200	219,600	17,823,700	952,500
Direct Charges to Capital	(8,000)	—	—	—	—	—
<b>Total Salaries and Benefits</b>	<b>14,570,100</b>	<b>16,651,600</b>	<b>16,871,200</b>	<b>219,600</b>	<b>17,823,700</b>	<b>952,500</b>
% Change		14.3%		1.3%		5.6%
Professional Services	1,555,300	1,986,500	2,003,500	17,000	2,012,500	9,000
Memberships & Subscriptions	4,247,700	5,844,900	5,042,600	(802,300)	5,069,600	27,000
Other Accounts	552,600	583,000	454,000	(129,000)	440,400	(13,600)
<b>Total O&amp;M</b>	<b>20,925,700</b>	<b>25,066,000</b>	<b>24,371,300</b>	<b>(694,700)</b>	<b>25,346,200</b>	<b>974,900</b>
% Change		19.8%		(2.8%)		4.0%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE

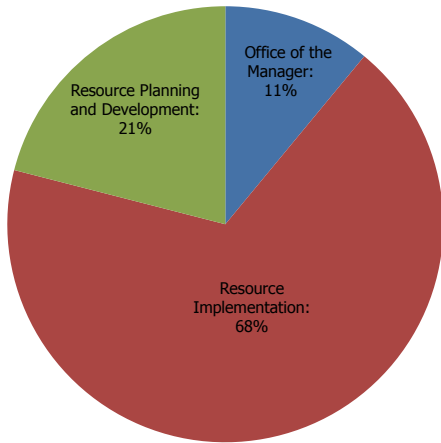


FY 2021/22 Budget by Expenditure

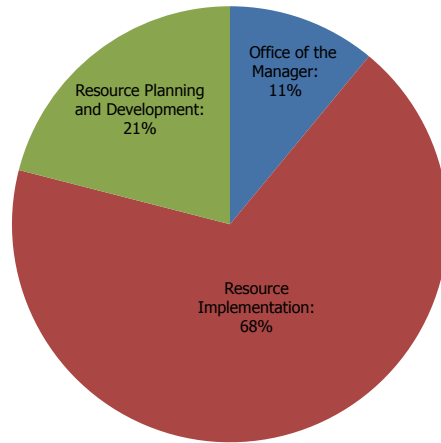


## O&M BUDGET BY SECTION

FY 2020/21 BUDGET BY SECTION



FY 2021/22 BUDGET BY SECTION



	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21	Personnel Budget		
						19/20	20/21	21/22
Office of the Manager	2,978,700	2,720,700	(258,000)	2,818,400	97,700	13	12	12
Resource Implementation	17,530,300	16,562,500	(967,800)	17,202,600	640,100	40	41	41
Resource Planning and Development	4,556,900	5,088,100	531,200	5,325,200	237,100	16	18	18
<b>Total O&amp;M</b>	<b>25,066,000</b>	<b>24,371,300</b>	<b>(694,700)</b>	<b>25,346,200</b>	<b>974,900</b>	<b>69</b>	<b>70</b>	<b>70</b>

Note - Totals may not foot due to rounding.

## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	<b>59</b>	<b>68</b>	<b>68</b>	<b>—</b>	<b>68</b>	<b>—</b>
	O&M	59	68	68	—	68	—
	Capital	—	—	—	—	—	—
<b>Temporary</b>	<b>Total</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>(1)</b>
	O&M	2	1	2	1	2	(1)
	Capital	—	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>61</b>	<b>69</b>	<b>70</b>	<b>1</b>	<b>70</b>	<b>(1)</b>
	O&M	61	69	70	1	70	(1)
	Capital	—	—	—	—	—	—

Totals may not foot due to rounding.



## BUDGET HIGHLIGHTS

WRM's Biennial Budget is \$24.4 million in FY 2020/21 and \$25.3 million in FY 2021/22 or a decrease of 2.8% and an increase of 4.0%, respectively from the prior budget years. WRM's budget is increasing by only 1.1% over the biennium. The main factors affecting these changes:

- The increase in salaries and benefits are being offset to a large degree by a reduction in memberships and subscriptions due to the dissolution of two water committees, and the shift of the Innovation Conservation Program costs to the non-departmental Demand Management budget.
- The Conservation Program, Local Resources Program, Future Supply Actions and Supply Programs budgets are captured in the non-departmental section of the budget. WRM is responsible for the management, development and administration of these programs.

The following are the significant changes by budget year:

### FY 2020/21

#### Personnel–Related Issues

Personnel count remains flat. However, due to ongoing succession planning, eleven positions have been reclassified: two management positions reclassified to non-management intermediate levels, and nine additional positions recruited at a lower level. In addition, one district temporary position is included for transforming paper records to digital libraries and improving records management.

Salaries and benefits reflect negotiated labor increases and merit increases for qualified employees. These increases are offset by vacancies filled at lower level job classifications.

#### Professional Services

The budget reflects an increase in support for the IRP, including forecasts of residential water use, legislation impacts on conservation, and incorporating climate change. The budget also reflects an increase for updating the Colorado River Basin Demand and Hydrology for the Colorado River Sustainability Plan analysis.

#### Memberships and Subscriptions

The budget is decreasing as the result of the dissolution of the State Water Project Contractors Authority (SWPCA) and State & Federal Water Contractors Authority (SWFCA) organizations. Projects and funding will be

managed within the State Water Contractors association. The budget includes a new membership for the California Water Data Consortium.

#### Other

The budget includes an increase in advertising and printing for the Urban Water Management Plan, as well as expensed equipment for new employees. These increases are offset by the costs related to the Innovation Conservation Program being moved to the Demand Management budget (non-departmental).

### FY 2021/22

#### Personnel–Related Issues

Total temporary personnel count decreases from the FY 2020/21 budget, due to one District Temporary position that will be utilized for only a portion of FY 2021/22 in order to complete the digital records project.

Salaries and benefits reflect negotiated labor increases and merit increases for qualified employees.

#### Professional Services

Budget reflects slight increase for continued IRP related activities.

### Memberships and Subscriptions

The budget reflects an inflationary increase for Municipal Water Quality Investigations and Six Agency dues. The State Water Contractors membership dues will stay flat.

### Other

The budget reflects an increase in materials and supplies for software, as well as training and seminars for new climate related conferences. These increases are offset by a decrease in printing costs related to the Urban Water Management Plan.

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## ENGINEERING SERVICES

Engineering Services provides innovative solutions that exceed our partner's expectations as the public-sector's leader for water engineering.

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### PROGRAMS

Engineering Services performs project management, design, construction management, infrastructure condition assessments, facility planning, manages Metropolitan's Capital Investment Plan (CIP), and provides on-going operations and maintenance support to other stakeholders and partners within the organization.

Engineering Services accomplishes its mission through the following programs or services to our strategic partners:

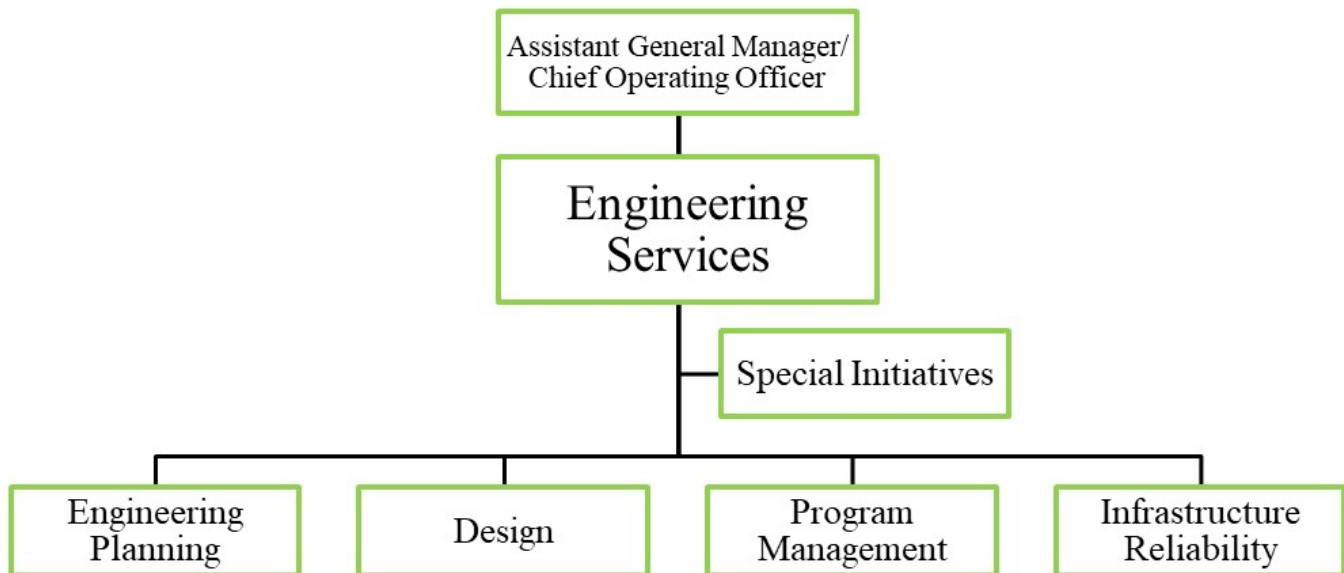
**Office of the Group Manager** oversees the management of the Engineering Services group by providing strategic leadership on engineering initiatives and core business efforts, to ensure the continued reliability and quality of water deliveries. The office also provides technical support for special initiatives including the Delta conveyance, Dam Safety, and Metropolitan's Regional Recycled Water Program.

**Engineering Planning** is responsible for the functions of facility planning, hydraulic analysis, hydraulic modeling, protection of Metropolitan's substructures, construction contract administration, technical control and oversight of engineering standards, capital project support, business process management and budgeting, and management of Metropolitan's CIP.

**Design** is responsible for the preparation of technical assessments, conceptual and preliminary designs for new facilities and for rehabilitation of existing facilities, final design drawings and specifications for construction, and technical support during the construction, commissioning, and operation of facilities.

**Program Management** is responsible for the overall delivery of both capital and O&M projects for treatment plants, distribution, conveyance and storage systems; and serves as Metropolitan's Owner's Engineer.

**Infrastructure Reliability** is responsible for the management of construction contracts, field inspection, and factory fabrication inspection; and surveying and mapping, right-of-way, and corrosion and materials engineering.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, Engineering Services will focus on the following key issues:

### Delta Conveyance

Support the on-going activities of the Design and Construction Authority Joint Powers Authority by providing as-needed project management and technical support for the initial work activities related to the Delta conveyance facilities.

### Special Initiatives

Provide program management and leadership for development of Metropolitan’s Regional Recycled Water Program in the form of program planning, budgeting and collaboration with internal and external program participants and stakeholders, and provide technical support to the operations of the advanced water treatment demonstration plant.

Continue to support opportunities to collaborate with other agencies to enhance local water supplies.

### Dam Safety

Ensure the safe and reliable operation of Metropolitan’s dams and reservoirs through periodic dam inspections and extensive surveillance, comprehensive evaluations of existing dams and appurtenant structures using current design standards, thorough review and inspection of major repair work, and careful planning and coordination of emergency action plans with local agencies. New dam safety initiatives include upgrading instrumentation and use of technology to obtain and present instrumentation results in real-time.

## Infrastructure Reliability

Manage and complete board–authorized projects within the CIP to ensure the reliable delivery of water to Metropolitan’s member agencies.

Provide engineering and technical services to support the operation and maintenance of Metropolitan’s water conveyance, delivery, treatment, and support facilities.

Protect public safety, minimize future costs of infrastructure maintenance and repairs, and avoid unplanned outages by monitoring Metropolitan’s facilities and right-of-way, performing essential technical assessments, and implementing modern asset management methods.

## CIP Management

Execute capital projects to enhance seismic resiliency of key Metropolitan facilities, rehabilitate aging infrastructure, and maintain system flexibility. High priority programs that will continue during the biennium include the PCCP Rehabilitation and CRA Rehabilitation.

Partner with Water System Operations and other stakeholders to prioritize capital projects to address Metropolitan’s short–term needs and long–term objectives, and optimize utilization of internal and external resources.

Continue to identify and implement improvements in project delivery.

## Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation

Continue pipe procurement, valve procurement, and construction to rehabilitate the remaining PCCP portions of the Second Lower Feeder. Continue preliminary design to rehabilitate the Allen-McColloch Pipeline, Calabasas Feeder, Rialto Pipeline, and Sepulveda Feeder.

## CRA Rehabilitation

Continue investigations to rehabilitate the CRA main pumps and construction to rehabilitate pump house cranes and discharge line isolation joints. Complete design to upgrade potable water, industrial water and wastewater lines and replace transformers at each of the five CRA pumping plants.

## Employee Development

Lead workforce development and succession planning activities to optimally develop and maintain technical expertise and skills needed in the future to ensure infrastructure reliability, meet regulations, respond to emergencies, and support Metropolitan initiatives.

## Partnership and Collaboration

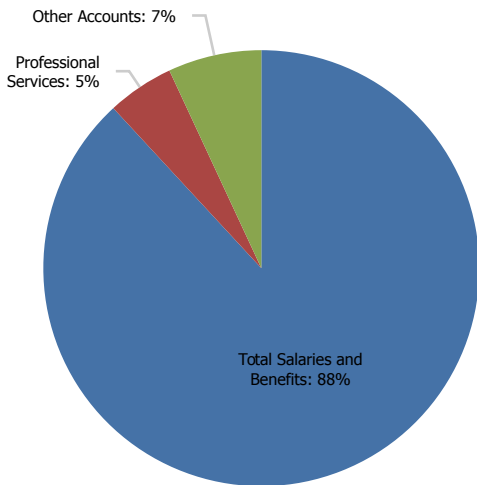
Lead communication and new initiatives to enhance partnership and collaboration between ESG and WSO, and further improve the quality and timeliness of deliverables.

## O&M FINANCIAL SUMMARY

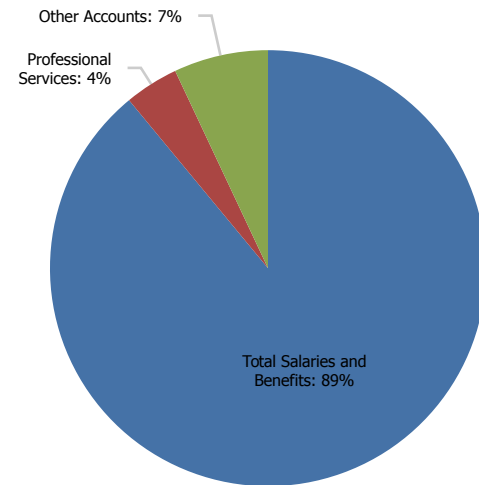
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	70,900,300	81,444,400	84,147,100	2,702,700	89,110,600	4,963,500
<i>Direct Charges to Capital</i>	<i>(42,497,700)</i>	<i>(51,301,500)</i>	<i>(50,070,500)</i>	<i>1,231,000</i>	<i>(53,066,600)</i>	<i>(2,996,100)</i>
<b>Total Salaries and Benefits</b>	<b>28,402,600</b>	<b>30,142,900</b>	<b>34,076,600</b>	<b>3,933,700</b>	<b>36,044,000</b>	<b>1,967,400</b>
% Change		6.1%		13.1%		5.8%
Professional Services	1,368,700	1,552,800	1,773,500	220,700	1,749,000	(24,500)
Materials & Supplies	574,200	734,200	741,700	7,500	754,700	13,000
Memberships & Subscriptions	224,300	237,000	237,000	—	237,500	500
Taxes & Permits	522,200	484,000	870,000	386,000	957,000	87,000
Travel Expenses	138,100	172,100	172,100	—	172,100	—
Other Accounts	681,300	542,000	511,600	(30,400)	511,300	(300)
<b>Total O&amp;M</b>	<b>31,911,400</b>	<b>33,865,000</b>	<b>38,382,500</b>	<b>4,517,500</b>	<b>40,425,600</b>	<b>2,043,100</b>
% Change		6.1%		13.3%		5.3%
Operating Equipment	837,200	174,800	720,800	546,000	569,800	(151,000)
<b>Total O&amp;M and Operating Equipment</b>	<b>32,748,600</b>	<b>34,039,800</b>	<b>39,103,300</b>	<b>5,063,500</b>	<b>40,995,400</b>	<b>1,892,100</b>
% Change		3.9%		14.9%		4.8%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE

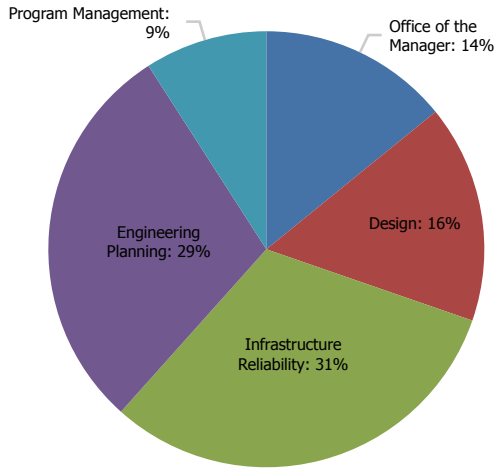


FY 2021/22 BUDGET BY EXPENDITURE

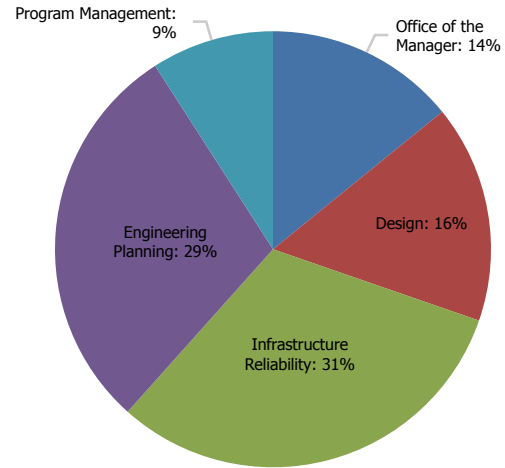


## O&M BUDGET BY SECTION

FY 2020/21 BUDGET BY SECTION



FY 2021/22 BUDGET BY SECTION



	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21	Personnel Budget		
						19/20	20/21	21/22
Office of the Manager	4,204,600	5,549,900	1,345,300	5,817,700	267,800	2	12	12
Design	4,817,400	6,131,900	1,314,500	6,486,800	354,800	16	20	20
Infrastructure Reliability	11,873,700	11,946,100	72,400	12,634,900	688,700	58	51	51
Engineering Planning	10,346,100	11,150,600	804,500	11,707,100	556,500	41	42	42
Program Management	2,623,100	3,603,900	980,800	3,779,200	175,300	10	13	13
<b>Total O&amp;M</b>	<b>33,865,000</b>	<b>38,382,500</b>	<b>4,517,500</b>	<b>40,425,600</b>	<b>2,043,100</b>	<b>127</b>	<b>139</b>	<b>139</b>

Note - Totals may not foot due to rounding.

## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
		<b>Regular</b>	<b>Total</b>	<b>320</b>	<b>355</b>	<b>355</b>	<b>—</b>
	O&M	131	127	139	12	139	—
	Capital	189	228	217	(12)	217	—
<b>Temporary</b>	<b>Total</b>	<b>1</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
	O&M	1	—	—	—	—	—
	Capital	1	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>321</b>	<b>355</b>	<b>355</b>	<b>—</b>	<b>355</b>	<b>—</b>
	O&M	131	127	139	12	139	—
	Capital	190	228	217	(12)	217	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

Engineering Services' O&M and Operating Equipment Biennial Budget is \$39.1 million in FY 2020/21 and \$41.0 million in FY 2021/22 or an increase of 14.9% and an increase of 4.8%, respectively from the prior year budgets. These increases are primarily due to the following factors:

- Salaries and benefits reflect negotiated increases and additional increases due to Engineering Services' new organizational structure which includes additional management positions from the prior budget cycle, support to WSO in the form of additional field engineers, and the need for staff training budgets.
- Professional services reflects specialized technical support for the new project controls and reporting system (PCRS).
- Materials and supplies reflect an increase in software maintenance fees.
- Taxes and permits reflect an increase in the annual dam safety fees paid to the state Division of Safety of Dams (DSOD).

The following are the significant changes by budget year:

### FY 2020/21

#### Personnel–Related Issues

Total personnel levels remain flat at 355 individuals which is consistent with the previous fiscal year. However, the O&M and capital staffing complement differs from the FY 2019/20 budget. This change is primarily due to increased support for Engineering Services' new organizational structure, plant and field engineers' support to WSO, and additional training budgets for staff, thereby resulting in a shift of staff from capital work to O&M in FY 2020/21.

Planned capital spending for FY 2020/21 will remain steady with a district-wide capital budget estimated to be approximately \$250 million (see details in CIP Appendix). Planned spending reflects project budgets and schedules to meet Metropolitan's overall biennial budgetary goals. High priority projects that will continue during the fiscal year include the Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation Program; the Colorado River Aqueduct (CRA) Reliability Program; the Distribution System Reliability Program; and the Right of Way and Infrastructure Protection Program.

#### Salaries & Benefits

Salaries and benefits reflect negotiated labor increases and merit increases for qualified employees.

#### Professional Services

The budget primarily reflects an increase for specialized technical expertise to support the PCRS.

#### Materials and Supplies

The budget reflects an increase in software maintenance costs (e.g., PCRS, ProjectWise).

#### Taxes & Permits

The budget reflects an increase in annual dam safety fees paid to the state DSOD.

#### Other

Other non-labor budget reflects a decrease in rents and leases of copier machines which will now be centralized and funded under the Administrative Services Section of the Office of the Chief Administrative Officer.



## FY 2021/22

### Personnel–related issues

Total personnel count remains flat at 355 individuals from FY 2020/21.

Planned capital spending for FY 2021/22 will remain steady with a district-wide capital budget estimated to be approximately \$250 million (see details in CIP Appendix).

### Salaries & Benefits

Salaries and benefits reflect negotiated labor increases and merit increases for qualified employees.

### Professional Services

The budget reflects a decrease in level of support for energy sustainability.

### Materials and Supplies

The budget reflects an increase in software maintenance fees (e.g., PCRS, ProjectWise).

### Taxes & Permits

The budget reflects anticipated increases in annual dam safety fees paid to the state DSOD.

### Operating Equipment – FY 2020/21 and FY 2021/22

The operating equipment budget reflects an increase in FY 2020/21 from the prior budget year primarily due to the replacement of aging vehicles, 3D survey scanner, and other survey equipment. In FY 2021/22, the budget reflects ongoing replacement of vehicles and survey equipment.

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# OFFICE OF CHIEF ADMINISTRATIVE OFFICER

The Office of the Chief Administrative Officer (CAO) provides outstanding value to its customers for a wide range of administrative, environmental planning and security management services

## PROGRAMS

Office of the Chief Administrative Officer accomplishes its mission through the following programs or sections:

**Administrative Services** provides a range of critical services including contracting, inventory management, warehousing, reprographics, technical writing, records management, EForms management, Enterprise Content Management, and administration of Metropolitan's Rideshare Program.

**Environmental Planning (EPS)** provides expertise for environmentally responsible decision-making and compliance with environmental laws and regulations. EPS ensures Metropolitan activities comply with the California Environmental

Quality Act (CEQA); obtains permits or approvals from federal and state environmental regulatory agencies for Metropolitan activities; and participates in management of Metropolitan reserves and coordination with other non-Metropolitan reserve planning efforts.

**Security Management** provides cost-effective and innovative protection of Metropolitan's employees, patrons, infrastructure and equipment.

**Board Support** provides administrative support to the Board and the Office of the Chair; coordinates Metropolitan's board document management system; and coordinates travel for the Board.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/2022, the Office of the Chief Administrative Officer will focus on the following key issues:

### Support Proposed Delta Improvements

Provide environmental and technical services to support long-term Delta solutions to improve water supply reliability and water quality, and protect and enhance Delta ecosystem and associated species.

Provide technical and regulatory support for Metropolitan's Delta Island holdings.

### Support Development of Water Supplies and Management of Water Reserves

Provide planning, California Environmental Quality Act/National Environmental Policy Act (CEQA/NEPA), and regulatory support for development of new water supplies, including continued planning support for the proposed Regional Recycled Water Program (RRWP).

Prepare CEQA/NEPA and environmental permitting documentation for supplemental water supplies and water conservation measures, including support of Local Resources Programs with member agencies.

Provide strategic environmental compliance input and services to obtain supplemental supplies of water through transfers, banking and innovative crop and land management practices.

### Climate Action Planning

Complete preparation of Climate Action Plan (CAP) and associated CEQA documentation to mitigate the significant effects of greenhouse gas (GHG) emissions from Metropolitan projects. Develop and implement GHG monitoring and reporting tools and establish a monitoring schedule. Continue collaboration with internal Metropolitan groups to implement GHG reduction strategies and verify reductions realized. Provide annual Board updates on progress towards meeting CAP goals. Continue to identify and evaluate new GHG reduction strategies for future updates to ensure Metropolitan is meeting its GHG reduction goal.

### Regulatory Compliance

Provide timely and professional planning services and CEQA and regulatory support for all capital and O&M projects in an environmentally responsible manner.

Prepare reclamation plans and associated CEQA documentation, coordinate annual inspections, and prepare annual reports for Metropolitan's operations in compliance with the provisions of the Surface Mining and Reclamation Act (SMARA).

Provide increased monitoring support for Desert O&M activities in response to increased regulatory oversight, additional O&M workload to support aging infrastructure, urgent repairs, and longer species monitoring periods resulting from changing climatic conditions.

Support continued restoration and monitoring of populations and habitat of the unarmored threespine stickleback fish in compliance with Metropolitan-sponsored legislation (AB 2488) and long-term Endangered Species Act permits for the inspection and maintenance of the Foothill Feeder.

Provide federal and state legislative review and identify bills and regulations that should be supported or opposed based on Metropolitan's legislative priorities and policy principles.

### Reserve Management

Manage Metropolitan's four large-scale multi-species reserves and participate in several other regional conservation and multi-species reserve programs. Management of these reserves is required to satisfy regulatory requirements for the continued delivery of imported water and the construction and operation of major O&M and capital projects.

Serve as Metropolitan's representative on the Southwestern Riverside County Multi-Species Reserve Management Committee, administer a reserve management agreement with Riverside County Parks (Parks), and actively manage reserve lands to ensure compliance with state and federal permits and multi-agency cooperative management agreements, including the Memorandum of Intent

between Metropolitan, Parks, and other members of the Diamond Valley Lake Ad Hoc Committee.

Facilitate collaboration among Metropolitan, Parks, and the Southwestern Riverside County Multi-Species Reserve Management Committee towards implementation of the Trails Plan and construction of multi-use connecting trails between Diamond Valley Lake and Lake Skinner and between the Reserve and the County's Regional Trail System.

Serve as Metropolitan's representative on the Reserve Management Committee for the Lake Mathews Multiple Species Reserve, administer a reserve management agreement with Riverside County Habitat Conservation Agency, and actively manage Lake Mathews reserve lands to ensure compliance with state and federal permits.

Represent Metropolitan on the Lower Colorado River Multi-Species Conservation Program and the Orange County Natural Communities Coalition as voting members of the respective governance committees.

Work collaboratively with Real Property, Engineering Services, and reserve management to facilitate field coordination among stakeholders on issues within the reserves and surrounding areas.

### Innovative Solutions

Increase efficiency in procurement practices by streamlining acquisition processes. Enhance customer experience and satisfaction by upgrading warehouse ordering platform and expanding online training modules to further the customer's knowledge in key areas such as requisition processing and agreement administration.

Review administrative functions to promote higher levels of productivity, standardization, and to improve efficiency in key areas such as grant management and document management.

Continue implementation of the Information Governance / Enterprise Content Management (ECM) solution to improve existing storage, access, retrieval and control of physical and electronic records in line with fiscal, legal, and regulatory requirements.

Utilize Metropolitan's EForm Management program to improve business processes, increase

productivity and enhance overall user experience by incorporating mobile technology and adopting innovative and efficient business practices.

Continue to enhance board document management through modernized technology and continued training of District staff on policies and procedures of Board matters.

### Sustainability Efforts

Continue the quarterly 'Our Legacy' E-Newsletter series to raise employee awareness on sustainability issues and encourage positive eco-friendly "green" behavior.

Continue efforts to grow and ensure Metropolitan's Rideshare Program remains beneficial for employees and compliant with South Coast Air Quality Management District's regulatory requirements.

Explore opportunities to expand the Electric Vehicle Charging program.

### Succession Planning and Employee Development

Continue to implement an organization-wide cross-training program to promote organizational adaptability, institutional knowledge, experience, and expertise.

Continue mentoring of entry-level staff and continue the utilization of Metropolitan's student internship program to provide college students hands on work experience while giving Metropolitan access to future candidates.

### Security Management

Implement a Security Strategic plan that is aligned with District goals and objectives and provides for an incremental and phased approach for obtaining resources, including staff, equipment and technology.

Publish specifications for security infrastructure, based on regulatory requirements and industry best practices.

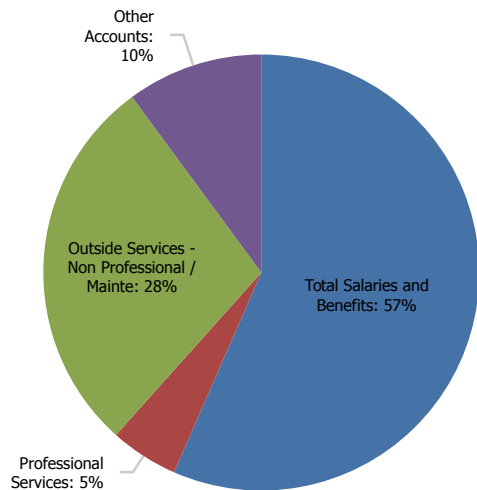
Formalize conceptual approval on capital project plans and specifications to ensure security opportunities and considerations are incorporated.

## O&M FINANCIAL SUMMARY

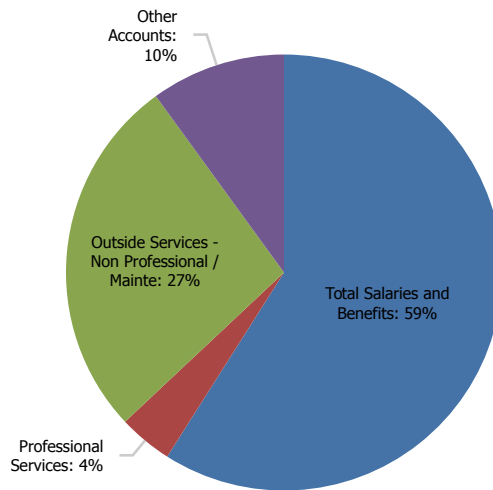
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	19,169,300	21,560,500	23,485,200	1,924,700	24,686,900	1,201,700
Direct Charges to Capital	(1,396,200)	(1,863,100)	(2,020,600)	(157,500)	(2,013,500)	7,100
<b>Total Salaries and Benefits</b>	<b>17,773,100</b>	<b>19,697,400</b>	<b>21,464,600</b>	<b>1,767,200</b>	<b>22,673,400</b>	<b>1,208,800</b>
% Change		10.8%		9.0%		5.6%
Professional Services	1,374,900	923,900	1,924,000	1,000,100	1,574,000	(350,000)
Outside Services - Non Professional / Mainte	8,706,600	10,233,600	10,791,500	557,900	10,515,500	(276,000)
Rent & Leases	426,400	660,600	1,111,600	451,000	1,118,500	6,900
Subsidies & Incentives	693,600	1,029,800	841,900	(187,900)	843,600	1,700
Other Accounts	2,181,000	1,736,600	1,923,400	186,800	1,928,500	5,100
<b>Total O&amp;M</b>	<b>31,155,600</b>	<b>34,281,900</b>	<b>38,057,000</b>	<b>3,775,100</b>	<b>38,653,500</b>	<b>596,500</b>
% Change		10.0%		11.0%		1.6%
Operating Equipment	246,700	—	124,900	124,900	34,600	(90,300)
<b>Total O&amp;M and Operating Equipment</b>	<b>31,402,300</b>	<b>34,281,900</b>	<b>38,181,900</b>	<b>3,900,000</b>	<b>38,688,100</b>	<b>506,200</b>
% Change		9.2%		11.4%		1.3%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE

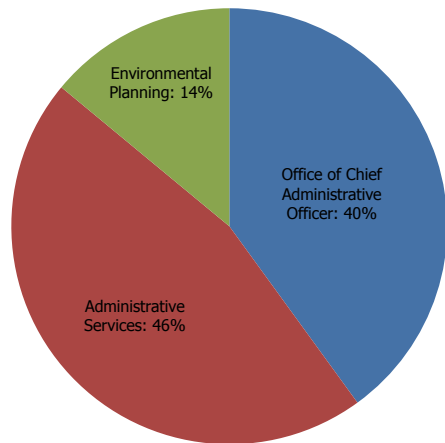


FY 2021/22 BUDGET BY EXPENDITURE

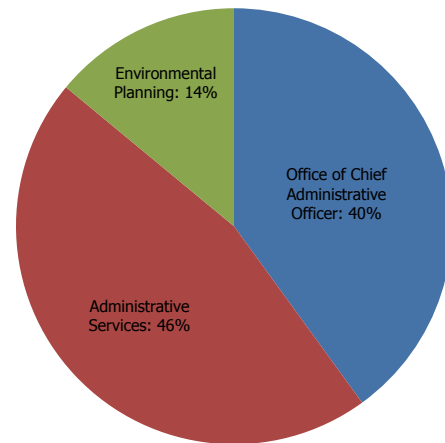


## O&M BUDGET BY SECTION

FY 2020/21 BUDGET BY SECTION



FY 2021/22 BUDGET BY SECTION



	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21	Personnel Budget		
						19/20	20/21	21/22
Office of Chief Administrative Officer	12,915,300	15,074,200	2,158,900	15,312,500	238,400	14	16	16
Administrative Services	16,497,500	17,639,400	1,142,000	17,917,400	277,900	77	78	77
Environmental Planning	4,869,100	5,343,400	474,300	5,423,600	80,200	18	14	14
<b>Total O&amp;M</b>	<b>34,281,900</b>	<b>38,057,000</b>	<b>3,775,100</b>	<b>38,653,500</b>	<b>596,500</b>	<b>108</b>	<b>108</b>	<b>107</b>

Totals may not foot due to rounding.

## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	<b>98</b>	<b>113</b>	<b>114</b>	<b>1</b>	<b>114</b>	<b>—</b>
	O&M	92	108	106	(2)	106	—
	Capital	5	5	8	3	8	—
<b>Temporary</b>	<b>Total</b>	<b>2</b>	<b>—</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>(2)</b>
	O&M	1	—	2	2	1	(2)
	Capital	1	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>99</b>	<b>113</b>	<b>116</b>	<b>3</b>	<b>115</b>	<b>(2)</b>
	O&M	93	108	108	—	107	(2)
	Capital	6	5	8	3	8	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

The Office of the CAO's O&M and Operating Equipment Biennial Budget is \$38.2 million in FY 2020/21 and \$38.7 million in FY 2021/22 or an increase of 11.4% and an increase of 1.3% respectively from the prior budget years. The changes are due primarily to the following factors:

- The development and implementation of Metropolitan's Security Strategic Management Plan requires additional labor and non-labor resources in order to meet vulnerability assessment recommendations.
- Costs are increasing for more stringent and specialized environmental regulatory oversight services for O&M projects throughout Metropolitan's service area.
- A consultant study to determine user needs and establish technical and performance requirements for a new contracts management system.

The following are the significant changes by budget year:

### FY 2020/21

#### Personnel-Related issues

Total personnel count increased by 1 regular full time position and 3 district temporary positions from the FY 2019/20 budget. The increase in labor is necessary in order to provide for additional security management services and temporary labor to support the backfile-conversion of the Enterprise Content Management project.

The budget also reflects an increase in capital labor necessary for environmental planning and permitting.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

#### Professional Services

The budget reflects an increased need for specialized technical expertise related to environmental planning for the Surface Mining and Reclamation Act, Climate Action Planning, Desert/CRA environmental monitoring, and the restoration and monitoring associated with the Foothill Feeder shutdown. The budget also includes funding to determine the technical requirements necessary for a new contracts management system.

#### Non-Professional Services

The budget increase from FY 2019/20 is associated with increased security staffing and coverage, as well as an increase in certified security services.

#### Rents and Leases

The budget increase reflects centralization of costs associated with District-wide reprographics copiers to the Administrative Services Section. Commensurate cost reductions have taken place across Metropolitan to account for this centralization.

#### Subsidies and Incentives

The budget decrease from FY 2019/20 reflects the current employee usage rate for Metropolitan's Rideshare program.

#### Other

The budget increase reflects the need for additional environmental permitting for California Department of Fish and Wildlife, as well as travel and conferences for the Board.



## FY 2021/22

### Personnel-Related issues

Total personnel count decreased by two district temporary positions from the FY 2021/22 budget, reflecting completion of the backfile-conversion of the Enterprise Content Management project.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

### Professional Services

The budget decrease is due to completion of the study for the replacement of a contract management system and reduced environmental monitoring during the Foothill Feeder Dewatering/Shutdown project related to the Unarmored Threespine Stickleback fish.

### Non-Professional Services

The budget decrease is due to the completion of one-time costs associated with the rebid and transition of Metropolitan's storage contract in the prior period.

### Operating Equipment - FY 2020/21 and FY 2021/22

The operating equipment budget reflects the need for the replacement of a forklift in Metropolitan's warehouse. Additionally, an increase in service demand necessitates the purchase of specialized reprographics equipment.

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## INFORMATION TECHNOLOGY

Information Technology provides innovation and outstanding value to its customers for a wide range of technical services and enterprise business solutions.

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### PROGRAMS

Information Technology provides innovation and value to its customers for a wide range of technical services and enterprise business solutions. The group collaboratively works with customers to deliver information technology options, services, and solutions in the areas of enterprise and business applications, Engineering Services and Water System Operations applications, data analytics, mobile/wireless computing, telecommunications, network services, cybersecurity, project management and personal computing.

**Office of Group Manager** oversees the management of the Information Technology (IT) group by providing strategic leadership on initiatives and capital investments to improve operational efficiencies, enhance reliability & cybersecurity capabilities, and deliver innovative options and solutions.

**Cybersecurity** focuses on security standards and policies to enhance Metropolitan's cybersecurity posture and to ensure protection against evolving and increasing cyber threats.

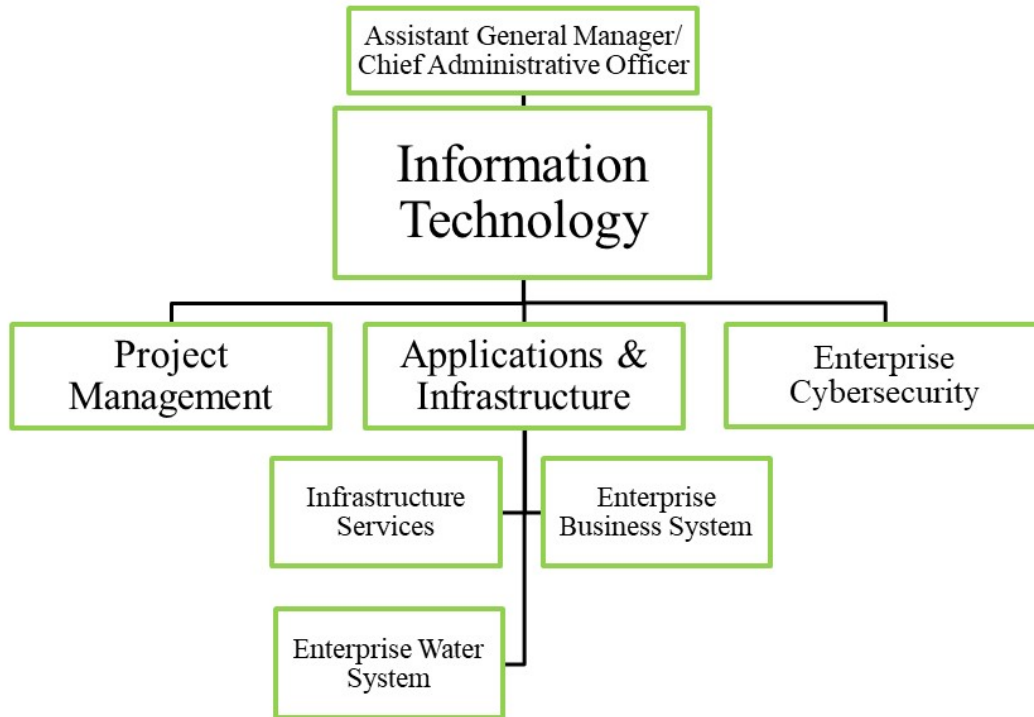
**Project Management Office** is responsible for the overall governance and project management of the IT program and project portfolio.

**Office of IT Section Manager** manages and supports IT business and service areas related to IT infrastructure, enterprise business and water systems.

**IT Infrastructure** monitors, manages, and maintains Metropolitan's enterprise-wide infrastructure services related to telecommunications, networks, servers, data center operations, and related client services.

**Enterprise Business Systems** develops and supports enterprise and business software applications and business intelligence systems.

**Enterprise Water Systems** provides services, solutions, and systems that support business functions in Engineering Services and Water Systems Operations.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, IT will focus on the following key areas in support of the General Manager’s strategic priorities:

- Cloud First Technology
- Data Center Modernization
- Cybersecurity Operations Center
- IT Capital Investment Plan
  - SCADA Control System
  - Replace end-of-life systems
  - IT Infrastructure Upgrades

### Business Technology & Process Enhancement

Beginning with FY 2018/19, the IT group began establishing the foundation to support Metropolitan’s move toward the cloud. The implementation of cloud solutions will enhance productivity, streamline business processes, and mitigate costs for the organization.

During the FY 2020/21 and FY 2021/22 biennium, IT will continue to implement projects in support of Metropolitan’s strategic initiatives, including continued migration to mobile technology and strengthening Metropolitan’s cybersecurity

capabilities by deploying new and emerging technologies and implementing enhanced security countermeasures. In addition, the planned technology upgrades will provide greater visibility and consolidation of IT costs and performance.

### Information Systems Upgrades and Projects

IT continues to improve partnerships with other business areas to enhance the capabilities of systems that achieve Metropolitan’s operational goals and objectives. The following key projects include IT deliverables that add value to the group’s business customers:

#### Office of the COO

The Water Systems Control Master Plan provided a road map to fully coordinate and further protect the operational and business investments of Metropolitan’s SCADA systems. The master plan defined a multi-phased approach for replacing/upgrading the control system critical to Metropolitan’s operations, water delivery, water quality, and infrastructure monitoring. The first

phase of this project has been initiated and the RFQ was published to select viable technology platforms.

Continue to upgrade the control and electrical protection systems at the Wadsworth Pumping Plant to ensure continued reliability of the facility.

AMR System RTUs and Radio Modem Upgrade - Project phases include the upgrade of the Automatic Meter Reader (AMR) system, implementation of radio modems, and replacement of the Remote Terminal Units (RTUs) in support of updating obsolete equipment.

Flow Scheduler Project includes the development of a software tool that will streamline member agency flow change requests and enhance the process of Metropolitan operators logging flow demand data.

Maximo Mobile Computing Upgrade aims to replace existing mobile devices, used in Water Systems Operations, with mobile technology. This effort will enhance access to business information and vastly increase the functionality of the existing equipment.

As part of the infrastructure reliability objective, the Asset Monitoring and Management System project seeks to develop a common framework to manage condition monitoring across Metropolitan's operations.

The Laboratory Instrumentation Data Interface Project will upgrade end-of-life equipment at Metropolitan's Water Quality Laboratory at Weymouth Treatment Plant. This effort will also facilitate integrated data acquisition and automation to streamline operations within the laboratory framework.

Fuel Management System Upgrade seeks to upgrade the system that enables management controls over fuel inventories, dispensing, and security to ensure operability, vendor support, and system reliability at Metropolitan facilities as a continuation of the refurbishment initiative.

### **Office of the CAO**

As part of the Data Center Modernization Project, the scope includes assessment, design, and planning for the modernization and upgrade of

Metropolitan's data center(s) to meet current and future needs while enhancing our resiliency and redundancy capabilities.

The Cybersecurity Project will assess and remediate potential vulnerabilities and evolving cyber threats with an emphasis on implementing a security operations center (SOC) at Metropolitan.

Board Room Technology Upgrade - This project will upgrade audio, video and information technology-related equipment in the main board room and all committee rooms at Metropolitan's headquarters building.

Continue to partner with Administrative Services on the Enterprise Content Management (ECM) project for the implementation of an ECM application and for the optimization of digital assets on Metropolitan's network storage devices. Once fully implemented, the ECM system will provide a framework for collaboration, automation, and enhancements of core business processes.

Continue deployment of upgrades to improve the reliability, performance, and capacity of Metropolitan's wireless network infrastructure comprising microwave radio wide-area networks (WANs) and wireless access point local-area networks (LANs).

### **Office of the CFO**

The Budget System Replacement Project will replace Metropolitan's budgeting system to support the development of capital and O&M budgets and Board deliverables. The current budget system has reached end-of-life and cannot be upgraded.

The Water Information Systems (WINS) upgrade will include much needed enhancement features to Metropolitan's water billing system to allow for automation and increased mobile functionality.

The Data Warehouse Project will develop data marts modeling for business areas providing integrated reporting through Extraction/Transformation/Loading (ETL) procedures and common dimensions. The Enterprise Data Warehouse will contain both business and operational data and will be designed to combine these various data types to meet operational needs and support decision making.

The Payroll/Timekeeping project seeks to upgrade and enhance PeopleSoft payroll and replace the current timekeeping software with a package that integrates with the payroll system and provides for ease-of-use interface for customers.

### **External Affairs, Legal, and Risk Management**

Metropolitan's public-facing website, mwdh2o.com, is being redesigned to stay current with the latest technology, mobile compatibility, and greater functionality and features.

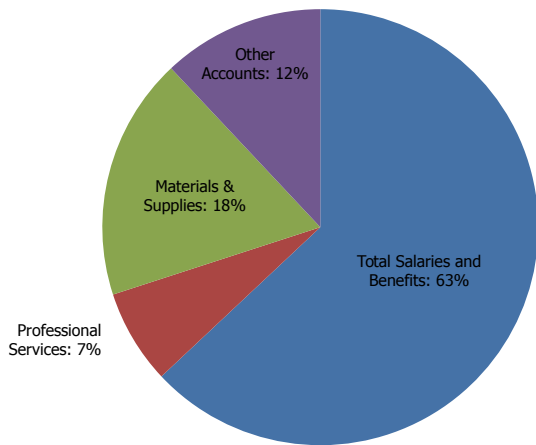
The Incident Reporting System Project will upgrade the current end-of-life incident tracking and reporting tool used for compliance tracking by Risk Management, Workers Compensation, Safety and Regulatory Services, and WSO.

## O&M FINANCIAL SUMMARY

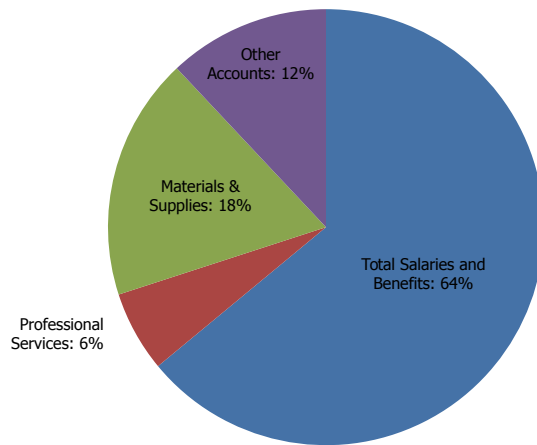
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	28,587,300	30,801,300	31,686,900	885,600	33,340,600	1,653,700
Direct Charges to Capital	(1,871,300)	(1,392,100)	(1,465,500)	(73,400)	(1,491,000)	(25,500)
<b>Total Salaries and Benefits</b>	<b>26,716,000</b>	<b>29,409,200</b>	<b>30,221,400</b>	<b>812,200</b>	<b>31,849,600</b>	<b>1,628,200</b>
% Change		10.1%		2.8%		5.4%
Professional Services	527,200	1,849,000	3,212,800	1,363,800	2,864,100	(348,700)
Communication Expenses	1,807,800	1,609,500	1,932,900	323,400	2,060,400	127,500
Equipment Expensed	184,000	2,306,600	1,302,500	(1,004,100)	495,000	(807,500)
Materials & Supplies	5,836,000	6,423,700	8,395,200	1,971,500	9,117,200	722,000
Outside Services - Non Professional / Mainte	93,800	202,800	734,100	531,300	1,080,300	346,200
Repairs & Maintenance - Outside Services	833,000	1,442,500	1,343,300	(99,200)	1,643,700	300,400
Other Accounts	272,300	418,300	511,300	93,000	529,800	18,500
<b>Total O&amp;M</b>	<b>36,270,100</b>	<b>43,661,600</b>	<b>47,653,500</b>	<b>3,991,900</b>	<b>49,640,100</b>	<b>1,986,600</b>
% Change		20.4%		9.1%		4.2%
Operating Equipment	751,000	748,400	935,500	187,100	528,100	(407,400)
<b>Total O&amp;M and Operating Equipment</b>	<b>37,021,100</b>	<b>44,410,000</b>	<b>48,589,000</b>	<b>4,179,000</b>	<b>50,168,200</b>	<b>1,579,200</b>
% Change		20.0%		9.4%		3.3%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE



FY 2021/22 BUDGET BY EXPENDITURE



## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	<b>120</b>	<b>134</b>	<b>130</b>	<b>(4)</b>	<b>130</b>	<b>—</b>
	O&M	113	127	123	(4)	123	—
	Capital	7	7	7	—	7	—
<b>Temporary</b>	<b>Total</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>—</b>	<b>2</b>	<b>—</b>
	O&M	4	—	2	2	2	—
	Capital	1	2	—	(2)	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>125</b>	<b>136</b>	<b>132</b>	<b>(4)</b>	<b>132</b>	<b>—</b>
	O&M	117	127	125	(2)	125	—
	Capital	7	9	7	(2)	7	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

The Information Technology O&M biennial budget supports the need for Metropolitan to remain resilient, sustainable and innovative. This budget includes critical end-of-life upgrades of PCs, software upgrades, risk mitigation (cybersecurity), infrastructure replacement and refurbishment (data center relocation and modernization), transition to cloud-based computing and innovative technologies to support business process improvements.

Information Technology's biennial O&M and Operating Equipment budget is \$48.6 million in FY 2020/21 and \$50.2 million in FY 2021/22 or an increase of 9.4% and an increase of 3.3% respectively from the prior budget years. The changes are due primarily to the following key factors:

- Salaries and Benefits reflect negotiated labor increases and the reduction of four positions in FY 2020/21.
- The PC Replacement Project will continue with the phased approach at replacing aging PCs and related equipment in FY 2020/21. The equipment expense category will reduce from \$1.3 million to \$0.49 million in FY 2021/22 as IT transitions to an "on-going" refresh of PCs beginning in FY 2021/22.
- As part of the Headquarters Improvement Program, IT will be responsible for coordinating the move of IT equipment (e.g., PCs, telephones, and networking) during the temporary relocation of staff.
- New services within this biennial budget include costs associated with datacenter modernization to mitigate risk to Metropolitan while providing greater redundancy and resiliency capabilities.
- As part of the Cloud First strategy, this biennial budget includes new cloud services and consulting to facilitate the transforming of IT services to the cloud environment.

The following are significant changes by budget year:



## FY 2020/21

### Personnel–Related matters

Total personnel count decreased from 134 to 130 FTEs for the FY 2020/21 budget, reflecting the reduction of four positions.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

### Professional Services

The budget reflects IT support for the PC replacement project, HQ relocation, on-call services for application enhancements, transition to cloud-based computing and other strategic IT priorities.

### Communication Expenses

The budget reflects increases in communication expenses including co-location (for redundancy and resiliency), cloud-based connections (Oracle FastConnect & Microsoft Azure ExpressRoute), new circuits for field locations and increased capacity (bandwidth) to support Metropolitan's operational needs.

### Equipment Expensed

The budget decrease from FY 2019/20 reflects the decrease in planned procurement of PC hardware for the PC Replacement Project.

### Materials and Supplies

The budget reflects increased levels of software licensing/support agreements as a result of three primary areas:

- Cloud computing
- Critical cybersecurity enhancements
- New Capex to Opex for software purchases, subscriptions and maintenance

## Telecommunication

The budget reflects increases in telecommunication expenses including co-location (for redundancy and resiliency), cloud-based connections (Oracle FastConnect & Microsoft Azure ExpressRoute), new circuits for field locations and increased capacity (bandwidth) to support Metropolitan operational needs.

### Repairs and Maintenance

No significant change in repairs and maintenance for FY 2020/21.

### Equipment Expensed

Equipment expenses include procurement of PC hardware for the PC replacement project.

## FY 2021/22

### Personnel–Related issues

Total regular personnel for O&M remained at 130 FTEs reflecting the reduction of four Business Analyst positions in prior FY2020/21. Salaries and Benefits reflect negotiated labor increases.

### Professional Services

No significant budget change in professional services for FY 2021/22. Key budgetary within this category include reduction in professional services as the PC Replacement Project reaches substantial completion, which is off-set by increases in remote data-center cost (primary & secondary).

### Communication Expenses

The budget increase in communication expenses includes inflationary factors and new circuits to support Metropolitan operational needs.

### Equipment Expensed

The budget reduction in equipment expensed is primarily attributed to completion of the PC Replacement project.

### Materials and Supplies

The budget reflects inflationary increases for software licensing/support agreements, continued transformation to cloud computing and new capex to opex expenses associated with deployment of capital projects.

### Non-Professional Services

The budget increase includes planned expenses for primary and secondary datacenters as part of Metropolitan's datacenter modernization initiative.

### Repairs and Maintenance

Increases to the budget for repairs and maintenance are attributed to hardware equipment (servers) coming off warranty and going on extended support agreements.

### Operating Equipment - FY 2020/21 and FY 2021/22

The operating equipment budget reflects the critical replacement of IT equipment that has reached end-of-life, including network equipment, audio/video systems for conference rooms, hardware (servers and storage devices) and replacement of service vehicles used to maintain IT systems located throughout Metropolitan's service area.

The operating equipment budget increase in FY 2020/21 is primarily attributed to the replacement of end-of-life networking equipment that is critical to Metropolitan's wide-area-network communication that services the entire Los Angeles basin area.

The operating equipment budget decrease in FY 2021/22 is a result of fewer IT equipment replacements.

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## HUMAN RESOURCES

Human Resources (HR) strategically, and cost effectively, recruits, retains, motivates, rewards, and develops Metropolitan's employees.

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### PROGRAMS

The focus of Human Resources is to work closely with management to foster effective management; prepare to meet future workforce challenges; partner with customers on solutions; and provide excellent HR services that ensure compliance to numerous HR laws, regulations, and responsibilities.

The Human Resources Group partners with others across the organization to provide custom services and solutions that address current and future gaps in skills, knowledge, and abilities.

HR services include employee and labor relations, recruitment and selection, equal employment opportunity (EEO), HR Strategic Partnering, HR Information Systems, benefits, retirement, leave administration, classification and compensation administration, medical screening, workers' compensation, training, organizational development, workforce and career development, and HR business support services.

HR accomplishes its mission through the following programs or sections:

**Office of Human Resource Group Manager** provides strategic leadership and direction for Metropolitan's Human Resources functions. Organizations reporting directly to the Office of the Human Resource Group Manager include Employee Relations and Human Resources Services.

The office also has responsibility for diversity, inclusion, and investigating internal complaints of unlawful discrimination. EEO investigations entail staff meeting with complainants, interviewing witnesses, and issuing findings as to whether allegations of unlawful discrimination can be substantiated. This work is critical in

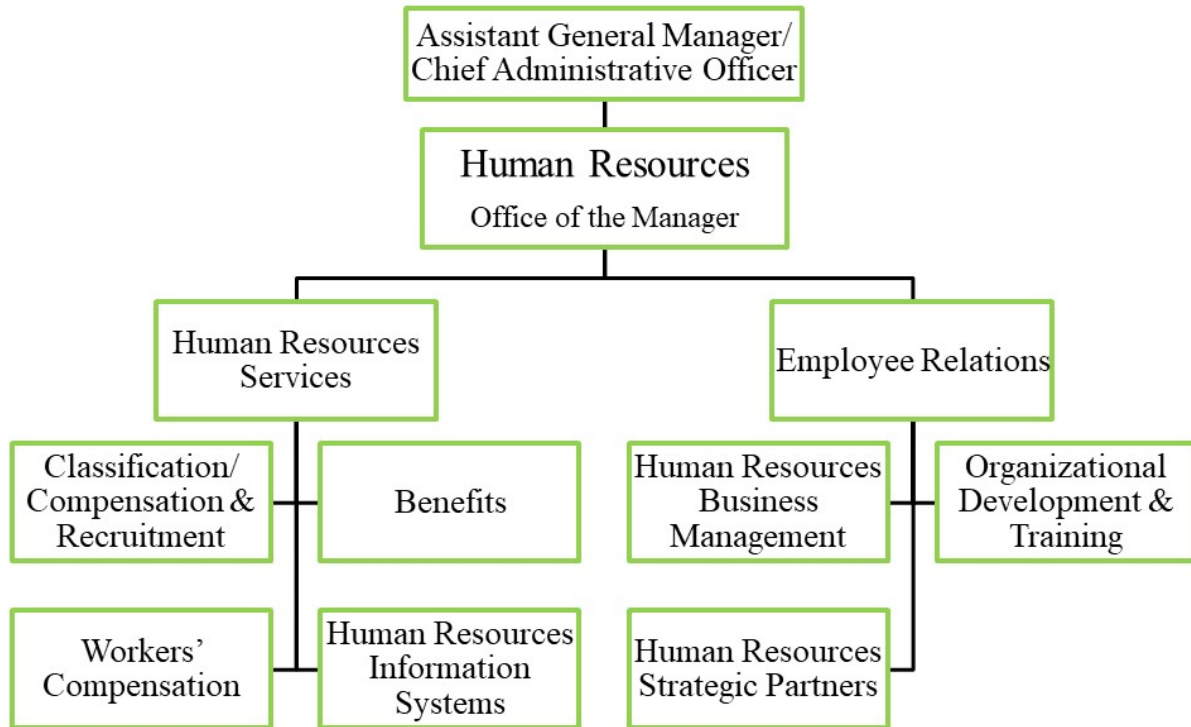
ensuring that Metropolitan maintains a workplace free of discrimination and harassment. Diversity and inclusion includes partnering with Employee Resource Groups and external affinity groups to outreach to future applicants.

**Employee Relations** is responsible for fostering harmonious labor relations between Metropolitan and its four certified bargaining units, and plays a key role in contract negotiations. The staff also serves as a resource to managers and supervisors on such matters as grievances, disciplinary actions, and workplace conflicts. The section also provides ongoing training to managers on all facets of employer-employee relations.

HR has designated HR Strategic Partners to serve as single points of contact for managers, providing HR support in several areas, including Employee Relations, recruitment, training, succession planning, and strategic development.

**Human Resources Services** is responsible for the strategic design and implementation of Metropolitan's compensation, benefits, recruitment. The section leads and participates in continuous process improvement and cost optimization studies for all plans. Responsibilities include job analysis, market assessments, recruitment, active employee and retiree benefit program administration, partnering with management on new initiatives, compliance, Workers Compensation, medical screening and implementing new programs and agreements.

Finally, staff under Human Resources Information Systems administer Metropolitan's MyHR system, and serve as a critical liaison between HR and the Information Technology Group.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, HR will focus on the following key issues that support the General Manager's objective of Employee Development and additional HR priorities:

### Ensure Effective People Management

Strong people management skills are essential to meeting Metropolitan's future challenges and successes. HR will ensure that the role of management is defined and that current managers have the tools and training needed to provide effective management.

A formal, multi-tiered Management and Leadership Development program will help managers better understand their roles and responsibilities as they progress through management.

Learning opportunities will be provided to employees to prepare for future management positions from the entry-level manager all the way to the executive level.

Ongoing events, workshops and forums will provide opportunities to deliver consistent expectations and tools for management, including motivating and valuing employee contributions.

### Strengthen Partnerships with HR Customers

Effective people solutions require that HR partners with its customers, including management, unions, employees, retirees and others. HR must understand the customer's business needs and then build working relationships that develop effective solutions to people-related challenges. This working partnership will minimize misdirected efforts, speed decision-making, reduce rework and, ultimately, produce a better workplace at a reduced cost.

Strengthened HR/customer partnerships and communications will identify areas for improvement in HR products, services, support and messaging.

Ensure that Risk Management, Employee Relations, EEO and the Legal Department coordinate to effectively defend against litigation of liability claims and to cost-effectively resolve claims.

## Prepare to Meet Challenges of Future Workforce Changes

On average, about 100 employees per year are retiring and this trend is expected to continue over the next several years. As experienced and knowledgeable employees retire, HR will continue to support and expand upon on-going succession planning efforts underway.

Efforts will include a focus on learning, development, knowledge capture, cross-training opportunities, and building pipelines for future vacancies.

HR will develop new strategies, support existing efforts and ensure Metropolitan remains competitive when compared to other organizations.

HR will support career development activity undertaken by employees to enhance knowledge, skills, and abilities for future work and promotional opportunities, including support of internship and mentoring initiatives.

## Provide Excellent Human Resources Services

HR provides a wide range of services and support from pre-hire to retirement, impacting almost every aspect of the organization. To make the maximum contribution, all HR functions must serve as trusted advisors that speak with one voice, listen well and provide consistent guidance on people-related matters.

HR's recent reorganization is designed to improve customer service, provide stronger support to employees, and is aimed at developing the next generation of leaders through training, Management Academy, and recruitment.

HR will continue to simplify policies, processes, and procedures to reduce the costs of HR administration by utilizing technology, reducing redundancies and implementing new approaches to existing services.

HR will develop standard reports to enhance management access to employee data and assist with decision-making.

HR will administer a full-range of benefit services for health, leave, deferred compensation and retirement programs.

HR will continue to review the recruitment process and procedures to improve quality of hire and time-to-fill.

## Ensure Compliance with Laws and Regulations

HR manages compliance to four MOUs and the Administrative Code, and addresses many sensitive and confidential personnel issues.

HR will continue to monitor a wide array of changing legal and regulatory requirements while adapting HR processes and systems to conform to these changing requirements.

HR will ensure Metropolitan meets Equal Employment Opportunity requirements and numerous Federal, State, and Local laws and regulations and Public Sector codes and rulings.

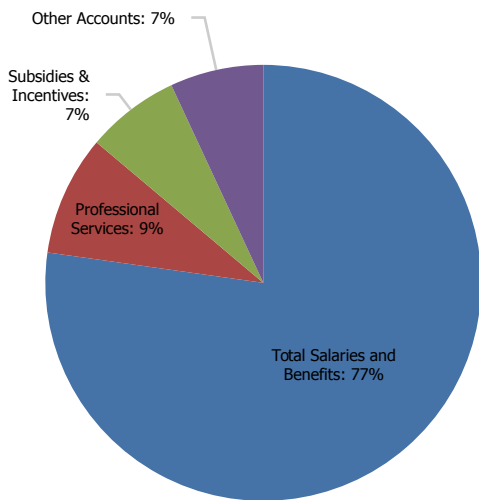
HR will maintain fiduciary responsibilities in the management of financial and retirement programs and comply with the Affordable Care Act and with all privacy and data security requirements.

## O&M FINANCIAL SUMMARY

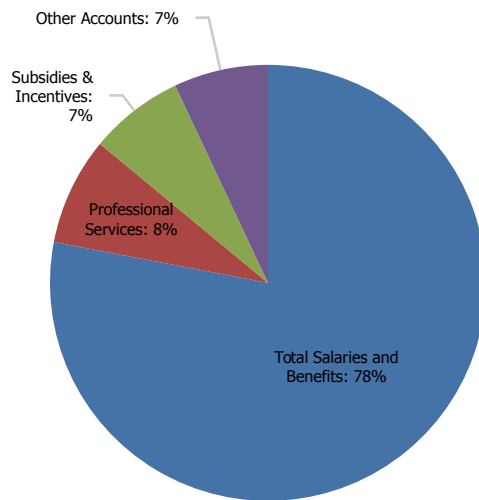
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	9,843,600	9,973,600	11,066,200	1,092,600	11,629,400	563,200
Direct Charges to Capital	(98,100)	—	—	—	—	—
<b>Total Salaries and Benefits</b>	<b>9,745,500</b>	<b>9,973,600</b>	<b>11,066,200</b>	<b>1,092,600</b>	<b>11,629,400</b>	<b>563,200</b>
% Change		2.3%		11.0%		5.1%
Professional Services	1,232,600	1,126,700	1,221,200	94,500	1,242,700	21,500
Advertising	208,000	140,000	225,000	85,000	230,000	5,000
Outside Services - Non Professional / Mainte	200,900	231,500	240,300	8,800	240,300	—
Subsidies & Incentives	912,400	961,500	974,800	13,300	974,800	—
Training & Seminars Costs	208,300	177,700	146,100	(31,600)	146,300	200
Other Accounts	314,500	270,500	403,500	133,000	404,800	1,300
<b>Total O&amp;M</b>	<b>12,822,200</b>	<b>12,881,500</b>	<b>14,277,100</b>	<b>1,395,600</b>	<b>14,868,300</b>	<b>591,200</b>
% Change		0.5%		10.8%		4.1%

Note - Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE

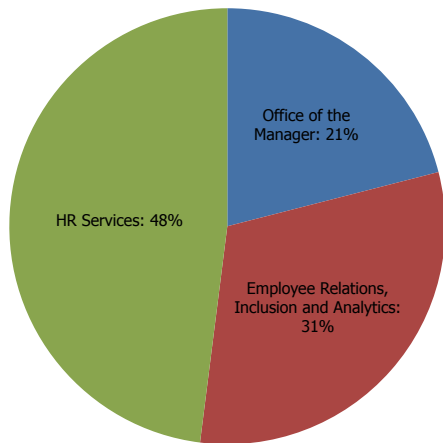


FY 2021/22 BUDGET BY EXPENDITURE

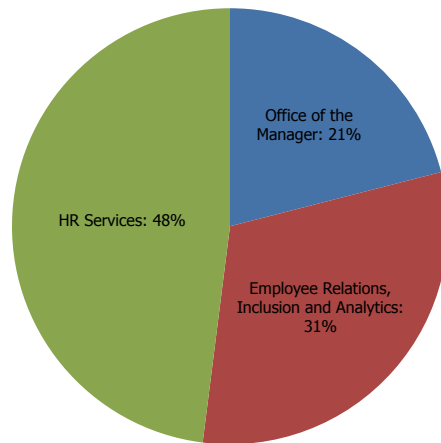


## O&M BUDGET BY SECTION

FY 2020/21 BUDGET BY SECTION



FY 2021/22 BUDGET BY SECTION



	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21	Personnel Budget		
						19/20	20/21	21/22
Office of the Manager	3,488,700	2,967,400	(521,300)	3,121,200	153,800	7	8	8
Employee Relations, Inclusion and Analytics	3,254,700	4,410,800	1,156,100	4,567,600	156,900	11	11	11
HR Services	6,138,100	6,898,900	760,800	7,179,400	280,500	24	28	28
<b>Total O&amp;M</b>	<b>12,881,500</b>	<b>14,277,100</b>	<b>1,395,600</b>	<b>14,868,300</b>	<b>591,200</b>	<b>42</b>	<b>47</b>	<b>47</b>

Totals may not foot due to rounding.

## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
		<b>Regular</b>	<b>Total</b>	39	42	42	—
	O&M	38	42	42	—	42	—
	Capital	1	—	—	—	—	—
<b>Temporary</b>	<b>Total</b>	7	—	5	5	5	—
	O&M	7	—	5	5	5	—
	Capital	—	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>45</b>	<b>42</b>	<b>47</b>	<b>5</b>	<b>47</b>	<b>—</b>
	O&M	45	42	47	5	47	—
	Capital	1	—	—	—	—	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

HR's Biennial Budget is \$14.3 million in FY 2020/21 and \$14.9 million in FY 2021/22 or an increase of 10.8% and an increase of 4.1% respectively from the prior budget years. The changes are due primarily to the following factors:

- Professional services increase in both years due to increased organizational and employee development training and programs, and increased recruitment activities. Additionally, there were increases to Metropolitan's Workers' Compensation third-party contract.
- Rents and Leases increase due to the Union Station Headquarters Improvement Project.

The following are the significant changes by budget year:

### FY 2020/21

#### Personnel–Related issues

Personnel count increased by five District Temporary positions from the FY 2019/20 budget in order to accommodate increased recruitment and classification workload, HRIS administration, as well as succession planning for future vacancies.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

#### Professional Services

The budget reflects increases as a result of bargaining unit negotiations. The budget also reflects increases in Recruitment, Organizational and Employee Training Programs, as well as an increase to the Workers' Compensation agreement.

#### Advertising

The budget reflects an increase as a result of an increase in recruitment activity.

#### Other

The budget reflects a net increase in Software Licensing & Support, Rents & Leases, and Equipment Expensed.

### FY 2021/22

#### Personnel–Related issues

Personnel count remains flat from FY 2020/21.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

#### Professional Services

The budget reflects increases in Recruitment, Organizational and Employee Training Programs, as well as an increase to the Workers' Compensation agreement.



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## REAL PROPERTY

Real Property applies strategic approaches to the acquisition, management and protection of Metropolitan's real property assets, and seeks to effectively optimize revenues and control land management costs.

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### PROGRAMS

The Real Property group accomplishes its mission through the following programs or organizations:

**Office of the Group Manager** includes Business Management, Planning & Acquisition, Property Management, and Asset Management. The Group Manager directs the group's efforts in planning acquiring, and managing Metropolitan's real property assets; is responsible for the development of real property policies and strategies to centralize Metropolitan's land activities to ensure properties are maintained, secured, and protected for present and future needs.

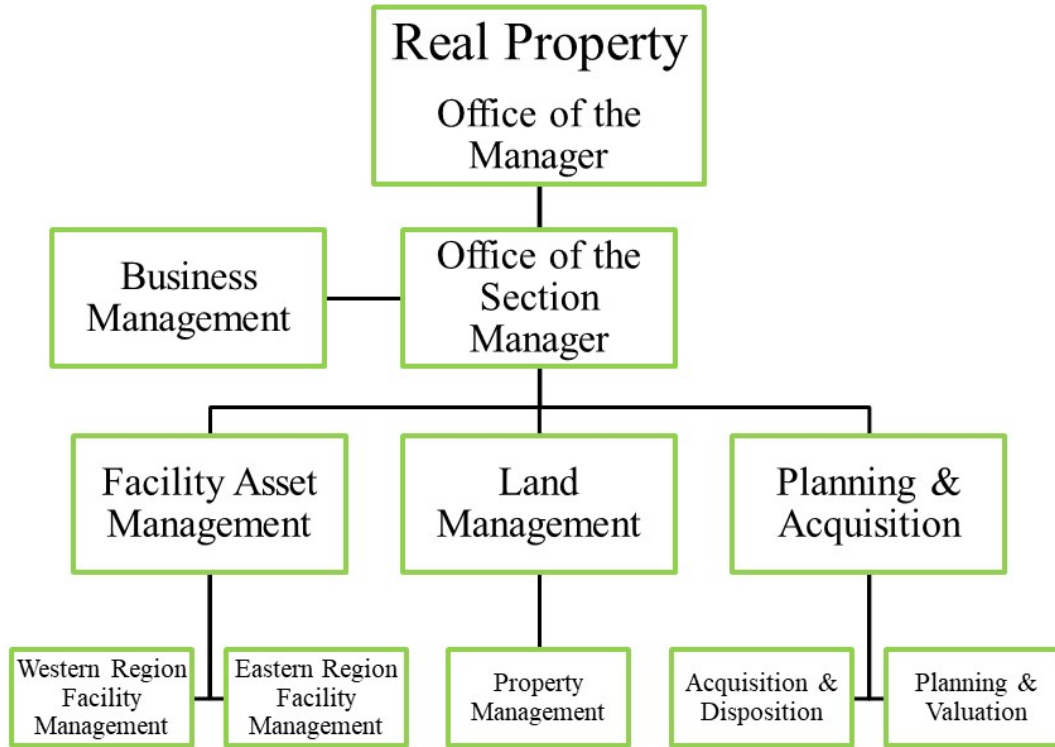
**Business Management** monitors and tracks the group's business plan, financial and budgetary initiatives; and provides administrative and business process support. In addition, the Team handles property tax payments, lease payments, provides contract support, and board letter and report coordination.

**Planning & Acquisition** is responsible for right of way planning and acquisition of real property and

real property rights for future conveyance and distribution programs and existing infrastructure rehabilitation programs. The unit is also responsible for the disposition of surplus properties.

**Property Management** is responsible for managing Metropolitan's real property assets, processing requests for secondary uses of real property and identification of properties that are excess to Metropolitan's needs. In addition, the Unit is responsible for the protection of Metropolitan's real property including site inspections, trespass and encroachment resolution.

**Asset Management** is responsible for management of Metropolitan's headquarters facility, the DVL Visitor Center and provides management and maintenance of employee housing.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, Real Property will focus on the following key issues:

### Centralized Management of Metropolitan's Real Property Assets

Continue with a centralized management approach of Metropolitan's real property assets to ensure properties are regularly maintained, secured and protected for present and future needs.

Continue and complete the managerial reorganization of employee housing to the Real Property Group.

Implement and test a staffing plan, a maintenance/replacement schedule and cost estimates for the property management of approximately 100 desert housing units.

Continue to budget, administer, and provide property and facility management services for the leased office space in Sacramento, Washington DC, and San Diego.

Continue facility management direction and logistical support throughout the Union Station

Headquarters Improvement Project.

### Real Property Asset Protection & Stewardship

Monitor legislation regarding eminent domain, relocation assistance, and public agency real estate acquisition and appraisal practices.

Provide timely and suitable responses to property adjacent projects, land developments, and environmental proceedings.

Complete property management and right-of-way operating policies to reflect contemporary best practices.

Implement a new web-enabled right of way software and property management solution to improve processes to monitor financial compliance with terms and conditions of licensing and leasing agreements such as invoicing, insurance coverage, and accounts receivable.

Develop a staffing and implementation plan to detect and address right-of-way encroachments

upon Metropolitan properties with a collaborative cross-functional approach to prioritize and remediate the highest risk conditions.

Complete annual reviews to identify properties that are excess to Metropolitan's needs, and bring information to the Board for action to declare those properties surplus.

Coordinate a monthly cross-functional Property Review Council to review land-use requests by public and private entities to ensure Metropolitan's rights-of-way, facilities, environmental reserves and water quality are protected.

Complete annual site inspections of conveyed property to identify and correct any conditions in conflict with terms and conditions of the conveyance agreements.

File possessory tax reports and tax payments to appropriate counties on time.

### Bay Delta Properties

Complete and start implementation of a specific comprehensive Land Management Plan to optimize use and best land owner management practices.

Maximize utilization of the 20,000 acres of agricultural lands and revenue-leases purchased in the Delta to offset costs of land ownership.

Ensure Water Reclamation District assessments, local property taxes and coalition fees are paid on time.

Provide support to the Delta conveyance and habitat rehabilitation efforts.

### Palo Verde Valley Properties

Complete and start implementation of a specific comprehensive Land Management Plan to optimize use and best land owner management practices.

Manage Metropolitan's 29,000 acres of agricultural lands and revenue-leases to encourage a vibrant farming economy, water conservation, and to offset costs of land ownership.

Ensure Palo Verde Irrigation District water tolls, local property taxes, and coalition fees are paid by

the farmers and lease-holders on time.

### Diamond Valley Lake Recreation and Management

Identify infrastructure improvements as part of the Diamond Valley Lake Recreation capital appropriation. These projects will enhance recreational opportunities and promote economic self-sustainability.

Explore marina and other recreational opportunities to expand lease revenues, and collaborate with the stakeholders of the DVL Recreation Area Memorandum of Intent.

Identify additional DVL land considered excess to Metropolitan's needs, and bring to the Board for action to declare those properties surplus.

### Right of Way Planning, Acquisition & Disposition

Provide right-of-way planning and acquisition of real property and real property rights, including appraisal and relocation services, for future conveyance and distribution programs and infrastructure rehabilitation programs. These include the Regional Recycled Water Program, Right of Way & Infrastructure Protection Program and the Prestressed Concrete Cylinder Pipeline Rehabilitation Program.

Other projects include the CRA Reversionary Interest that is tied to the 1932 Act, which supports water supply reliability. Lastly, services include disposition of surplus properties.

### Facility & Energy Management

Continue to optimize the cost of maintaining Metropolitan's headquarters building and DVL Visitor's Center while supporting Metropolitan's sustainability initiatives established by the Building Owners and Managers Association and EPA's voluntary ENERGY STAR program.

Execute a multi-year strategic approach to manage critical rehabilitation projects at Metropolitan's Headquarters as the equipment, components, and furnishings reach the end of their useful life cycle.

Complete an architectural plan and begin implementation to paint, carpet, and replace

cubicle/modular furniture on all floors of the Headquarters facility.

Continue to manage employee relocations during the construction phase of the Union Station Headquarters Improvement Project.

Complete a multi-year plan, implemented in the prior budget cycle, to replace asphalt and pavement at DVL recreation areas and roads.

### Workforce Development & Succession Planning

Expand knowledge, skills, and abilities of staff through training, succession planning, and educational workshops.

Engage with local universities and professional societies to promote Metropolitan employment opportunities.

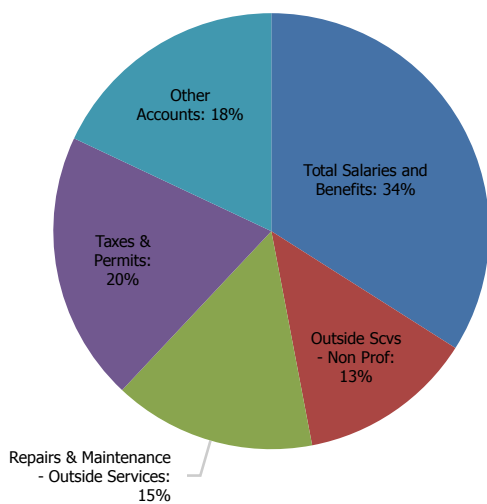
Collaborate with public agencies to identify areas where consistent real property best practices can be applied.

## O&M FINANCIAL SUMMARY

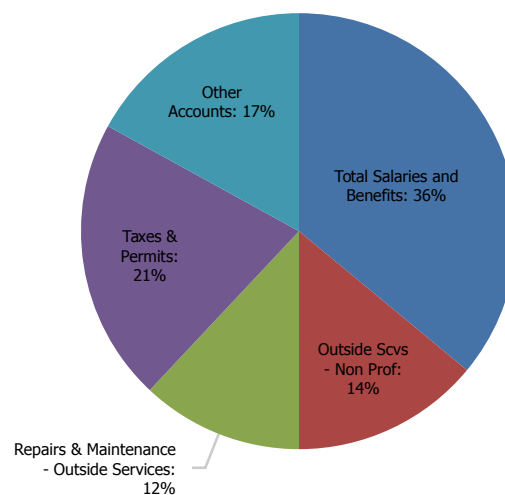
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	8,964,000	10,403,200	12,262,100	1,858,900	12,742,300	480,200
<i>Direct Charges to Capital</i>	<i>(490,300)</i>	<i>(117,900)</i>	<i>(1,813,100)</i>	<i>(1,695,200)</i>	<i>(1,939,000)</i>	<i>(125,900)</i>
<b>Total Salaries and Benefits</b>	<b>8,473,700</b>	<b>10,285,300</b>	<b>10,449,000</b>	<b>163,700</b>	<b>10,803,300</b>	<b>354,300</b>
% Change		21.4%		1.6%		3.4%
Professional Services	509,600	934,600	1,190,600	256,000	1,161,600	(29,000)
Outside Services - Non Professional / Mainte	3,047,900	4,782,100	3,919,100	(863,000)	4,149,200	230,100
Rent & Leases	1,025,100	950,900	1,120,900	170,000	1,138,900	18,000
Repairs & Maintenance - Outside Services	901,000	3,311,200	4,607,500	1,296,300	3,492,000	(1,115,500)
Taxes & Permits	4,984,100	5,796,000	6,175,600	379,600	6,346,700	171,100
Utilities Charges	1,291,500	1,464,800	1,473,500	8,700	1,548,800	75,300
Other Accounts	1,079,900	922,200	1,617,200	695,000	1,237,700	(379,500)
<b>Total O&amp;M</b>	<b>21,312,800</b>	<b>28,447,100</b>	<b>30,553,400</b>	<b>2,106,300</b>	<b>29,878,200</b>	<b>(675,200)</b>
% Change		33.5%		7.4%		(2.2%)
Operating Equipment	227,700	—	99,600	99,600	21,000	(78,600)
<b>Total O&amp;M and Operating Equipment</b>	<b>21,540,500</b>	<b>28,447,100</b>	<b>30,653,000</b>	<b>2,205,900</b>	<b>29,899,200</b>	<b>(753,800)</b>
% Change		32.1%		7.8%		(2.5%)

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE



FY 2021/22 BUDGET BY EXPENDITURE



## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	<b>41</b>	<b>51</b>	<b>50</b>	<b>(1)</b>	<b>50</b>	<b>—</b>
	O&M	39	50	43	(8)	43	—
	Capital	2	1	8	7	8	—
<b>Temporary</b>	<b>Total</b>	<b>3</b>	<b>1</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>(2)</b>
	O&M	3	1	7	6	5	(2)
	Capital	1	—	2	2	2	—
<b>Total Personnel</b>	<b>Total</b>	<b>44</b>	<b>52</b>	<b>59</b>	<b>7</b>	<b>57</b>	<b>(2)</b>
	O&M	41	51	49	(2)	47	(2)
	Capital	3	1	10	9	10	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

Real Property's O&M and Operating Equipment Biennial Budget is \$30.7 million in FY 2020/21 and \$29.9 million in FY 2021/22 or an increase of 7.8% and a decrease of 2.5%, respectively from the prior budget years. The main factors affecting these changes:

- Expanded responsibilities for the group, including the management, maintenance and construction of Employee District Housing throughout the service area.
- Large maintenance and repair projects at Metropolitan's USHQ Facility, DVL Visitor Center and Recreation Area, and property structures in the Bay Delta and Palo Verde Valley.
- Significant efforts related to encroachment remediation, appraisal and marketing of surplus properties, and office relocation services during the Union Station Headquarters Improvement Project.

The following are the significant changes by budget year:

### FY 2020/21

#### Personnel-Related Issues

Total personnel count is decreasing by one regular full time position and increasing by eight district temporary positions from the FY 2019/20 budget. The increase in district temporary labor is necessary to support critical district housing projects, management of Bay Delta and Palo Verde property structures, land protection projects, and the encroachment remediation projects.

Capital labor allocation reflects a significant increase in FY 2020/21 in order to support such projects as the Employee Village Enhancements in the desert, Union Station Headquarters Improvement Project, USHQ Fire Alarm Replacement, support to Engineering for the

Prestressed Concrete Cylinder Pipeline Rehabilitation, Right of Way and Infrastructure Protection, and the Enterprise Content Management projects.

Salaries and benefits reflect negotiated labor increases and merit increases for qualified employees.

#### Professional Services

The budget reflects an increase in professional consulting services anticipated for the implementation of a new property management database, as well as examination of the impacts and opportunities associated with the Release of Federal Reversionary Lands Act of June 18, 1932 (47 Stat. 324, chapter 270). In addition,

consultants will be retained to complete a regenerative agricultural study in the Palo Verde Valley with California State University at Chico.

### Non-Professional Services

The budget reflects a significant decrease from the FY 2019/20 budget which included a large portion of the costs for the temporary relocation of personnel and cubicle-workstations during the Union Station Headquarters Improvement Project.

### Repairs and Maintenance - Outside Services

The budget reflects increased costs for repairs and maintenance at Headquarters, DVL Recreation and Visitors Center, Employee District Housing, and property structures in the Bay Delta and Palo Verde Valley.

### Taxes & Permits

The budget reflects increases to annual property tax payments, as well as a one-time assessment from the Bay Delta Island Reclamation Districts for demolition of occupied and unoccupied structures in the Bay Delta.

### Other

The budget reflects an increase due to one-time Expensed Equipment purchases for replacement of seating in the Board, replacement of chairs and tables in the committee rooms, cafeteria equipment and equipment for the USHQ Wellness Center.

## FY 2021/22

### Personnel-Related Issues

Total personnel count is decreasing by two district temporary positions from the FY 2020/21 budget. This decrease reflects the completion of temporary work assignments.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

### Non-Professional Services

The budget reflects an increase due to contract price escalations, including contracts for janitorial and building engineering services.

### Repairs and Maintenance - Outside Services

The budget reflects a reduction from FY 2020/21 due to the completion of one-time repairs, reduction in the movers necessary for the Union Station Headquarters Improvement Project, and completion of a three-year paving project at the DVL recreation facilities and Visitor's Center.

### Other

The budget reflects a decrease due to one-time furniture purchases for Board and Committee rooms in the FY 2020/21.

### Operating Equipment - FY 2020/21 and FY 2021/22

The operating equipment budget reflects an increase in FY 2020/21 due to the replacement of commercial equipment in the USHQ Wellness Center that has reached end-of-life, a CAD plotter, and a vehicle (truck) for an ongoing California Fish & Wildlife Service contract at DVL.

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# OFFICE OF CHIEF FINANCIAL OFFICER

The Office of the Chief Financial Officer (CFO) provides innovative, proactive, and strategic financial direction in support of the mission of Metropolitan, the Board of Directors, management, and employees.

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## PROGRAMS

The Office of the Chief Financial Officer is responsible for maintaining Metropolitan's strong financial position and high credit ratings and helping to achieve equitable water rates and charges that generate sufficient revenues.

In addition, the Office of the CFO assists in the efficient management of Metropolitan's financial resources, and ensures that adequate financial controls are in place to accurately record financial transactions, communicate financial results, and protect Metropolitan's assets.

The Office of the CFO accomplishes its mission through the following programs or sections:

**Chief Financial Officer** is responsible for the overall administration of finance and accounting functions for Metropolitan including debt and investment management; financial planning and analysis including rate setting and budgeting; accounting and control including financial reporting, payroll, accounts payable, accounts receivable; and risk management and business continuity.

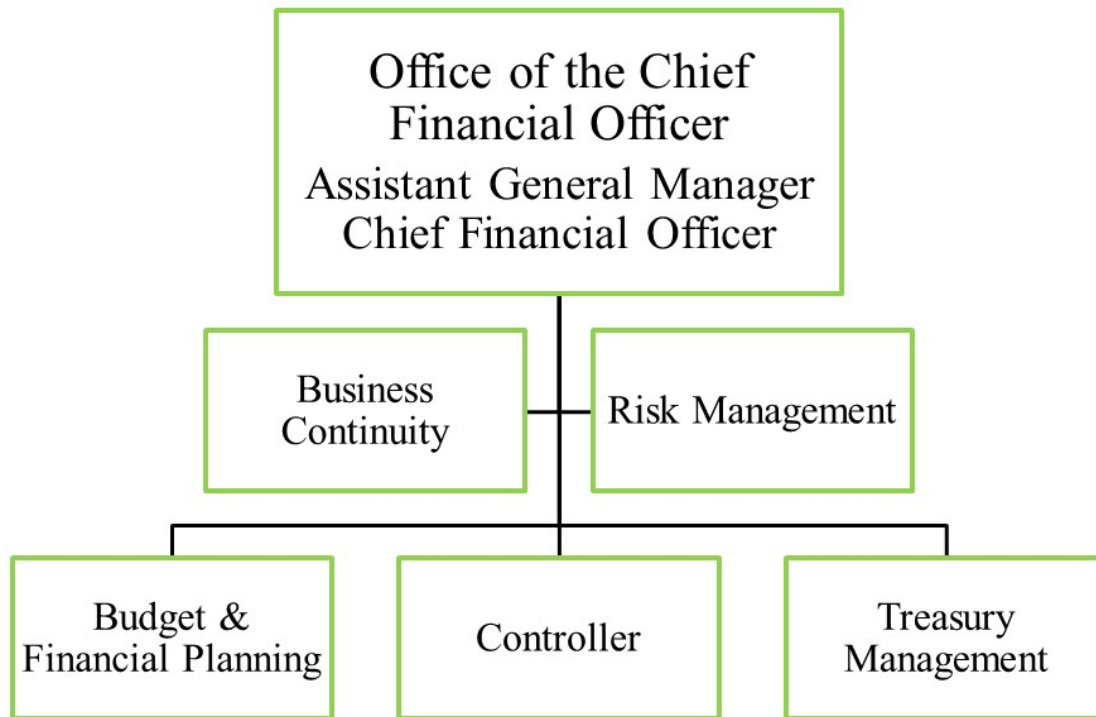
**Business Continuity Management Program** ensures that Metropolitan productively identifies potential business impacts and implements recovery strategies to continue critical operations in the event of an emergency or other business disruption. This is accomplished by conducting Business Impact Analyses and developing business continuity plans along with a life cycle of ongoing plan maintenance, testing, training and awareness. In addition, emergency communications are spearheaded using the MetAlert mass notification system.

**Risk Management** reports directly to the Chief Financial Officer section, is responsible for managing all aspects of Metropolitan's casualty insurance and risk management programs to minimize exposure to loss; access risk and recommend strategies to minimize or transfer contract risk on all Metropolitan and agreements, and procure excess and specialty insurance policies to supplement the self-insured property and liability claims program.

**Budget and Financial Planning** is responsible for Metropolitan's Biennial Budget, revenue requirements, and rates and charges recommendations; cost monitoring and analysis; short and long term financial analysis; planning and financial modeling; the water standby charge program; and the annual tax levy and annexation fee calculations.

**Controller** is responsible for maintaining internal controls that safeguard Metropolitan's assets, as well as recording and maintaining its official accounting records via the billing, accounts payable, payroll, and financial reporting functions.

**Treasury/Debt Management** is responsible for Metropolitan's investment and treasury obligations including receipt, safekeeping, and disbursement of Metropolitan's funds; preparation of security sales documents; and all commercial banking activities, including receipts and payment processing, such as wires, checks, and automatic deposits; and administration of debt obligations including all issuance of bonds, and investor and bond rating agency relations.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, the Office of the CFO will focus on the following key issues:

### Cost of Service and Budget

Complete the biennial cost-of-service analysis for rates and charges. Complete and implement the Biennial Budget.

### Financial Forecasts and Analysis

Provide an updated Ten-Year Financial Forecast in the Biennial Budget.

Continue to provide the Board with various analyses to manage financial performance for long-term rate stability, given the future potential implementation of the Delta conveyance and the Regional Recycled Water Program.

Analyze the funding of financial initiatives as identified.

### Annexation/Tax Levy

Complete the annual annexation calculation and tax levy assessment.

### Rates and Charges

Manage and effectively administer rates and charges to recover costs consistent with Board policy and objectives. Complete a comprehensive rate restructuring study.

### Financial Reporting/Internal Controls

Continue to record and report the financial activities of Metropolitan in a timely and transparent manner to the Board and member agencies.

Continue to ensure that internal controls are in place to provide assurance that assets are safeguarded and financial information is fairly stated.

Continue to improve communications of financial information to the Board, member agencies, management, and the financial community.

Continue to improve communications of financial information to the Board, member agencies, management, and the financial community.

### Capital Financing

Update capital financing plans and work with rating agencies and investors to communicate financial needs and capabilities, ensure cost-effective access to capital markets, and maintain long-term bond ratings of AA or better.

Work with Metropolitan's underwriting team, financial advisors, and swap advisors to identify financing opportunities to prudently manage the overall cost of financing Metropolitan's capital investment program.

Manage investor relations to ensure clear communications, accuracy of information, and integrity.

Continue to manage debt service to mitigate the volatility of debt service payments over time and reduce debt service costs through re-financings and the prudent use of interest rate swaps, in accordance with Metropolitan's interest rate swap policy.

Maintain relationships with the financial community and bond rating agencies to maintain Metropolitan's high credit ratings and access to various aspects of the financial markets to maximize financial flexibility.

### Investment

Prudently invest Metropolitan's funds with the objective of safety of principal, liquidity, and yield.

Manage the short term portfolio to provide the necessary liquidity to fund in excess of \$3.0 billion over the biennium in expenditures for Operations and Maintenance, debt service, and construction projects.

Measure the performance of the short-term portfolio, and manage the portfolio to meet or exceed the short-term benchmark consistent within established investment codes and policy.

Manage outside portfolio managers to ensure compliance with Metropolitan's investment policy, and to monitor investment activity performance.

### Risk Management

Continue to effectively manage Metropolitan's casualty insurance and risk management programs to minimize exposure to loss.

### Business Continuity

Continue to refine the Business Continuity Plan template and Fusion system to capture better information and produce actionable and easy to follow recovery plans.

Collaborate with the business users to perform annual plan updates and approvals using Fusion software.

Conduct biannual application recovery exercises will be with the business users to ensure accessibility, data integrity, and functionality of critical applications and data as indicated in the Business Impact Analysis (BIA). Information Technology is enhancing the disaster recovery infrastructure at the Lake Mathews backup data center that will provide a robust and safe test environment for the business users.

Conduct tabletop exercises for Metropolitan's business continuity plan to validate recovery strategies and identify areas in need of updating.

Test emergency communications using MetAlert (the MIR3 mass notification system) on a regular frequency to all employees as well as the Board to ensure effective communications in the event normal methods are impacted.

### Workforce Development & Succession Planning

Continue to examine and consider the challenges associated with succession planning and future staffing requirements in light of the composition and age of the workforce.

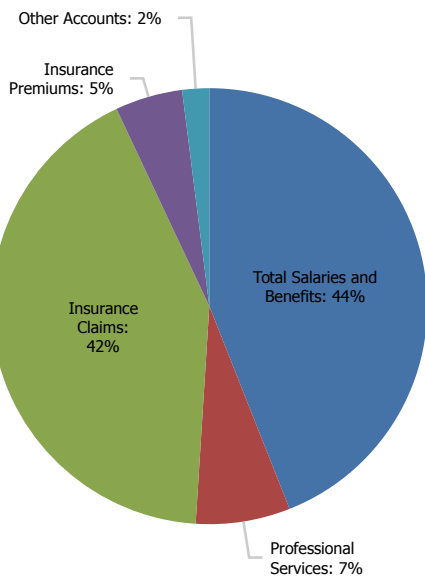
Work with each section within the Office of the CFO to establish staff back-up responsibilities for various work processes.

## O&M FINANCIAL SUMMARY

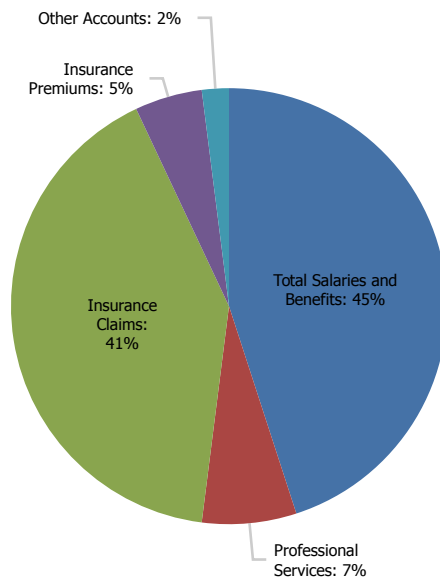
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	7,892,500	10,763,100	12,858,800	2,095,700	13,104,600	245,800
Direct Charges to Capital	(61,200)	—	(626,800)	(626,800)	(203,000)	423,800
<b>Total Salaries and Benefits</b>	<b>7,831,300</b>	<b>10,763,100</b>	<b>12,232,000</b>	<b>1,468,900</b>	<b>12,901,600</b>	<b>669,600</b>
% Change		37.4%		13.6%		5.5%
Professional Services	1,298,300	1,076,600	2,084,900	1,008,300	2,061,100	(23,800)
Insurance Claims	714,100	11,547,600	11,733,000	185,400	11,920,000	187,000
Insurance Premiums	1,283,800	1,300,000	1,450,000	150,000	1,500,000	50,000
Other Accounts	320,800	510,900	449,300	(61,600)	450,600	1,300
<b>Total O&amp;M</b>	<b>11,448,300</b>	<b>25,198,200</b>	<b>27,949,200</b>	<b>2,751,000</b>	<b>28,833,300</b>	<b>884,100</b>
% Change		120.1%		10.9%		3.2%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE

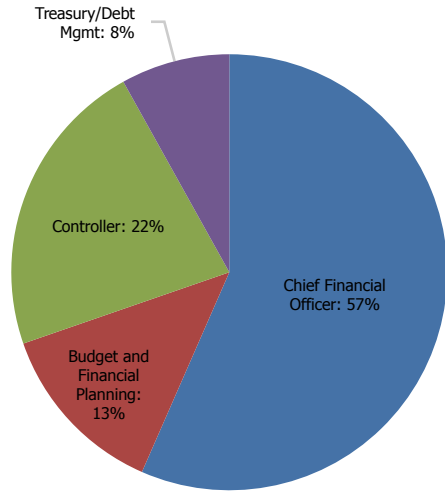


FY 2021/22 Budget by Expenditure

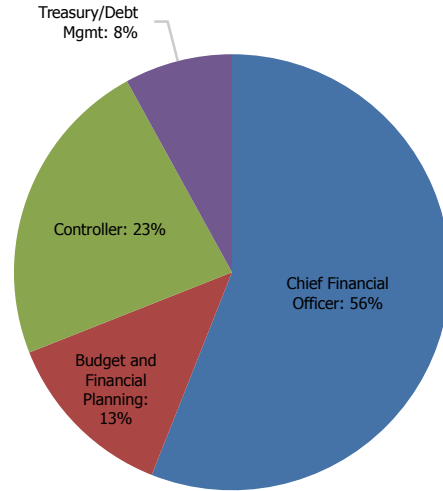


## O&M BUDGET BY SECTION

FY 2020/21 BUDGET BY SECTION



FY 2021/22 BUDGET BY SECTION



	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21	Personnel Budget		
						19/20	20/21	21/22
Chief Financial Officer	14,847,600	15,710,600	863,000	16,064,200	353,600	6	8	8
Budget and Financial Planning	2,822,600	3,661,700	839,100	3,716,800	55,100	10	11	11
Controller	5,487,800	6,265,200	777,400	6,682,000	416,800	28	31	31
Treasury/Debt Mgmt	2,040,100	2,311,700	271,600	2,370,300	58,600	5	5	5
<b>Total O&amp;M</b>	<b>25,198,100</b>	<b>27,949,200</b>	<b>2,751,000</b>	<b>28,833,200</b>	<b>884,100</b>	<b>49</b>	<b>55</b>	<b>55</b>

Totals may not foot due to rounding.

## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	<b>46</b>	<b>49</b>	<b>51</b>	<b>2</b>	<b>51</b>	<b>—</b>
	O&M	46	49	51	2	51	—
	Capital	—	—	—	—	—	—
<b>Temporary</b>	<b>Total</b>	<b>2</b>	<b>—</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>—</b>
	O&M	2	—	4	4	4	—
	Capital	—	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>48</b>	<b>49</b>	<b>55</b>	<b>6</b>	<b>55</b>	<b>—</b>
	O&M	48	49	55	6	55	—
	Capital	—	—	—	—	—	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

The Office of the CFO's O&M Biennial Budget is \$27.9 million in FY 2020/21 and \$28.8 million in FY 2021/22 or an increase of 10.9% and an increase of 3.2% respectively from the prior budget years.

The change is primarily due to the following factors:

- Staffing was increased in the Rates & Charges unit to manage the development of the critical biennial rate setting and cost of service processes including the ten year financial forecast, and also to support the Payroll process and accurate and timely reporting of compensation to CalPERS.
- Temporary labor increase to support increased reporting workload due to new government accounting and reporting standards as well as reporting for Delta Conveyance Authority (DCA), Delta Conveyance Finance Authority (DCFA), Six Agency Committee, Colorado River Board and other agencies; accurate payroll processing and reporting to CalPERS; and critical business systems such as water billing, payroll and budget.
- The increase in professional services is primarily due to a new rate restructuring study to be undertaken over the biennium. The other increases are for investment management services, and critical audits or studies related to internal controls, bond accounting, Government Accounting Standards (GASB) implementation, and critical business systems.

The following are the significant changes by budget year.

### FY 2020/21

#### Personnel–Related issues

Total personnel count is increasing by 2 regular full time positions and 4 district temporary positions from the FY 2019/20 budget.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

#### Professional Services

Accounting for the realignment of some of the budget from memberships and subscriptions to professional services, the budget for professional is increasing by about \$800K. Over 60% of this increase is related to a new rate restructuring study to be undertaken over the biennium. The remaining increase is for investment management services to support Metropolitan's \$600 million investment portfolio, and for critical audits and studies related to accounting, reporting and business systems.

#### Insurance Premiums

The insurance premiums budget is increasing as a result of the expected overall pool exposure to catastrophic losses such as wild fire risk liability, US economic and political uncertainties, global instability and new and increased exposures due in part to climate change.

#### Insurance Claims

Third party liability claims budget is increasing based on projected losses from the actuarial report.

## FY 2021/22

### Personnel–Related issues

Total personnel count remains flat from the FY 2020/21 budget.

Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

### Professional Services

The professional services budget is decreasing primarily as the result of the completion of the rate restructuring study before the end of the year.

### Insurance Premiums

The insurance premiums budget is increasing as a result of the expected overall pool exposure to catastrophic losses.

### Insurance Claims

Third party liability claims budget is increasing based on projected losses from the actuarial report.

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## EXTERNAL AFFAIRS

External Affairs builds awareness and support for Metropolitan's mission and programs by directing media and stakeholder communications, public outreach and education projects, legislative activities, business outreach and innovation programs, and member agency support services.

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### PROGRAMS

External Affairs is responsible for advancing Metropolitan's policy objectives and communicating with large and diverse audiences on behalf of the district. A strong portfolio of communication tools, public outreach and sponsorship programs, education, legislative and innovation activities is used to build positive working relationships and increase awareness of Metropolitan's programs and initiatives with the public, news media, legislators, regulators, educators, community groups, businesses, labor organizations, Metropolitan's public member agencies and other stakeholders.

Staff at the Union Station headquarters office and regional representatives give voice to Metropolitan's policy priorities and projects throughout Southern California. External Affairs also manages strategic activities and regional outreach in Metropolitan's offices in Sacramento, Washington, D.C. and San Diego.

**Office of Group Manager** directs the activities of Business Outreach, Conservation and Community Services, Legislative Services, Media Services and the Member Services and Public Outreach sections, and the Business Management team. The Group Manager provides strategic leadership to communicate policy objectives and program initiatives in coordination with the board, executive management and other groups within the organization.

**Business Outreach Team** actively encourages the participation of small, locally-owned, women-owned, minority-owned, disabled veteran-owned and economically disadvantaged business enterprises, and facilitates business in the solicitation and procurement of construction

contracts, professional services agreements, equipment and other materials and supplies. Through participation and collaboration with companies, entrepreneurs, innovation hubs and other agencies, the Business Outreach section enhances involvement in new technologies and positions Metropolitan as an international leader in water innovation.

**Legislative Services** promotes and protects the interests of Metropolitan and its member agencies before executive, legislative, and regulatory agencies of the state and federal governments. The section advances Metropolitan's policy objectives and board-adopted legislative priorities with legislators and other water policymakers, and supports an effective and growing outreach program with member agencies and stakeholders to mobilize and sustain support for Metropolitan's key initiatives.

**Conservation and Community Services** advances public awareness of Metropolitan and important water and conservation issues through advertising, education and community outreach. The section promotes and helps market conservation programs and activities, and manages Metropolitan's sponsorships for education and research programs, water forums, events and community partnerships.

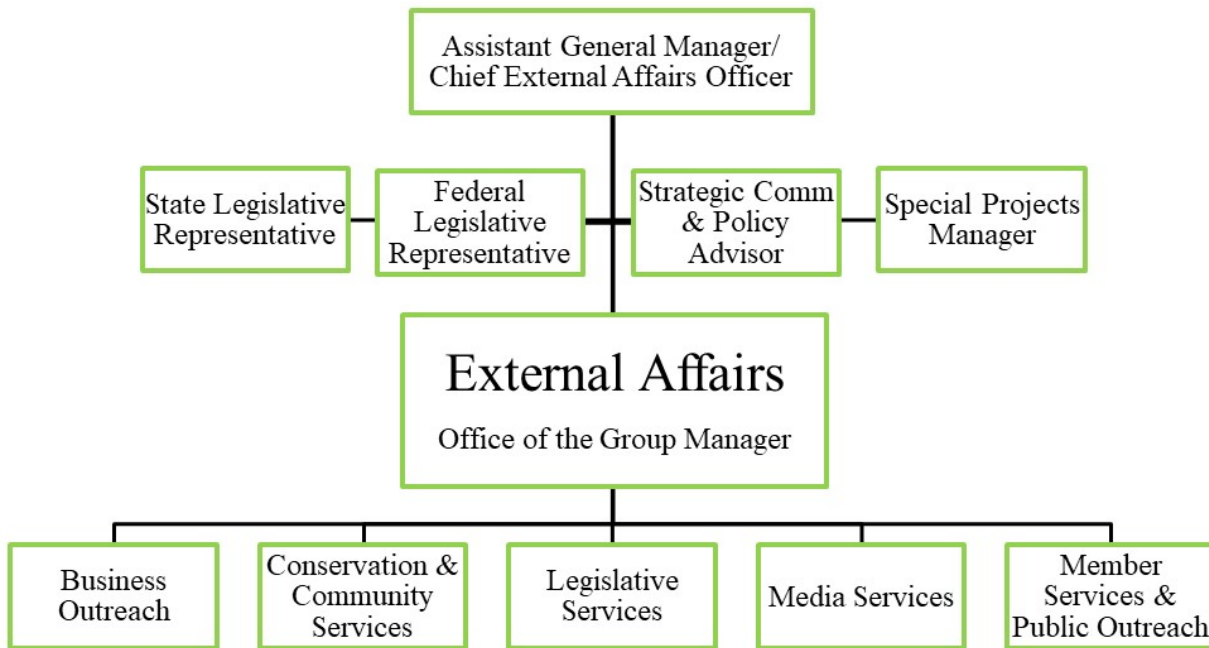
The Education Unit supports standards-based water education curriculum and works with educational associations, institutions and teachers to provide water education resources for elementary and secondary schools, colleges and universities. The unit hosts the annual Solar Cup competition.

**Member Services and Public Outreach**

provides support services to Metropolitan’s member agencies and manages outreach efforts for Metropolitan’s facility operations, construction activities and other water resource initiatives. The section works with and supports local government, business, agriculture and community organizations, and directs research efforts to support Metropolitan programs. This section recently partnered with the Sanitation Districts of Los Angeles County on the construction of the Regional Recycled Water Advanced Purification Center, which is now operational at the Joint Water Pollution Control Plant in Carson. Staff conducts site tours of the new 500- gallon-per-day facility.

The Inspection Trip Team conducts board-sponsored field inspections of Metropolitan and related facilities to educate and inform business and community leaders with firsthand knowledge of Metropolitan’s operations.

**Media Services** develops, coordinates and communicates messages, information and achievements to support Metropolitan’s key objectives and programs. The section is responsible for media inquiries, press releases and conferences, informational resources including fact sheets, talking points, brochures and opinion pieces and videos, and managing Metropolitan’s websites, e-newsletters, blogs and a growing presence on social media platforms and digital platforms.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, External Affairs will focus on the following key issues and objectives:

### Communications and Outreach Efforts

Expand and continue to improve the use of strategic, impactful and creative communication plans and programs to inform the public, businesses, environmental and other stakeholder groups about Metropolitan's initiatives and leadership to ensure safe, reliable and sustainable water supplies now and into the future.

Update content and informational resources on the newly redesigned mwdh2o.com website, manage development of redesigned microsites as needed to improve the functionality, content management, security and end-user experience.

Develop in-house management of social media outreach and marketing activities, search engine optimization and marketing functions to meet business and outreach goals.

Strengthen the capacity of sponsorship and partnership programs, including the Community Partnering Program, legislative sponsorships and memberships, and business outreach sponsorships, to enhance information-sharing on water issues and stewardship and relationships with non-governmental organizations, business groups, local elected officials, community organizations and other stakeholder groups throughout Southern California.

Engage in research and related activities that provide accurate and timely information on public opinions, consumer attitudes and awareness to inform future outreach activities with member agencies, stakeholders and the public.

### Water Supply Reliability, Conservation and Sustainability

Develop and implement an effective and well-managed multimedia, multilingual advertising and outreach campaign to increase public awareness of water supply conditions, Metropolitan and member agency rebate programs, and support for long-term conservation strategies.

Provide communication support for Metropolitan programs, planning activities and projects that ensure water supply reliability, including existing water operations, imported supplies from the Colorado River and State Water Project, the Integrated Resource Plan and local resource programs that diversify the region's water portfolio, conservation actions and innovative water technologies.

Increase awareness of Metropolitan's long-standing efforts to promote environmental stewardship through actions and investments for projects, programs, research and collaborative activities that promote the use of native plants, protect and enhance habitat and ecosystems, watersheds, and water quality.

Promote public awareness of climate change impacts on water supply conditions and reliability using a range of community and outreach tools to support Metropolitan's current and future initiatives, including the Climate Action Plan.

### Bay-Delta and Local Supply Initiatives

Provide information and secure support of stakeholders, the public and legislators for Metropolitan's positions on policies that promote water supply reliability and an environmentally sustainable Bay-Delta. This includes programs and policies related to Delta conveyance, EcoRestore and Metropolitan-owned properties and science investments in the Delta.

Ensure strong coordination and consistent messaging with state and federal agencies, State Water Contractors, JPA participating agencies, and member agencies on activities related to Delta conveyance.

Provide communication and community outreach to increase public awareness of and support for new and proposed projects to advance local supply development, including the Regional Recycled Water Advanced Purification Center.

## Legislative Policy Objectives

Work with the board, member agencies and executive management to secure support for and/or sponsorship of federal and state legislation and regulatory policies that advance Metropolitan's policy objectives, including strategic water quality and supply initiatives, conservation, Delta solutions, regional water resources projects, and sustainable water and energy management.

Conduct briefings, presentations and tours for elected officials and government leaders, and community-based environmental and business organizations to increase understanding of key water infrastructure systems and investments and key legislative and regulatory policies.

## Board and Member Agency Support

Facilitate ongoing communication and coordination between Metropolitan and its member agencies through regular meetings with general managers, legislative and education coordinators, and public information officers.

Effectively manage the inspection trip program in coordination with the Board to educate the public, business and community leaders, elected officials, news media, members of the public about Metropolitan and encourage a dialogue about the state's water supply and infrastructure, environmental issues and climate change impacts, agriculture and urban water interface and future challenges.

Provide primary support to the Board's Communications and Legislation Committee, the Agriculture and Industry Relations Committee, and the ad hoc Facilities Naming Committee, ensuring that committee presentations, board letters and associated activities provide timely, accurate and relevant information on programs, trends and activities to help inform board actions and ensure transparency.

## Business Outreach

Maintain an effective Business Outreach program for regional small businesses and veterans to ensure broad participation while achieving board-adopted goals of 25 percent or better for contracting dollars to small business and 3 percent to disabled veteran-owned enterprises.

Partner with member agencies in hosting "Connect 2 Met/Connect 2 Vet" and other business opportunity forums to educate local businesses on how to conduct business with public agencies and their purchasing departments.

Provide leadership and collaborate with member agencies, other public agencies and innovation programs to identify, develop and promote emerging water technologies.

## Educational Programs

Update and expand distribution of Metropolitan's K-12 water education materials in the areas of science, math, language arts and social studies.

In coordination with member agencies and the educational community, explore opportunities to expand educational services through the use of new technologies to reach more students, teachers and classrooms, including underserved and culturally diverse populations.

Support and manage Metropolitan's unique educational programs, including water education grants and sponsorship opportunities, the annual Solar Cup competition, and the annual Student Art Contest.

## Emergency Management and Crisis Communication

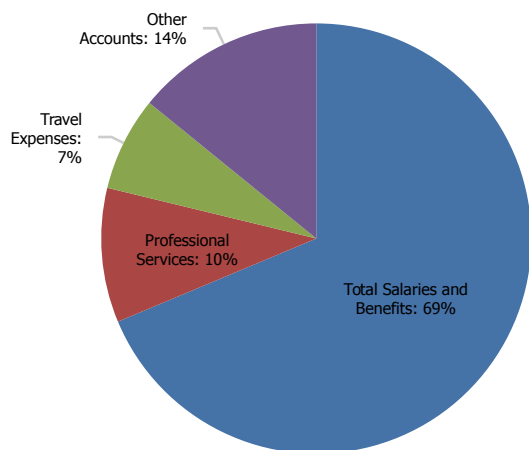
Support Metropolitan's emergency preparedness with a responsive crisis communications plan, well-trained staff, and the use of social media and other communications technologies to provide essential services during times of emergency and in response to disasters.

## O&M FINANCIAL SUMMARY

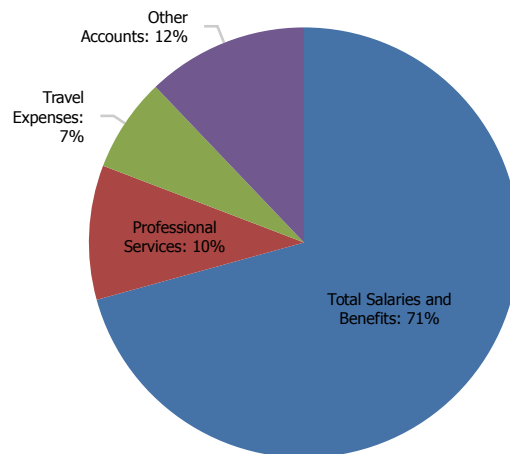
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	16,868,800	17,907,700	18,994,100	1,086,400	20,100,600	1,106,500
Direct Charges to Capital	(164,800)	—	—	—	—	—
<b>Total Salaries and Benefits</b>	<b>16,704,000</b>	<b>17,907,700</b>	<b>18,994,100</b>	<b>1,086,400</b>	<b>20,100,600</b>	<b>1,106,500</b>
% Change		7.2%		6.1%		5.8%
Professional Services	2,314,900	2,944,300	2,824,500	(119,800)	2,825,800	1,300
Advertising	423,000	1,320,800	610,000	(710,800)	610,000	—
Community Outreach Activities	329,000	400,000	400,000	—	400,000	—
Materials & Supplies	320,200	275,700	319,200	43,500	317,000	(2,200)
Memberships & Subscriptions	484,400	577,100	704,900	127,800	703,400	(1,500)
Outside Services - Non Professional / Mainte	960,500	1,055,200	806,000	(249,200)	685,400	(120,600)
Sponsorships	563,700	659,300	655,500	(3,800)	664,000	8,500
Travel Expenses	1,475,500	1,831,400	1,966,500	135,100	1,966,500	—
Other Accounts	486,900	605,400	586,400	(19,000)	585,700	(700)
<b>Total O&amp;M</b>	<b>24,062,100</b>	<b>27,576,900</b>	<b>27,867,100</b>	<b>290,200</b>	<b>28,858,400</b>	<b>991,300</b>
% Change		—		—		—
Operating Equipment	30,400	32,300	—	(32,300)	—	—
<b>Total O&amp;M and Operating Equipment</b>	<b>24,092,500</b>	<b>27,609,200</b>	<b>27,867,100</b>	<b>257,900</b>	<b>28,858,400</b>	<b>991,300</b>
% Change		14.6%		0.9%		3.6%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE

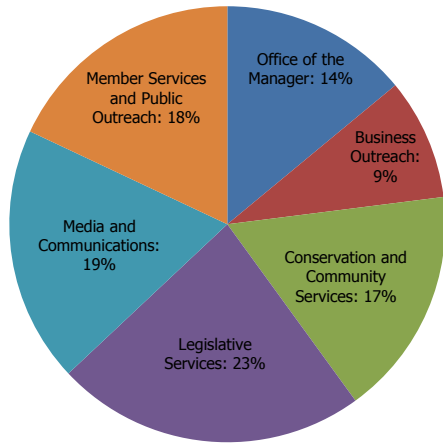


FY 2021/22 BUDGET BY EXPENDITURE

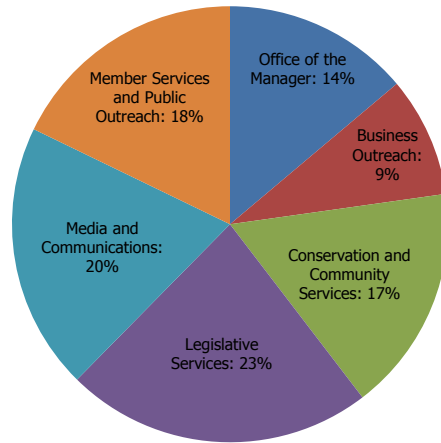


## O&M BUDGET BY SECTION

FY 2020/21 BUDGET BY SECTION



FY 2021/22 BUDGET BY SECTION



	2019/20	2020/21	Change from	2021/22	Change from	Personnel Budget		
	Budget	Proposed	2019/20	Proposed	2020/21	19/20	20/21	21/22
Office of the Manager	3,314,800	3,926,300	611,500	4,094,600	168,300	9	10	10
Business Outreach	2,421,400	2,383,600	(37,700)	2,502,100	118,500	7	7	7
Conservation and Community Services	5,275,400	4,870,500	(404,800)	4,929,500	59,000	11	11	11
Legislative Services	6,351,900	6,369,400	17,500	6,590,800	221,400	14	13	13
Media and Communications	5,689,500	5,382,700	(306,800)	5,649,700	267,000	19	20	20
Member Services and Public Outreach	4,524,200	4,934,700	410,500	5,091,600	156,900	10	11	11
<b>Total O&amp;M</b>	<b>27,577,000</b>	<b>27,867,100</b>	<b>290,200</b>	<b>28,858,300</b>	<b>991,100</b>	<b>70</b>	<b>72</b>	<b>72</b>

Totals may not foot due to rounding.

## PERSONNEL SUMMARY

		2018/19	2019/20	2020/21	Change from	2021/22	Change from
		Actual	Budget	Proposed	2019/20	Proposed	2020/21
<b>Regular</b>	<b>Total</b>	<b>69</b>	<b>70</b>	<b>72</b>	<b>2</b>	<b>72</b>	<b>—</b>
	O&M	68	70	72	2	72	—
	Capital	1	—	—	—	—	—
<b>Temporary</b>	<b>Total</b>	<b>1</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
	O&M	1	—	—	—	—	—
	Capital	—	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>70</b>	<b>70</b>	<b>72</b>	<b>2</b>	<b>72</b>	<b>—</b>
	O&M	70	70	72	2	72	—
	Capital	1	—	—	—	—	—

Totals may not foot due to rounding.



## BUDGET HIGHLIGHTS

External Affairs' O&M and Operating Equipment Biennial Budget is \$27.9 million in FY 2020/21 and \$28.9 million in FY 2021/22 or an increase of 0.9% and an increase of 3.6%, respectively from the prior budget years, due to increased costs for salaries and benefits.

In an effort to achieve budget savings for non-labor activities, the plan incorporates new efficiencies for communication and outreach activities while maintaining strong support for Metropolitan's program, business and strategic priorities.

- **Advertising:** In FY 2018/19, the board authorized \$14.7 million for a three-year multi-media multilingual advertisement campaign to fully engage Southern Californians in making conservation a way of life. The campaign was funded, developed and implemented in coordination with WRM. It leveraged research, new messaging and creative concepts, and optimization to target consumers and more effectively reach disadvantaged communities. In FY 2020/21, spending for the advertising consultant contract will be reduced from the planned \$3 million to \$1.5 million, and the use of in-house resources for video services, design, social media marketing and member agency partnerships will be expanded to continue a successful outreach and marketing effort to promote rebates, native plants and water use efficiency.
- **Projects and Community Outreach:** External Affairs will continue to provide a full range of communications and public outreach support for capital projects and other major initiatives to promote water supply reliability and sustainability. These include a Delta conveyance project, the Regional Recycled Water Advanced Purification Center, the Integrated Resources Plan, climate change and refurbishment of existing infrastructure such as Colorado River, Second Lower Feeder, and other rehabilitation projects.
- **Online Strategic Initiatives:** A redesign of the mwdh2o.com website and project-specific microsites is scheduled for completion during FY 2020/21. This is being managed in collaboration with IT, and funding is administered by CIP. Recognizing the growing value of social media to communicate with broad and diverse audiences, new efforts will use Metropolitan's social media platforms to convey day-to-day activities and messaging on projects, initiatives and actions in a compelling and engaging format.
- **Board Outreach Support:** Resources are provided to support outreach activities by the Chairwoman and Metropolitan's Board, including inspection trips, communication activities, participation at conferences and community events, media training, coordination with member agencies for education, communication and legislative services, and logistical support.

The following are the significant changes by budget year:

### FY 2020/21

#### Personnel-Related Issues

The budget for Salary and Benefits reflect negotiated labor increases and merit increases for qualified employees that will be offset by anticipated vacancies from retirements in the biennial period. In FY 2018/19, one position was reassigned to the Delta Conveyance Authority and was subsequently backfilled. Additionally, one position was transferred out of External Affairs to Administrative Services. In FY 2019/20, one additional regular position was added to provide

support for capital projects outreach and communications as part of succession planning in the Member Services and Public Outreach Section.

#### Other

The FY 2020/21 and FY 2021/22, budgets reflect reductions from the FY 2018/19 and FY 2019/20 budgets in the advertising, professional services and non-professional services accounts, as a result of the website redesign being reallocated to the capital budget. These changes have been carefully evaluated to ensure External Affairs will have the resources to carry out its core mission and objectives in these areas effectively and efficiently.

The budget maintains funding levels to support Board and General Manager initiatives and priorities for website and electronic media enhancements, community outreach efforts, and research-related professional and non-professional services. The budget also directs funding within the External Affairs budget for new research and related activities that provide accurate and timely information on public opinions and awareness to help inform future outreach activities; business outreach, new technology-based education projects, enhanced legislative support in the region and stakeholder outreach.

#### Operating Equipment

The budget reflects no operating equipment requests for FY 2020/21.

## FY 2021/22

### Personnel-related Issues

Total personnel count remains flat with the FY 2020/21 budget. Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.

### Operating Equipment

The budget reflects no operating equipment requests for FY 2021/22.



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# GENERAL COUNSEL DEPARTMENT

The Legal Department provides a full range of legal services in a professional, timely, cost-effective, and creative manner.

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## GOALS AND OBJECTIVES

The role of the Office of the General Counsel is to support the priorities established by the Board of Directors and the General Manager. The goal of the Legal Department is to provide a full range of legal services in a professional, timely, cost-effective and creative manner that minimizes risk to Metropolitan.

## PROGRAMS

The General Counsel is the chief legal spokesperson for Metropolitan and the Board of Directors and oversees the Legal Department's administrative functions.

The General Counsel represents Metropolitan in litigation and other proceedings to which Metropolitan is a party; provides legal advice to the Board, its committees, and to Metropolitan's staff; drafts, reviews, and negotiates contracts, documents, and other agreements; consults with representatives of other public and private entities on matters of mutual concern; monitors and analyzes pending and enacted legislations and, when appropriate, drafts legislative recommendations.

The Office of the General Counsel provides legal services to the Board, its committees, and to Metropolitan staff in the following areas:

- Represents Metropolitan's interests relating to water supply matters, including Bay Delta resources, Colorado River supplies, the State Water Contract (SWC) and the State Water Project (SWP) groundwater and water transfer issues, California Environmental Quality Act (CEQA), Endangered Species Act and other environmental issues, energy issues, water delivery and treatment, and worker safety.
- Represents Metropolitan's interests with regard to claims and litigation by or against Metropolitan.
- Provides legal advice with respect to the acquisition, management, and disposal of Metropolitan property and the administration of annexations, and provides legal assistance in Metropolitan's procurement and construction contract programs.
- Provides legal advice with respect to Metropolitan's financial activities, including Metropolitan's rates and charges, taxation, disclosure and bond issuance, legality of investments, and fiscal administration.
- Provides legal advice and assistance related to labor and personnel matters.
- Reviews, analyzes, and monitors pending state and federal legislation and drafts legislative recommendations.

In FY 2020/21 and FY 2021/22, the Office of the General Counsel will focus on the following key issues:

### Water Supply Reliability

Pursue a comprehensive legal strategy that proactively addresses legal issues associated with the operation of the SWP and the related permits and environmental matters while vigorously asserting and defending Metropolitan's interest in litigation and administrative proceedings regarding the SWP.

Provide legal advice in support of the development and implementation of the anticipated Department of Water Resources (DWR) proposal to improve the Delta conveyance facilities including the associated environmental documentation, implementing agreements and litigation in a manner supportive of Metropolitan's goals and objectives.

Provide legal advice regarding permitting, implementation and financing, of any proposed improvements to the Delta conveyance facilities including agreements with DWR and other state water contractors.

Provide legal advice and support relative to the continuing litigation relating to the Delta Stewardship Council, Oroville litigation and other matters impacting Metropolitan. Provide legal advice and support for proposed water transfers and exchanges and development of local resources, desalination and conservation projects and programs. Provide legal support for capital projects required to upgrade, repair and provide additional flexibility in the operation of Metropolitan's distribution system.

Provide legal advice and support for update and implementation of Metropolitan's Integrated Water Resources Plan Update and Urban Water Management Plan, including development of the Long-Term Conservation Plan.

Provide legal advice and support in connection with the proposed extension and amendment of the SWC and preparation of supporting environmental documents under CEQA and any separate amendment of the SWC relating to the development and operation of new or additional conveyance facilities.

Continue to defend and enforce the terms of the Quantification Settlement Agreement and related agreements among the participating agencies and other agencies with Colorado River contracts.

Assist in developing, negotiating and documenting new water conservation and augmentation projects and implement the Drought Contingency Plan (DCP). Defend Metropolitan in litigation challenging the DCP.

Provide legal support for Metropolitan's efforts to protect and make optimal use of its Colorado River rights and related water transfer, storage, and exchange programs. Provide legal support for initiatives to identify and obtain new water supplies on the Colorado River, and to protect existing Colorado River water supplies against erosion by unlawful or unreasonable uses.

### Finance

Provide legal advice regarding adoption of rates and charges. Continue to defend Metropolitan against challenges to its rate structure.

Provide legal advice and assist with amendments to existing bond resolutions and the development of a subordinate lien bond resolution.

### Operations

Negotiate and prepare service connection agreements for new or modified member agency connections. Provide legal assistance on regulatory and real estate issues, including CEQA issues, arising from service connection requests.

### District Governance

Continue to provide timely advice to the Board and committees on governance and legal compliance matters.

Serve as the point of contact and coordinate Metropolitan responses to Public Records Act requests.

### Corporate Resources/District Infrastructure

Provide legal support for capital investment projects and repair and replacement plans, including professional services and procurement contracts.

Provide legal support for environmental analysis under CEQA of Metropolitan’s projects and other discretionary actions, in addition to analyzing potential environmental impacts of other agencies’ projects on Metropolitan properties and facilities.

### Workforce/Human Resources

Provide proactive counsel, assistance and advice on workforce issues. Continue to defend Metropolitan in EEO and PERB matters, as well as grievance and disciplinary matters. Assist with investigations or engage third party investigators.

Represent Metropolitan in claims and litigation.

### Real Property

Assist Real Property group in the negotiation and documentation of real property acquisitions and the surplusing of real property. Negotiate and provide legal support for the lease and licensing of Metropolitan property. Provide legal support for the grant and acceptance of easements and entry permits.

Represent Metropolitan in real property disputes including landlord tenant issues, condemnation and inverse condemnation issues and other matters.

### Technology

Collaborate with Business Technology Group, External Affairs, and Human Resources on Information Governance Policies and the implementation of new technologies and protocols. Assist in educating the staff and Board in matters relating to technology and special media.

### Energy Costs and Management

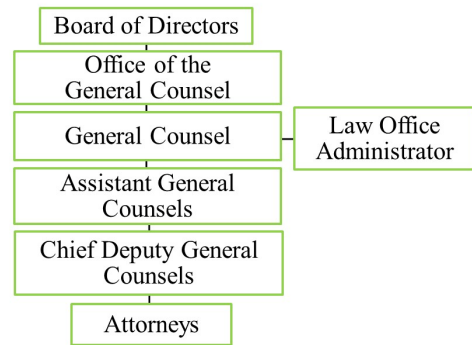
Assist with implementation of the Energy Management Plan, including providing advice on wholesale energy transactions, renewable energy projects and energy-related contracts and legislation.

Provide legal support to ensure that SWP energy needs are met in a cost-effective and sustainable manner.

### Legal Department Administration

Continue to aggressively manage outside counsel costs, while obtaining effective representation to protect Metropolitan’s interests. Provide on-going training opportunities and develop and implement succession planning.

### OFFICE OF THE GENERAL COUNSEL ORGANIZATION CHART

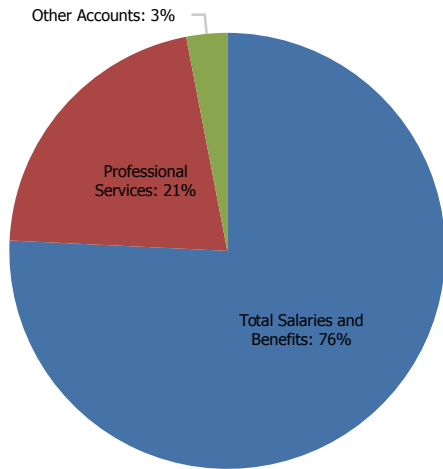


## O&M FINANCIAL SUMMARY

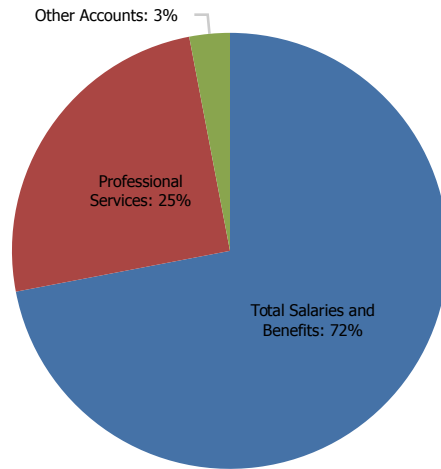
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	10,357,800	11,308,300	12,071,000	762,700	12,775,300	704,300
Direct Charges to Capital	—	—	—	—	—	—
<b>Total Salaries and Benefits</b>	<b>10,357,800</b>	<b>11,308,300</b>	<b>12,071,000</b>	<b>762,700</b>	<b>12,775,300</b>	<b>704,300</b>
% Change		9.2%		6.7%		5.8%
Professional Services	1,644,200	3,460,000	3,398,000	(62,000)	4,443,000	1,045,000
Materials & Supplies	25,400	55,000	170,000	115,000	170,000	—
Memberships & Subscriptions	111,000	110,000	110,000	—	110,000	—
Outside Services - Non Professional / Mainte	30,800	35,000	35,000	—	35,000	—
Subsidies & Incentives	55,100	55,000	55,000	—	55,000	—
Travel Expenses	59,100	120,000	120,000	—	120,000	—
Other Accounts	55,700	59,000	44,000	(15,000)	44,000	—
<b>Total O&amp;M</b>	<b>12,339,100</b>	<b>15,202,300</b>	<b>16,003,000</b>	<b>800,700</b>	<b>17,752,300</b>	<b>1,749,300</b>
% Change		23.2%		5.3%		10.9%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE



FY 2021/22 BUDGET BY EXPENDITURE



## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	<b>36</b>	<b>37</b>	<b>37</b>	<b>—</b>	<b>37</b>	<b>—</b>
	O&M	36	37	37	—	37	—
	Capital	—	—	—	—	—	—
<b>Temporary</b>	<b>Total</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>—</b>	<b>2</b>	<b>—</b>
	O&M	1	2	2	—	2	—
	Capital	—	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>37</b>	<b>39</b>	<b>39</b>	<b>—</b>	<b>39</b>	<b>—</b>
	O&M	37	39	39	—	39	—
	Capital	—	—	—	—	—	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

The Office of the General Counsel's Biennial Budget is \$16.0 million in FY 2020/21 and \$17.8 million in FY 2021/22 or an increase of 5.3% and an increase of 10.9% respectively from the prior budget years. The increase is primarily due to the following factors:

- Professional services costs increase reflects anticipated expenses for Bay Delta legal costs, water quality litigation, labor and employment issues, general litigation and other legal costs.
- Salaries and Benefits costs reflect negotiated labor increases and merit increases for qualified employees.

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## GENERAL AUDITOR DEPARTMENT

The Audit Department provides independent, professional, and objective assurance and consulting services designed to add value to and improve Metropolitan's operations.

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### PROGRAMS

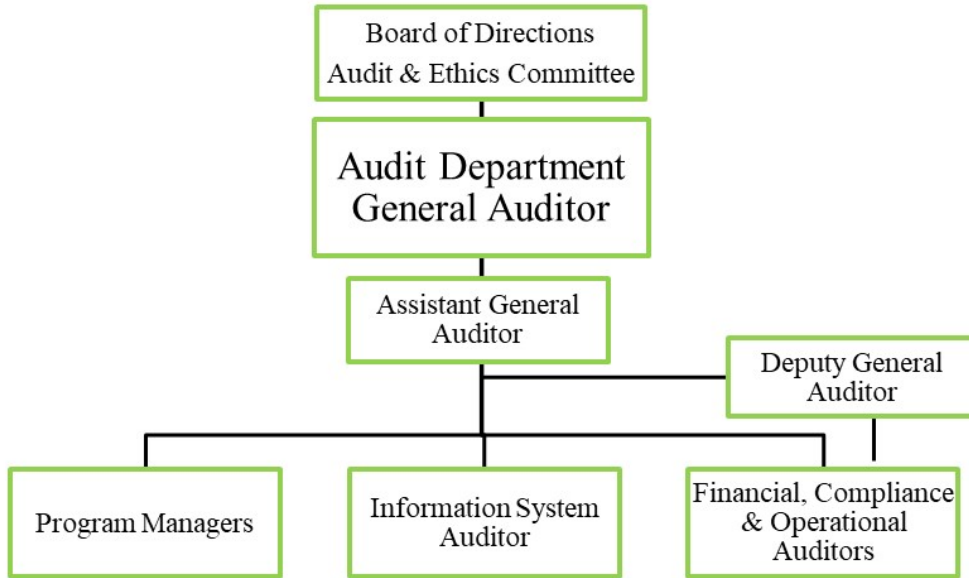
The Audit Department helps the organization accomplish its objectives by using a proactive, systematic approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

The scope of work of the Audit Department is to determine whether Metropolitan's network of risk management, internal control, and governance processes, as designed and represented by management, is adequate and functioning in a manner to ensure:

- Risks are appropriately identified, managed, and monitored.
- Significant financial, managerial, and operating information is accurate, reliable, and timely.

- Employees' actions are in compliance with policies, standards, procedures, and applicable laws and regulations.
- Resources are acquired economically, used efficiently and protected adequately.
- Programs, plans, and objectives are achieved.
- Quality and continuous improvement are fostered in the organization's control processes.
- Significant legislative or regulatory issues impacting the organization are recognized and addressed appropriately.

Opportunities for strengthening internal controls, improving efficiency, and protecting the organization's image may be identified during audits. These opportunities will be communicated to the appropriate level of management.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, the Audit Department will focus on the following key issues:

### Risk Analysis, Risk Mitigation and Internal Controls

Provide risk perspective and auditing advice and counsel to the Board and management in operational and financial activities.

Publish risk-focused audit reports designed to clearly communicate the General Auditor’s opinion regarding the internal control structure, significant control issues, and recommendations to mitigate noted risk.

Improve the completion time for audits and evaluate the adequacy and timeliness of management’s responses to, and corrective actions taken on, all significant control issues noted in audit reports.

Emphasize test work of significant projects.

### Workforce Development

Encourage training opportunities for Audit Department staff to enhance competencies in risk assessment and broaden knowledge of Metropolitan operations. Utilize this knowledge in fine-tuning the Annual Audit Risk Assessment and Audit Plan.

### Management and Leadership

Efficiently manage the department’s budget for maximum effectiveness of state budgetary objectives.

Uphold the mission, roles, and responsibilities of the Audit Department.

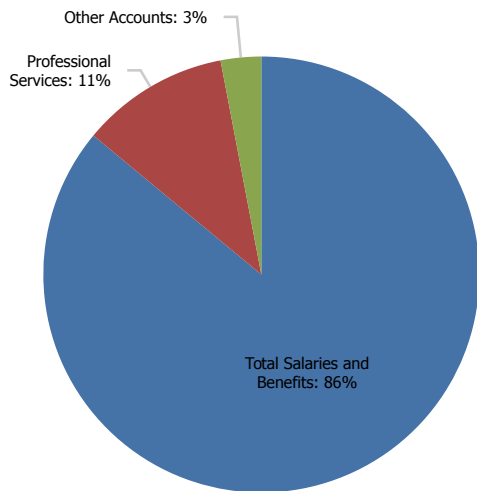


## O&M FINANCIAL SUMMARY

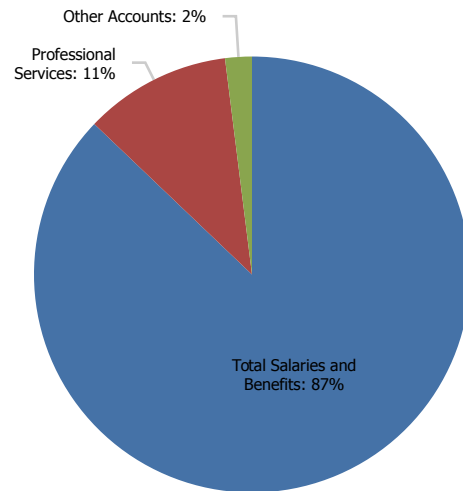
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	2,816,800	3,283,500	3,908,200	624,700	4,159,700	251,500
<i>Direct Charges to Capital</i>	—	—	—	—	—	—
<b>Total Salaries and Benefits</b>	<b>2,816,800</b>	<b>3,283,500</b>	<b>3,908,200</b>	<b>624,700</b>	<b>4,159,700</b>	<b>251,500</b>
% Change		16.6%		19.0%		6.4%
Professional Services	417,400	500,000	500,000	—	500,000	—
Materials & Supplies	16,900	16,000	58,000	42,000	35,000	(23,000)
Memberships & Subscriptions	3,900	5,500	5,500	—	5,500	—
Subsidies & Incentives	17,700	15,000	17,000	2,000	17,000	—
Training & Seminars Costs	6,400	17,000	17,000	—	17,000	—
Travel Expenses	3,200	5,000	5,000	—	5,000	—
Other Accounts	21,700	13,000	11,000	(2,000)	11,000	—
<b>Total O&amp;M</b>	<b>3,304,000</b>	<b>3,855,000</b>	<b>4,521,700</b>	<b>666,700</b>	<b>4,750,200</b>	<b>228,500</b>
% Change		16.7%		17.3%		5.1%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE



FY 2021/22 BUDGET BY EXPENDITURE



## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	<b>10</b>	<b>13</b>	<b>13</b>	<b>—</b>	<b>13</b>	<b>—</b>
	O&M	10	13	13	—	13	—
	Capital	—	—	—	—	—	—
<b>Temporary</b>	<b>Total</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
	O&M	—	—	—	—	—	—
	Capital	—	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	<b>10</b>	<b>13</b>	<b>13</b>	<b>—</b>	<b>13</b>	<b>—</b>
	O&M	10	13	13	—	13	—
	Capital	—	—	—	—	—	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

The Audit Department's Biennial Budget is \$4.5 million in FY 2020/21 and \$4.8 million in FY 2021/22 or an increase of 17.3% and an increase of 5.1% respectively from the prior budget years. The main factors affecting these changes:

- Increases to Salaries and Benefits reflect negotiated labor increases, merit increases for qualified employees, and succession planning.
- The increase to the budget for Materials and Supplies reflects an upgrade of Audit software.

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## ETHICS OFFICE

The Ethics Office promotes an ethical culture at Metropolitan by administering and advising Metropolitan's ethics policies and reviewing potential ethics violations.

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### PROGRAMS

Metropolitan's Ethics Office was established by special legislation enacted in 2000. In doing so, it was with a conviction that a strong ethical culture is the foundation of good governance. Moreover, it was based on the belief that an ethical culture is created through a robust ethics program that sets clear expectations for conducting business within the organization and with external parties.

An ethical culture is based on the following: effective board oversight, strong tone-at-the-top, senior management involvement, organization-wide commitment, a customized code of conduct, ethics training, communications, and ongoing monitoring system. It also involves the administration of financial disclosure reports, an anonymous incident reporting system, timely investigation of reported incidents, publication of summary investigation findings, and, where appropriate, referrals to Department managers for consistent disciplinary action.

These processes promote transparency and accountability, allowing the public insight into how the District conducts its business and holding District officials accountable for meeting internal and state ethics standards. The Ethics Office accomplishes its mission through the following programs and services, each of which is critical to achieving the ultimate goal of internal ethics and compliance - maintaining an ethics-centered culture:

**Ethics Compliance** The Ethics Office services as the filing officer for state-mandated financial interest disclosure reports for Directors and employees. These filings are required for individuals who make or participate in making decisions in their official capacity that could affect their personal financial interests. To date, all

Directors and over 700 employees have been identified as mandatory filers.

The Ethics Office also maintains and updates Metropolitan's conflict of interest code, designating employee reporting positions and disclosure categories. These requirements are tailored to the unique responsibilities of each designated position and are reviewed on a periodic basis for compliance with evolving standards.

**Advice and Education** The Ethics Office advises employees, directors, and contractors on Metropolitan's ethic policies and standards. These include the areas of conflicts of interest and proper use of authority. Advice and education are provided through consultations, training programs, and reference materials. The Ethics Office addresses requests for advice and training and recommends consultations where appropriate.

The Ethics Office also facilitates state-mandated AB1234 and sexual harassment training for Directors and provides orientations for new Directors and employees about Metropolitan's internal ethic provisions.

#### **Policy Analysis and Program Development**

The Ethics Office proposes ethic rules and modifications to existing rules, performs risk assessment, and analyzes investigation procedure to maintain best practices in the field.

**Investigation** Investigations are undertaken both to promote accountability and to identify systematic changes needed in order to avoid further missteps. Performing comprehensive investigations, including investigation planning, gathering of evidence, document review, witness

interviews, comparative analysis of facts, drafting of reports, and organization and indexing of evidence.

The Ethics Officer reviews the investigation findings, determines whether ethics violations occurred, and makes recommendations to executive management.



## GOALS AND OBJECTIVES

In FY 2020/21 and FY 2021/22, the Ethics Office will focus on the following key issues and initiatives:

### Ethics Consultation

Provide ethics risk perspective and advisory services to directors, officers, and employees needing input on ethics-related issues. In specific requests for assistance, provide thorough analysis and prompt responses. Continue to review board agendas and prepare memorandum for directors to help identify potential sources of conflicts of interest in matters coming before them. Review conflict of interest disclosures from potential contractors for the professional services contracting unit and make recommendations for resolving potential conflicts. Perform outreach to Group Managers to proactively engage in the program and project process to help maintain ethics-centered decision-making.

### Policy Development

Continue to assess the scope and content of Metropolitan’s ethics policies and provisions. Develop new ideas for improvements and work to achieve consensus among stakeholders.

Follow developments in legislation and Fair Political Practices Commission proceedings to identify emerging issues that may affect the Metropolitan community.

The Ethics Office performs objective and comprehensive investigations of ethics complaints, which entails investigation planning, gathering evidence, document review, witness interviews, comparative analysis of facts, drafting of reports, and organization and indexing of evidence. The Ethics Officer reviews the investigation findings, determines whether ethics violations occurred, and makes recommendations to executive management.

## Investigations

Evaluate opportunities to streamline the investigation process. These efforts include establishing reasonable guidelines to ensure that inquiries proceed in an efficient and responsible manner. Improve the effectiveness and timeliness of communication to interested parties on the progress of investigations. Define accountability standards for investigations that address the need to discontinue or close inquiries when substantiating evidence cannot be obtained within a reasonable time period. Survey best practices in the field and recommend improvements to Investigation Guidelines.

## Education and Outreach

Design accessible and understandable ethics education programs focused on needs of different work groups. Increase the number of in-person presentations.

Update employee orientation materials, website content, and online training program and create new fact sheets and pamphlets on the most common ethics topics facing Metropolitan.

## Workforce Development

Encourage training opportunities for Ethics Department staff to enhance competencies in governmental ethics and to broaden knowledge of Metropolitan operations. Utilize this knowledge in fine-tuning Ethics consultation, policy development and outreach efforts.

## Management and Leadership

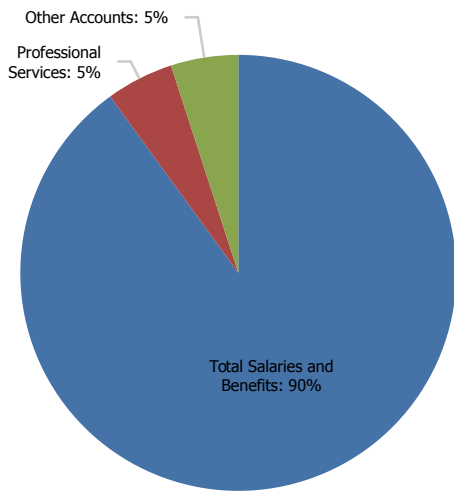
Efficiently manage the Ethics Office's budget for maximum effectiveness. Uphold the missions, roles, and responsibilities of the Ethics Office.

## O&M FINANCIAL SUMMARY

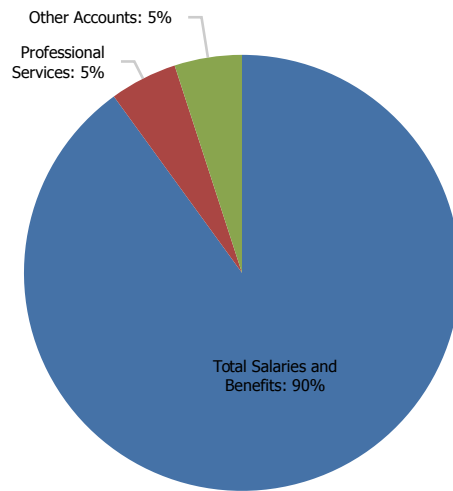
	2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Total Salaries and Benefits	1,018,700	1,299,700	1,460,400	160,700	1,518,900	58,500
<i>Direct Charges to Capital</i>	—	—	—	—	—	—
<b>Total Salaries and Benefits</b>	<b>1,018,700</b>	<b>1,299,700</b>	<b>1,460,400</b>	<b>160,700</b>	<b>1,518,900</b>	<b>58,500</b>
% Change		27.6%		12.4%		4.0%
Professional Services	17,100	85,000	85,000	—	85,000	—
Materials & Supplies	10,500	1,500	26,500	25,000	26,500	—
Outside Services - Non Professional / Mainte	—	16,700	17,000	300	17,000	—
Subsidies & Incentives	1,100	13,000	13,000	—	13,000	—
Training & Seminars Costs	3,200	6,000	6,000	—	6,000	—
Travel Expenses	2,900	6,000	6,000	—	6,000	—
Other Accounts	25,300	20,500	7,500	(13,000)	7,500	—
<b>Total O&amp;M</b>	<b>1,078,800</b>	<b>1,448,400</b>	<b>1,621,400</b>	<b>173,000</b>	<b>1,679,900</b>	<b>58,500</b>
% Change		34.3%		11.9%		3.6%

Totals may not foot due to rounding.

FY 2020/21 BUDGET BY EXPENDITURE



FY 2021/22 BUDGET BY EXPENDITURE



## PERSONNEL SUMMARY

		2018/19 Actual	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
<b>Regular</b>	<b>Total</b>	4	5	5	—	5	—
	O&M	4	5	5	—	5	—
	Capital	—	—	—	—	—	—
<b>Temporary</b>	<b>Total</b>	—	—	—	—	—	—
	O&M	—	—	—	—	—	—
	Capital	—	—	—	—	—	—
<b>Total Personnel</b>	<b>Total</b>	4	5	5	—	5	—
	O&M	4	5	5	—	5	—
	Capital	—	—	—	—	—	—

Totals may not foot due to rounding.

## BUDGET HIGHLIGHTS

The Ethics Office's Biennial Budget is \$1.6 million in FY 2020/21 and \$1.7 million in FY 2021/22 or an increase of 11.9% and an increase of 3.6% respectively from the prior budget years. The increase is due primarily to the following:

- Salaries and Benefits reflect negotiated labor increases and merit increases for qualified employees.
- Professional Services and non-labor budgets remain flat over the biennium.

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## STAFFING SUMMARY

Group/Department	2018/19 Actual	2019/20 Budget	2020/21 Proposed	2021/22 Proposed
<b>Regular Employees</b>				
Office of the General Manager	13	13	13	13
Water System Operations	862	940	940	940
Water Resource Management	59	68	68	68
Engineering Services	320	355	355	355
Bay Delta Initiatives	17	17	17	17
Office of the Chief Administrative Officer	98	113	114	114
Information Technology	120	134	130	130
Human Resources	39	42	42	42
Real Property	41	51	50	50
Office of the Chief Financial Officer	46	49	51	51
External Affairs	69	70	72	72
<b>Subtotal - General Manager's Department</b>	<b>1,684</b>	<b>1,852</b>	<b>1,852</b>	<b>1,852</b>
Office of Ethics	4	5	5	5
Office of the General Auditor	10	13	13	13
Office of the General Counsel	35	37	37	37
<b>Total - Departmental Regular Employees</b>	<b>1,734</b>	<b>1,907</b>	<b>1,907</b>	<b>1,907</b>
<b>Temporary Employees</b>				
District Temporary	47	23	43	37
<b>Total Authorized Positions</b>	<b>—</b>	<b>1,930</b>	<b>1,950</b>	<b>1,944</b>

Totals may not foot due to rounding.

## OPERATING EQUIPMENT SUMMARY

Classification	2020/21 Quantity	2020/21 Amount	2021/22 Quantity	2021/22 Amount
Audio Visual	10	152,132	8	144,706
Automobiles	15	569,323	8	250,809
Boats	—	—	1	98,550
Communication Equipment	7	191,625	—	—
Construction/Shop/Maint Equip	25	794,198	34	1,025,000
CPU's, Laptops & Servers	24	662,939	20	503,700
Drafting Equipment	1	6,680	—	—
Equipment Accessories	1	8,541	—	—
Heavy Equipment	8	1,223,567	9	1,565,990
Lab Equipment	8	1,040,779	5	1,022,107
Monitoring Equipment	13	294,173	10	230,000
Office Equipment	2	18,341	—	—
Other Equipment	24	610,745	11	284,253
Printers	3	89,757	1	34,623
Pumps	4	101,287	—	—
Survey Equipment	12	390,376	4	132,766
Trucks	22	1,703,067	34	1,830,926
Utility Vehicles	1	20,953	1	30,003
<b>Grand Total</b>	<b>180</b>	<b>7,878,483</b>	<b>146</b>	<b>7,153,433</b>

Totals may not foot due to rounding.

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## **PERFORMANCE MEASURES**

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To be provided in adopted budget document

(Pages 157 thru 160)

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## STATE WATER PROJECT

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### OVERVIEW

Metropolitan participates in the State Water Project (SWP), which is managed and operated by the California Department of Water Resources (DWR) and is an integral part of Metropolitan's conveyance system. The SWP 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 39.2 million residents.

The SWP consists of a complex system of dams, reservoirs, power plants, pumping plants, canals and aqueducts to deliver water. SWP water consists of water from rainfall and snowmelt runoff that 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, and at four delivery points near the northern and eastern boundaries of Metropolitan's service area. The budgeted costs for the SWP are as follows:

#### SWC Cost Summary, \$ millions<sup>1</sup>

	2018/19 Actuals	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Delta Water Charge: Capital	\$38.8	\$38.7	\$57.5	\$18.8	\$59.7	\$2.3
Delta Water Charge: OMP&R	88.4	96.2	92.4	(3.8)	92.4	0.0
Transportation Capital	138.2	125.3	136.8	11.5	148.3	11.4
Transportation OMP&R	120.0	195.4	179.8	(15.6)	182.9	3.1
Power, Variable	127.5	172.4	205.2	32.8	212.7	7.5
Power, OAPF	3.6	2.4	5.8	3.4	3.5	(2.3)
Credits	(34.2)	(41.0)	(61.8)	(20.8)	(70.1)	(8.4)
CA Water Fix/ Delta Conveyance	—	13.0	25.0	12.0	25.0	0.0
<b>SWC Total</b>	<b>\$482.3</b>	<b>\$602.5</b>	<b>\$640.8</b>	<b>\$38.3</b>	<b>\$654.4</b>	<b>\$13.6</b>
SWC Dues	\$3.3	\$4.7	\$3.9	(\$0.9)	\$3.9	\$0.0
Acre–feet delivered	945,646	906,675	1,063,240	156,565	1,059,490	(3,750)

<sup>1</sup> Does not include Departmental costs reflected elsewhere in this Budget.

Annually, the DWR reviews and redetermines the water supply aspects of the SWP as required by the SWC, and the financial aspects attributable to the water supply function of the SWP.<sup>1</sup> 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 2020 is supported by Appendix B to Bulletin 132-19). 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). All State Water Contractors are obligated to pay all costs incurred by DWR to operate the SWP for water supply delivery, as part of their contractual participation in the project. Therefore, DWR reconciles actual costs for each year and either collects more funds from the Contractors if actual costs exceeded estimated costs, or provides a credit/refund if actual costs were lower than estimated costs.

Metropolitan's budgeted SWP costs are based on the 2020 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 the 29 State Water Contractors. Through Calendar Year 2018, 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 \$13.2 billion through fiscal year 2018/19. Metropolitan's SWC was originally a 75-year contract through December 31, 2035. Although the SWC had been amended for other provisions before, the term of the contract was extended and approved in December 2018. Among other amendments, the Contractors and DWR agreed to an extension to December 31, 2085. The Contract Extension Amendment has been challenged in court. However, the amendments have not yet been implemented.

The State Water Contractors have long-term contracts with DWR for participation in the SWP, through which they receive 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 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

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<sup>1</sup> The term "supply" is used to distinguish between other functions of the SWP such as recreation and flood control. The term is not used to distinguish between the conservation (supply) and transportation (conveyance) functions of the SWP under the State Water Contracts for participation in the SWP.

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 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.

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.

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

	<b>CY 2015 DWR</b>	<b>CY 2016 DWR</b>	<b>CY 2017 DWR</b>	<b>CY 2018 DWR</b>	<b>CY 2019 Estimated</b>	<b>CY 2020 Estimated</b>	<b>CY 2021 Estimated</b>
East Branch	\$241.17	\$186.21	\$160.55	\$174.90	\$160.33	\$199.67	\$207.44
West Branch	\$226.58	\$175.85	\$170.57	\$162.42	\$155.10	\$213.79	\$221.11

The SWP energy costs are impacted by two factors. First, the annual hydrology, secondly the energy policies of the state of California. The SWP has invested heavily in hydroelectric power generation facilities. The unit cost of operating the power facilities declines as the amount of available water increases. 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.

## BUDGET HIGHLIGHTS

The budget for the SWP is increasing in FY 2020/21 compared to the FY 2019/20 budget due to substantial capital related expenditures for Oroville Spillway repair and California Aqueduct improvements. Power costs are projected to be higher due to higher water deliveries and a projected increase in the CAISO transmission access charge (TAC) by the State Water Contractors. FY 2021/22 projects an increase in Transportation Capital and O&M related costs.

The Biennial Budget includes Metropolitan's planned contribution of \$25 million per year for Delta conveyance project planning activities, which contributes to the increase in SWP expenditures in FY 2020/21. This contribution follows Board policy that staff work with the State to find solutions to improve Delta conveyance. The focus over the next two years will be supporting the California Department of Water Resources as it seeks permits for a Delta conveyance project; participating in the Delta Conveyance Design and Construction Authority; and continuing to put forward sound scientific research to help inform and improve Delta management decisions. If staff determines that Metropolitan's appropriate contribution toward planning activities should exceed the budgeted amount, the General Manager will request authorization from the Board for additional funding. Additionally, at a later date staff will recommend that the Board separately consider Metropolitan's participation in a new Delta conveyance project, after project planning has progressed further.

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# COLORADO RIVER AQUEDUCT

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## 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, 305 miles of high voltage power lines, 1 electric switching station, 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 CRA. 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 Summary, \$ millions

	2018/19 Actuals	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
CRA Power <sup>1</sup>	\$39.3	\$52.9	\$52.2	(\$0.7)	\$57.6	\$5.4
CRA Dues <sup>2</sup>	\$0.7	\$0.7	\$0.8	\$0.1	\$0.8	—
Acre-feet	798,103	915,550	745,173	(170,377)	732,790	(12,383)

<sup>1</sup>Does not include Departmental costs reflected elsewhere in this Budget

<sup>2</sup>Six 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 System 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 three basic sources of power available to meet CRA energy requirements: Hoover Power, Parker Power, 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 2015	FY 2016	FY 2017	FY 2018	FY 2019
Hoover <sup>1</sup>	\$15.84	\$15.36	\$17.86	\$18.46	\$18.33
Parker <sup>1</sup>	\$13.55	\$12.58	\$15.40	\$14.38	\$17.67
SP15, off-peak <sup>2</sup>	\$33.15	\$24.97	\$26.48	\$28.27	\$38.52
SP15, on-peak <sup>3</sup>	\$40.68	\$30.13	\$33.46	\$38.84	\$49.97

<sup>1</sup>Information from Annual Reports for years 2015, 2016, 2017, 2018, and 2019

<sup>2</sup>SP15, off-peak price, is used to determine Metropolitan's off-peak energy costs.

<sup>3</sup>SP15, on-peak, 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.

Metropolitan's current basic resource mix is 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.

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 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, and is reflective of Southern California market energy prices.

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

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
January	\$35.70	\$30.14	\$36.22	\$37.09	\$42.56
February	\$31.88	\$24.47	\$28.52	\$36.84	\$72.73
March	\$30.73	\$19.61	\$23.97	\$32.39	\$35.98
April	\$29.03	\$18.92	\$26.71	\$27.69	\$24.83
May	\$28.11	\$23.06	\$32.08	\$24.12	\$20.25
June	\$37.01	\$33.41	\$38.14	\$31.45	\$24.81
July	\$39.27	\$39.03	\$41.49	\$101.04	\$35.24
August	\$39.02	\$38.57	\$54.96	\$85.22	\$36.39
September	\$38.00	\$35.55	\$43.18	\$38.32	\$40.35
October	\$35.55	\$35.45	\$47.86	\$41.09	\$35.71
November	\$30.22	\$30.67	\$44.82	\$55.50	\$37.44
December	\$29.83	\$36.40	\$44.21	\$57.26	\$37.80

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

## BUDGET HIGHLIGHTS

The budget for the CRA power is decreasing in FY 2020/21 compared to FY 2019/20 due to lower diversions at Intake. In FY 2021/22, costs are higher due to a new greenhouse gas charge to be collected by the California Air Resources Board.

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## 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

	2018/19 Actuals	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
IID/MWD Conservation	\$12.3	\$9.5	\$13.8	\$4.3	\$13.2	(\$0.6)
In Basin	1.1	1.6	6.3	4.7	1.6	(4.6)
Other CRA	7.9	9.3	14.2	4.9	14.6	0.4
PVID Program	7.3	6.2	8.1	1.9	5.4	(2.7)
SWP Programs	(1.6)	27.8	26.4	(1.4)	26.4	—
<b>Total Supply Programs<sup>1</sup></b>	<b>\$27.1</b>	<b>\$54.4</b>	<b>\$68.7</b>	<b>\$14.3</b>	<b>\$61.2</b>	<b>(\$7.5)</b>

<sup>1</sup> 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 diversions on the CRA of 733 to 745 thousand acre-feet (TAF). On the SWP, Supply Program expenses 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 expenses support the Palo Verde Irrigation District land fallowing program and the Imperial Irrigation District/Metropolitan Conservation Program, as well as other programs to conserve and develop supplies.

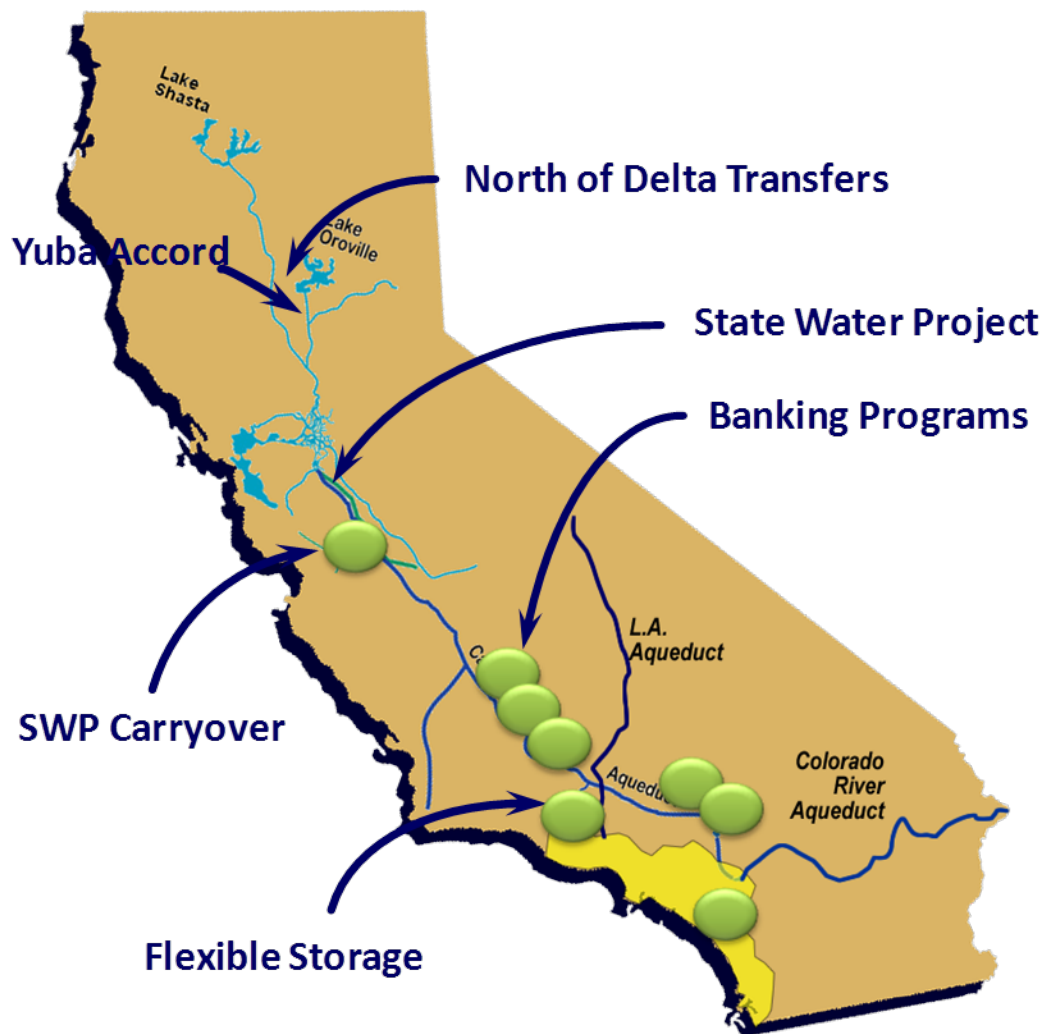
### SUPPLY PROGRAMS DEVELOPED ALONG THE STATE WATER PROJECT

Since adoption of the 1996 Integrated Resources Plan (1996 IRP) and subsequent updates, Metropolitan has developed and actively managed a portfolio of supplies to convey through the California Aqueduct, as shown in Figure 10. The geographical locations of the projects are indicated by the green dots; Metropolitan's service area is designated by the yellow highlighted area. 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 portfolio of supplies that Metropolitan has developed to be conveyed through the SWP since adoption of the Monterey Amendments and the 1996 IRP extend from north of the Delta to Southern California.

Since the Monterey Amendments, Metropolitan has secured one-year water transfer supplies through Metropolitan-only purchases, buyer coalition-purchases, and Governor Drought Water Banks. The most recent years that Metropolitan secured these one-year transactions were 2008 through 2010, and 2015. Metropolitan opted not to pursue these transactions in 2012 through 2014 or 2018. Most of the sellers were Sacramento Valley water users who are not Contractors. Other Contractors obtained one-year water transfers during this time frame as well. There were no single-year transfer programs in 2011, 2016-2017, or 2019 because of favorable water supply conditions and lack of capacity to move transfer supplies through the Delta.

In addition to the above 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.

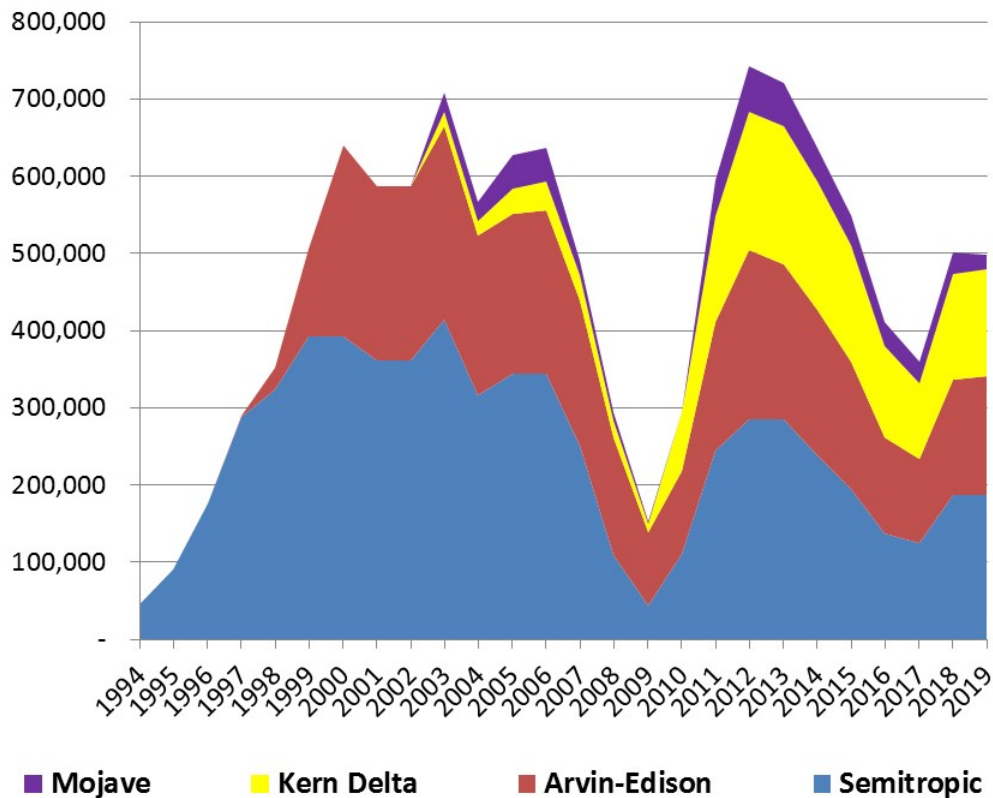
**Figure 10: California Aqueduct Portfolio of Supplies**



In addition to one-year transfers, and the Yuba Accord water, Metropolitan has developed groundwater storage agreements that allow Metropolitan to store available supplies in the Central Valley for return later. Metropolitan enters into point of delivery agreements with DWR to deliver water supplies from the SWP facilities to these storage programs. Metropolitan enters into introduction of local supplies agreements to return these water supplies to the SWP system for delivery to Metropolitan's service area. Metropolitan's storage activities are shown in Figure 11. The figure shows how the programs function to store supplies during surplus conditions and return supplies during a drought. The storage programs have demonstrated that they can provide a significant amount of water when needed.

### SWP Groundwater Storage Programs year–end balance, acre–feet

- 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. A 2017 State Water Resources Control Board (SWRCB) regulation setting a Maximum Contaminant Level (MCL) for trichloropropane (TCP) has temporarily suspended use of this program due to the levels detected in the program groundwater wells.
- 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. Currently, the minimum annual yield to Metropolitan is 38,200 acre-feet, and the maximum annual yield is 229,700 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.
- 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.
- 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. The Mojave storage program returns water only by exchange of surface water supplies.
- Antelope Valley-East Kern (AVEK) Storage Program: under the storage agreement, 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 up to 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. The water is returned by exchange of SWP supplies or direct groundwater pump-in.
- Antelope Valley-East Kern (AVEK) High Desert Water Bank Program: under this agreement, AVEK provides storage for up to 70,000 acre-feet per year of its unused SWP Table A amount to Metropolitan or other supplies for later return. The maximum storage capacity for Metropolitan supplies would be 280,000 acre-feet. The program is designed to return up to 70,000 acre-feet per year by direct pump-in to the East Branch of the California Aqueduct. Water can also be returned by exchange of SWP supplies when available.

**Figure 11: SWP Groundwater Storage Programs, acre-feet**

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.

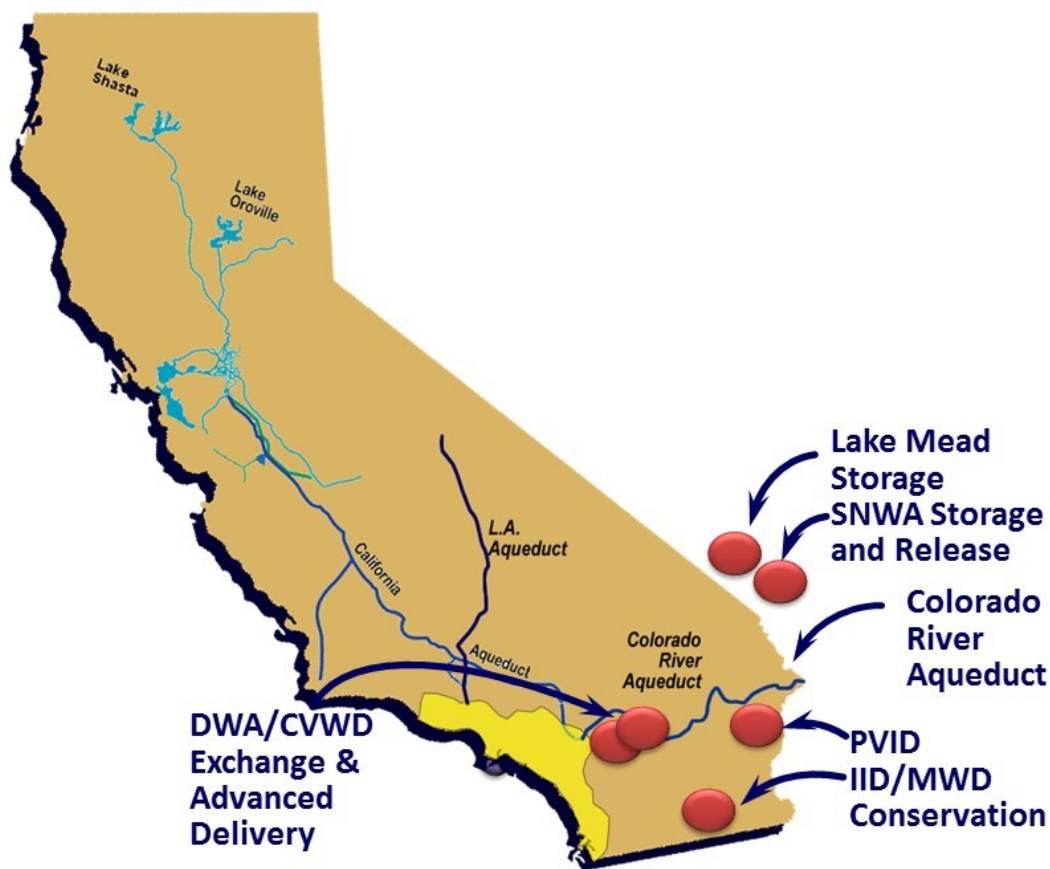
- San Gabriel Valley Water District:** under this agreement, Metropolitan delivers treated water to a San Gabriel Valley Water District (SGVMWD) sub-agency in exchange for twice as much untreated SWP supplies delivered into the Main San Gabriel groundwater basin. The groundwater basin supplies water to both Metropolitan and SGVMWD sub-agencies. Each year Metropolitan purchases 5,000 acre-feet minus the unbalanced exchange amount. By mutual agreement Metropolitan may purchase more than the 5,000 acre-feet per year should SGVMWD have additional supplies available. 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 advance of the exchange for their SWP Contract Table A allocations. In addition to their Table A supplies, the agencies can take delivery of SWP supplies available under Article 21 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. 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. In December 2019, the exchange agreements were amended to provide more flexibility and operational certainty for the parties involved. Additionally, under the amended agreement, Coachella and Desert in wet years pay a portion of Metropolitan's water storage management costs, up to a combined total of \$4 million per year.



## SUPPLY PROGRAMS DEVELOPED ALONG THE COLORADO RIVER AQUEDUCT

Since adoption of the 1996 IRP and subsequent updates, Metropolitan has developed and actively manages a portfolio of supplies to convey through the CRA. Metropolitan determines the delivery schedule of those resources throughout the year based on changes in the availability of SWP and of Colorado River water. Figure 12 shows the geographic location of the portfolio of additional CRA supplies, designated by the red dots, which Metropolitan has developed for diversion into the CRA since adoption of the 1996 IRP. These resources extend from Lake Mead to Southern California and provide supply to Metropolitan's service area, which is shown in the yellow highlighted area.

**Figure 12: 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 is then available to Metropolitan. Execution of the Quantification Settlement Agreement (QSA) and related agreements resulted in changes in the availability of water under the program. As a result of a 2014 IID-Metropolitan letter agreement, the amount of water conserved 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 the Coachella Valley Water District (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 PVID's valley service area are paid to reduce water use by not irrigating a portion of their land. A maximum of 35 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 in 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, over 1.3 million acre-feet total of Colorado River water has been conserved. The volume of water that becomes available to Metropolitan is governed by the QSA and the Colorado River Water Delivery Agreement. Under these agreements:
  - 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
  - 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.

- Southern Nevada Water Authority and Metropolitan Storage and Interstate Release Agreement: Under this 2004 agreement and a related Operational Agreement, the Southern Nevada Water Authority (SNWA) may offer a portion of its Colorado River water supplies to Metropolitan when there is space available in the CRA to receive the water. SNWA may call for return of the water in a future year, in which Metropolitan would reduce its Colorado River water order to return this water. In 2009, 2012, and 2015, Metropolitan, the Colorado River Commission of Nevada, and SNWA amended the related Operational Agreement dealing with volumes of water that may be stored or called at various times. The agreements can be terminated upon 90 days' notice following the return of the water stored by Metropolitan.
- Lower Colorado Water Supply Project: This project develops additional water supplies by pumping groundwater into the All-American Canal for delivery to IID. An equal volume of Colorado River water is then made available for other water users along the river. Under a contract among Metropolitan, the City of Needles, and the United States Bureau of Reclamation, Metropolitan receives any excess unused water developed by the project. 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, stored in, and delivered from Lake Mead. The amount of water stored in Lake Mead must be created through extraordinary conservation, system efficiency, or tributary conservation methods. ICS is available for delivery in a subsequent year, with Extraordinary Conservation ICS subject to a one-time deduction to benefit the river system and annual 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, the Lower Colorado Water Supply Project, All American and Coachella Canal water received under the San Luis Rey Indian Water Rights Settlement Agreement prior to the settlement parties receiving the water, and groundwater desalination. "System Efficiency ICS" can be created 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, and two projects to create ICS by conservation in Mexico:
  - Yuma Desalting Pilot Project: Metropolitan contributed funds toward the 2010-2011 pilot run of the Yuma Desalting Plant in exchange for a portion of the desalinated water produced by the project. The Yuma Desalting Plant treated brackish agricultural drainage that flows into Mexico to the Ciénega de Santa Clara

at the terminus of the Colorado River but does not count as deliveries to Mexico under the Mexican Water Treaty. Metropolitan's portion of the desalinated water was 24,397 acre-feet and this water was stored in Lake Mead. Metropolitan can take delivery of up to the entire amount in any single year.

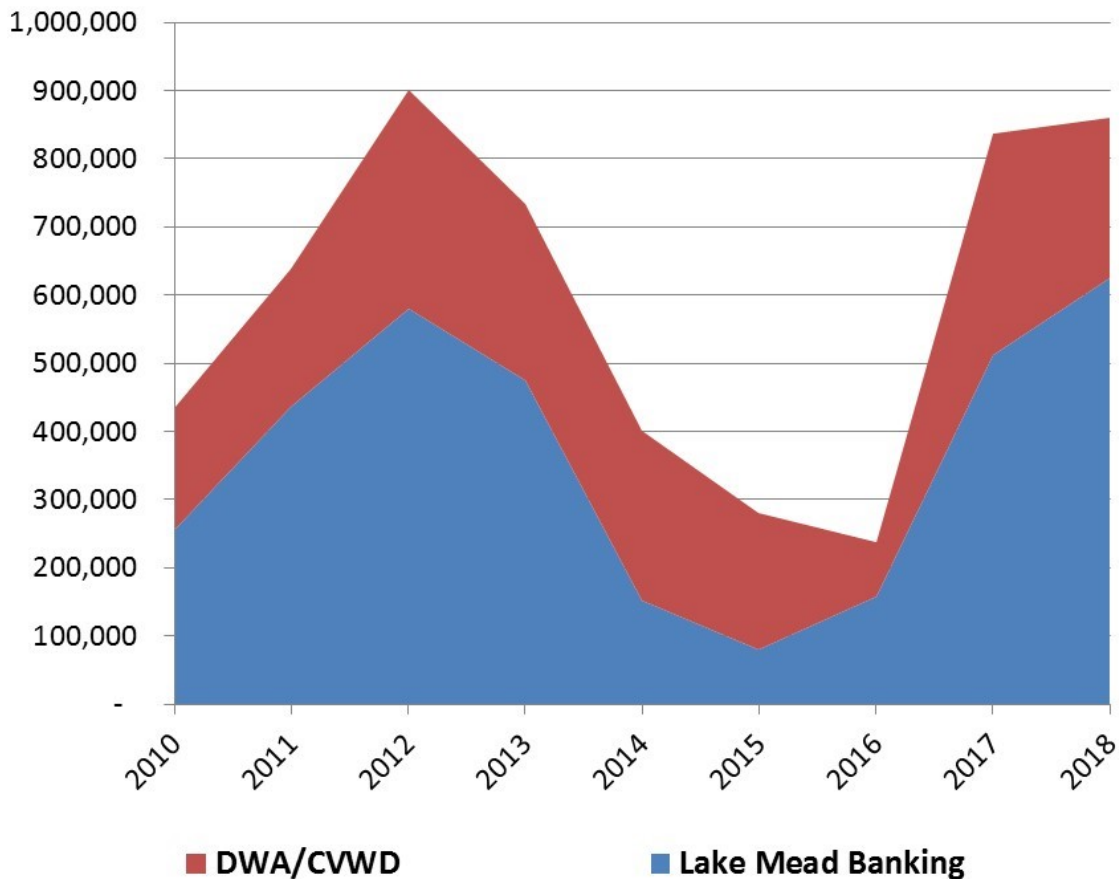
- Drop 2 (Warren H. Brock) Reservoir: Metropolitan contributed funds toward the Bureau of Reclamation's construction of an 8,000 acre-foot off-stream regulating reservoir near Drop 2 of the All-American Canal in Imperial County. This reservoir conserves about 70,000 acre-feet of water per year by capturing 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 take delivery of 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.
- 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 was credited to Metropolitan's intentionally-created surplus water account. 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.
- In September 2017, Metropolitan executed agreements in support and continuation of a program to augment Metropolitan's Colorado River supply through international pilot projects in Mexico. Under the new set of agreements, Metropolitan's total share of costs are expected to be \$3.75 million for 27,275 acre-feet of project supplies. The costs will be paid in three parts, 2020, 2023, and 2026.
- In May 2019, Upper and Lower Basin Drought Contingency Plans (DCP) were executed and became effective. The Lower Basin DCP Agreement requires California, Arizona, and Nevada to store defined volumes of water in Lake Mead at specified lake levels. Pursuant to intrastate implementation agreements, Metropolitan will be responsible for 93 percent of California's DCP Contributions under the Lower Basin DCP. Implementation of the Lower Basin DCP enhances Metropolitan's ability to store water in Lake Mead and to ensure that water in storage can be delivered at a later date. The Lower Basin DCP increases the total volume of water the California may store in Lake Mead by 200,000 acre-feet, which Metropolitan will have the right to use. The Lower Basin DCP will be effective through 2026.
- 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 exchange for future deliveries by DWA and CVWD of an equal volume of 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 to deliver an equivalent amount of Colorado River water. In December 2019, the exchange agreements were amended to provide more flexibility and operational certainty for the parties involved. Additionally, under the amended agreement, Coachella and Desert in wet years pay a portion of Metropolitan's water storage management costs, up to a combined total of \$4 million per year<sup>1</sup>.

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<sup>1</sup> DWA has a SWP Table A contract right of 55,750 acre-feet per year and CVWD has a SWP Table A contract right of 138,350 acre-feet per year, for a total of 194,100 acre-feet per year. In addition to their Table A supplies, DWA and CVWD, subject to Metropolitan's written consent may by exchange take delivery of SWP supplies available under Article 21 of their SWP Contracts, the Turn-back Pool Program, and non-SWP supplies they may acquire and convey through SWP facilities. Under the Metropolitan-CVWD Delivery and Exchange Agreement for 35,000 Acre-feet, up to 35,000 acre-feet of Metropolitan's SWP Table A supply can be requested annually by CVWD for delivery by exchange.

Figure 13 shows the year-end balance in Metropolitan’s Colorado River storage programs. The combined capacity of the Lake Mead Storage program and the DWA/CVWD advance delivery program is 2,300,000 acre-feet, plus the amount of water in storage in Lake Mead as a result of the Drop 2 Reservoir and Yuma Desalting Plant system efficiency projects.

**Figure 13: Colorado River Storage Programs, acre-feet**



In addition to the supply programs developed by Metropolitan, Metropolitan entered into an exchange agreement with the San Diego County Water Authority (SDCWA). On April 29, 1998, SDCWA and IID executed an agreement (the “IID-SDCWA Transfer Agreement”) for SDCWA’s purchase from IID of Colorado River water that is conserved within IID. An amendment to the IID-SDCWA Transfer Agreement, executed as one of the QSA related agreements, set the maximum transfer amount at 205,000 acre-feet in 2021, with the transfer gradually ramping up to that amount over an 18 year period, then stabilizing at 200,000 acre-feet per year beginning in 2023.

No facilities currently exist to deliver water directly from IID to SDCWA. Accordingly, in 1998, SDCWA entered into an exchange agreement with Metropolitan, pursuant to which SDCWA would have made available to Metropolitan at Lake Havasu on the Colorado River the conserved IID Colorado River water acquired by SDCWA from IID. Metropolitan would have delivered to SDCWA an equal volume of water from Metropolitan’s supplies. The 1998 SDCWA-Metropolitan Exchange Agreement was conditioned upon the State Legislature’s appropriation of \$235 million to Metropolitan for lining the earthen All-American and Coachella Valley Canals to conserve water that would otherwise seep into the soil. Upon completion of the canal lining, Metropolitan had the rights to the estimated 77,700 acre-feet per year of conserved water for 110 years (Canal Lining Water).

In 2003, SDCWA and Metropolitan amended their exchange agreement, pursuant to which Metropolitan assigned the rights to the Canal Lining Water for 110 years and the \$235 million in state funding to SDCWA in exchange for SDCWA's agreement to pay for deliveries of Metropolitan water exchanged for the Canal Lining Water and IID transfer water based on the conveyance rates charged to Metropolitan's member agencies.

## BUDGET HIGHLIGHTS

The budget for the Supply Programs increases over the budget period compared to FY 2019/20, primarily due to inflation and changing program utilization. This reflects the assumption of a 50 percent allocation on the SWP and approximately 733 to 745 TAF deliveries on the CRA.

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## DEMAND MANAGEMENT

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### OVERVIEW

Demand Management costs are Metropolitan’s expenditures for funding local water resource development programs, water conservation programs and all the Future Supply Actions Program. These demand management programs incentivize the development of local water supplies, the conservation of water to reduce the reliance on imported water, and funding of programs focused on removing barriers to the development of local water supplies. 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 or to Metropolitan’s own supply. Rather, the effect of these downstream programs is to produce a local supply of water for the local agencies.

Demand management is an integral function of Metropolitan’s services to its member agencies. It is not a service provided to Metropolitan’s member agencies. Instead, it is a function undertaken to provide full-service water and wheeling service to Metropolitan’s member agencies. By undertaking demand management, Metropolitan avoids and defers the need to provide more water or wheeling service to its agencies, and accordingly, also avoids and defers additional costs associated with providing that additional water or wheeling service.

The budgeted costs for Demand Management are as follows:

#### Demand Management Cost Summary<sup>1</sup>, \$ millions

	2018/19 Actuals	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Conservation Program <sup>2</sup>	\$16.6	\$43.0	\$43.0	—	\$43.0	—
Local Resources Program	\$30.9	\$40.8	\$19.3	(\$21.6)	\$20.3	\$1.1
Future Supply Actions / Stormwater Pilot	\$0.9	\$2.0	\$4.3	2.3	7.1	2.9

<sup>1</sup> Does not include Departmental costs reflected elsewhere in this Budget.

<sup>2</sup> Appropriated, annual Conservation expenditures are estimated to be \$25M per year.

Budgeted Demand Management costs reflect the financial commitment for the Conservation Program, conservation messaging, 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 AB 1668 and SB 606. These bills build on Governor Brown’s efforts to make water conservation a way of life in California and create a new foundation for long-term improvements in water conservation and drought

planning. They establish guidelines for efficient water use and a framework for the implementation and oversight of the new standards, which must be in place by 2022. The two bills strengthen the state's water resiliency in the face of future droughts with provisions that include:

- Establishing water use objectives and long-term standards for efficient water use that apply to urban retail water suppliers; comprised of indoor residential water use, outdoor residential water use, commercial, industrial and institutional (CII) irrigation with dedicated meters, water loss, and other unique local uses.
- Providing incentives for water suppliers to recycle water.
- Identifying small water suppliers and rural communities that may be at risk of drought and water shortage vulnerability and provide recommendations for drought planning.
- Requiring both urban and agricultural water suppliers to set annual water budgets and prepare for drought.

Metropolitan coordinates closely with its member agencies to achieve these provisions both at a retail agency level in compliance with legislative requirements and as a region.

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.

## SB 60 DIRECTED METROPOLITAN TO EXPAND DEMAND MANAGEMENT PROGRAMS

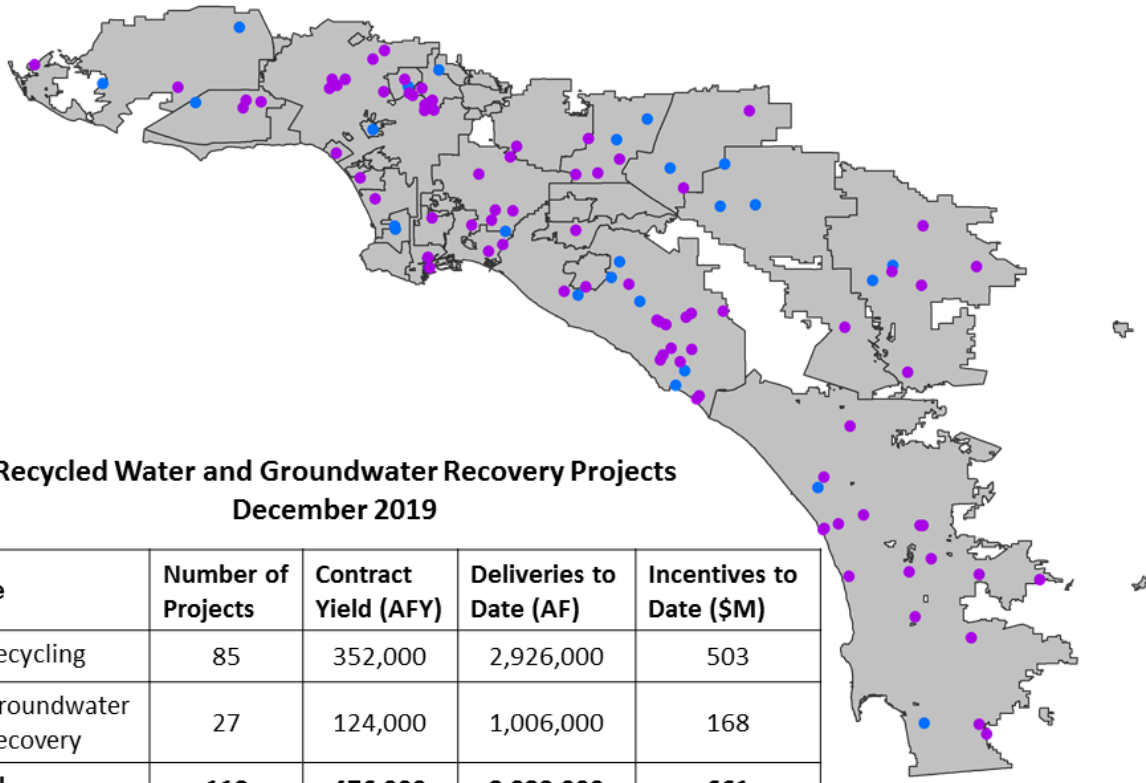
In September 1999, Governor Gray Davis signed SB 60 (Hayden) into law. SB 60 amended the Metropolitan Water District Act to direct Metropolitan to increase "sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures." SB 60 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 2018/19 alone, Metropolitan's service area achieved 1.6 million acre-feet of water savings from conservation, recycled water and groundwater recovery programs. The 1.6 million acre-feet of water savings from water management activities in fiscal year 2018/19 exceeded actual water transactions in the same period of 1.42 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 1982 Metropolitan has invested more than \$1.4 billion and Metropolitan's service area has achieved 6.9 million acre-feet of water savings.

Metropolitan’s Conservation 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 2018/19, the Conservation Program achieved 1.0 million acre-feet of saved water through new and existing conservation initiatives funded with incentives and maintained through plumbing codes. Cumulatively, through fiscal year 2018/19 the Conservation Program has achieved over 3.0 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 85 recycling projects and 27 groundwater recovery projects located throughout Metropolitan’s service area. Under the program, there are a total of 112 projects in Operation. Since inception in 1982 through FY 2018/19, Metropolitan has provided about \$497 million in incentives to produce about 2.9 million acre-feet of recycled water and approximately \$164 million to recover 991,000 acre-feet of degraded groundwater for municipal use.

Local Resources Program Projects



**Recycled Water and Groundwater Recovery Projects  
December 2019**

Type	Number of Projects	Contract Yield (AFY)	Deliveries to Date (AF)	Incentives to Date (\$M)
● Recycling	85	352,000	2,926,000	503
● Groundwater Recovery	27	124,000	1,006,000	168
<b>Total</b>	<b>112</b>	<b>476,000</b>	<b>3,932,000</b>	<b>661</b>



## BUDGET HIGHLIGHTS

The budget for the Demand Management costs is decreasing when comparing the Biennial Budget to FY 2019/20, due primarily to reduced expenditures for local resources programs as a result of the termination of some existing contracts. Historically, conservation activity peaks during years of shortfalls and diminishes during periods of wet years. The Demand Management is budgeted at \$48.5 million for FY 2020/21 and \$52.5 million in FY 2021/22.

The demand management budget is being funded this biennial period by the fiscal-year-end 2019/20 balance of the Water Stewardship Fund and the collection of the Water Stewardship Rate through the end of calendar year 2020. In April 2018, the Board directed staff to undertake a study to determine the most appropriate allocation of demand management costs. The Board also suspended the billing and collection of the Water Stewardship Rate from deliveries to SDCWA pursuant to the exchange agreement in 2018-2020. Staff undertook the cost allocation study with the help of two consultants. In December 2019, staff presented the recommendations for rate design alternatives to recover demand management costs. The Board did not select a rate design alternative and instead, directed staff to incorporate the 2019/20 fiscal-year-end balance of the Water Stewardship Fund to fund demand management costs for the next biennial period. The Water Stewardship Rate will also be collected through end of calendar year 2020, also providing funds for the Water Stewardship Fund. If the demand management program requires additional funding during the biennium budget period, the need for additional funding will be brought back to the Board.

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## DEVELOPMENTS

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### OVERVIEW

As of September 30, 2019, the northern Sierra precipitation was 136 percent of the 50-year average for the time of year. For the water year ended September 30, 2019, northern Sierra snow water content measured 163 percent of the 30-year seasonal peak average. On December 2, 2019, the DWR notified State Water Contractors that its initial calendar year 2020 allocation estimate of State Water Project water is 10 percent of contracted amounts, or 191,150 acre-feet for Metropolitan. (An acre-foot is the amount of water that will cover one acre to a depth of one foot and equals approximately 325,851 gallons, which represents the needs of three average families in and around the home for one year within Metropolitan's service area.) Changes to the 2020 allocation may occur and are dependent on the developing hydrologic conditions.

The Upper Colorado River Basin peak snowpack accumulation measured 133 percent of the 30-year seasonal peak average for the water year ended September 30, 2019. On October 11, 2019, the total system storage in the Colorado River Basin was 53 percent of capacity, an increase of six percent or 3.64 million acre-feet for the water year ended September 30, 2019. As of such date, the projected base supply of Colorado River water in calendar year 2020 was estimated to be 983,436 acre-feet.

Metropolitan's storage capacity, which includes reservoirs, conjunctive use and other groundwater storage programs within Metropolitan's service area and groundwater and surface storage accounts delivered through the SWP or CRA, is approximately 6.1 million acre-feet. In 2019, approximately 626,000 acre-feet of total stored water in Metropolitan's reservoirs and other storage resources was designated as emergency storage that was reserved for use in the event of supply interruptions from earthquakes or similar emergencies, as well as extended drought. Metropolitan replenishes its storage accounts when available imported supplies exceed demands. Effective storage management is dependent on having sufficient years of excess supplies to store water so that it can be used during times of shortage. Metropolitan forecasts that, with anticipated supply reductions from the SWP due to pumping restrictions, it will need to draw down on storage in about seven of ten years and will be able to replenish storage in about three years out of ten. As a result of increased SWP supplies and reduced demands from 2016 to 2019, Metropolitan's storage as of January 1, 2019 is estimated to be 2.98 million acre-feet. Due to the relatively higher SWP allocation in 2019 and improving conditions on the Colorado River, Metropolitan expects January 1, 2020 storage to be approximately 4.0 million acre-feet. As a result of a collaborative process between Metropolitan and its member agencies to evaluate Metropolitan's Emergency Storage Objective, by January 1, 2020 the total emergency storage in Metropolitan's reservoirs and other storage resources will be increased from 626,000 acre-feet to 750,000 acre-feet.

### Delta Conveyance

In 2015, the State and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed "California WaterFix" and "California EcoRestore," respectively. In this alternative approach, DWR and the Bureau of Reclamation would implement planned water conveyance improvements (California WaterFix) as a stand-alone project with the required habitat restoration limited to that directly related to construction mitigation. The associated costs of such mitigation would be underwritten by the public water agencies participating in the conveyance project. Ecosystem improvements and habitat restoration more generally (California EcoRestore) would be undertaken under a more phased approach than previously contemplated by the BDCP and would not be linked with the conveyance project or permits. As part of California EcoRestore, which was initiated in 2015, the State is pursuing more than 30,000 acres of Delta habitat restoration. Work on a number of EcoRestore projects is ongoing. Among other things,

EcoRestore is expected to implement restoration projects required by the biological opinions issued in 2008 and 2009 to which the SWP is subject. EcoRestore is estimated to cost \$300 million in the first four years, and includes amounts being paid by the State Water Contractors, including Metropolitan, for the costs of habitat restoration required to mitigate State and federal water project impacts pursuant to the biological opinions.

In July 2017, DWR certified a final EIR and approved the California WaterFix as an improvement to the SWP. On February 12, 2019, then recently elected Governor Gavin Newsom presented at the State of the State address a conceptual proposal supporting a single-tunnel configuration for new Bay-Delta conveyance instead of the two-tunnel California WaterFix. Subsequently, on April 29, 2019, Governor Newsom issued an executive order directing identified State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system. Among other things, the Governor's executive order directed the State agencies to inventory and assess the current planning for modernizing conveyance through the Bay-Delta with a new single tunnel project. Following the Governor's executive order, in May 2019, DWR withdrew approval of the California WaterFix project and decertified the EIR. In August 2019, DWR terminated the last permit associated with the project.

DWR is pursuing a new environmental review and planning process for a single tunnel project to modernize the State Water Project's Bay-Delta conveyance. The formal environmental review process is expected to begin with a Notice of Preparation under CEQA anticipated to be issued by DWR in the late 2019 timeframe. Planning, environmental review and conceptual design work by DWR for a proposed single tunnel project is expected to take approximately 18 to 36 months. A single tunnel project to be proposed under the new planning effort and environmental review process to be undertaken by DWR may be designed and configured differently than previously analyzed single tunnel alternatives. Information regarding the Delta conveyance project is located on Metropolitan's website at <http://www.mwdh2o.com/DocSvcPubs/DeltaConveyance/index.html>.

## Regional Recycled Water Program

In 2015, Metropolitan executed an agreement with the Sanitation Districts of Los Angeles County (LACSD) to implement a demonstration project and to establish a framework of terms and conditions of a regional recycled water program (the "RRWP"). The objectives of the RRWP are to enable the potential reuse of up to 150 million gallons per day (mgd) of treated effluent from LACSD's Joint Water Pollution Control Plant (JWPCP). Purified water from a new advanced treatment facility could be delivered through pipelines to the region's groundwater basins, industrial facilities, and two of Metropolitan's treatment plants. Construction of a 0.5 mgd advanced water treatment demonstration plant was approved in 2017 and was completed in August 2019. Testing and operation of the plant to confirm treatment costs and provide the basis for regulatory approval of the proposed treatment process and technical recommendations concerning design, operation, and optimization of the full-scale RRWP will be completed in 2020. The RRWP will have the flexibility to be expanded in the future to implement Direct Potable Reuse (DPR) through raw water augmentation at the two Metropolitan treatment plants. The State Water Resources Control Board Division of Drinking Water is in the process of developing a framework for the regulation of DPR in California, and the current anticipated date for promulgation is 2023. Information regarding the RRWP is located on Metropolitan's website at <http://www.mwdh2o.com/DocSvcPubs/rrwp/index.html#home>.

## CAPITAL FINANCING

### OVERVIEW

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

The budgeted costs for capital financing are as follows:

#### Capital Financing Cost Summary, \$ millions

	2018/19 Actuals	2019/20 Budget	2020/21 Proposed	Change from 2019/20	2021/22 Proposed	Change from 2020/21
Debt Service, net of BABs Reimbursement	\$280.9	\$309.6	\$285.8	(\$23.9)	\$292.7	\$6.9
GO Bond Debt Service	13.5	14.3	7.3	(7.1)	8.2	1.0
SRF Loan	—	—	—	—	—	—
Debt Administration	5.7	6.9	5.7	(1.3)	6.1	0.4
PAYGO	128.1	120.0	135.0	15.0	135.0	—
<b>Total<sup>1</sup></b>	<b>\$428.2</b>	<b>\$450.9</b>	<b>\$433.7</b>	<b>(\$17.2)</b>	<b>\$442.0</b>	<b>\$8.3</b>

<sup>1</sup> 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 PAYGO amounts to support the 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) expenditures for FY 2020/21 and FY 2021/22 which includes Minor Capital Projects are estimated to be \$225.0 million in each fiscal year. They are proposed to be funded by current operating revenues (PAYGO) and revenue bond proceeds. The FY 2020/21 CIP expenditures are \$25 million higher than the FY 2019/20 budget, as are the FY 2021/22 CIP expenditures. The largest areas of expenditures in the Biennial Budget are infrastructure refurbishment and replacement and infrastructure upgrades.

The CIP planned spending as developed by Engineering Services and presented in the Capital Expenditures section of the budget is estimated to be \$500 million over the biennium. The budget assumes that 90% of planned engineering spending or \$225 million in each fiscal year will occur as recent changes in the capital appropriation process streamlined capital appropriations, expediting capital project expenditures.

## PAYGO Percentage of Funding, \$ millions

	<b>2019/20 Budget</b>	<b>2020/21 Proposed</b>	<b>2021/22 Proposed</b>
Capital Investment Plan expenses <sup>1</sup>	\$200.0	\$225.0	\$225.0
Project Funding:			
New Bond Issues	80.0	90.0	90.0
Prior Bond Funds/Construction Fund	—	—	—
Grants and Loans Funds	—	—	—
Operating Revenues (PAYGO)	120.0	135.0	135.0
PAYGO Percentage of Funding	60.0%	60.0%	60.0%

<sup>1</sup> CIP appropriation is \$500M over the biennium. Estimated CIP expenditures are estimated to be \$225M per year.

In FY 2020/21 and FY 2021/22, the percentage of capital that is funded by operating revenues is set at 60% consistent with the FY 2018/19 and FY 2019/20 ten-year forecast for this time period. The projected percentage of capital funded from operating revenues will range from 60 percent to 70 percent over the ten years of the long-range forecast.

## OUTSTANDING DEBT

Metropolitan has total debt outstanding of \$4.0 billion as of December 31, 2019. Metropolitan's debt issues are summarized below and discussed in detail thereafter.

## Outstanding Debt, \$'s, as of December 31, 2019

Issue	Debt Outstanding
1993 Series A, Water Revenue Refunding Bonds	12,225,000
2000 Authorization, Series B-3, Water Revenue Bonds (1)	88,800,000
2010 Authorization, Series A, Water Revenue Bonds (2)	250,000,000
2010 Series B, Water Revenue Refunding Bonds	56,005,000
2011 Series B, Water Revenue Refunding Bonds	1,345,000
2011 Series C, Water Revenue Refunding Bonds	118,800,000
2012 Series A, Water Revenue Refunding Bonds	181,180,000
2012 Series C, Water Revenue Refunding Bonds	19,835,000
2012 Series F, Water Revenue Refunding Bonds	48,885,000
2012 Series G, Water Revenue Refunding Bonds	111,890,000
2013 Series D, Special Variable Rate Water Revenue Refunding Bonds (1)	87,445,000
2014 Series A, Water Revenue Refunding Bonds	37,870,000
2014 Series C-2, Water Revenue Refunding Bonds	14,020,000
2014 Series C-3, Water Revenue Refunding Bonds	2,810,000
2014 Series D, Special Variable Rate Water Revenue Refunding Bonds (1)	38,465,000
2014 Series E, Water Revenue Refunding Bonds	86,060,000
2014 Series G-5, Water Revenue Refunding Bonds	6,205,000
2015 Authorization, Series A, Water Revenue Bonds	204,120,000
2015 Series A-1, Special Variable Rate Water Revenue Refunding Bonds (1)	94,450,000
2015 Series A-2, Special Variable Rate Water Revenue Refunding Bonds (1)	94,450,000
2016 Series A, Water Revenue Refunding Bonds	239,455,000
2016 Authorization, Series A, Subordinate Water Revenue Bonds (Taxable) (1)	175,000,000
2016 Series B-1, Special Variable Rate Water Revenue Refunding Bonds (1)	51,835,000
2016 Series B-2, Special Variable Rate Water Revenue Refunding Bonds (1)	51,835,000
2017 Series A, Authorization Water Revenue Bonds (1)	80,000,000
2017 Series A, Subordinate Water Revenue Refunding Bonds	238,015,000
2017 Series B, Subordinate Water Revenue Refunding Bonds	178,220,000
2017 Series C, Subordinate Water Revenue Bonds (1)	80,000,000
2017 Series D, Subordinate Water Revenue Refunding Bonds (1)	95,630,000
2017 Series E, Subordinate Water Revenue Refunding Bonds (1)	95,625,000
2018 Series A, Subordinate Water Revenue Refunding Bonds	94,675,000
2018 Series A-1, Special Variable Rate Water Revenue Refunding Bonds (1)	104,935,000
2018 Series A-2, Special Variable Rate Water Revenue Refunding Bonds (1)	104,935,000
2018 Series B, Subordinate Water Revenue Bonds	64,345,000
2018 Series B, Water Revenue Refunding Bonds	137,485,000
2019 Series A, Water Revenue Refunding Bonds	218,090,000
2019 Series A, Subordinate Water Revenue Refunding Bonds	241,530,000
<b>Total Revenue Bonds</b>	<b>3,806,470,000</b>
2010 Series A, WaterWorks General Obligation Refunding Bonds	18,735,000
2014 Series A, WaterWorks General Obligation Refunding Bonds	12,560,000
2015 Series A, WaterWorks General Obligation Refunding Bonds	16,755,000
<b>Total General Obligation Bonds</b>	<b>48,050,000</b>
Subordinate Short-Term Revenue Refunding Certificates, Series 2019 A (Taxable)	46,800,000
2019 Short-Term Revolving Credit Facility Notes (1)	100,000,000
Total Revolving Note Program	146,800,000
<b>Total Debt:</b>	<b>4,001,320,000</b>

(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 2020/21 are budgeted at \$298.7 million and includes \$7.3 million in General Obligation bond debt service, \$285.8 million in revenue bond debt service, and \$5.7 million for debt administration costs.

Debt Service payments in FY 2021/22 are budgeted at \$307.0 million and include \$8.2 million in General Obligation bond debt service, \$292.7 million in revenue bond debt service, and \$6.1 million for debt administration costs. Total debt service costs in FY 2021/22 are expected to be \$8.3 million greater than the FY 2020/21 payments. Interest payments on synthetic fixed rate debt were calculated at their associated swap rates. Interest rates on variable rate debt were calculated at 1.70 percent for FY 2020/21 and FY 2021/22.

Outstanding variable rate debt on December 31, 2019 was approximately \$1,390.2 million, including bonds bearing interest in the Index Mode, special variable rate bonds initially designated as self-liquidity bonds, variable rate demand obligations, and revolving note programs. Of the \$1,390.2 million, \$493.6 million are treated by Metropolitan as fixed rate debt by virtue of interest rate swap agreements. The remaining \$896.6 million of variable rate obligations represent approximately 22.7 percent of total outstanding water revenue bonds and revolving notes.

Going forward, Metropolitan will finance a portion of its construction program through issuance of fixed-rate debt. Metropolitan intends to issue approximately \$90 million of new debt in FY 2020/21 and FY 2021/22, respectively.

## DEBT RATINGS

Credit risk is the risk that a financial loss will be incurred if a counterparty to a transaction does not fulfill 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 Metropolitan's senior lien 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. Metropolitan's Master Subordinate Bond Resolution, Resolution 9199, adopted by the Board in March 2016, and subsequently supplemented and amended, also incorporates limitations on additional revenue bonds.

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, 2019, outstanding general obligation bonds, water revenue bonds and other evidences of indebtedness in the amount of \$4.0 billion represented approximately 0.13 percent of the FY 2019/20 taxable assessed valuation of \$3,092 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 position of Metropolitan at June 30, 2019 was \$6.8 billion. The aggregate amount of revenue bonds outstanding as of December 31, 2019 was \$3.8 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 senior/subordinate lien 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 senior/subordinated lien debt service on all revenue bonds and other senior debt. The target is 2.0 times. In FY 2020/21 and FY 2021/22, the projected debt coverage ratio is 1.5 and 1.6 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 2020/21 and FY 2021/22, the projected fixed charge coverage ratio is 1.5 and 1.6, respectively. These levels help maintain favorable credit ratings and access to the capital markets at low cost.

## BUDGET HIGHLIGHTS

The FY 2020/21 and FY 2021/22 Capital Financing budget is decreasing from the FY 2019/20 budget due to lower debt service expenditures overall. Debt service costs decrease by \$24 million over the biennium compared to the FY 2019/20 budget primarily as a result of favorable refundings. Lower overall Capital Financing costs provide increased financial flexibility and resiliency.

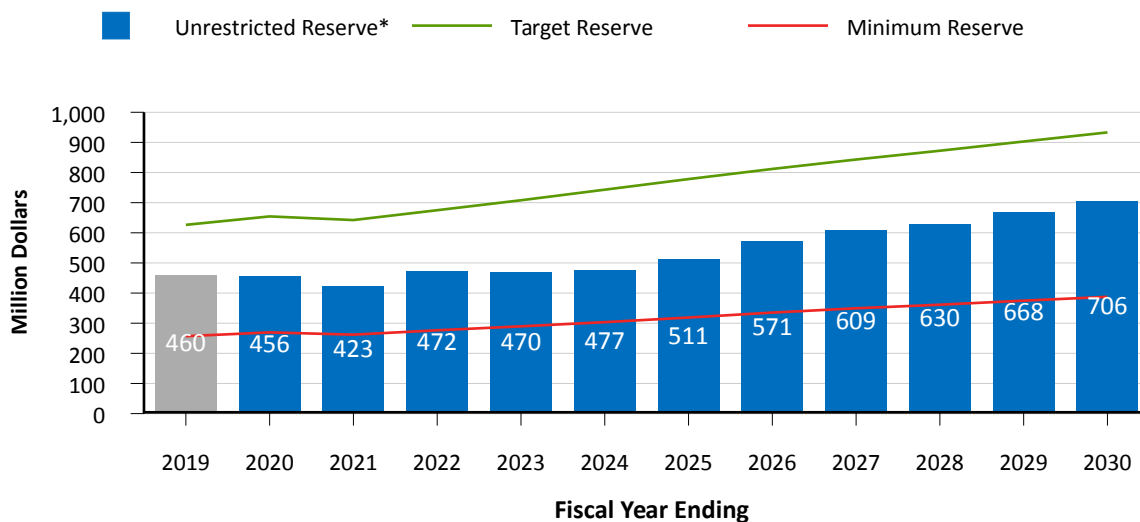


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# TEN-YEAR FINANCIAL FORECAST

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 forecast 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. The Ten-Year Financial Forecast is updated with every budget to reflect the most up-to-date planning assumptions and projections.

## Projected Financial Indicators



Ave Rate Increase	3.0%	3.0%	5.0%	5.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Water Transactions** (MAF)	1.42	1.55	1.60	1.60	1.60	1.64	1.69	1.74	1.74	1.74	1.75	1.75
Rev. Bond Cvg	1.4	1.5	1.5	1.6	1.6	1.8	2.0	2.2	2.1	2.1	2.2	2.3
Fixed Chg Cvg	1.4	1.4	1.5	1.6	1.7	1.8	1.9	1.9	1.8	1.6	1.7	1.7
PAYGO, \$M	128	30	135	135	180	210	210	210	210	210	210	210

\* includes Revenue Remainder and Water Rate Stabilization Fund

\*\* includes water sales, exchanges and wheeling

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 target of 1.2 times throughout the ten-year period. Revenue bond coverage will meet the target of 2.0 times beginning in FY 2024/25. Reserve levels will

be above minimums as established by board policy; PAYGO expenditures will range to fund between 60 and 70 percent of the Capital Investment Plan (CIP) expenditures; and projected overall rate increases are expected to range between 3 to 5 percent.

The estimated overall rate increases for the ten-year forecast is a result of increases in operating and maintenance costs, higher State Water Contract (SWC) costs, higher capital financing costs, increased costs for demand management, and higher power costs for the State Water Project (SWP) and Colorado River Aqueduct (CRA). Annual expenditures are expected to increase from \$1.8 billion in FY 2020/21 to \$2.5 billion by FY 2029/30, or an annual average increase of about 4 percent. During this same period, capital investments are expected to be about \$2.9 billion. To finance these capital investments, the ten-year forecast anticipates funding \$1.9 billion of the CIP from water revenues or PAYGO. The balance of the CIP, or \$0.9 billion, will 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 and the anticipated 2020 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.
- Building storage in wet and normal years to manage risks and drought.
- Funding an estimated \$2.9 billion capital program that provides projects meeting water quality, reliability, stewardship and information technology directives.
- Funding for Metropolitan's planned contribution for Delta conveyance project planning costs of \$100 million are included in the years FY 2021 through FY 2023. The focus over the next two years will be supporting the California Department of Water Resources as it seeks permits for a Delta conveyance project; participating in the Delta Conveyance Design and Construction Authority; and continuing to put forward sound scientific research to help inform and improve Delta management decisions. If staff determines that Metropolitan's appropriate contribution toward planning activities should exceed the amount included in the Biennial Budget for FY 2021 and 2022, the General Manager will request authorization from the Board for additional funding. Metropolitan's planning contribution for FY 2023 will be considered with the next biennial budget to be considered in FY 2022. Long-term costs for a Delta conveyance project have not been included in the forecast. At a later date staff will recommend that the Board separately consider Metropolitan's participation in a new Delta conveyance project after project planning has progressed further.
- Funding for the proposed Regional Recycled Water Program of \$30 million for preparation of a programmatic environmental impact report is included in FY2021 and FY2022. This is the next step before the Board will be fully informed and ready to make a decision on if, how, and when to proceed with further investments in this project. Long-term costs of the RRWP have not been included in the forecast.

## ASSUMPTIONS FOR THE TEN-YEAR FORECAST

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

Fiscal Year Ending	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Water Transactions, MAF *	1.60	1.60	1.60	1.64	1.69	1.74	1.74	1.74	1.75	1.75
CRA Diversions, TAF	745	733	764	991	982	982	991	980	980	980
SWP allocation, %	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
CIP, \$M	225	225	300	300	300	300	300	300	300	300
PAYGO, \$M	135	135	180	210	210	210	210	210	210	210
Interest on investments, %	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Interest rate, fixed bonds, %	3.70%	3.70%	4.00%	4.00%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Interest rate, variable bonds, %	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%

\* includes water sales, exchanges, and wheeling

Metropolitan's principal sources of water supplies are the SWP and the Colorado River. Metropolitan receives water delivered from the SWP under SWC provisions, including Table A allocation, 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 reviewed to maintain affordability throughout the ten-year period. CIP projects have been carefully reviewed, scored and ranked to continue the ability to deliver water reliably and safely while meeting all regulatory requirements.

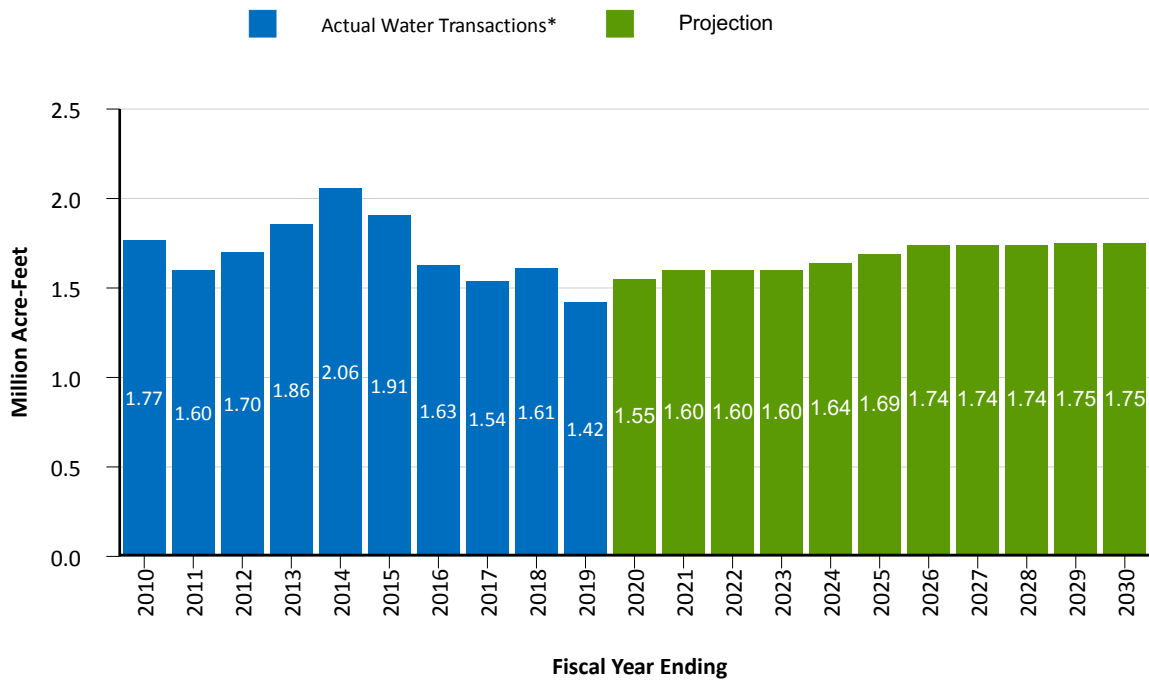
The inflation factor is based on forecasts by economists and is applied to Metropolitan's O&M expenses, such as chemicals, but excluding labor and additives, which are based on the Memoranda of Understanding for the represented employees. The interest rate applicable to Metropolitan's investment portfolio 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.

## FORECAST OF WATER TRANSACTIONS

Revenues from water transactions (sales, exchanges, and wheeling) provide approximately 80 percent of the revenues necessary to support Metropolitan's capital and operating costs. The 2015 IRP Update and recent recalibrations by Water Resource Management provides the basis for the water transactions forecast over the ten years. It is expected that demand for Metropolitan supplies will increase over the ten-year period, from 1.60 million acre-feet in FY 2020/21 to 1.75 million acre-feet by FY 2029/30. This forecast includes the exchange water delivered to the San Diego County Water Authority (SDCWA) pursuant to the 2003 Amended and Restated Exchange Agreement (exchange water). The 2015 IRP Update contemplates continued investment in local resources and retail and regional conservation measures to meet state policy regarding water use efficiency. Under the 2015 IRP Update, conservation and water efficiency initiatives will result in reductions of regional water use to the targets, which reflect efforts to meet state policies enacted to make conservation a way of life in California. Local resource augmentation will result in additional local supply, including production already anticipated from existing programs. These local supplies and increased conservation and water use efficiency reduce demand on Metropolitan and the need for Metropolitan to import additional water.

The figure below shows historic and forecast water transactions, including the exchange water and wheeling.

### Water Transactions, MAF



\* includes water sales, exchanges, and wheeling

## SOURCES OF FUNDS

### Revenues

Through FY 2029/30, revenues from rates and charges, which include the Readiness-to-Serve (RTS) Charge, Capacity Charge, and water transaction revenues, collected from the member agencies will account for approximately 91 percent of total revenues. Total revenues are projected to increase from about \$1.8 billion in FY 2020/21 to \$2.6 billion in FY 2029/30. This increase is almost entirely attributed to increases in water rates and charges.

### Water Rates and Charges

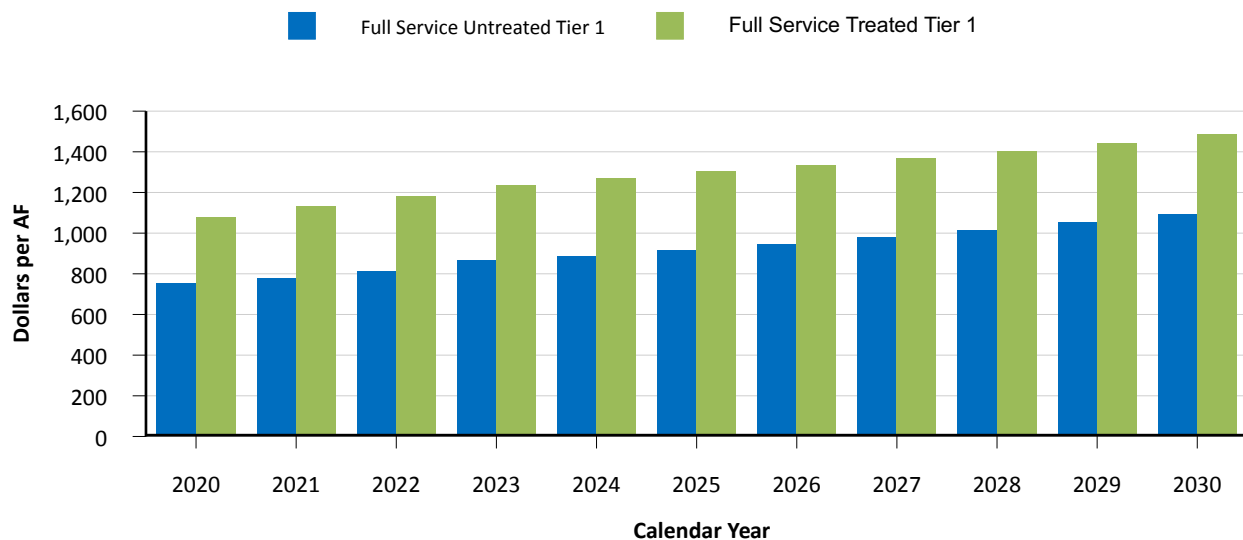
The table below shows the estimated unbundled water rates and charges under the current rate structure. Components of the rate structure may increase at different rates depending on the costs recovered. The full-service treated Tier 1 water rate is estimated to be \$1,486 per acre-foot by January 1, 2030, compared to \$1,078 per acre-foot on January 1, 2020, an average increase of 3.3 percent per year over the ten-year period.

Rates & Charges Effective January 1st	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Tier 1 Supply Rate (\$/AF)	\$208	\$246	\$247	\$247	\$247	\$247	\$247	\$250	\$260	\$269	\$278
Tier 2 Supply Rate (\$/AF)	\$295	\$285	\$285	\$285	\$285	\$285	\$285	\$285	\$285	\$285	\$285
System Access Rate (\$/AF)	\$346	\$374	\$397	\$397	\$403	\$421	\$441	\$459	\$478	\$499	\$518
Water Stewardship Rate (\$/AF)	\$65	\$—	\$—	\$54	\$63	\$69	\$73	\$79	\$82	\$84	\$89
System Power Rate (\$/AF)	\$136	\$160	\$170	\$170	\$175	\$179	\$185	\$192	\$193	\$200	\$211
Full Service Untreated Volumetric Cost (\$/AF)											
Tier 1	\$755	\$780	\$814	\$868	\$888	\$916	\$946	\$980	\$1,013	\$1,052	\$1,096
Tier 2	\$842	\$819	\$852	\$906	\$926	\$954	\$984	\$1,015	\$1,038	\$1,068	\$1,103
Treatment Surcharge (\$/AF)	\$323	\$351	\$369	\$369	\$382	\$390	\$390	\$390	\$390	\$390	\$390
Full Service Treated Volumetric Cost (\$/AF)											
Tier 1	\$1,078	\$1,131	\$1,183	\$1,237	\$1,270	\$1,306	\$1,336	\$1,370	\$1,403	\$1,442	\$1,486
Tier 2	\$1,165	\$1,170	\$1,221	\$1,275	\$1,308	\$1,344	\$1,374	\$1,405	\$1,428	\$1,458	\$1,493
Readiness-to-Serve Charge (\$M)	\$136	\$136	\$144	\$144	\$148	\$153	\$163	\$166	\$177	\$179	\$179
Capacity Charge (\$/cfs)	\$8,800	\$11,200	\$12,500	\$12,500	\$15,000	\$15,100	\$15,300	\$16,000	\$16,000	\$16,000	\$16,000

\*Water Stewardship Rate applies to CY 2020 and will not be collected in CYs 2021 and 2022. The volumetric rates shown for CYs 2023-2030 represent a placeholder until the Board approves a method to recover demand management costs from CY 2023 forward.

In 2021 and 2022, the Water Stewardship Rate is not included in the ten-year projection of rates and charges, as a result of Metropolitan’s Board action in December 2019. The Board directed staff: (1) to incorporate the use of the 2019/20 fiscal-year-end balance of the Water Stewardship Fund to fund all demand management costs in the proposed FY 2020/21 and 2021/22 biennial budget; and (2) to not incorporate the Water Stewardship Rate, or any other rates or charges to recover demand management costs, with the proposed rates and charges for CYs 2021 and 2022. Therefore, in those two years, the full-service rate will not include the Water Stewardship Rate element and the rate for wheeling service will be inapplicable. It is anticipated that Metropolitan will undergo a rate structure review over the next biennium period and as a result the costs of demand management will be recovered through a different method replacing the Water Stewardship Rate, potentially in connection with an updated rate structure. The following figure shows the volumetric cost per acre-foot for Tier 1 Full Service untreated water and Tier 1 Full Service treated water.

Volumetric Cost, \$ AF



Property tax revenue is expected to increase from \$139.9 million in FY 2020/21 to 156.4 million in FY 2029/30. This projection assumes the Board maintains the ad valorem tax rate at 0.0035 percent of assessed valuations, by determining the inapplicability of MWD Act Section 124.5, and assessed value increases by 2.5 percent per year. Property tax revenue is used to pay Metropolitan’s general obligation bonds and a portion of the SWC capital costs. By FY 2022/23 almost all of the revenues will be used to pay SWC costs as voter-approved general obligation bonds mature.

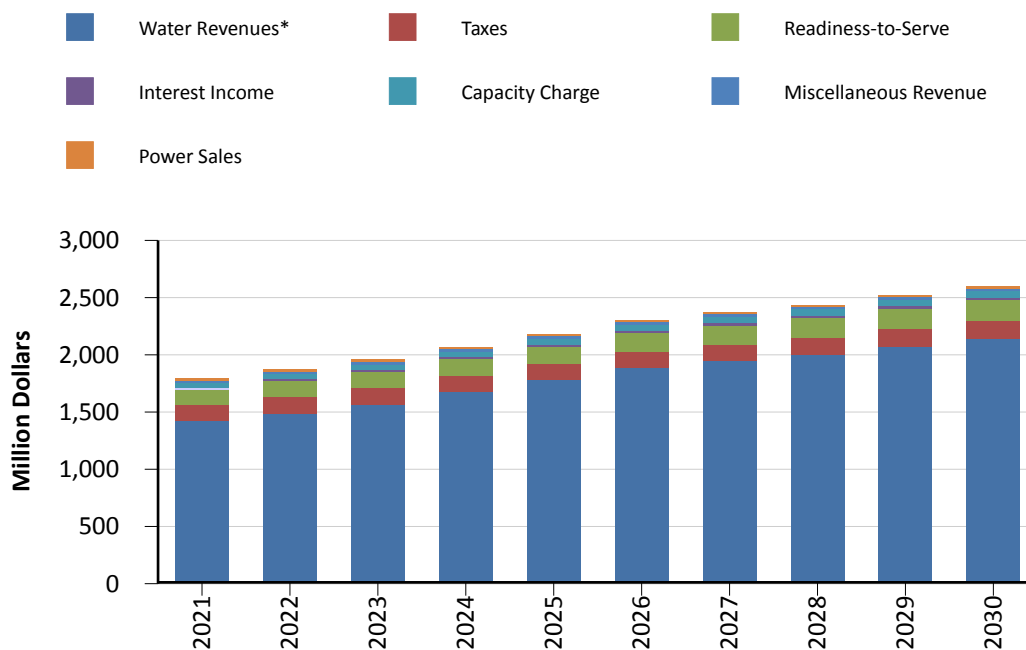
Power sales from Metropolitan’s hydroelectric power recovery plants and the CRA are projected to average about \$17.5 million per year over this ten-year period. Metropolitan has 16 small hydroelectric plants on its distribution system. These revenues are dependent on the amount of water that flows through Metropolitan's distribution system and the price paid. Power from some of the plants is sold under existing contracts that are priced higher compared to the prices currently being offered for renewable power. CRA revenues derive from the management of loads and resources on the CRA; energy not needed to meet hourly CRA loads is sold into the California Independent System Operator.

Interest income is projected to increase from \$18.0 million in FY 2020/21 to \$25.5 million in FY 2029/30 as a result of increased balances with returns of 1.5 percent annually from FY 2020/21 to FY 2029/30. 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 revenue is forecasted to average \$20.7 million over the ten-year forecast period. Miscellaneous revenue includes items such as leases, late fees, and water transactions with non-member agencies including Coachella Valley Water District and United States Bureau of Reclamation.

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

Revenue Forecast, \$ millions



\* includes revenues from water sales, exchanges and wheeling

### Other Funding Sources

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

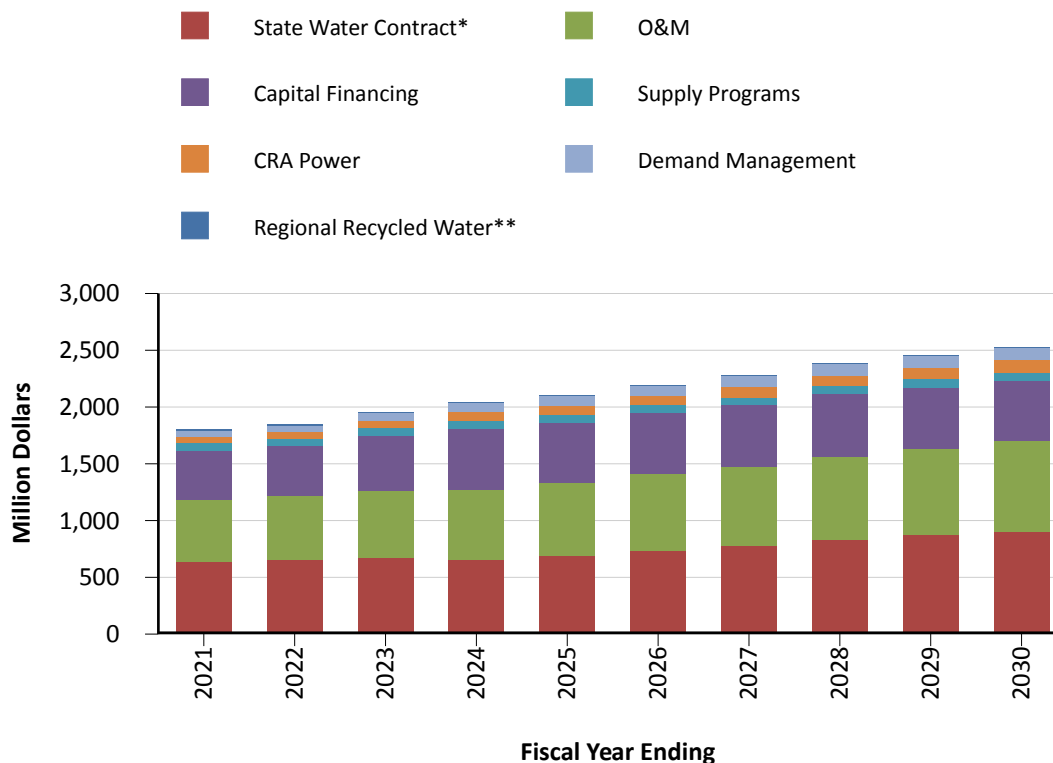
## USES OF FUNDS

Over the next ten years, total annual expenses are projected to range from \$1.8 billion in FY 2020/21 to \$2.5 billion in FY 2029/30.

### Expenses

Expenses are grouped into eight major categories: SWC, O&M, Regional Recycled Water, Delta Conveyance, 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 2020/21 to FY 2029/30. The second figure following shows the comparison of FY 2020/21 to FY 2029/30 in terms of the contribution of expenses to the total.

#### Expense Forecast, \$ millions

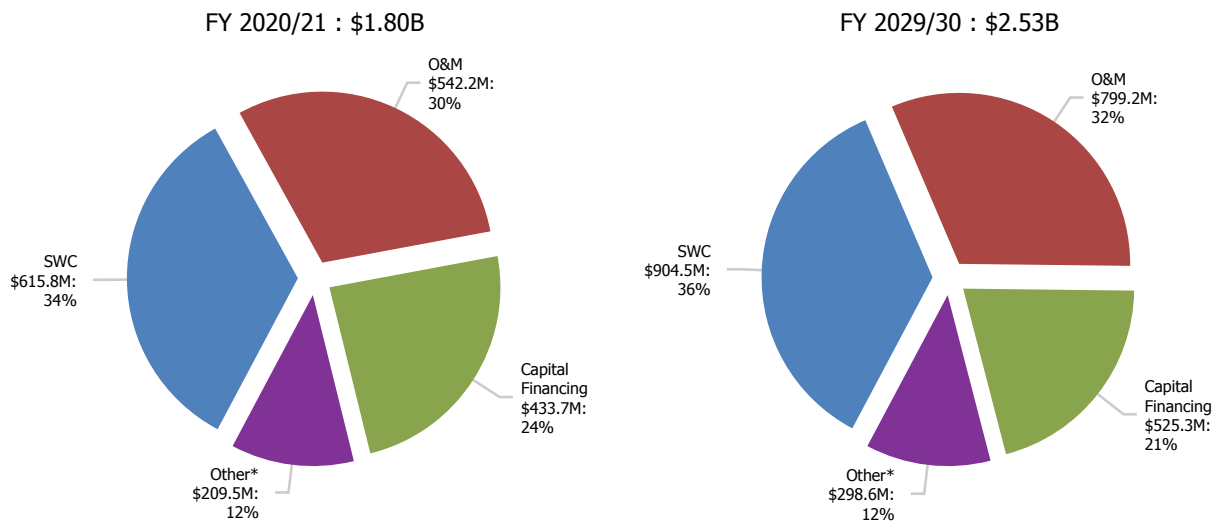


\* includes Delta conveyance planning costs

\*\* only includes Regional Recycled Water Program planning costs



### Expenditure Forecast, Contribution by Major Area



\* includes planning costs for Regional Recycled Water Program and Delta conveyance project

### Regional Recycled Water Program Planning Costs

The ten year forecast includes planning costs for the Regional Recycled Water Program at \$15 million per year for FY 2020/21 and FY 2021/22 for preparation of a programmatic environmental impact report. This is the next step before the Board will be fully informed and ready to make a decision on if, how, and when to proceed with further investments in this project.

### State Water Project

Metropolitan is one of 29 agencies that contract with the State of California for participation in the SWP's water supply function<sup>1</sup>. 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 \$615.8 million in FY 2020/21 to \$904.5 million in FY 2029/30, as shown in the figure below. SWC costs account for 34 percent of Metropolitan's expenses in FY 2020/21, growing to 36 percent in FY 2029/30. The remainder of the fixed costs is based upon information provided by the DWR, and is associated with Transportation Capital and Minimum Operations & Maintenance, and the Delta Water Supply Capital and Minimum Operations & Maintenance. 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 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.

<sup>1</sup> The term "supply" is used to distinguish between other functions of the SWP such as recreation and flood control. The term is not used to distinguish between the conservation (supply) and transportation (conveyance) functions of the SWP under the State Water Contracts for participation in the SWP.

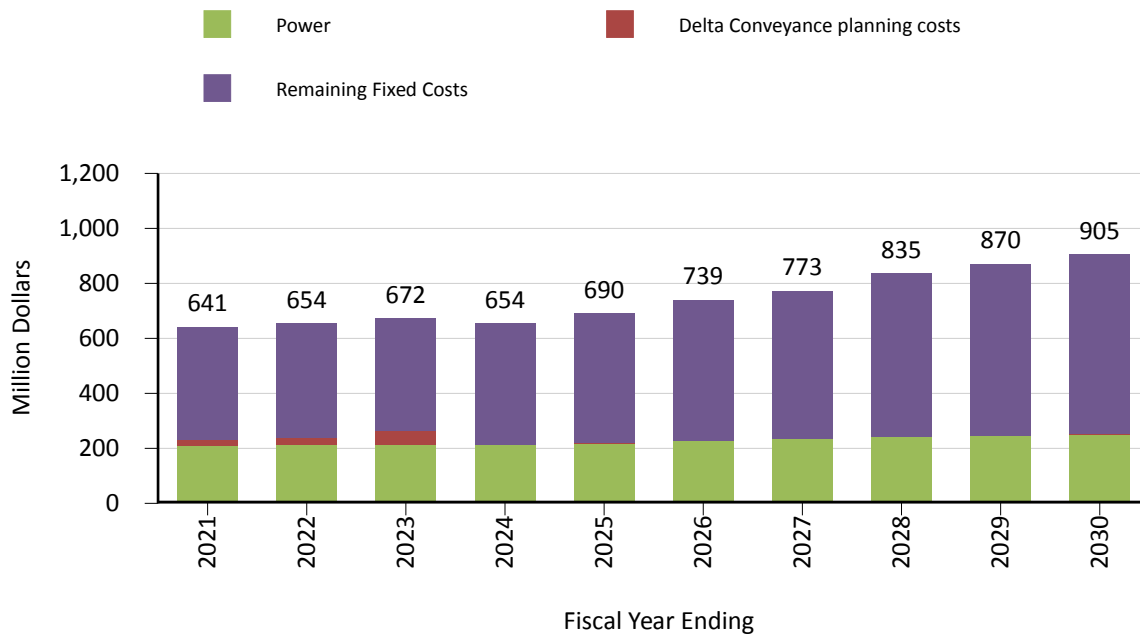
The SWP owns generating resources, including the Hyatt complex, recovery generation units on the California Aqueduct, and a contract for power from the Kings River Conservation District's Pine Flat generating facility. The SWP is a participant in the Lodi Energy Center, a natural gas-fired combined cycle 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 878 MAF per year.

On April 29, 2019, Governor Newsom issued an executive order directing State agencies to develop a single-tunnel Bay-Delta conveyance facility instead of the approved WaterFix project. In light of this, the WaterFix project is no longer included in the ten year projection. Funding for Metropolitan's contribution for Delta conveyance project planning activities of \$100 million is included in the years FY 2021 through FY 2023. The focus over the next two years will be supporting the DWR as it seeks permits for a Delta conveyance project; participating in the Delta Conveyance Design and Construction Authority; and continuing to put forward sound scientific research to help inform and improve Delta management decisions. If staff determines that Metropolitan's appropriate contribution toward planning activities should exceed the amount included in the Biennial Budget for FY 2021 and 2022, the General Manager will request authorization from the Board for additional funding. Metropolitan's planning contribution for FY 2023 will be considered with the next biennial budget to be considered in FY 2022. Long-term costs for a Delta conveyance project has not been included in the forecast. At a later date staff will recommend that the Board separately consider Metropolitan's participation in a new Delta conveyance project after project planning has progressed further.

Please refer to the section on the SWP for additional details on SWP expenses.

The total SWC costs are shown in the figure below. The SWP is described under the Non-Departmental Budgets section of the Biennial Budget.

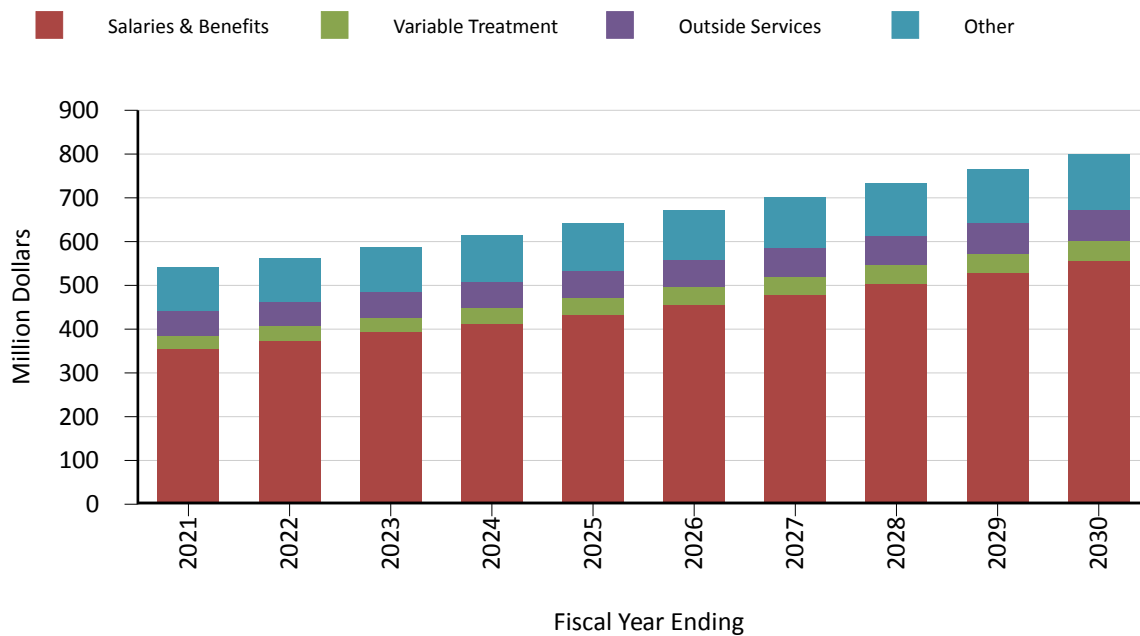
SWP Forecast, \$ millions



## Operations and Maintenance

O&M costs are projected to increase from \$542 million in FY 2020/21 to \$799 million in FY 2029/30. This represents an average annual increase of 4.4 percent from FY 2020/21. During this time frame, inflation is assumed to be 3.0 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.

### O&M Forecast, \$ millions



## Demand Management

Demand management costs include funding for the Local Resource Programs (LRP), the Conservation Program, Future Supply Actions Program and the Stormwater Pilot Program. These expenses are projected to increase from \$48.5 million in FY 2020/21 to \$114.1 million in FY 2029/30. The LRP costs are projected increase from \$19.3 million in FY 2020/21 to \$69.6 million in FY 2029/30. The projections anticipate that new projects will receive funding to meet IRP goals. The Conservation costs are projected to be \$25 million per year in the budget years (with authorization to spend up to \$43 million per year) and \$43 million per year for the remainder of the 10-year period. This program provides continued funding of residential, commercial, and outdoor conservation programs, and conservation messaging. In addition, Future Supply Actions and Stormwater Pilot costs average about \$3 million per year throughout the 10-year period.

Demand Management programs are described under the Non-Departmental Budgets section of the Biennial Budget.

### CRA Power Costs

CRA Power costs are projected to increase from \$52.2 million in FY 2020/21 to \$111.9 million in FY 2029/30. 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.

Colorado River diversions are expected to average about 913 TAF over the ten-year period, slightly more than deliveries as water is stored.

Power costs are described under the Non-Departmental Budgets section of the Biennial Budget.

### Supply Programs

Supply programs increase slightly over the ten-year period from \$68.7 million in FY 2020/21 to \$72.5 million in FY 2029/30. The estimates represent expenses for average year 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.

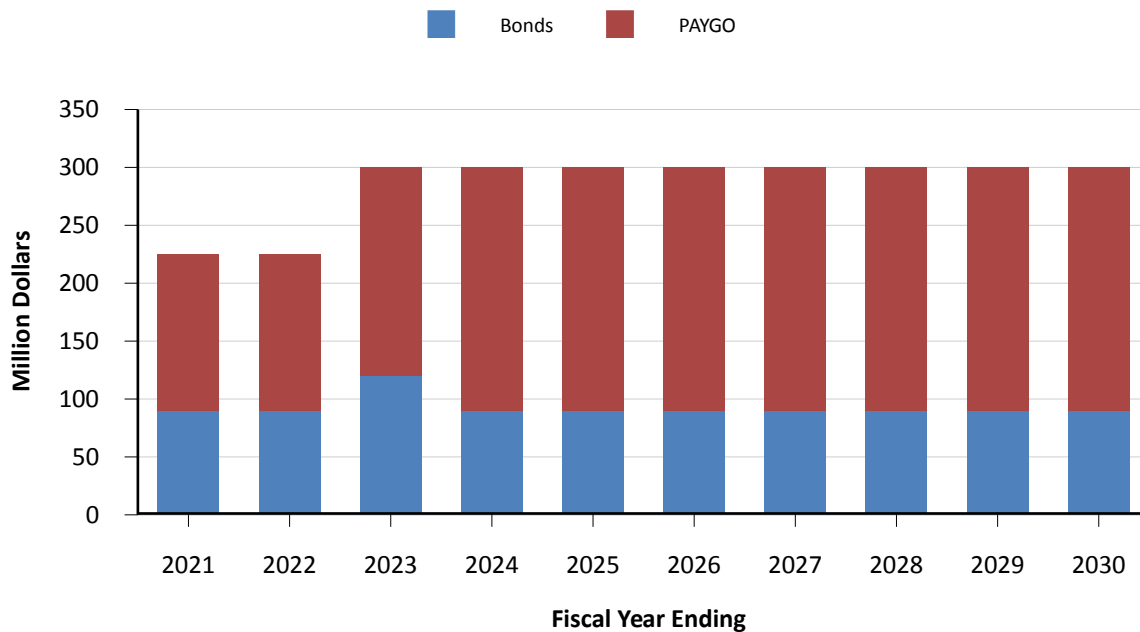
A description of Metropolitan’s Supply Programs is provided under the Non-Departmental section of the Biennial Budget.

### Capital Investment Plan

The ten-year projected CIP through FY 2029/30 is estimated at \$2.9 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 and compliance with regulatory requirements. 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 to 70 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 helps ensure that Metropolitan meets its coverage targets by generating a margin of revenues over operating and debt expenses. 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 from which they benefit, and not deferring these costs entirely to future generations of ratepayers.

Bond funded expenditures may 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.

Typically, fixed rate bonds are only redeemable a given number of years after their issuance. Variable rate debt, on the other hand, is generally redeemable on any interest payment or reset 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.

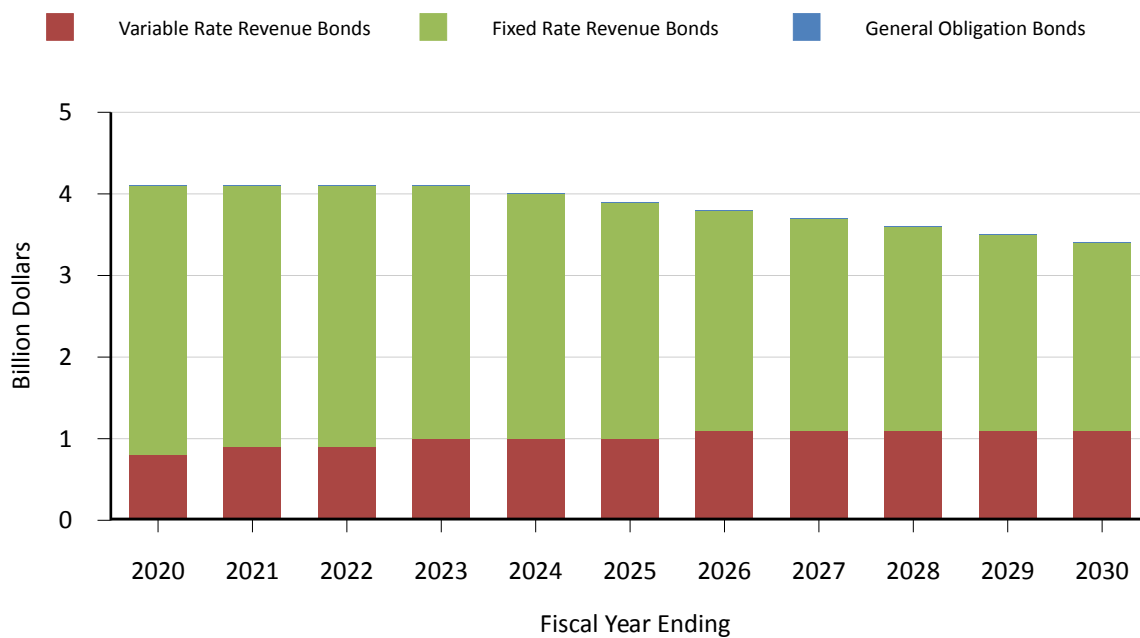
In the last several years, Metropolitan has issued self-liquidity debt. Metropolitan is irrevocably committed to purchase all self-liquidity bonds tendered pursuant to any optional or mandatory tender to the extent that remarketing proceeds are insufficient and no standby bond purchase agreement or other 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.

### Debt Financing

It is anticipated that there will be about \$2.9 billion of capital expenditures over the ten-year period. Of this, \$930.0 million, or 32 percent of future capital expenditures, are anticipated to be funded by debt proceeds. Outstanding debt, including revenue and general obligation bonds ("GO bonds"), as of December 31, 2019 is \$4.0 billion. The net position of Metropolitan at June 30, 2019 was \$6.8 billion. Metropolitan may not have outstanding revenue bond debt in amounts greater than 100 percent of its equity. As of June 30, 2019, the debt to equity ratio was 59 percent.

Total outstanding debt is illustrated below. Total outstanding debt is estimated to be \$3.4 billion by FY 2029/30, approximately 15 percent lower than the current level.

### Outstanding Debt, \$ billions

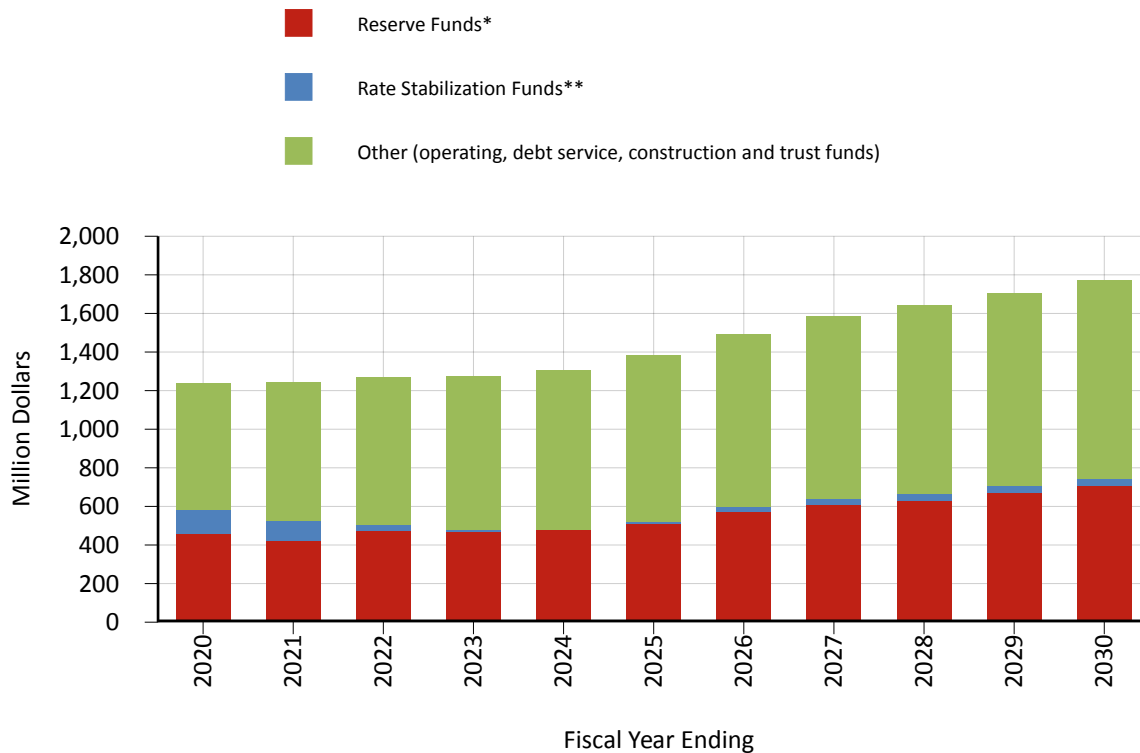


Metropolitan’s variable rate debt as a percentage of total revenue bond debt is projected to increase to 32% percent over this time period as fixed rate debt is retired. The appropriate amount of variable rate debt will continue to be monitored and adjusted depending on market rates, financing needs, 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 2029/30.

End of Year Fund Balances, \$ millions



\* includes Water Rate Stabilization Fund and Revenue Remainder 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 by FY 2024/25. 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 SWC. 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 1.5 times over the ten-year period. These levels help maintain strong credit ratings and access to the capital markets at low cost, and provide PAYGO funding for the CIP.

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

Fiscal Year Ending	2021 Proposed	2022 Proposed	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast	2029 Forecast	2030 Forecast
<b>SOURCES OF FUNDS</b>										
Revenues										
Taxes	139.9	140.1	140.1	140.1	140.0	143.2	146.4	149.7	153.0	156.4
Interest Income	18.0	18.2	18.4	18.7	19.5	20.9	22.5	23.6	24.5	25.5
Power Sales	20.8	21.9	23.5	14.2	14.0	15.2	15.6	15.8	16.7	17.5
Fixed Charges (RTS & Capacity Charge)	171.6	181.9	188.2	194.6	203.7	211.8	219.9	228.1	234.6	235.6
Water Revenues (1)	1,423.6	1,491.4	1,568.8	1,677.8	1,780.2	1,888.5	1,943.4	2,000.0	2,071.8	2,141.6
Miscellaneous Revenue	19.9	20.5	21.0	21.5	22.1	22.7	23.2	18.4	18.8	19.3
Bond Proceeds	99.3	89.4	119.2	89.4	89.4	89.4	89.4	89.4	89.4	89.4
<b>Sub-total Revenues</b>	<b>1,893.1</b>	<b>1,963.4</b>	<b>2,079.2</b>	<b>2,156.3</b>	<b>2,269.0</b>	<b>2,391.5</b>	<b>2,460.3</b>	<b>2,524.9</b>	<b>2,608.9</b>	<b>2,685.3</b>
Fund Withdrawals										
R&R and General Fund	135.0	135.0	180.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0
Bond Funds for Construction	—	0.6	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Water Stewardship Fund	22.6	75.6	28.0	—	—	—	0.6	—	—	—
Treatment Surcharge Stabilization Fund	—	—	1.1	4.3	—	—	—	—	—	3.0
Decrease in Water Rate Stabilization Fund	26.2	—	14.7	7.0	—	—	—	—	—	—
<b>Sub-total Fund Withdrawals</b>	<b>183.7</b>	<b>211.2</b>	<b>224.6</b>	<b>221.9</b>	<b>210.6</b>	<b>210.6</b>	<b>211.3</b>	<b>210.6</b>	<b>210.6</b>	<b>213.6</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>2,076.9</b>	<b>2,174.6</b>	<b>2,303.8</b>	<b>2,378.2</b>	<b>2,479.6</b>	<b>2,602.2</b>	<b>2,671.6</b>	<b>2,735.5</b>	<b>2,819.5</b>	<b>2,899.0</b>
<b>Water Transactions* (MAF)</b>	<b>1.60</b>	<b>1.60</b>	<b>1.60</b>	<b>1.64</b>	<b>1.69</b>	<b>1.74</b>	<b>1.74</b>	<b>1.74</b>	<b>1.75</b>	<b>1.75</b>

Totals may not foot due to rounding.

(1) includes revenues from water sales and exchanges

Fiscal Year Ending	2021 Proposed	2022 Proposed	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast	2029 Forecast	2030 Forecast
<b>USES OF FUNDS</b>										
Expenses										
State Water Contract (1)	615.8	629.4	622.0	653.2	690.2	739.4	773.3	834.4	870.0	904.5
Supply Programs	68.7	61.2	68.8	77.4	69.0	68.5	68.9	69.8	71.8	72.5
Delta Conveyance Project	25.0	25.0	50.0	—	—	—	—	—	—	—
Colorado River Power	52.2	57.6	67.6	78.3	79.8	84.1	89.2	91.5	100.5	111.9
Regional Recycled Water Program planning	15.0	15.0	—	—	—	—	—	—	—	—
Debt Service	298.7	307.0	309.1	325.8	321.4	327.5	332.3	337.6	329.1	315.3
Demand Management	48.5	52.5	71.0	76.7	85.5	91.7	99.9	105.1	109.5	114.1
Departmental O&M	502.6	522.9	546.4	571.0	596.7	623.7	651.9	681.5	712.4	744.8
Treatment Chemicals, Sludge & Power	31.6	32.8	33.8	35.6	37.8	40.1	41.3	42.6	44.1	45.4
Other O&M	7.9	7.2	7.4	7.6	7.9	8.0	8.3	8.6	8.8	9.0
<b>Sub-total Expenses</b>	<b>1,666.1</b>	<b>1,710.4</b>	<b>1,775.9</b>	<b>1,825.6</b>	<b>1,888.2</b>	<b>1,983.1</b>	<b>2,065.1</b>	<b>2,170.9</b>	<b>2,246.1</b>	<b>2,317.6</b>
Capital Investment Plan	225.0	225.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
Fund Deposits										
R&R and General Fund	135.0	135.0	180.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0
Revenue Bond Construction	9.3	—	—	—	—	—	—	—	—	—
Treatment Surcharge Stabilization Fund	—	6.7	—	—	7.8	15.7	7.4	3.9	2.2	—
Interest for Construction & Trust Funds	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Increase in Required Reserves	41.3	62.5	47.6	42.3	55.0	48.5	65.1	40.5	35.8	45.9
Increase in Water Rate Stabilization Fund	—	34.6	—	—	18.4	43.9	23.7	9.0	24.3	25.3
<b>Sub-total Fund Deposits</b>	<b>185.8</b>	<b>239.1</b>	<b>227.9</b>	<b>252.6</b>	<b>291.5</b>	<b>319.0</b>	<b>306.4</b>	<b>264.6</b>	<b>273.4</b>	<b>281.4</b>
<b>TOTAL USES OF FUNDS</b>	<b>2,076.9</b>	<b>2,174.6</b>	<b>2,303.8</b>	<b>2,378.2</b>	<b>2,479.6</b>	<b>2,602.2</b>	<b>2,671.6</b>	<b>2,735.5</b>	<b>2,819.5</b>	<b>2,899.0</b>

Totals may not foot due to rounding.

(1) without Delta conveyance planning costs

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

Fiscal Year Ending	2021 Proposed	2022 Proposed	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast	2029 Forecast	2030 Forecast
<b>RATIOS</b>										
Fixed Charge Coverage	1.5	1.6	1.7	1.8	1.9	1.9	1.8	1.6	1.7	1.7
Revenue Bond Coverage	1.5	1.6	1.6	1.8	2.0	2.2	2.1	2.1	2.2	2.3
Var. Rate Debt as % of Rev. Bond Debt	21.6%	22.5%	23.5%	24.3%	26.0%	27.8%	29.5%	31.1%	32.4%	32.7%
<b>RESTRICTED FUNDS EOY balance</b>										
General Fund	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Other	681.2	728.9	762.7	790.9	830.2	861.9	912.3	940.5	962.5	995.3
<b>Sub-total Restricted Funds</b>	<b>751.2</b>	<b>798.9</b>	<b>832.7</b>	<b>860.9</b>	<b>900.2</b>	<b>931.9</b>	<b>982.3</b>	<b>1,010.5</b>	<b>1,032.5</b>	<b>1,065.3</b>
<b>UNRESTRICTED FUNDS EOY balance</b>										
Reserve Funds (1)	422.8	471.9	470.5	477.3	511.0	571.4	609.4	630.3	668.0	706.0
Treatment Surcharge Stabilization Fund	—	6.7	5.7	1.4	9.1	24.9	32.2	36.1	38.3	35.4
Water Stewardship Fund	103.6	28.0	—	—	—	—	—	—	—	—
R&R Fund	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
<b>Sub-total Unrestricted Funds</b>	<b>530.8</b>	<b>511.1</b>	<b>480.6</b>	<b>483.1</b>	<b>524.6</b>	<b>601.3</b>	<b>646.0</b>	<b>671.8</b>	<b>712.5</b>	<b>747.5</b>
<b>TOTAL FUNDS</b>	<b>1,282.1</b>	<b>1,310.0</b>	<b>1,313.3</b>	<b>1,344.0</b>	<b>1,424.8</b>	<b>1,533.2</b>	<b>1,628.4</b>	<b>1,682.4</b>	<b>1,745.1</b>	<b>1,812.8</b>

Totals may not foot due to rounding.

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



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## CAPITAL INVESTMENT PLAN

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### Summary

The primary focus of the CIP Appendix is to provide information on all capital programs and projects that have been proposed, evaluated, and included in the budget forecast to begin or continue during and after FY 2020/21 and FY 2021/22. Scope, accomplishments, objectives and financial projections are provided for each capital program. Every project with work planned for the two budget years and beyond is listed under the Individual Program Summaries.

The total planned capital spending for FY 2020/21 and FY 2021/22 of approximately \$500 million includes all anticipated costs for labor including administrative overhead, construction and professional services contract costs, right of way, materials, operating equipment, and incidental expenses.

Annual planned capital spending for FY 2020/21 and FY 2021/22 is estimated to be approximately \$250 million and is planned to be funded by a combination of current operating revenues (i.e., PAYGO) and debt.

<b>Capital Program</b>	<b>FY 2020/21</b>	<b>FY 2021/22</b>	<b>Total</b>
Colorado River Aqueduct Reliability	\$ 55,000,000	\$ 52,370,000	\$ 110,970,000
Cost Efficiency & Productivity	\$ 6,705,000	\$ 8,800,000	\$ 14,255,000
Dams & Reservoirs Improvements	\$ 5,100,000	\$ 13,100,000	\$ 18,200,000
Distribution System Reliability	\$ 37,200,000	\$ 29,900,000	\$ 68,200,000
District Housing & Property Improvements	\$ 3,500,000	\$ 7,500,000	\$ 3,000,000
Minor Capital Projects	\$ 3,800,000	\$ 5,400,000	\$ 9,200,000
Prestressed Concrete Cylinder Pipe Rehabilitation	\$ 30,260,000	\$ 23,600,000	\$ 55,925,000
Regional Recycled Water Program	\$ 210,000	\$ —	\$ 210,000
Right of Way & Infrastructure Protection	\$ 2,415,000	\$ 5,700,000	\$ 8,115,000
System Flexibility/Supply Reliability	\$ 13,600,000	\$ 24,800,000	\$ 38,400,000
System Reliability	\$ 44,900,000	\$ 52,500,000	\$ 97,400,000
Treatment Plant Reliability	\$ 48,550,000	\$ 27,610,000	\$ 77,460,000
Water Quality/Oxidation Retrofit	\$ 18,500	\$ —	\$ 18,500
<b>Total</b>	<b>\$ 251,258,500</b>	<b>\$ 251,280,000</b>	<b>\$ 501,353,500</b>

## Capital Investment Plan Organization

### CIP Structure

The CIP has been restructured for clearer planning and reporting into the following format:

1. PROGRAM
2. PROJECT GROUP
3. PROJECT

The highest level of the CIP structure is Program. Programs are comprised of one or more Project Groups. There are 13 capital programs described in Table 1.

Table 1 - Capital Programs

Program	Definition
Colorado River Aqueduct (CRA) Reliability	Projects under this program will replace or refurbish facilities and components on the CRA system in order to reliably convey water from the Colorado River to Southern California.
Cost Efficiency & Productivity	Projects under this program will upgrade, replace, or provide new facilities, software applications, or technology that will provide economic savings that outweigh project costs through enhanced business and operating processes.
Dams & Reservoirs Improvements	Projects under this program will upgrade or refurbish Metropolitan's dams, reservoirs, and appurtenant facilities in order to reliably meet water storage needs and regulatory compliance.
Distribution System Reliability	Projects under this program will replace or refurbish existing facilities within Metropolitan's distribution system including pressure control structures, hydroelectric power plants, and pipelines in order to reliably meet water demands.
District Housing & Property Improvements	Projects under this program will refurbish or upgrade Metropolitan workforce housing to enhance living conditions and attract and retain skilled employees.
Minor Capital Projects	This program will execute refurbishments, replacements, or upgrades at Metropolitan facilities that cost less than \$400,000 each, and which projects will be identified after adoption of the budget.
Prestressed Concrete Cylinder Pipe (PCCP) Reliability	Projects under this program will refurbish or upgrade Metropolitan's PCCP feeders to maintain reliable water deliveries without unplanned shutdowns.
Regional Recycled Water	Projects under this Program are planned to demonstrate the feasibility of recycling wastewater for recharge of groundwater basins, and provide a new, sustainable and drought resistant source of supply for Southern California.
Right-of-Way and Infrastructure Protection	Projects under this program will refurbish or upgrade above-ground facilities and rights-of-way along Metropolitan's pipelines in order to address access limitations, erosion-related work, and security needs.
System Flexibility/Supply Reliability	Projects under this program will enhance the flexibility and/or increase the capacity of Metropolitan's water supply and delivery infrastructure to meet current and projected service demands.

<b>Program</b>	<b>Definition</b>
System Reliability	Projects under this program will improve or modify facilities throughout Metropolitan's service area in order to utilize new processes and/or technologies, and to improve facility safety and overall reliability. These include projects related to Metropolitan's Supervisory Control and Data Acquisition (SCADA) system and other Information Technology projects.
Treatment Plant Reliability: <ul style="list-style-type: none"> <li>• Diemer Plant</li> <li>• Jensen Plant</li> <li>• Mills Plant</li> <li>• Skinner Plant</li> <li>• Weymouth Plant</li> </ul>	Projects under this program will replace or refurbish facilities and components at Metropolitan's five water treatment plants in order to continue to reliably meet treated water demands.
Water Quality/Oxidation Retrofit	Projects under this program will add or upgrade facilities to ensure compliance with water quality regulations for treated water at Metropolitan's treatment plants and throughout the distribution system.

## Capital Investment Plan Development

### Background

The projects that comprise the proposed CIP have been identified from many Metropolitan studies of projected water needs as well as ongoing monitoring and inspections, condition assessments, and focused vulnerability studies. Staff continues to study operational demands on aging facilities and has made recommendations for capital projects that will maintain infrastructure reliability and ensure compliance with all applicable water quality regulations, and building, fire, and safety codes. Staff has also studied business and operations processes and proposed projects that will improve efficiency and provide future cost savings. Additionally, several projects have been identified and prioritized to provide flexibility in system operations to address uncertain supply conditions from the Colorado River and the State Water Project.

### CIP Development Process

The CIP is structured to reflect Metropolitan's strategic goals of providing a reliable supply of high-quality water at the lowest cost possible. As part of the CIP development process, all new and existing projects are evaluated against an objective set of criteria to ensure existing and future capital investments are aligned with Metropolitan's priorities for water supply reliability, water quality, and public safety.

This rigorous evaluation process has resulted in a thorough review and assessment of all proposed capital projects by staff and managers prior to inclusion in the CIP budget. Staff continues to conduct comprehensive field investigations that identify critical replacement and refurbishment projects and a variety of necessary facility upgrades related to infrastructure reliability as well as regulatory compliance. Project schedules are evaluated regularly in order to plan for necessary capital investments in infrastructure reliability and to accommodate the urgency of each project. Additionally, current demand projections that account for ongoing conservation, planned increased local supply production, and the economy, have been evaluated to ensure that demand and growth-related projects are appropriately scheduled.

### Project Proposals

Sponsors are required to submit proposals for all projects that have not yet been authorized for construction or approved to proceed with final design to be considered for inclusion into the CIP. For newly proposed projects, proposals must include scope, justification, alternatives, impacts of re-scheduling work for a later time, impact on operations and maintenance costs, and an estimate of total project cost. For existing projects, staff must also provide justification for continuing the project, explain any changes since the proposal was last evaluated, and describe critical phases for the upcoming years.

The projects are evaluated, rated, and prioritized based on the contents of the proposals. The guidelines provided to the project sponsors are summarized in Table 2.

Table 2 - Project Proposal Guidelines

<b>Section</b>	<b>Guideline</b>
Appropriation No., CIP Index No., Project No., (if existing) and Project Title	If a proposed project has been previously authorized by the Board, provide the Appropriation and CIP Index numbers along with the project title and project number if one has been assigned. If not previously authorized, provide a project title only.
Sponsoring Group	Indicate the Group sponsoring the project, as follows: 1) Office of General Manager 2) Water System Operations 3) Water Resource Management 4) Engineering Services 5) Information Technology 6) Real Property 7) Human Resources 8) External Affairs 9) General Counsel Department 10) General Auditor Department 11) Ethics Office 12) Environmental Planning
Estimated Total Project Cost	Show the total estimate of cost from inception to completion of a project, including administrative overhead and contingency, as applicable.
GM Business Plan	Indicate the strategic priorities under GM's Business Plan the project best supports.
Current Project Phase	Indicate the phase (Study, Preliminary Design, etc.) as of the date proposal submitted.
Current Phase % Complete	Current phase percent complete as of the date proposal submitted.
Project Description	Describe the project scope of work.
Changes to Existing Project	For an existing project, describe any changes to the project scope, budget, or schedule over the past two years.
Justification	Describe the nature of the issue to be addressed by the project. What is the problem? What is the function of the facility/component being addressed by the project? Why is it important?  Consider issues such as: <ul style="list-style-type: none"> <li>• Operational flexibility</li> <li>• New facility expansion</li> <li>• New water supply</li> <li>• Aging infrastructure deterioration/failure</li> <li>• Process improvement/failure</li> <li>• Maintenance capability</li> <li>• Seismic vulnerability</li> <li>• Obsolescence (vendor support, parts, technology, etc.)</li> <li>• Security</li> <li>• Regulatory Compliance (water quality, environmental, health and safety, etc.)</li> <li>• Cost savings</li> <li>• Revenue generation</li> <li>• Energy savings</li> <li>• Productivity</li> </ul> Include an explanation of how the project addresses any of the above issues and provide documentation, when applicable, to substantiate the need for the project.

Section	Guideline
Directive	<p><b>Regulatory/Legal Settlement:</b> Indicate if this is related to a written citation or directive, verbal/written directive, or in-house identification (includes environmental mitigation mandated by an MND or EIR).</p> <p><b>Special Initiative/Directive:</b> Indicate if the project is specifically identified in one of the core or strategic initiatives; identified via Area Study, System Overview Study, etc.; and/or what phase(s) of the project have been authorized such as study, preliminary design, or final design.</p>
Service Disruption	Describe how Metropolitan’s day-to-day operations could be impacted if the project is not approved. Consider business, as well as water system operations, including maintenance activities.
Cost/Productivity/Sustainability	Describe potential cost, water, and/or energy savings, waste reduction, revenue/energy generation, better customer service, etc., that justify the project. Include a pay-back period.
Alternatives	Provide a brief description of any potential project scope alternatives, including any opportunities to “stage” the work. Include if it is possible to only perform a portion of a project to meet foreseeable customer needs. Consider the possibility of new technology, changing demands, as well as environmental impacts and economies of scale. Describe any reasonable projects, processes, or other initiatives available as alternatives to the project. Discuss both positive and negative aspects of each alternative. If possible, explain what other similar agencies are doing about this or similar issue.
Additional Background Information	Provide any other supplemental information (e.g. detailed history of a problem, supporting technical information, shutdown constraints, etc.) that will help in evaluating the project. This can also be attached to the proposal.
Schedule	Indicate the proposed beginning and end dates for all appropriate phases.
Detailed Project Cost Estimate	<p>Include an itemized list of all costs for the project, as follows:</p> <ol style="list-style-type: none"> <li>1) Direct Labor with additives at the indicated rate</li> <li>2) Equipment and Materials</li> <li>3) Incidental Expenses</li> <li>4) Professional/Technical Services (e.g., consultants)</li> <li>5) Right-of-Way and Land Purchases (e.g., easements, fee title, escrow fees)</li> <li>6) Operating Equipment Use and Rental</li> <li>7) Contract Payments (e.g., construction contracts)</li> <li>8) Administrative Overhead at the indicated rate</li> <li>9) Contingency</li> </ol> <p>All new project proposals and existing projects must include this estimate.</p>
Post-Implementation O&M Impacts	To the extent available/known, provide a description of the impacts, costs, and/or benefits this capital project is anticipated to have on Metropolitan’s current and future O&M expenses and services upon completion (e.g. labor, maintenance, and equipment costs; enhanced reliability; improved water quality, etc. For example, “Ozone generators will substantially increase electrical consumption by approximately \$1 million annually and the number of new pieces of equipment will require periodic maintenance per the manufacturer’s recommendations beginning in FY 2015/16. PDR and future studies will provide additional detail on the overall lifecycle costs”). This is required for projects greater than \$2 million and whose planned implementation date is within the next five fiscal years.
Approvals	<ol style="list-style-type: none"> <li>1) Person preparing and submitting the proposed project - Type name only</li> <li>2) Team manager sponsoring the project</li> <li>3) Unit manager sponsoring the project</li> <li>4) Section manager sponsoring the project (e.g., all new and existing projects)</li> <li>5) Group manager sponsoring the project (e.g., all new projects)</li> <li>6) Project manager signs in concurrence. (e.g., Engineering and IT organizations)</li> </ol>

**Evaluation Criteria**

The evaluation criteria cover four characteristics or objectives for capital projects: Project Justification, Directive, Service Disruption, and Cost/Productivity/Sustainability. In addition, a multiplier is applied to a project rating to factor in a risk assessment. Table 3 provides a description of the criteria and multiplier.

**Table 3 - Evaluation Criteria and Multiplier**

<b>Criteria</b>	<b>Description</b>
Justification	<p>Assessment of the overall importance of a project. Criterion looks at whether or not a project supports the following:</p> <ul style="list-style-type: none"> <li>- Supply reliability</li> <li>- Infrastructure reliability</li> <li>- Regulatory compliance</li> <li>- Other goals (e.g., cost savings, revenue generation, energy savings, and increased productivity)</li> </ul>
Directive	<p>Assessment of whether or not a project is specifically identified in one of the core or strategic initiatives, if any permitting agency such as the California State Department of Safety of Dams has issued a directive or citation to take corrective actions, the current authorized scope of work, and/or support the GM Business Plan:</p> <ul style="list-style-type: none"> <li>- Regulatory/Legal Settlement</li> <li>- Special Initiative/Directive</li> <li>- Board authorization</li> <li>- GM Business Plan</li> </ul>
Service Disruption	<p>Assessment of not doing a project. Criterion evaluates the following:</p> <ul style="list-style-type: none"> <li>- Impact to Metropolitan’s business operations</li> <li>- Impact to water system operations (e.g., system delivery and/or reliability, cascading impact on system due to failure, etc.)</li> </ul>
Cost/Sustainability/Customer Service	<p>Assessment of whether or not a project improves the following:</p> <ul style="list-style-type: none"> <li>- Cost efficiency</li> <li>- Sustainability</li> <li>- Customer service</li> </ul>

<b>Multiplier</b>	<b>Description</b>
Risk Assessment	<p>Assessment of the probability of:</p> <ul style="list-style-type: none"> <li>- Facility/component/process failure</li> <li>- Workplace health and safety</li> <li>- Water quality or environmental impact</li> <li>- Missed opportunity (e.g., available resources, shutdown, revenue generation, cost savings, supply)</li> <li>- Not meeting service demands</li> </ul>



## Project Evaluation

A CIP Evaluation Team comprised of staff from Water System Operations, Water Resource Management, Real Property, Engineering Services, Finance, Information Technology, Environmental Planning, and External Affairs evaluate and rate all project proposals. The evaluation criterion is designed to prioritize projects that directly support reliability, quality, and safety for inclusion in Metropolitan's proposed CIP.

An iterative process is employed to first score and rank every new and existing project, and then solicit feedback from project sponsors, customers, and resource providers in order to establish schedules and cash flow requirements. Those schedules, along with analyses of facility shutdown requirements, environmental permitting timeframes, and contracting process requirements, also enable resource managers to identify staffing needs. The final schedule and implementation plan for FY 2020/21 and FY 2021/22 are reflected in the budget and objectives summarized under each of the Individual Programs Summaries that appear later in this document.

## Capital Investment Plan for Fiscal Years 2020/21 and FY 2021/22

### Process Improvements

In October 2018, Metropolitan's Board amended the Administrative Code to allow for an appropriation of the total amount of planned biennial CIP spending following the approval of the biennial budget and authorize work on all capital projects identified in the CIP subject to the requirements of CEQA and limits on the General Manager's authority; and delegate responsibility to the General Manager to determine whether a project is exempt from CEQA. In order to be considered a planned project, the project must be included and described in the Capital Investment Plan Appendix for the two-year budget cycle. Consistent with this action, all requests to allocate funds and proceed with planned capital projects are reviewed and approved by the Chief Engineer acting under the General Manager's authority. Upon approval, such requested funds are then transferred to the pertinent capital project. These transfers are based on both board actions and/or management decisions to initiate capital projects and/or proceed to the next phase of planned work.

### Additions

Projects not described in the CIP Appendix are considered unplanned and are not included in the planned biennial spending. Unplanned projects require specific Board authorization in order to initiate the work. Eight unplanned projects totaling \$9.2 million were added to the FY 2018/19 and FY 19/20 budget as authorized by the Board. These projects were identified after adoption of the budget and included projects such as Filter Influent Valve Gear Box Replacement at the Skinner plant, Employee Village Enhancements Program, and Wadsworth Pumping Plant Sleeve Valve Refurbishment.

### New Projects

This year, a total of 67 new projects, including unplanned projects that have been authorized by the Board but excluding Minor Capital projects, have been recommended by the CIP Evaluation Team to either proceed as proposed, or be staged to perform only a portion of the work in the biennial budget period, and have been incorporated into the capital programs.

### Major Objectives

Below, grouped by CIP Program, are descriptions of some of the capital project major activities anticipated to be underway or completed over the next two fiscal years.

#### Colorado River Aqueduct Reliability

Complete construction of the 6.9 kV Power Cables Replacement, Main Pumping Plants Discharge Line Isolation Bulkhead Couplings, Pump Plant Sump System Rehabilitation, and Pumping Plants Crane Improvements projects. Complete the demonstration unit pilot project for the Main Pump, Motor, Discharge Valve and Auxiliary System Refurbishment Project. Complete the preliminary design for the Main Transformer Refurbishment Project.

#### Cost Efficiency and Productivity

Deploy the new Budget System Replacement and WINS Water Billing System Upgrade projects. Complete the Project Controls Reporting System project. Complete the MWDH2o.com redesign. Start the Payroll-Timekeeping Reimplementation project.

### Dams & Reservoirs Improvements

Complete Diamond Valley Lake Dam Monitoring System Upgrades project. Start design of the Mills and Jensen finished water reservoir floating cover replacement projects. Complete assessment of the Lake Mathews and Lake Skinner spillways.

### Distribution System Reliability

Complete the designs and start construction for the Casa Loma Siphon Barrel No. 1 Replacement and Santa Monica Feeder Cast Iron Pipe Rehabilitation Projects. Complete construction of the Orange County C&D Team Support Facility. Begin the design of the Lake Mathews Forebay Pressure Control Structure and Bypass project.

### District Housing and Property Improvements Program

Complete assessments of District housing, and master planning of the villages at Hinds, Eagle Mountain, Iron Mountain, and Gene.

### Prestressed Concrete Cylinder Pipe Reliability

Continue pipe procurement, valve procurement, and construction to rehabilitate the remaining PCCP portions of the Second Lower Feeder. Continue preliminary design to rehabilitate the PCCP portions of the Allen-McColloch Pipeline, Calabasas Feeder, Rialto Pipeline, and Sepulveda Feeder. Continue annual electromagnetic inspections of all PCCP pipelines.

### Right of Way and Infrastructure Protection

Start construction of pipeline protection and access improvements in the Orange County Region. Continue effort to develop and certify programmatic EIRs for the western San Bernardino, Los Angeles, Riverside and San Diego County regions. Begin similar effort for the CRA.

### System Flexibility/Supply Reliability

Complete construction of the Greg Avenue PCS - Pump Modifications and New Control Building project. Complete the preliminary design for modifications to the Perris Pumpback, Bypass, and Hydroelectric Plant facilities. Complete Construction of the Perris Valley Pipeline tunnel project.

### System Reliability

Complete Headquarters Improvements project construction. Complete construction and startup of the Wadsworth/DVL Control and Protection Systems Upgrade project. Complete deployment of MWD Cyber Security Upgrades.

### Treatment Plant Reliability

Complete construction of the Diemer west filter and basin rehabilitation projects; Jensen Modules 2 and 3 Flocculator Rehabilitation project; and Weymouth Chlorine System Upgrades projects. Complete Jensen travelling bridge and basin improvements; and Weymouth administration and control building seismic upgrades.

### Water Quality/Oxidation Retrofit

Complete Weymouth Hypochlorite Feed Facilities project and Weymouth ORP completion activities. Complete the design for the Mills Bromate Control project.

## Financial Projections

Planned capital spending for FY 2020/21 and FY 2021/22 is estimated to be \$250 million and \$250 million, respectively, and are planned to be funded by a combination of current operating revenues (R&R and PAYGO) and debt. Considerations for timing of nearby projects and facility shutdowns, urgency, aging infrastructure, updated service demand projections, and regulatory requirements are taken into account. Estimated capital spending is updated on a regular basis as new projects are added, other projects are completed, construction cost estimates are refined, or contracts awarded. From time to time, projects that have been undertaken are delayed, redesigned or deferred for various reasons and no assurance can be given that a project in the CIP will be completed in accordance with its original schedule.

The total planned spending for the FY 2020/21 and FY 2021/22 biennium is approximately \$500 million as shown in Figure 1 by Program. Planned spending has been estimated based on anticipated project progress and estimated costs for all ongoing and planned work for the new biennium budget period.

Figure 1 - Capital Investment Plan for FY 2020/21 and FY 2021/22 by Program

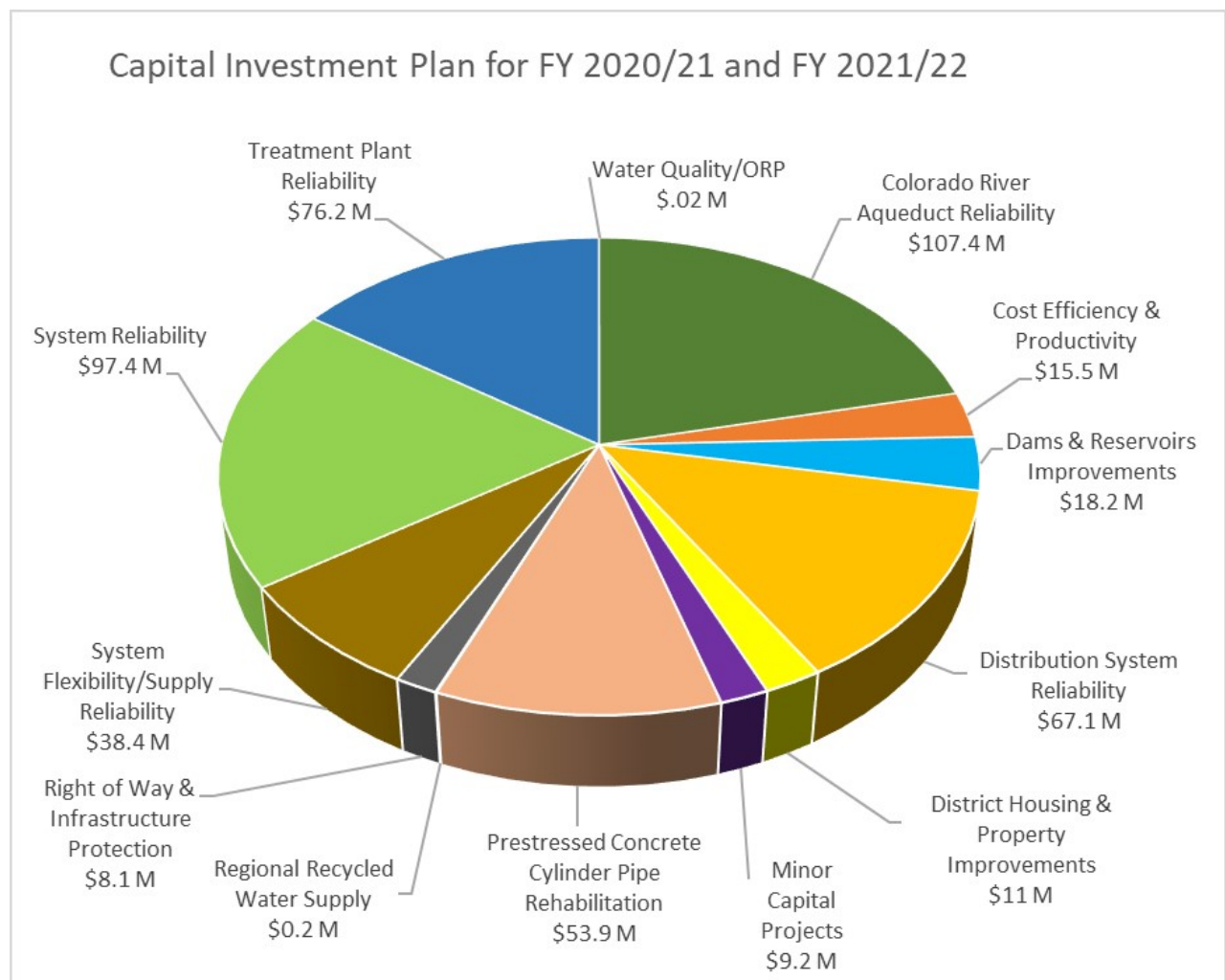


Figure 2 depicts the planned capital spending profile, including actual and projected cash flow, for the 10-year period from FY 2015/16 through FY 2024/25 and Table 4 provides a more detailed three-year outlook.

Figure 2 - CIP 10-year Window by Program FY 2015/16 through FY 2024/25

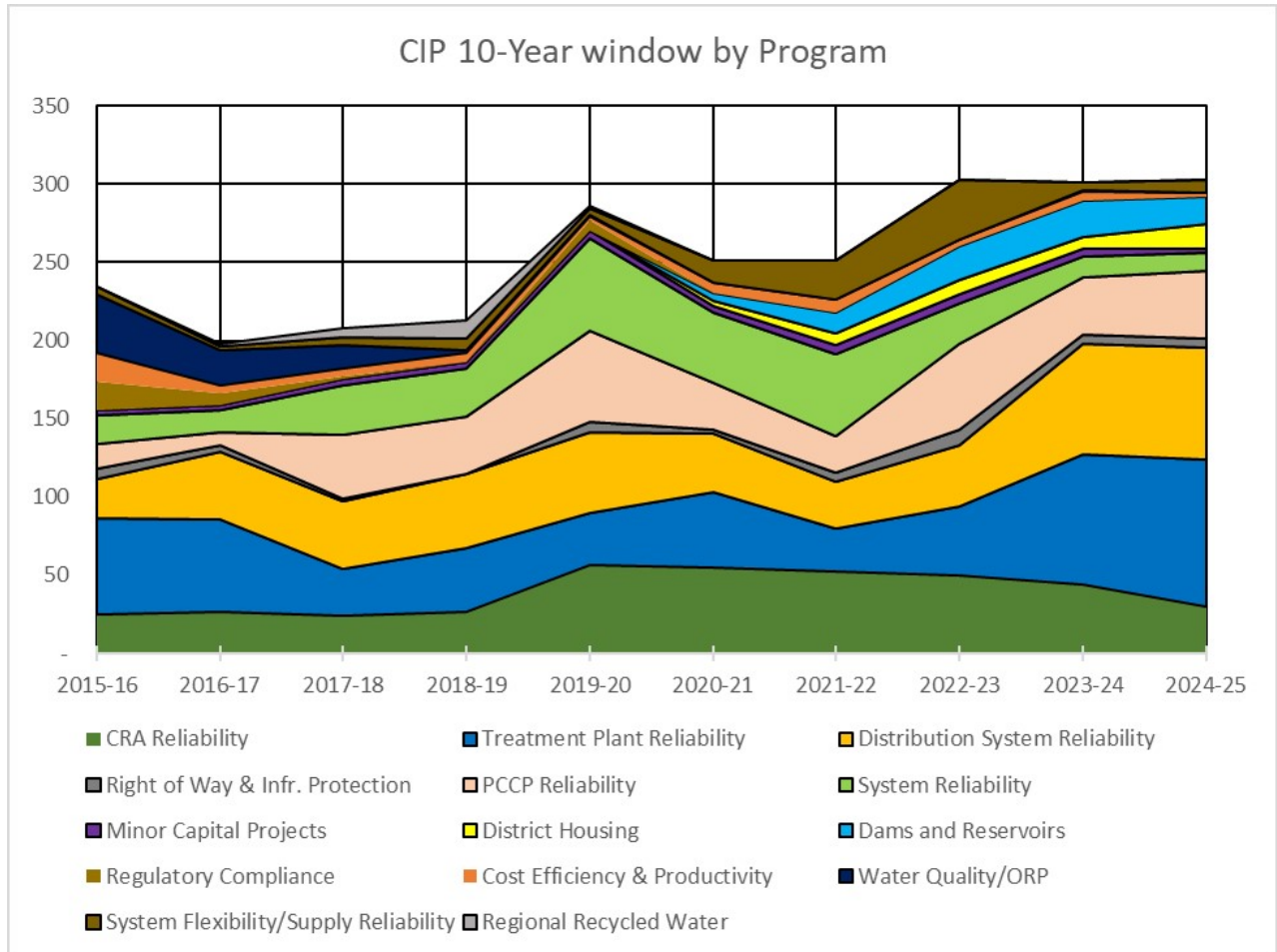


Table 4 - Three-Year Outlook

Capital Program and Project Groups	FY 2020/21	FY 2021/22	FY 2022/23
<b>Colorado River Aqueduct Reliability</b>	\$ 55,000,000	\$ 52,370,000	\$ 49,700,000
CRA - Conveyance	\$ 5,000,000	\$ 4,970,000	\$ 6,700,000
CRA - Electrical Systems	\$ 2,500,000	\$ 6,500,000	\$ 14,800,000
CRA - Pumping Plants	39,500,000	\$ 28,400,000	\$ 16,000,000
CRA - Other	\$ 8,000,000	\$ 12,500,000	\$ 12,200,000
<b>Cost Efficiency &amp; Productivity</b>	\$ 6,705,000	\$ 8,800,000	\$ 4,020,000
Diamond Valley Lake Recreation - New/Improvements	\$ 925,000	\$ 1,800,000	\$ 3,500,000
Diamond Valley Lake Recreation - Refurbishment & Replacement	\$ 250,000	\$ 3,000,000	\$ —
IT - Business Support	\$ 5,500,000	\$ 4,000,000	\$ 520,000
Cost Efficiency & Productivity - Other	\$ 30,000	\$ —	\$ —
<b>Dams &amp; Reservoirs Improvements</b>	\$ 5,100,000	\$ 13,100,000	\$ 22,000,000
Dams & Reservoirs - All	\$ 5,100,000	\$ 13,100,000	\$ 22,000,000
<b>Distribution System Reliability</b>	\$ 37,200,000	\$ 29,900,000	\$ 39,300,000
Pipelines, Tunnels, Canals	\$ 27,900,000	\$ 22,800,000	\$ 11,000,000
Pressure Control Structures/Hydroelectric Plants/Service Connections/Valves & Gates	\$ 5,400,000	\$ 3,000,000	\$ 18,000,000
Distribution System - Other	\$ 3,900,000	\$ 4,100,000	\$ 10,300,000
<b>District Housing &amp; Property Improvements</b>	\$ 3,500,000	\$ 7,500,000	\$ 8,700,000
Housing & Property Improvements	\$ 3,500,000	\$ 7,500,000	\$ 8,700,000
<b>Minor Capital Projects</b>	\$ 3,800,000	\$ 5,400,000	\$ 6,300,000
Minor Capital Projects - All	\$ 3,800,000	\$ 5,400,000	\$ 6,300,000
<b>Prestressed Concrete Cylinder Pipe Rehabilitation</b>	\$ 30,260,000	\$ 23,600,000	\$ 54,800,000
Allen McColloch Pipeline	\$ 1,500,000	\$ 200,000	\$ 1,000,000
Calabasas Feeder	\$ 100,000	\$ 150,000	\$ 1,600,000
Rialto Feeder	\$ 185,000	\$ 250,000	\$ 600,000
Second Lower Feeder	\$ 26,900,000	\$ 21,300,000	\$ 43,300,000
Sepulveda Feeder	\$ 375,000	\$ 500,000	\$ 7,100,000
PCCP - Other	\$ 1,200,000	\$ 1,200,000	\$ 1,200,000
<b>Regional Recycled Water</b>	\$ 210,000	\$ —	\$ —
Regional Recycled Water Program - All	\$ 210,000	\$ —	\$ —
<b>Right of Way &amp; Infrastructure Protection</b>	\$ 2,415,000	\$ 5,700,000	\$ 10,000,000
Los Angeles Region	\$ —	\$ —	\$ 300,000
Orange County Region	\$ 1,500,000	\$ 1,600,000	\$ 2,200,000
Riverside/San Diego Region	\$ —	\$ —	\$ 1,000,000
Western San Bernardino Region	\$ 805,000	\$ 4,000,000	\$ 4,300,000
ROWIP - Other	\$ 110,000	\$ 100,000	\$ 2,100,000
<b>System Flexibility/Supply Reliability</b>	\$ 13,600,000	\$ 24,800,000	\$ 38,000,000
System Flexibility/Supply Reliability - All	\$ 13,600,000	\$ 24,800,000	\$ 38,000,000
<b>System Reliability</b>	\$ 44,900,000	\$ 52,500,000	\$ 25,500,000

<b>Capital Program and Project Groups</b>	<b>FY 2020/21</b>	<b>FY 2021/22</b>	<b>FY 2022/23</b>
IT/SCADA - Infrastructure	\$ 17,200,000	\$ 21,000,000	\$ 17,000,000
Operations Support	\$ 9,000,000	\$ 12,000,000	\$ 5,000,000
System Reliability - Other	\$ 18,700,000	\$ 19,500,000	\$ 3,500,000
<b>Treatment Plant Reliability</b>	<b>\$ 48,550,000</b>	<b>\$ 27,610,000</b>	<b>\$ 44,300,000</b>
Diemer	\$ 17,800,000	\$ 5,100,000	\$ 9,000,000
Jensen	\$ 18,500,000	\$ 14,200,000	\$ 14,600,000
Mills	\$ 480,000	\$ 860,000	\$ 5,600,000
Skinner	\$ 470,000	\$ 50,000	\$ 1,600,000
Weymouth	\$ 11,300,000	\$ 7,400,000	\$ 13,000,000
Treatment - General	\$ —	\$ —	\$ 500,000
<b>Water Quality/Oxidation Retrofit</b>	<b>\$ 18,500</b>	<b>\$ —</b>	<b>\$ 100,000</b>
Water Quality/Oxidation Retrofit - All	\$ 18,500	\$ —	\$ 100,000

## Potential Changes to the Proposed CIP

The program described below will require specific Board decisions prior to funding and authorization to proceed. Descriptions for proposed projects are included in the Individual Program Summaries section of this Appendix.

### Regional Recycled Water Program (RRWP)

Construction of the Advanced Water Treatment Demonstration Plant (demo plant) was completed during the 2018/19-2019/20 biennium. The initial testing and operation of the plant to confirm treatment costs and provide the basis for regulatory approval of the proposed treatment processes and technical recommendations concerning design, operation, and optimization of the full-scale RRWP will be completed in late-2020 to early-2021. The demo plant has the flexibility to be modified in the future to test treatment processes for implementation of Direct Potable Reuse (DPR) through raw water augmentation (RWA). Funding for modifications to the demo plant to support DPR testing are not currently in the CIP and will be brought to the Board at a future date. Upon approval by the Board to modify the demo plant, the CIP will be updated accordingly.

Additional board presentations to establish a basis for a decision to proceed with the RRWP are planned during fiscal year 2019/20. Since a determination by the Board on the status of the full-scale program is still pending, the proposed biennial budget does not include any expenditures on the full-scale RRWP. In addition to potentially beginning implementation of the demo plant modifications for DPR, there are multiple scenarios for proceeding with the overall full-scale regional program over the coming biennium. Scenarios for the next two years could range from preparation of a Programmatic Environmental Impact Report (PEIR) along with its associated engineering support for CEQA documentation of the full RRWP, to initiating detailed studies and preparing the basis of design for a 20-mgd early-start treatment plant and distribution system in conjunction with the PEIR activities. Upon a decision by the Board as to how to proceed with the full-scale program, the CIP will be updated accordingly.

If approved, preparation of the PEIR and preliminary engineering would commence in fiscal year 2020/21, with a duration of approximately two years. The estimated cost for this effort is \$30 million, with approximately \$15 million expended each year and is not currently included in the CIP for FY 2020/21 and FY 2021/22. The \$30 million biennial planning budget for the RRWP is included in the Biennial Budget under O&M. Project descriptions for the RRWP are provided in the Individual Program Summaries section.



## Capital Investment Plan Detail

The core of this section is the Individual Program Summaries, which provide information for each capital project that has been proposed, evaluated, and included in the budget forecast to begin or continue during and after FY 2020/21 and FY 2021/22. Scope, accomplishments, objectives and financial projections are provided for each capital program. Every project with work planned for the two budget years and beyond is listed under the appropriate Program Summary by Project Group. The information provided reflects project details current as of the time of publication and is subject to change. The Individual Program Summaries are ordered alphabetically by Program title. The information contained in the Individual Program Summaries is described in further detail below.

### Key Information

For each Program, key information is highlighted at the top of the Individual Program Summary page and includes the FY 2020/21 and FY 2021/22 biennial estimate. Table 5 provides an explanation of each item.

Table 5 - Key Program Information

Item	Description
Program Description	A brief explanation of the types of projects included in the Program
Fiscal Year 2020/21 Estimate	Estimate of planned spending from July 2020 through June 2021. It does not include a contingency amount.
Fiscal Year 2021/22 Estimate	Estimate of planned spending from July 2021 through June 2022. It does not include a contingency amount.
Accomplishments for FY 2018/19 and FY 2019/20	Listing of new projects initiated and major milestones achieved during the last biennium
Objectives for FY 2020/21 and FY 2021/22	Listing of projects with major milestones planned during the budget biennium with the total project estimate, estimated project completion, and the planned milestone

### Narratives

Each Individual Program Summary also contains a narrative portion that includes a description of each project planned to be underway during the two-year budget period and beyond.

Table 6 - Program Summary Index

Program Title	Page No.
Colorado River Aqueduct Reliability	<a href="#">223</a>
Cost Efficiency & Productivity	<a href="#">235</a>
Dams & Reservoirs	<a href="#">239</a>
Distribution System Reliability	<a href="#">244</a>
District Housing & Property Improvements	<a href="#">266</a>
Minor Capital Projects	<a href="#">267</a>
PCCP Reliability	<a href="#">268</a>
Advanced Water Treatment Demonstration Plant	<a href="#">271</a>
Right of Way & Infrastructure Protection	<a href="#">273</a>
System Flexibility/Supply Reliability	<a href="#">275</a>
System Reliability	<a href="#">277</a>
Treatment Plant Reliability	<a href="#">290</a>
Water Quality/ORP	<a href="#">307</a>

## Individual Program Summaries

### Colorado River Aqueduct (CRA) Reliability Program

Fiscal Year 2020/21 Estimate: \$55 million

Fiscal Year 2021/22 Estimate: \$52.4 million

**Program Information:** *The CRA Reliability Program is composed of projects to replace or refurbish facilities and components of the CRA system in order to reliably convey water from the Colorado River to Southern California.*

#### Accomplishments for FY 2018/19 and FY 2019/20

- New projects initiated during the last biennium:
  - Whitewater Siphon Erosion Protection Refurbishment
  - Hinds Pumping Plant Discharge Valve Platform Replacement
  - Iron Mountain-Eagle Mountain 230 kV Transmission Line Pilot Relay Replacement
  - CRA Physical Security Improvements
  - CRA Pumping Plant Delivery Line Rehabilitation
  
- Major milestones achieved during the last biennium:
  - Construction completed:
    - CRA UPS Replacement
    - Intake Pumping Plant 2.4 kV Power Line Replacement
    - CRA and Iron Mountain Reservoir Panel Replacement
    - CRA Switch House Building Seismic Upgrades
    - Eagle Mountain Radial Gate Replacement
    - CRA Surge Chamber Slide Gates for Delivery Line Bypass Pipelines
  - Construction contract awarded:
    - Gene Wash Reservoir Discharge Valve Rehabilitation
    - CRA Radial Gates Rehabilitation
    - CRA Pumping Plant Sump System Rehabilitation
    - Eagle Mountain Utility Improvements
    - CRA Pumping Plants Discharge Line Isolation Bulkhead Couplings
    - CRA 6.9 kV Power Cable Replacement

## Objectives for FYs 2020/21 and 2021/22

<b>Project</b>	<b>Total Project Estimate</b>	<b>Estimated Completion</b>	<b>Major Milestones</b>
Copper Basin Reservoirs Discharge Valve Rehabilitation	\$ 15,000,000	2024	Begin construction
CRA 6.9 kV Power Cables Replacement	\$ 18,000,000	2022	Complete construction
CRA Main Pump, Motor, Discharge Valve and Auxiliary System Refurbishment	\$ 230,000,000	2030	Complete Demonstration Unit Pilot
CRA Main Pumping Plants Discharge Line Isolation Bulkhead Couplings	\$ 40,000,000	2022	Complete construction
CRA Main Transformer Refurbishment	\$ 42,000,000	2027	Complete preliminary design
CRA Pump Plant Flow Meter Replacement	\$ 20,000,000	2021	Complete construction
CRA Pump Plant Sump System Rehabilitation	\$ 40,000,000	2022	Complete construction
CRA Pumping Plant Storage Buildings at Hinds, Eagle Mountain and Iron Mountain	\$ 8,000,000	2023	Begin design
CRA Water Distribution System Replacements at Hinds and Eagle Mtn. Pumping Plants	\$ 8,500,000	2022	Begin construction
CRA Pumping Plants Crane Improvements	\$ 1,400,000	2022	Complete construction
Gene Wash Reservoirs Discharge Valve Rehabilitation	\$ 11,000,000	2022	Complete construction
Mile 12 Flow and Chlorine Monitoring Station Upgrades	\$ 3,000,000	2022	Complete construction

## CRA - Conveyance Project Group

**Cabazon Radial Gate Facility Improvements**

The Cabazon Radial Gate facility is located on the CRA in the city of Cabazon within Riverside County and approximately one mile upstream of the San Jacinto Tunnel. The Cabazon Radial Gate facility was constructed in 1936 and consists of a 17-foot-wide by 16-foot-tall radial gate controlled by an electric motor actuator. The facility was designed to protect the downstream conduits and tunnels from becoming over-pressurized in the event of a blockage by diverting water into an 800-foot long, concrete-lined channel which flows into the San Gorgonio Wash. The existing radial gate, motor, and controls have reached the end of their service life and are no longer reliable.

This project will replace the discharge radial gate with a concrete weir structure. The weir system is a passive overflow system which will reject water above a set hydraulic grade and thereby prevent downstream over-pressurization. A portion of the approximately 800-foot-long discharge channel will be widened to accommodate the weir structure.

**CRA Conduit Structural Protection**

The CRA has 55 miles of cut-and-cover conduits where vehicles and storm water flows can cross over the aqueduct. These conduits are unreinforced concrete horseshoe-shaped structures placed upon an invert slab. At some locations, these conduits are subject to heavy vehicle loading. Few locations include existing dirt roads that cross the aqueduct with insufficient soil cover over the conduit; including locations where heavy equipment must be placed over or near the conduit for access into tunnels or siphons. This project will install new protective structures such as reinforced concrete slabs that span over the unreinforced conduits at specific locations. The slabs will protect the conduits from damage by distributing the equipment loading to the surrounding soil. Design was authorized by the Board in January 2016.

**CRA Radial Gates Rehabilitation**

There are a total of 14 hydraulic radial gates located along the CRA. The gates are needed to dewater and isolate various reaches of the CRA for maintenance and repairs. Inspections have identified that eight gates are corroded and require refurbishment or replacement. Protective coatings on various components of the gates have begun to fail. The existing motor actuators used to open and close the gates have also deteriorated from 70 years of use in the harsh desert environment. This project will involve refurbishment or replacement of eight radial gates. The motor actuators and the gates' electrical and control equipment will also be replaced. In addition, the concrete walls and floors within the diversion channels will be repaired. Design was authorized by the Board in May 2014. A construction contract was awarded by the Board in August 2019.

**CRA Tunnels - Seismic Resilience Upgrades**

The CRA is a 242-mile-long conveyance system that transports water from the Colorado River to Lake Mathews in Riverside County, including 124 miles of tunnels which were constructed in the late 1930s and was placed into service in 1941. While the CRA was constructed in accordance with current seismic codes of that time, recent seismic risk assessments of the CRA identified that some tunnels are vulnerable to damage from a strong earthquake on the southern San Andreas Fault. The scope of this project includes detailed seismic evaluations and completion of upgrades to strengthen vulnerable tunnel sections.

**Eagle Lift & Eagle West Siphons Seismic Improvements**

The CRA was placed into service in 1941. As the aqueduct traverses the desert, it must cross numerous drainage channels, ravines, and other natural depressions. At each crossing, the aqueduct's open channel transitions into a buried conduit (an inverted siphon) which drops below ground and passes beneath the natural surface feature. At the downstream end of the siphon, water re-emerges into the open aqueduct. Typically, siphons are cast-in-place reinforced concrete conduits, which vary in length from 150 feet to 5 miles. An initial assessment of the Eagle Lift and Eagle West Siphons identified potential slope failure of the soil covering the siphons as a result of a strong seismic event. This project will perform a detailed slope stability analysis and evaluate and implement mitigation options.

**Iron Mountain Tunnel Rehabilitation**

The Iron Mountain Tunnel was constructed between 1933 and 1938 as part of the CRA system. The tunnel is located downstream of the Iron Mountain pumping plant, and is eight miles long. The tunnel's cross-section is horseshoe-shaped, with overall dimensions of 16 feet high by 16 feet wide. Longitudinal and transverse cracks up to 1 inch wide have developed along a 2,500-foot-long stretch of the tunnel. This project will mitigate the cracks with focus on tunnel strengthening and corrosion protection. Preliminary design was authorized by the Board in October 2010.

### **Mile 12 Flow and Chlorine Monitoring Station Upgrades**

One of the CRA's critical points for monitoring flow rates and chlorine levels is located at Mile Marker 12 (Mile 12) along the aqueduct. Monitoring equipment includes a set of flowmeters with instrumentation, chlorine analyzers, communication equipment, solar panels, and batteries. Although the equipment has performed well, it has exceeded its life span and is beginning to fail. This project will replace the existing deteriorated flow meters with new ultrasonic models that are compatible with other meters in use throughout the CRA; relocate the data and communications equipment from the underground manhole to a new aboveground monitoring station with air-conditioned cabinets to enable stable operation; and construct a reliable power source. Construction was authorized by the Board in August 2010.

### **Whitewater Tunnel No. 2 Seismic Upgrades**

The CRA consists of five pumping plants, 124 miles of tunnels, 63 miles of canals, and 55 miles of conduits, siphons, and reservoirs. One of the tunnels, CRA Whitewater Tunnel No. 2, is a 1.5-mile long; 16-foot-high by 16-foot-wide horseshoe-shaped tunnel that parallels closely to the southern San Andreas Fault and crosses a splay of the fault approximately one-third mile from its west portal. A recent seismic risk assessment of the CRA identified that this tunnel is vulnerable to major damage from a strong earthquake on the southern San Andreas Fault. This project will perform near-term upgrades to strengthen vulnerable tunnel sections at the east and west portals of this tunnel and will improve access at the west portal. Furthermore, in order to expedite post-earthquake repairs of damaged tunnel sections, the design of a new bypass tunnel will be prepared in advance, steel sets will be procured and stockpiled, and tunnel repair contractors will be prequalified so that specialized equipment and crews may mobilize rapidly. Preliminary design was authorized by the board in December 2017.

## **CRA - Electrical Systems Project Group**

### **Standby Diesel Engine Generator Replacements**

Back-up power for critical auxiliary systems at the Iron Mountain, Gene, and Intake pumping plants is provided by stand-by diesel generators. The standby generators are over 50 years old, require frequent repairs, and have reached the end of their service lives. In addition, upgrades to the generators' ancillary equipment are planned to meet current fire codes and environmental regulations. This project will improve the reliability of emergency power for critical auxiliary systems at the pumping plants. The scope of the project includes relocation and installation of new generators. The replacement generator will include alarms, valves, meters, and a control system capable of automatic start-up upon loss of primary power, automatic transfer back to primary power once the normal source is reestablished, and remote status monitoring. Preliminary design for all three pumping plants' standby generators was authorized by the Board in April 2008; and final design and equipment procurement for Iron Mountain standby generator was authorized by the Board in March 2012.

### **Electrical Power Distribution Upgrades - Gene, Iron Mountain, Eagle Mountain and Hinds Pumping Plants**

The 2.4 kV electrical power distribution system at all five Desert pumping plant facilities conveys power from the MWD-owned 2.4 kV switchyard to all areas within the property confines, including the operations and maintenance (O&M) areas and the villages. The power is stepped down from 2.4 kV, typically by a pole-mounted transformer, to the required voltage based on the end-user's requirements, usually 120 V for houses and buildings, or 480 V for workshops. The existing breakers are no longer common in the power industry, and spare parts are difficult to obtain.

This project will replace the existing electrical power distribution systems at Gene, Iron Mountain, Eagle Mountain and Hinds Pumping Plants with new distribution systems. The work will include replacing existing 2.4 kV breakers with 4160 V breakers, and replacing associated cables, conduits, feeders, risers, wooden poles and transformers. Underground power distribution will be used when feasible. This project will improve the reliability of water deliveries and will optimize maintenance.

### **Black Metal Mountain 2.4 kV Electrical Power Upgrade**

Black Metal Mountain (Black Metal) Site No. 1 and Site No. 2 are two of Metropolitan's communication sites, located in the San Bernardino Mountains. The sites are situated on top of a mountain and provide line-of-sight propagation to subsequent communication sites. Given their prime location, the communication sites on Black Metal Mountain house communication equipment for Metropolitan, several state and local government agencies, and local radio stations and cellular service providers. The existing power line that serves the two communication sites is aging and deteriorated, and is located in rocky, mountainous terrain, with some poles on the edge of 600-foot cliffs. This project will design and construct the replacement of the existing 2.4 kV power line that serves MWD's Black Metal Mountain communication sites. The work will include installation of new power poles, larger conductors to increase the available power to the sites, and service roads where feasible, to allow access for maintenance.

### **CRA 230 kV Transmission Line Improvements**

The CRA has an extensive 230 kV transmission system that originates from Hoover Dam and supplies power to all five pumping plants. This 305-mile long transmission system was installed in the 1930s and consists of approximately 75-foot-high steel towers with concrete and wood footings, aluminum and copper conductors and supports to attach the conductors and insulators to the towers. Spans between the towers average 1,200 feet with varying ground elevations. Vertical clearances between the lowest conductor and the ground in a span can vary with temperature, wind speeds, and power loads. Over the years, operating under maximum power loads and extreme desert temperatures has led to insufficient vertical clearances as required by the current electrical standards. This project will assess ground clearances of the conductor spans and increase clearances, as needed, by raising the heights of existing towers and/or adding new towers between spans, and construct tower refurbishment or replacement.

This project will also rehabilitate and improve substations, switching stations, and control rooms related to the CRA's 230 kV transmission system in order to comply with NERC (North American Electric Reliability Corporation) standards, increase system reliability, and reduce the risk of unplanned CRA outages. Rehabilitations and upgrades include new relays at Eagle Mountain Pumping Plant to mitigate potential cascading power outages from a stuck breaker scenario at Eagle and installation of physical security systems at Gene and Eagle Mountain pumping plants control rooms and switch yards (NERC requirements); replacement of outdated bank protection relays at Intake, Gene, Iron Mountain and Hinds pumping plants; replacement of outdated 230 kV disconnect switches at Camino Switching Station and at the Gene and Iron Mountain 230 kV transfer buses; installation of a new 230 kV circuit breaker at Iron Mountain to enable isolation of the Iron-Eagle 230 kV transmission line without disruption of CRA water deliveries; and, purchase of SCE circuit breakers which are integrated with the CRA's 230 kV system at Gene and Eagle Mountain pumping plants in order to give MWD greater flexibility without having to rely on SCE.

### **CRA 6.9 kV Power Cable Replacement**

There are a total of 45 primary pumps and motors at the five CRA pumping plants. Power is transmitted to the motors via 3-inch-diameter cables which run through a tunnel that connects each switch house to each pump house. The quantity of cables varies from nine to 27 per plant. These cables were installed in four phases from 1939 through 1959. After 55 to 75 years of continuous service, the power cables have deteriorated and need to be replaced. Oil has begun to leak through cracks in the lead jacket, at the cable connection joints, and at the cable termination points. Frequent repairs are required to address the leaks and maintain the cables' insulating capacity. This project includes the replacement of the deteriorated main power cables at each of the five CRA pumping plants. The Board awarded a construction contract in February 2019.

### **CRA Auxiliary Power Systems**

All five CRA pumping plants have medium and low voltage systems that were constructed to the design standards of the 1930s-1950s. They provide power for general lighting, cranes, computers, shop equipment, and critical equipment such as the pumping plant sump pumps and lubrication oil pumps. Over the years, numerous additional electrical loads have been added to the auxiliary power systems. As a result, the distribution panel capacity limits have been exhausted, and some wiring is now undersized. The scope of this project includes upsizing the distribution panels to allow additional capacity and space for future loads and replacing the cables and conduits to comply with current National Electrical Code and safety standards. Preliminary investigations were authorized by the Board in March 2016 for all five pumping plants. Preliminary design for Iron Mountain Pumping Plants was authorized by the Board in May 2018.

### **CRA Main Transformer Rehabilitation**

Seven transformers provide electrical power to each CRA pumping plant to maintain continuous operation. All existing transformer units are original equipment, with many dating from the 1940s. Recent inspections revealed oil leakage and other signs of aging for some of the transformers. Failure of an existing transformer would disrupt power supply to a pumping plant and interrupt water delivery. The scope of the project includes rehabilitation of existing transformers, replacement of transformers, or the addition of spare transformers along with spill containment structures. This work also includes replacement of leaky circulating oil pumps that are used to cool the transformers and construction of secondary spill containment for the transformer banks. Preliminary design was authorized by the Board in May 2020.

### **CRA Pump Plants 2.3 kV and 480 V Switch Rack Rehabilitation**

All five CRA Pumping Plants have a 2.3 kV and 480 V switch racks that are the central power distribution for the 2.3 kV, 480 V and 120 V that feed multiple medium and low voltage critical equipment within the pumping plants. These switch racks have been in service since the original construction of the CRA. The equipment is old, obsolete and replacement parts are difficult to obtain. This project will rehabilitate the 2.3 kV and the 480V switch racks at all five CRA pumping plants to ensure the equipment meets the current safety and electrical codes and provides a reliable power supply to the plants.

## **CRA - Pumping Plants Project Group**

### **CRA Main Pump, Motor & Discharge Valve Refurbishment**

Each of the five CRA pumping plants has nine main pumps that lift the water to the required elevation necessary to continue flow down the aqueduct. The 45 main pumps rely on multiple auxiliary systems including lubricating oil systems, circulating water systems, controls and instrumentation systems, discharge valves, electrical and control panels, and individual equipment components. In the mid-1980s, a major rehabilitation project was undertaken on the 45 main pumps. As a result, the 45 main pumps have performed well over the nearly 30 years since the rehabilitation work was completed. However, the pumps are now showing signs of deterioration caused by continuous operation over that length of time. While that project successfully extended the service life of the pumps and increased their hydraulic capacity, the pump auxiliary systems were not addressed at that time. The pump auxiliary systems are from the original CRA construction and are now deteriorating and need to be replaced. An assessment of the main pumps, motors, and their auxiliary systems at all five CRA pumping plants will capture current operating conditions, create updated baseline documents of all existing equipment and systems, and provide replacement or rehabilitation recommendations for all pump and auxiliary system components. Preliminary investigations were authorized by the Board in October 2016, and an agreement to provide condition assessments for the main pump motors was authorized by the Board in December 2019. This project will refurbish the 45 main pumps and their auxiliary systems, including lubricating oil systems, circulating water systems, controls and instrumentation systems, discharge valves, electrical and control panels, and individual equipment components, as deemed appropriate by the assessment.

**CRA Main Pumping Plants Discharge Line Isolation Bulkhead Couplings**

Each of the nine main pumps at the five CRA pumping plants discharges the water into an individual 6-foot diameter discharge line. The nine discharge lines then merge into three 10-foot diameter pipelines that convey flow to the top of the lift and discharge into a headgate structure which empties the water into the next section of the aqueduct. Isolation of a single pump or its discharge valve, currently requires a lengthy flow reduction where three pumps have to be removed from service while cutting and welding activities are performed to install a steel bulkhead in one pump's 6-foot discharge line. This operation is labor-intensive and requires more than 72 hours to complete the isolation and removal of the isolation bulkhead. This project will install isolation couplings in the 6-foot discharge lines downstream of each main pump discharge valve. The discharge line couplings will allow individual pump units and discharge valves to be isolated significantly faster by eliminating the current cutting and welding process required to isolate a unit; thus, minimizing impacts to overall pumping capacity. A construction contract was awarded by the Board in August 2019.

**CRA Main Pumping Plants Sand Removal System**

At each of the five CRA pumping plants, water is withdrawn from the CRA, filtered to remove large debris and sand, and then pumped through a circulating water system. The circulating water system feeds the pump house service water system, the cooling system at each pump unit, the fire water system, the irrigation water system, and the domestic water treatment system. The existing filtration system is not designed to strain out fine silts. Consequently, the fine silt has built up as sediment in the circulating water systems leading to excessive wear and failure of equipment such as pump packing, cooling water piping, and heat exchangers. This project will upgrade the filtration system to remove fine silt and eliminate sediment build up and refurbish any identified damaged components.

**CRA Main Pumping Plant Unit Coolers and Heat Exchangers**

Each of the five CRA pumping plants has nine main pumps. Each main pump has a cooling system to cool various components of the pump system. At each pump house, water is pumped through a circulating water system, which feeds multiple unit coolers and heat exchangers for each individual main pump unit. Over the years, the unit coolers have developed many leaks. Lack of sufficient cooling water could cause equipment overheating, and the leaks could damage nearby electrical equipment. This project will replace, refurbish, or upgrade the cooling system at each pump unit.

**CRA Pump Plant Flow Meter Replacement**

Acoustic flow meters are installed at each of the five CRA pumping plants on each 10-foot-diameter delivery lines. Flow measurements are used to adjust pumping rates and balance the flows from plant to plant. The existing meter units have begun to deteriorate due to their age and exposure to harsh desert conditions. Continued loss of accuracy could lead to incorrect flow adjustments or unsynchronized pumping rates, which could cause flooding at the plants or overtopping of the aqueduct. This project will install new acoustic flow meters on the delivery lines which will connect to nearby flow meter consoles housed inside new pre-fabricated equipment enclosures. Construction was authorized by the Board in June 2013.

**CRA Pump Plant Sump System Rehabilitation**

Each of the five CRA pumping plants has two independent main sumps that collect water leakage from the main pumps and discharge valves. Each main sump is approximately 9 feet wide, 20 feet long, and 35 feet deep, and can hold up to 48,000 gallons, or approximately one day's worth of leakage water. The sump system pumps this water back to the pumping plant's main intake manifold or to its forebay, depending on the plant. The 70-year-old sump piping systems and support structures are deteriorating and have exceeded their service lives. Failure of the sump piping systems has the potential to cause extensive flooding and damage to valves and pumps within the pumping plants. This project will rehabilitate the pumping plant sump systems, including replacement of corroded sump mechanical equipment, piping, and access structures at all five CRA pumping plants. Access features will be upgraded by replacing corroded catwalks, ladders and handrails within the sumps. This project will also rehabilitate circulating water equipment and piping systems, which are in the sump area. A construction contract was authorized by the Board in December 2018.



**CRA Pump Plants Circulation Water Systems**

Each of the five CRA pumping plants has nine main pumps. Each of these pump units use cooling equipment to cool various components of the pump system that feeds from the plant's circulating water system. This system has a loop with branch connections and an isolation valve at each unit. The piping and the valves that supply the circulating water systems run through the entire length of the plants and are all from the original CRA construction. The piping and the valves are now showing signs of deterioration. They are clogged, corroded and leaking. This project will replace and upgrade the circulation water systems for each pumping unit.

**CRA Pumping Plants Crane Improvements**

All five CRA Pumping Plants have a single overhead bridge crane which spans the motor room floor and a portable bridge crane for the individual pump bay below the motor room floor. These overhead cranes were installed in the pumping plants during the original CRA construction and have been in operation since 1939. The cranes are used to raise, shift, and lower main pump components and motors for maintenance and replacement. These cranes were rehabilitated in the late 1980s. They have now reached the end of their service life where spare parts for the original crane components are difficult to obtain or no longer available. Parts which were replaced in the 1980s are outdated and the electronic features are no longer supported by vendors. This project will replace all the overhead bridge cranes on the motor room floor and the portable pump-bay cranes below the motor room floor at all five pumping plants. The replacement includes the bridges, trolleys, hoists, drive trains and the system controls.

**CRA Pumping Plants Delivery Line Rehabilitation**

Each of the nine main pumps at the five CRA pumping plants discharges the water into individual six-foot diameter discharge lines. The nine discharge lines then merge and transition into three 10-foot diameter pipelines, Delivery Line Nos. 1, 2 and 3, that convey flow to the top of the lift and then discharge into a headgate structure which empties the water into the next section of the aqueduct. These delivery lines vary in length from 500 feet to 1,400 feet up steep and rocky slopes. The five Delivery Line No. 1s were constructed in the 1930s and were lined with coal tar enamel to protect the interior of the pipe from corrosion. After 80 years of service, the existing coal tar enamel lining on Delivery Line No. 1 at each plant is cracking, flaking, and the steel is starting to corrode. The mortar linings for Delivery Line Nos. 2 and 3 are still in good condition and do not require repair.

Additionally, depending on the length of each delivery line there are a total of three or four expansion joints located along the line. These expansion joints are deteriorated and showing signs of corrosion. This project provides a comprehensive rehabilitation of the delivery lines at each of the five CRA pumping plants, including replacement of the coal tar enamel with a cement mortar lining, expansion joints, and minor coating repairs. Under the General Manager's authority, preliminary investigations were authorized in June 2019.

**CRA Pumping Plants Water Treatment Systems Replacement**

All five of Metropolitan's Pumping Plants are located in remote areas of Riverside and San Bernardino Counties where municipal water treatment systems are not available. Each plant is instead served by a community on-site water treatment system. These on-site treatment systems are skid-mounted membrane filtration units that include a strainer, a pair of activated carbon vessels, and a domestic water storage tank. These systems have been in continuous operation for 25 years and now suffer from frequent membrane and pipe failures. This project will replace the skid-mounted water treatment systems in its entirety. Design was authorized by the board in July 2018.

**CRA Pump Plant Reservoir Spillway Auto Rejection - Iron Mountain and Eagle Mountain**

The Iron Mountain and Eagle Mountain Reservoirs are located on the upstream side of the Iron Mountain and Eagle Mountain pumping plants, respectively. The reservoirs dampen fluctuations in flow between the five pumping plants. Each reservoir contains a spillway which allows discharge of water to the desert in the event of a power outage of the main pumps. The two spillways were designed in the 1930s to safely reject up to approximately 1,200 cubic feet per second (cfs). The pumping plants were expanded in the 1950s and the aqueduct can now operate up to approximately 1,750 cfs. Rejection of flows greater than 1,200 cfs would cause uncontrolled release of water at these two reservoirs, which could damage nearby facilities and public roads or property. This project will modify the reservoir spillways to allow safe rejection of up to 1,750 cfs of water in the event of a power outage of the main pumps.

**Erosion and Drainage Control Protection for CRA Switchracks and Ancillary Structures**

The five CRA pumping plants are located in remote areas of the California desert which are periodically subjected to flash floods that carry high volumes of water, silt, and debris. During major storm events, the pumping plants' pump houses and support facilities are susceptible to flooding and deposition of silt and debris. In recent years, at several of the plants, debris flows have affected various critical electrical facilities. This project will include site grading, addition of perimeter drainage channels to intercept offsite flows, upsizing of storm drain culverts and extension of patrol roads to access the new storm drain facilities for maintenance. Design was authorized by the Board in January 2016.

**Gene and Intake Pumping Plant Outlet Structure Gate Rehabilitation**

Each of the five CRA pumping plants has nine main pumps that lift water from the pump house through a series of converging delivery lines that convey water from the pump house to a headgate structure located at the top of a hill. These structures then convey water to the downstream portion of the aqueduct. Flow from each headgate structure is regulated by three nine-foot square steel gates. Recent inspections at the Intake and Gene pumping plants have revealed that the protective coatings on various components of the gates have begun to crack and peel. This project will recoat the six headgate structure outlet gates at the Intake and Gene pumping plants in order to prevent metal loss due to corrosion.

**Hinds Pumping Plant Discharge Valve Pit Platform Replacement**

At each of the CRA pumping plants water is pumped from the plants' intake manifold, through the main pumps and out of the discharge valves. From the discharge valves, water travels through the delivery lines and into the aqueduct. The discharge valves are located in small concrete pits below the pump plant floor room. At the Hinds Pumping Plant, the concrete pit is equipped with a raised platform due to the deep pit. The platform is necessary to maintain the discharge valve's ancillary equipment. After over 75 years of service in a humid environment created mainly from the pump cooling water discharge, the metal platform has corroded significantly and needs to be replaced. This project will replace the discharge valve platform and relocate cooling water discharge piping in all nine discharge pits at the Hinds Pumping Plant. Under the General Manager's authority, preliminary design was authorized in November 2018.

**Iron Mountain, Hinds & Eagle Mountain Hazardous Waste Containment**

Hazardous wastes such as chemicals, oil, paint, paint thinners and antifreeze are generated through routine operations at the Iron Mountain Pumping Plant. Hazardous wastes are collected and placed into either metal or plastic drums ranging in size from five to 55 gallons. The existing hazardous wastes are then stored in a fenced temporary storage area. This project will replace the existing hazardous waste storage facility with a prefabricated, code-compliant, hazardous waste storage container.

### **Seismic Upgrades of CRA Support Facilities**

A recent initial seismic risk assessment has revealed that several CRA support structures may be vulnerable from a major seismic event. These support structures include office and maintenance buildings, guest lodges, and dining and recreation halls located at Hinds, Eagle Mountain, Iron Mountain and Gene Pumping Plants. This project will perform detailed seismic assessments and retrofit the support structures if necessary.

### **CRA - Other Project Group**

#### **Copper Basin Reservoir Discharge Valve Rehabilitation & Meter Replacement**

The Copper Basin Reservoir provides critical storage that enables flowrates along the CRA to be stabilized and controlled. If the reservoir needed to be drained rapidly in the event of an emergency, the discharge valves located at the base of the dam would be opened to safely release the water. Following 70 years of continuous service, the valves have begun to leak and need to be replaced. The dam is under the jurisdiction of the California Division of Safety of Dams (DSOD), which requires that the discharge valves be fully operational at all times. The project scope includes replacement of the fixed cone valves at the base of the dams; upgrade of the electrical systems; and access improvements to safely enable construction personnel, materials, and equipment to reach the work site. Design was authorized by the Board in February 2015.

In order to determine how much water is released to downstream pumping facilities, flow out of the Copper Basin Reservoir is measured at the entrance to Whipple Mountain Tunnel. Flow meters were installed at this location to collect information that is used to adjust the flow rate through the Copper Basin Reservoir outlet gate and the flow rates at each pumping plant, and to determine the amount of chlorine injected into the CRA to control quagga mussels. The existing flow transducers and meters were installed in 2007 and must be replaced to ensure reliable CRA water deliveries. This project will replace the flow meters, transducers, and cabling in the CRA's Whipple Mountain Tunnel.

#### **CRA Desert Region Security Improvements**

CRA facilities are critical components of Metropolitan's water delivery system. These facilities include five pumping plants and the El Camino Electrical Substation. These facilities have inadequate perimeter fencing. This project will install physical security improvements such as fencing, cameras, motion detectors, remote speakers, card readers, and lighting at Metropolitan's CRA pumping plants and at the El Camino Electrical Substation. This project will also include road improvements at the main entrances to the pumping plants and integration of security devices with Metropolitan's security system.

#### **CRA Erosion Protection**

The CRA is comprised of 55 miles of cut-and-cover conduits. The cut-and-cover conduits are arch or horseshoe shape, unreinforced, cast-in-place concrete. In most locations along the CRA, the overlying soil protects the cut-and-cover conduits from rock and debris flows. However, at narrow ravine crossings, heavy storm events often erode the soil and expose the conduits making them vulnerable to structural damage from the rock and debris flows. This project will provide erosion protection features such as gabion structures or concrete slabs; including grading of the eroded areas to protect the conduit. In addition, diversion berms or concrete swales will be constructed to divert storm flows over the concrete slabs. Preliminary Design was authorized by the Board in January 2016.

**CRA Pumping Plant Storage Buildings at Hinds, Eagle Mountain and Iron Mountain**

Between 1950 and 1955, several metal-sided buildings with timber frames were built at the CRA pumping plants to store equipment, spare parts, and maintenance supplies. Two of these buildings have been replaced at the Gene Pumping Plant; however, four original buildings still remain in service. These buildings have deteriorated after 65 years of service in the harsh desert environment and no longer seal properly to prevent rain and dust from entering the interiors. This project will replace the four remaining deteriorated storage buildings. As part of the design considerations, an assessment will be conducted to determine space requirements for storage of equipment and parts to support ongoing maintenance activities and upcoming capital rehabilitation work at the pumping plants. Preliminary design was authorized by the board in August 2016.

**CRA Village Water, Sewer & Asphalt Replacement**

All five of Metropolitan's pumping plants are located in remote areas of Riverside and San Bernardino Counties where municipal water distribution systems are not available. Each plant is instead served by a community on-site water treatment system. Water from the CRA is treated and conveyed to each village house and to the industrial portions of the pumping plants through a gravity-fed water distribution system which consists of distribution piping, isolation valves and valve boxes. Recent inspections of the distribution systems have found blockages, leaks, taste and odor problems, and root intrusion. This project will replace the domestic water distribution systems at all five CRA pumping plants which include the main line pipes, building laterals, new backflow prevention devices, valves, meters and remote water quality analyzers. Final design was authorized by the board in December 2017.

Municipal wastewater collection and treatment facilities are not available where the pumping plants are located. The pumping plants are served by community on-site wastewater systems. These on-site systems collect, treat, and dispose of domestic wastewater generated from bathrooms, kitchen facilities, maintenance buildings, guest lodges, and staff residences at the plants. The on-site systems consist of three primary components: community septic tanks and leach fields; collector lines located throughout the pumping plants which convey wastewater to the septic tanks; and sewer laterals which convey wastewater from individual buildings to the collector lines. The existing wastewater systems at the plants have deteriorated through continual use and need to be replaced. This project will replace the wastewater systems at the pumping plants. The systems will include new main-line pipes, building laterals, septic tanks and leach fields. Design was authorized by the Board in December 2012 for Gene and Iron pumping plants, while preliminary design was authorized by the Board for Intake Pumping Plant in January 2012.

The asphalt roadways at the pumping plants provide access between buildings and the villages for Metropolitan staff, residents, and visitors. There is a total of approximately 30 acres of asphalt-paved roadways and surfaces at all five pumping plants, and these asphalt surfaces are over 30 years old. Due to the harsh desert conditions and deterioration of the subgrade over time, potholes and cracks have developed throughout the villages. The planned upgrades to the roadway pavement include placement of a new layer of asphalt on less distressed areas throughout the CRA villages; removal and replacement of more heavily damaged roadways; and grading and installation of culverts to improve drainage. Design was authorized by the board in July 2018.

**Gene Wash Reservoir Discharge Valve Rehabilitation**

The Gene Wash Reservoir provides critical storage that enables flowrates along the CRA to be stabilized and controlled. If the reservoir needed to be drained rapidly in the event of an emergency, the discharge valves located at the base of each dam would be opened to safely release the water. Following 70 years of continuous service, the valves have begun to leak and need to be replaced. The dam is under the jurisdiction of the California Division of Safety of Dams (DSOD), which requires that the discharge valves be fully operational at all times. The project scope includes replacement of the fixed cone valves at the base of the dam; upgrade of the electrical systems; and access improvements to safely enable construction personnel, materials, and equipment to reach the work site. Design was authorized by the Board in February 2015. Metropolitan's Board awarded a construction contract in December 2019.

**Intake Pump Plant Road Improvements**

The 1.75-mile long asphalt access road into the Intake Pumping Plant travels between a large hill and Lake Havasu. At approximately the midpoint of the access road, it crosses a culvert that drains storm runoff from the hillside into the lake. This culvert is undersized, has partially collapsed, and fills with debris from an unlined wash during rain events. After rain events, Metropolitan staff must clear debris from the culvert in order to prevent rain water from overtopping the culvert and eroding the access road. This project will replace the existing culvert with a new culvert and deteriorated portions of the asphalt road.

## Cost Efficiency and Productivity Program

Fiscal Year 2020/21 Estimate: \$6.7 million

Fiscal Year 2021/22 Estimate: \$8.8 million

**Program Information:** *The Cost Efficiency and Productivity Program is comprised of projects to upgrade, replace, or provide new facilities, software applications, or technology, which will provide economic savings that outweigh project costs through enhanced business and operating processes.*

### Accomplishments for FY 2018/19 and FY 2019/20

- New projects initiated during the last biennium:
  - Learning Management System
  - MWDH20.com Redesign
  - Budget System Replacement
  
- Major milestones achieved during the last biennium:
  - Implemented the new Learning Management System
  - Enterprise Content Management (ECM) substantially completed restructuring and consolidation of data on Metropolitan’s shared drives and eliminated redundant, obsolete and trivial content.

### Objectives for FYs 2020/21 and 2021/22

Project	Total Project Estimate	Estimated Completion	Major Milestones
Diamond Valley Lake Wave Attenuator Replacement	\$ 3,500,000	2022	Complete design
Budget System Replacement	\$ 1,800,000	2021	Complete deployment
Diamond Valley East Marina, Trails, and Visitor Center	\$ 16,850,000	2021	Begin studies
MWDH20.com Redesign	\$ 2,040,000	2023	Complete redesign
Payroll-Timekeeping Reimplementation	\$ 1,300,000	2022	Begin project
Project Controls and Reporting System	\$ 5,800,000	2020	Complete project
WINS Water Billing System Upgrade	\$ 3,500,000	2022	Complete deployment
Supplier Portal Implementation	\$ 600,000	2022	Complete deployment
Services Procurement Application	\$ 800,000	2022	Complete deployment
Digital Assets Optimization	\$ 1,340,000	2022	Complete implementation

## DVL Recreation Project Group

### **Diamond Valley Lake East Marina Utilities**

Diamond Valley Lake (DVL) offers recreational opportunities to the region including boating, fishing, hiking, and biking. The facility supports 4,500 acres of on-water activity, 28 miles of trails, and 13,500 acres of protected open space. This project will extend the existing water, sewer, gas, and communication facilities from the intersection of Searle Parkway and Angler Avenue to the DVL East Marina to support existing operations and future development. The construction of the new infrastructure will replace existing failing tanks which are filled with trucked-in water to service the Marina store, enhance utility service reliability, and serve to comply with flows and pressures required to develop the Marina into a self-sustainable recreational facility.

### **Diamond Valley Lake Floating Wave Attenuator**

The existing floating wave attenuator (FWA) has been operational since 2006 as part of a two-phase approach. Phase 1 was completed by installing one 800-foot FWA. Phase 2 was to provide an additional attenuation system but was not implemented. Water levels at Diamond Valley Lake have fluctuated with severity and frequency for the last several years due to draw-down activities during drought conditions, then rebounding during the rainy seasons. Due to age and changing conditions, the concrete sections of the FWA have significantly degraded and the reinforcing bars are exposed to the elements which have accelerated corrosion of the existing FWA system. Under the General Manager's authority, preliminary investigations were authorized in August 2019.

### **Diamond Valley Lake Visitor Experience Improvement**

This project will enhance the visitor experience at DVL. Multiple projects will be studied, planned and implemented to expand recreational and educational outreach enhancing Metropolitan's resource protection and conservation message. An initial study on the recreation and educational opportunities at the DVL properties will be used to document and prioritize the various investment options. There are various outreach opportunities to be evaluated including updated signage at the lake and trails; outdoor classrooms; augmented reality kiosks to introduce watersheds and protected open space; and facility and exhibit improvements to the DVL Visitor Center, formerly known as "The Center for Water Education."

### **Diamond Valley Lake-Lake Skinner Trails**

This project will create a regional network of trails connecting DVL and Lake Skinner as identified in the DVL Memorandum of Intent. The Lakeview Trail and North Hills Trail at DVL and certain trails at Lake Skinner already exist. Metropolitan jointly funded a trails study with Riverside County Regional Park and Open-Space District to investigate trail alignments connection feasibility through a Consultant agreement. The proposed trail alignments minimize impacts to the Southwestern Riverside County Multi-Species Reserve and link DVL and Lake Skinner using existing roads to the greatest extent possible. Trail uses under consideration include hiking, bicycling, and horseback riding.

## IT - Business Support Project Group

### **Access Applications Upgrade**

Microsoft Access (MS Access) is the database platform currently used by Metropolitan for smaller departmental applications used by Administrative Services, Human Resources, External Affairs, WSO, and Executive Management. Several applications require enhancements, such as mobile capabilities and a greater database capacity, that are not available through MS Access. This project will migrate selected applications from MS Access to Azure ("the cloud") to securely implement mobile access.

**AP Imaging Replacement**

Metropolitan's existing Accounts Payable Imaging Solution is not performing as needed and needs to be replaced with a functioning system. This project will implement the following: scanning of vendor invoices; validation of invoice data per business process rules; retention of invoice images on-line and uploading of the validated data (POETA) to Oracle Financials Accounts Payable application. Current technology will be used to "read" the incoming invoices as they are scanned, and create the data values to update the Oracle A/P system. The process improvements will increase staff efficiency and productivity and will eliminate the need for filing and storage of hardcopy invoices.

**Budget System Replacement**

This project delivers a replacement system for the 12-year-old budgeting system, which produces the capital and O&M budgets.

**Digital Asset Optimization**

The Digital Asset Optimization project will remove redundant, obsolete and trivial (ROT) information from files on Metropolitan's network files shares (NFS). This work is being performed to allow for more effective and efficient searching and collection of information as it pertains to public requests, legal holds and other Metropolitan needs for information. Additionally, the data will be categorized, and metadata captured for easier retrieval capabilities.

**Enterprise Content Management**

The Enterprise Content Management (ECM) application will classify and manage electronic documents and other media to allow for easy retrieval, review, and destruction of information in accordance with Metropolitan's records retention schedule. In addition, the new ECM application will allow Metropolitan to more effectively and efficiently manage its digital asset needs for business needs to respond to requests under the California Public Records Act (CPRA), and for eDiscovery purposes, and will automate compliance with records retention policies. This project includes designing a taxonomy for storing unstructured data and the development of a thesaurus to support the implementation of Metropolitan's ECM application. Phase I was authorized by the Board in July 2017. Phase II of this project completes the design and delivers the initial deployment of the enterprise content management software into the Metropolitan environment. The system will allow for the organization, collaborations and automated enforcement of records retentions policies to non-structured electronic media. The final phase III will deliver the balance of the deployment of the enterprise content management software throughout Metropolitan.

**MWDH20.com Redesign**

The existing website will be replaced with a new site offering more functionality and capability to spread Metropolitan's mission of providing water to Southern California.

**Payroll-Timekeeping Reimplementation**

This project will re-implement PeopleSoft payroll and will replace the current timekeeping software with a package that provides better integration with the payroll software and a better user interface. The current payroll and timekeeping applications both have deficiencies that have caused significant compensation issues for employees and have resulted in the need for excessive manual corrections by payroll staff. This project will enhance workforce productivity by simplifying access to business information and will maintain sound business practices and fiscal integrity.



**Project Controls and Reporting System**

The Project Controls and Reporting System (PCRS) will replace Metropolitan's existing project control system that is now functionally obsolete. The PCRS will integrate data from multiple components of Metropolitan's financial and CIP scheduling systems and integrate this data in a new data warehouse. The PCRS will create standardized reports and dashboards and produce forecasts and resource requirement reports. This data warehouse will be an enterprise-wide tool that will also support other future corporate reporting applications. Deployment of the PCRS was authorized by the Board in October 2017.

**Real Property Group Business System Replacement**

This project will select and implement new software for the Real Property Group (RPG). The software will streamline planning, tracking, execution, and compliance management of Real Property business processes for both the Planning and Acquisition, and Land Management Unit(s). RPG's goal is to centralize the disparate, stand-alone applications and processes, and migrate existing data into one integrated system to increase productivity and improve business processes.

**Services Procurement Implementation**

In the current Oracle Business Suite (EBS), it is difficult to automate and record certain transactions such as retention payments, Stop Notices, and Liquidated Damages. These transactions are tracked separately by Finance and Engineering. The Oracle on-premise Service Procurement Module is part of the Oracle E-Business Suite. The module automates retention transactions at the time of payment, and can, through customization, accommodate the need to hold other payments as liabilities in the General Ledger (GL).

This project will implement the Oracle Service Procurement Module, as part of the Oracle E-Business Suite, to automate retention or other withholdings required as liabilities in the GL.

**Supplier Portal Implementation**

This project will implement Oracle's web-based Supplier Portal, which provides self-service capabilities to Metropolitan's supplier community. Suppliers have access to a secure area that provides complete visibility to transactions, including purchase orders, payments and planned payments, offers collaboration with Metropolitan staff, and allows the electronic submission of invoices. The implementation of the portal will reduce repetitive inquiries from vendors, saving staff time and reducing vendor frustration.

**WINS Water Billing System Upgrade**

The Water Information System (WINS) bills Metropolitan's member agencies, on a monthly basis, for approximately \$75 million. WINS is known as Metropolitan's "cash register". The custom application is 10 years old and needs to be updated. The billing logic is complicated and "hard-coded" into the application, requiring assistance from Metropolitan's Information Technology to make even minor modifications, such as adding new meters or programs. Member agencies have also requested additional functionality. This project will rewrite the WINS to add needed enhancements to the system to add functionality for both Metropolitan and member agencies.

**Incident Reporting System**

This project delivers a replacement for the 17+ year-old Incident Reporting System. This system reports and tracks incidents that occur on Metropolitan property. Incidents include safety, security, environmental, and workers compensation related events.

## Dams and Reservoirs Improvements Program

Fiscal Year 2020/21 Estimate: \$5.1 million

Fiscal Year 2021/22 Estimate: \$13.1 million

**Program Information:** *The Dams & Reservoirs Improvements Program is comprised of projects to upgrade or refurbish Metropolitan's dams, reservoirs, and appurtenant facilities in order to reliably meet water storage needs and regulatory compliance.*

### Accomplishments for FY 2018/19 and FY 2019/20

- New projects initiated during the last biennium:
  - Garvey Reservoir Cover and Liner Replacement
  - Dam Monitoring System Upgrades and Spillway Assessments at Lake Mathews and Lake Skinner
- Major milestones achieved during the last biennium:
  - Construction completed:
    - Palos Verdes Reservoir Improvements
    - Diamond Valley Lake Dam Monitoring Systems Upgrades Stages 1 and 2

### Objectives for FYs 2020/21 and 2021/22

Project	Total Project Estimate	Estimated Completion	Major Milestones
Diamond Valley Lake Dam Monitoring System Upgrades	\$ 6,000,000	2022	Start construction - Stage 3
Jensen FWR # 2 Floating Cover Replacement	\$ 8,400,000	2023	Begin final design
Mills Finished Water Reservoir Rehabilitation	\$ 19,000,000	2025	Begin final design

## Dams & Reservoirs - All Project Group

### **Diamond Valley Lake Dam Monitoring System Upgrades**

The three rock-fill dams which form Diamond Valley Lake (DVL) are monitored continuously by the facility's geodetic deformation monitoring system, which transmits real-time displacement data to Metropolitan's Headquarters at Union Station and to the Operations Control Center at Eagle Rock. This data is collected to provide early indication of a potential problem within the dam embankments or foundations, and to prepare mandatory reports on the dams' performance for submission to DSOD. After 17 years of continuous operation, the existing monitoring equipment has deteriorated and needs to be replaced. The planned upgrades will maintain the capability to continuously monitor dam performance in compliance with the DSOD operating permit.

Upgrades to the dam monitoring network at DVL will be accomplished in three stages. The Stage 1 - procurement and installation of the weir level sensors and strong motion accelerographs; Stage 2 - design and preparation of procurement documents for the geodetic deformation monitoring system; and Stage 3 - design and procurement of automated data acquisition system and upgrades to the communication network. Stage 2 construction was authorized by the Board in September 2017.

### **Jensen Finished Water Reservoirs Refurbishment**

The Jensen plant has two 50-MG finished water reservoirs. Reservoir No. 1 is a concrete structure with a concrete roof that was completed in 1972. The concrete roof of Reservoir No. 1 has a bituminous built-up roofing system and lightweight concrete cap made of perlite. Portions of the perlite cap have deteriorated over time due to weathering. Any further deterioration may result in ponded rainwater leaking into the reservoir, leading to the reservoir being removed from service in order to maintain treated water quality. The rehabilitation work will replace the damaged perlite with a thin concrete layer, which will extend the cover life for approximately 20 years. Design was authorized by the Board in April 2017.

Reservoir No. 2 has a polypropylene floating cover that was installed in 1997. The floating cover at Reservoir No. 2 is showing significant signs of wear and needs to be replaced. In addition, modifications to the Reservoir No. 2 inlet are needed, as turbulent flow at the inlet has torn holes in the floating cover on several occasions near the corners of the fixed metal air vents. The rehabilitation work will include installation of a new finished water reservoir liner and floating cover with a rainwater removal system and improvement of the existing inlet configuration. Design was authorized by the Board in April 2017.

Within both reservoirs, inadequate mixing contributes to chloramine decay, which in turn increases the nitrite levels within the reservoirs and downstream distribution system. In accordance with the Water Quality Action Response Guidelines, elevated nitrite levels will require additional monitoring, as they may result in bacterial regrowth, and may require operational changes to mitigate chlorine decay. This project will conduct a study of the mixing characteristics of Reservoirs Nos. 1 and 2 and will test and implement solutions for mixing improvements, including installation of stationary mixers equipped with chlorine injection inside the reservoirs to enhance mixing and reduce the occurrence of nitrification within the reservoirs. The project will also install needed mixing improvements.

### **Dam Monitoring System Upgrades at Lake Mathews and Lake Skinner**

Metropolitan relies on extensive instrumentation and regular inspections as a cornerstone of its dam monitoring program. The instrumentation provides warning signs of dam distress and provides real-time monitoring of the embankments and foundations. Extensive monitoring equipment has been installed at Lake Skinner and Lake Mathews over the last 44 years and 79 years, respectively. Recent inspections have noted that several of the piezometers and weirs at these facilities no longer function reliably and require rehabilitation or replacement.

Field surveys and condition assessments will be conducted at both dams to develop a staged replacement schedule. Based on the results of the assessments, installation of automated dam monitoring systems at each dam may be required. Design was authorized by the Board in December 2017.

**Etiwanda Reservoir Rehabilitation**

The Etiwanda Reservoir has been in operation for 26 years. The liner and appurtenances are in need of refurbishing to maintain their integrity and prevent excessive seepage as noted during periodic inspections. This project will rehabilitate the reservoir by replacing the reservoir liner with a geomembrane liner, replacing the sub-drain sump pump system, and installing new electronic monitoring instrumentation and equipment to better monitor operational status of the sump pump system. The project scope will also include inspection and evaluation of: (1) the asphalt pavement for the reservoir perimeter roads and parking lot for rehabilitation as needed; and (2) the isolation drop gates, emergency discharge slide gate, effluent gate, and reservoir sleeve valves.

**Garvey Reservoir Cover and Liner Replacement**

Garvey Reservoir was placed into operation in 1954. It is located at the junction of the Middle Feeder and the Garvey-Ascot Cross Feeder in the city of Monterey Park. Garvey Reservoir provides hydraulic grade stabilization, pressure relief, and operational and emergency storage for the Central Pool portion of the distribution system. A flexible membrane liner and reservoir floating cover were installed in 1999. The service life of a reservoir floating cover is approximately 20 years. The existing floating cover at Garvey Reservoir has become increasingly difficult to repair and needs replacement.

This project will replace the reservoir's aging floating cover and flexible membrane liner. In addition, the existing inlet/outlet tower will be retrofitted; circulation piping will be modified; the inlet and outlet control valves will be replaced as required; the standby generator and electrical system will be upgraded, and the on-site water quality laboratory will be relocated and refurbished.

**Lake Skinner Outlet Tower Seismic Upgrade**

Lake Skinner was constructed in the 1970s and is located in the city of Temecula, in Riverside County. Water is delivered from the lake through its outlet tower to the Skinner Water Treatment Plant. If the lake needed to be drained rapidly in the event of an emergency, the outlet tower would be used to safely release the water. The outlet tower is under the jurisdiction of the California Division of Safety of Dams which requires that the tower meet current seismic codes.

Metropolitan has an ongoing program to evaluate the seismic stability of its facilities in order to maintain reliable water deliveries and to meet current design practices and building codes. Under Metropolitan's seismic assessment program, staff conducted an initial assessment of the Lake Skinner Outlet tower. Seismic analyses of the Lake Skinner Outlet Tower have identified that the tower may be damaged during a major earthquake. The Board authorized preliminary investigations to evaluate the outlet tower to identify potential risk, vulnerabilities, and develop seismic upgrade option in December 2017.

**Live Oak Reservoir Rehabilitation**

The Live Oak Reservoir has a 2,500-acre-foot capacity and is located in the city of La Verne. The main purpose of the reservoir is to allow peaking of the Devil Canyon Power Plant and to provide for outages. The reservoir water surface controls the upstream hydraulic gradient for the San Dimas Hydroelectric Power Plant. An inspection identified the following: (1) several valves that are leaking; (2) the reservoir liner is damaged in several areas; (2) the emergency backup generator is no longer manufactured and parts are obsolete; (3) the existing HVAC system including the ductwork for the control room has exceeded its expected service life; (4) improvements to provide access control, intrusion alarm, and surveillance are needed; and (5) improvements to the grading, surface drainage, and paved roads adjacent to the Live Oak Reservoir are also needed. This project will replace three leaking butterfly valves, spot repair the existing asphalt concrete (AC) liner, replace the existing Emergency Standby Generator, replace the existing Heating, Ventilation, and Air Conditioning (HVAC) system, improve erosion controls for the facility, identify and restore all electrical components to new condition, including electrical, panel boards and grounding, sump pumps, and associated instrumentation, and conduct a security assessment of the facility to reinforce or upgrade physical features and protect infrastructure. This includes replacement of the inner fencing for the reservoir with security type fencing.

This project will also improve the emergency dewatering system for Live Oak Reservoir. The project scope will include the design and construction of appurtenant structures such as gantry cranes for lifting spillway drop gates, an emergency generator to back up the crane power source, automation of valves, modification of blow-off structures, or addition of secondary discharge lines to provide a more direct, reliable, and efficient means to dewater Live Oak Reservoir in the event of an emergency.

**Mills Finished Water Reservoir Rehabilitation**

The Mills plant relies on two finished water reservoirs with floating covers and geomembrane liners to provide storage for the downstream distribution system. Their capacity is approximately 25 million gallons (MG) each. The Hypalon cover on Reservoir No. 1 was installed in 1997, while the polypropylene cover on Reservoir No. 2 was installed in 1996. Over the past three years, an increasing number of rips and pinhole leaks in the covers were discovered and repaired. Due to their deterioration, the floating covers and geomembrane liners at both reservoirs need to be replaced. The rehabilitation work will include installation of new finished water reservoir liners and floating covers with a rain removal system, refurbishment or replacement of existing reservoir gates, installation of a new drop gate, and installation of enhanced security features and appurtenances for both reservoirs. Design was authorized by the Board in April 2017.

**Palos Verdes Reservoir Cover Replacement**

Palos Verdes Reservoir was constructed in 1939 to provide operational storage and hydraulic flexibility within the distribution system. Metropolitan installed a geomembrane floating cover in 1988 to preserve water quality and reduce evaporative losses from the reservoir. Following a detailed inspection of that facility in 2011, the reservoir was removed from service because of damage to its floating cover. Due to its age and deteriorated condition, the synthetic rubber could not be repaired. The scope of the project includes removal of the reservoir's existing concrete lining; regrading of the clay sub-liner; modification of the existing spillway structure, inlet/outlet tower, and secondary inlet and outlet structures; installation of a new sub-drain system, asphalt concrete lining, geomembrane liner, and geomembrane floating cover; modification of the existing 480-volt electrical service, sodium hypochlorite feed system, rainwater removal system, and drainage piping; installation of a new valve and flowmeter upstream of the reservoir; addition of a precast concrete instrumentation and water quality structure. Construction was authorized by the Board in November 2015.

**Palos Verdes Reservoir Groundwater Management**

This project will address long-term groundwater management at the Palos Verdes Reservoir. The project will evaluate monitoring and disposal options for groundwater seepage, install monitoring instrumentation, develop groundwater and stormwater handling systems, if needed, and provide a connection to the sewer.

**Spillway Upgrades - Lake Mathews and Lake Skinner**

Following the recent incidents at Oroville Dam, the California Division of Safety of Dams (DSOD) is now requiring that dam owners in California assess the condition of dam spillways to confirm that they meet minimum safety standards. In July 2017, DSOD issued an initial list of 93 dams requiring comprehensive spillway assessments to evaluate hydraulic capacity, geotechnical stability, structural integrity, and potential erosion from dam releases. Of the 20 Metropolitan facilities that are permitted by DSOD, two have been directed to undergo the comprehensive assessments: Lake Mathews and Lake Skinner.

Metropolitan submitted the required work plans for re-evaluation of the spillways at Lake Mathews and Lake Skinner and received approval of those plans in September 2017. For each dam, a comprehensive spillway assessment report will be prepared and submitted to DSOD for review. As part of these comprehensive assessments, re-evaluation of the outlet tower and conduit at Lake Skinner is recommended to identify potential risks and vulnerabilities of lowering the reservoir pool after a major seismic event. Due to its integral role in withdrawing water from the reservoir, the spillway work plan will be expanded to include the Lake Skinner outlet tower and conduit. The assessments were authorized by the Board in December 2017.

**Weymouth Finished Water Reservoir Rehabilitation**

The Weymouth plant's 50-million-gallon finished water reservoir was built in 1964. Because the finished water reservoir's concrete roof was constructed with no expansion joints, numerous cracks in the roof slab continue to open and close with the expansion/contraction cycles caused by daily fluctuation in temperature. Repair is required to protect the concrete and to prevent corrosion of the exposed reinforcing steel.

This project will repair cracked and spalling concrete on the underside of the finished water reservoir roof slab, support beam connections, and entry staircase. The project will concurrently perform any needed seismic retrofit to meet the latest Division of Safety of Dams (DSOD) standards.

## Distribution System Reliability Program

Fiscal Year 2020/21 Estimate: \$37.2 million

Fiscal Year 2021/22 Estimate: \$29.9 million

**Program Information:** *The Distribution System Reliability Program is comprised of projects to replace or refurbish existing facilities within Metropolitan's distribution system, including reservoirs, pressure control structures, hydroelectric power plants, and pipelines, in order to reliably meet water demands.*

### Accomplishments for FY 2018/19 and FY 2019/20

- New projects initiated during the last biennium:
  - East Lake Skinner Bypass and Bypass No. 2 Screening Structure Upgrade
  - Electrical Upgrades at Structures in the Orange County Region (Stage 2)
  - Flow Meter Replacement
  - Foothill Feeder - Castaic Valley Blow-off Valves Replacement
  - Hollywood Tunnel North Portal Equipment Upgrades
  - Lake Mathews Above Ground Storage Tank Replacement
  - San Diego Pipeline No. 1 Joint Repair
  - San Jacinto Diversion Structure Slide Gate (V-03) Rehabilitation
  - Santa Monica Feeder Cast Iron Pipe Rehabilitation
  - Sepulveda Feeder/East Valley Feeder Interconnection Electrical Upgrades
  - Sepulveda-West Basin Interconnection Valve Replacement
  - Service Connection LA-17 Rehabilitation
  - Service Connections WB-2A & WB-2B Equipment Relocation
  - Wadsworth Pumping Plant Sleeve Valve Refurbishment
  
- Major milestones achieved during the last biennium:
  - Construction completed:
    - Orange County Feeder Relining Reach 2
    - Santa Ana Bridge Expansion Joint Replacement
    - Garvey Reservoir Erosion & Drainage Control Improvements - Zones 1 - 5
    - Fairplex and Walnut Pressure Control Valves Replacement
    - Wadsworth Pumping Plant Yard Piping Lining Repairs
    - Lake Mathews Forebay Outlet Tower Improvements
    - Foothill Feeder - Castaic Valley Blow-off Valves Replacement
    - Valley View Hydroelectric Plant Generator Refurbishment
    - Rialto Pipeline Service Connections CB-12 & CB-16 Valve Replacement
    - DVL Inlet/Outlet Tower Fish Screen Replacement

- San Diego Pipeline No. 1 Joint Repair
- Five projects completed design:
  - Orange County Feeder Blow-off Structure and Access Road Repair
  - East Orange County Feeder No. 2 Service Connection A-6 Rehabilitation
  - Casa Loma Siphon Barrel No. 1 - Pipe Procurement for Siphon Replacement
  - Electrical Upgrades at 15 Structures in Orange County Region
  - Orange County Feeder Cathodic Protection

### Objectives for FYs 2020/21 and 2021/22

Project	Total Project Estimate	Estimated Completion	Major Milestones
Casa Loma Siphon Barrel No. 1 - Replacement	\$ 36,000,000	2023	Complete design and begin construction
East Orange County Feeder No. 2 Service Connection A-6 Rehabilitation	\$ 2,100,000	2021	Complete construction
Electrical Upgrades at 15 Structures in Orange County Region	\$ 4,700,000	2021	Complete construction
Garvey Reservoir Drainage & Erosion Control Improvements - Zones 6 to 8	\$ 1,800,000	2020	Complete design
Garvey Reservoir Sodium Hypochlorite Feed System Upgrades	\$ 3,900,000	2022	Complete construction
Lake Mathews Forebay Pressure Control Structure and Bypass	\$ 64,000,000	2027	Begin design
Orange County C&D Team Support Facility	\$ 14,000,000	2020	Complete construction
Orange County Feeder Lining Repair - Reach 3	\$ 14,000,000	2023	Begin construction
West Valley Feeder No. 1 - Access Road and Valve Structure Improvements	\$ 5,000,000	2020	Complete construction of DeSoto valve structure improvements

### PCSs/HEPs/Service Connections/Valves & Gates Project Group

#### 108<sup>th</sup> Street Pressure Control Structure Valve Replacement

The 108<sup>th</sup> Street Pressure Control Structure (PCS) located on the Palos Verdes Feeder was constructed in 1941. The pipeline has a design capacity of 80 CFS in this area and provides the flexibility to deliver water through the Inglewood Lateral and Culver City Feeders to member agencies, including the city of Los Angeles, Central Basin Municipal Water District, and West Basin Municipal Water District. This project will replace two failing valves at the 108<sup>th</sup> Street PCS. The work will include replacing a corroded ladder, catwalk grating, restoring electrical components to new condition, and adding security features. Electrical components consist of electrical panel boards and grounding, sump pumps, and associated instrumentation.



**Appian Way Valve Replacement**

The Appian Way Sectionalizing Valve Structure on the Palos Verdes Feeder was constructed in 1937. The pipeline has a design capacity of 60 CFS in this area and delivers water to Metropolitan's member agencies, Central Basin Municipal Water District, and the city of Los Angeles. The sectionalizing valve provides Metropolitan the flexibility to isolate flows on the Palos Verdes Feeder between the Long Beach Lateral Turnout Structure and Appian Way Sectionalizing Valve Structure to perform preventive maintenance, planned shutdowns, and emergency activities if required. This operational reliability allows for continued delivery of water to Metropolitan's central pool. The failing sectionalizing valve is 80 years old. Over the past few years, the 24-inch valve has been rebuilt several times to extend its service life. This valve can no longer be rebuilt and has become extremely difficult to operate as it gets stuck and does not fully open or close. The body and cone have eroded, which prevents the valve from properly sealing. This project will replace two failing valves, dresser couplings, corroded pipe spools, and install a new precast concrete roof slab at the Appian Way Sectionalizing Valve Structure. Additionally, the project would identify and restore all electrical components, and provide for SCADA control of the valve. Electrical components include electrical panel boards and grounding system, sump pumps, and associated instrumentation.

**Conveyance and Distribution System Electrical Structures Rehabilitation**

Metropolitan's distribution system includes over 1,000 structures which house equipment used to measure pipeline flow, control pipeline flow and/or pressure, relieve pressure or vacuum, and isolate or sectionalize a pipeline. The conduits and electrical equipment inside the structures have corroded and no longer provide adequate grounding. In addition, the wiring inside the conduits may be compromised. These electrical components have been in continuous service in a damp, underground environment for over 50 years, and need to be upgraded. The rehabilitation for the Conveyance and Distribution System Electrical Structures has been prioritized and will be completed in five stages. The Stage 1 upgrades will upgrade 15 highest priority service connection structures within Orange County. Stage 2 improvements will upgrade remaining 244 structures within Orange County. Stage 3 improvements will upgrade 258 structures in northern Los Angeles County. Stage 4 improvements will upgrade 258 structures in southern Los Angeles County. Stage 5 improvements will upgrade 301 structures in Riverside, San Diego, and San Bernardino Counties. The precise number of structures to be improved may vary depending condition assessments. The planned work includes replacing the existing service panels, conduits, wiring lights, and receptacles; and providing new grounding systems, sump pumps, exhaust fans, and remotely monitored flood alarms at each structure.

**Coyote Creek Hydroelectric Plant/PCS Emergency Standby Generator Replacement**

The existing emergency stand-by generator was installed when the Hydroelectric Plant/Pressure Control Structure (HEP/PCS) was constructed in 1982. The emergency generator is 37 years old and has deteriorated with age. This project will replace the existing emergency generator with a new 150 kW, 3-phase 480-volt, diesel engine driven generator and construct an additional manual transfer switch outside the stationary generator room to provide for a secondary portable generator hookup. The project scope will include electrical and mechanical system upgrades to the generator building to meet current emission and fire code regulations under the Environmental Protection Agency's Tier 3 Emission and Fuel Standards Program.

**Eagle Rock Tower Distribution System Upgrades**

Eagle Rock Tower diverts the flow of water from the Weymouth plant into the Palos Verdes Feeder, Santa Monica Feeder, and the Eagle Rock Lateral. The tower is also used to maintain the required hydraulic grade to the service connections upstream of the tower. This project will perform needed rehabilitation of various components of the Eagle Rock Tower distribution system. The project will include the following: (1) replace the leaking control and isolation valves at the interconnections to the Palos Verdes and Santa Monica Feeders, (2) replace corroded slide gate and cover, and repair slide gate rails and associated components, (3) fabricate and install new drop gate at inlet side of Eagle Rock Tower to improve isolation capability, (4) extend Santa Monica Feeder interconnection blow-off structure and install isolation valves to improve maintenance flexibility, (5) install stairs from access road to facilitate safe access to blow-off structure, and (6) replace corroded work platforms and ladders in interconnection structures to improve worker safety.

**East Orange County Feeder No. 2 Service Connection A-6 Rehabilitation**

The A-06 Valve and Meter structure is a service connection for the City of Anaheim and is located on the East Orange County Feeder #2. The meter is a 24-inch venturi meter with a design capacity of 40 CFS. The meter was first put into service in August of 1964. During routine maintenance, staff noticed a leak from a weld-o-let near the bottom of the venturi meter. The Materials and Metallurgy Team inspected the meter in June 2014 and recommend replacement the venturi meter. The scope of work is to replace the A-06 Venturi meter, valve, steel grating, and adjacent piping that is deteriorated. The work will also include replacing the sump pump and identifying and restoring all electrical components to like new condition. A construction contract was awarded by the Board in October 2019.

**East Orange County Feeder No. 2 Service Connection OC-44A Valve Replacement**

The East Orange County Feeder #2 is a 25-mile-long pipeline which delivers treated water from the Diemer plant to the cities of Anaheim, Orange, Santa Ana, and Irvine. Service Connection OC-44A, which is located in Newport Beach, was constructed in 1967 and delivers water to the Municipal Water District of Orange County. Gradual corrosion and wear from over 50 years of operation has led to the deterioration of the 16-inch plug valve. The valve is currently leaking and needs to be replaced. The plug valve shaft was installed in the horizontal position to allow placement of the valve within the vault. This unconventional position may have accelerated the deterioration of the valve. This project will replace a 16-inch-diameter plug valve, flowmeter, and appurtenant piping as required in the Service Connection OC-44A Structure. The work will also identify and restore all electrical components to new condition. Electrical components consist of electrical panel boards and grounding system, sump pump, and associated instrumentation.

**Flow Meter Replacement Project**

Metropolitan has over 500 flowmeters used for water revenue metering at service connections, operation of the conveyance and distributions, and for process control. Many flowmeters have been in operation over 50 years. Some of these meters are exhibiting signs of deterioration. Spare parts for older meters are increasingly difficult to procure.

This project will be conducted in three stages. Under Stage 1, a comprehensive evaluation of the flowmeters will be conducted to assess their current condition and availability of spare parts. Under Stage 2, deteriorating meters in critical services will be replaced. Under Stage 3, a comprehensive, risk-based approach will be implemented to replace the remaining flow meters. Under the General Managers authority, preliminary investigations were authorized in March 2019.

**Foothill Feeder PCS Valve Replacement**

Foothill Pressure Control Facility (PCF) is located at Castaic Lake Dam in northern Los Angeles County. The structure takes untreated water from the west branch of the State Water Project system and controls all untreated water flows into the Jensen plant. Foothill PCS consists of two turbines, two 60-inch inline sleeve valves, and three parallel trains of conical plug valves. Each plug valve train consists of three 48-inch conical plug valves in series, that are throttled to dissipate pressure. Although the conical plug valves are currently used to control flow, these types of valves are not well-suited for this application. In addition, recent valve inspections have identified leaks, cracks, and corrosion. This project will replace the conical valves with valves that are better-suited for flow control and will replace all other valves that are at the end of their service life and other facility improvements.

**Foothill Hydroelectric Plant Refurbishment**

The Foothill Hydroelectric Plant was constructed in 1981. The electrical and mechanical systems are exhibiting signs of normal wear and tear after 30 years of service. The scope of work is to refurbish control and electrical protection systems, mechanical piping for the generator cooling water systems, and add a Programmable Logic Controller. This project will install an on-line data acquisition and monitoring instrumentation and refurbish or replace other deficient equipment. Design was authorized by the Board in September 2018.

An assessment has identified that the facility is seismically vulnerable and should be upgraded. The scope of work also includes reinforcing the roof, replacing a cracked beam, and installing connectors and seismic restraints to the roof, columns, and walls. Retrofit work will also include upgrades for non-structural components such as equipment anchors, pipe/conduit supports, and crane rail bracing. Design was authorized by the Board in December 2014.

In addition, the electrical and mechanical systems are exhibiting signs of normal wear and tear after 30 years of service. The scope of work is to refurbish electrical protection relays, control relays, mechanical piping for the generator cooling water systems, and add a Programmable Logic Controller. This project will install on-line data acquisition and monitoring and will refurbish or replace other deficient equipment. Design was authorized by the Board in March 2012.

**Hollywood Tunnel North Portal Equipment Upgrades**

Built as part of the Santa Monica Feeder in 1937, the North Portal of the Hollywood Tunnel is one of three control points along the feeder, which delivers water to the cities of Burbank, Beverly Hills, Los Angeles, and Santa Monica. The valves and mechanical control system at the North Portal of the Hollywood Tunnel are obsolete. Repair parts are not available and must be fabricated at a machine shop. This project will replace the existing sleeve valves and hydraulic actuators at the North Portal of the Hollywood Tunnel with new control valves with electric actuators. The upgrade includes replacing the mechanical controls with electronic, PLC/SCADA controls, which will allow the facility to be monitored and controlled from the Eagle Rock Operations Control Center.

**Hydroelectric Plant Rehabilitation**

Metropolitan owns and operates 15 hydroelectric power plants with a total installed capacity of 130 megawatts. Approximately 10% of Metropolitan's income is derived from these power plants. The first plant to be commissioned was the Greg Avenue Power Plant in 1979, and the last was the Wadsworth Hydroelectric Power Plant in 2002. Many of these plants have been in operation over 35 years and have not undergone refurbishment or upgrade. Several plants are beginning to show signs of deterioration and several have already been refurbished. A comprehensive approach to rehabilitation of the other hydroelectric plants is needed to protect Metropolitan assets and fortify infrastructure reliability.

This project will assess and evaluate Metropolitan's hydroelectric plants, determine the rehabilitation requirements for each plant, identify needed pilot efforts, prioritize the needed rehabilitation, and develop a multi-phase plan to complete the rehabilitation. New facilities or those that have already undergone rehabilitation will not be included in the evaluation. For the included hydroelectric plants, the assessment will evaluate the following equipment and systems: turbine, generator, power equipment and switchyard, control system, protection system, auxiliary systems such as lube oil and cooling water, and the overall facility.

### **Lake Mathews Forebay Pressure Control Structure and Bypass**

Lake Mathews is the terminus of Metropolitan's CRA and was constructed in the 1930's. Untreated water stored in the reservoir is withdrawn through the lake's forebay and hydroelectric plant and is then conveyed through the Upper Feeder and Lower Feeder to the Weymouth and Diemer plants, respectively. The Lake Mathews forebay discharge valves and outlet tower have gradually deteriorated over 75 years of operation. Portions of the facilities need to be replaced to maintain reliable deliveries from Lake Mathews into the Central Pool. The ten 32-inch-diameter Howell-Bunger valves that are used to withdraw water from the lake have gradually deteriorated through continuous use. The frequency of repairs is increasing, while replacement parts are difficult to obtain. These 60- to 75-year-old valves need to be replaced.

Upgraded facilities may include a bypass system which includes new headworks regulating valves, upgraded outlet tower gates, and a new overflow spillway structure. The system is expected to provide full-service capacity and deliver water to the Upper and Lower Feeders year-round. The Board authorized preliminary design in February 2014.

### **Lake Mathews Junction Shaft Gate Hydraulic Power Unit Study - Outlet Tower No. 2 Isolation**

The roller gates at the Lake Mathews junction shaft do not operate consistently and reliably. The large isolation gates utilize hydraulic power units to operate under normal conditions and store energy for use in emergency conditions when electric power is not available. Although maintained in accordance with the manufacturer's recommendations, the gates no longer function as designed. This project will evaluate the two roller gate operators at the Lake Mathews junction structure that provide isolation for Outlet Tower No. 2. The study will focus on the condition of hydraulic power unit equipment, safety elements related to pressurized hydraulic reservoirs/tanks, and operating procedures/practices.

### **Lake Mathews Outlet Tower No. 2 Valve Rehabilitation**

The outlet tower valves operate intermittently do not open and close completely. Without proper operation of the valves, tier selection and flow rates are impacted which may adversely affect system operations including raw water quality, water treatment processes at the downstream Weymouth and Diemer plants, and secure isolation of the tower from the lake needed for maintenance and inspection work. This project will complete a comprehensive study and implement recommendations on replacement or refurbishment of the butterfly valves on the Lake Mathews Outlet Tower No. 2.

### **OC-88 Pumping Plant Upgrades**

The OC-88 Pumping Plant, consisting of the OC-88 and OC-88A pump stations, was constructed in 1990 and is located in the city of Lake Forest. Treated water from the Diemer plant is conveyed through the Allen McColloch Pipeline (AMP) to the OC-88 Pumping Plant, which in turn pumps water directly into the Municipal Water District of Orange County's (MWDOC's) South County Pipeline. The surge tank system protects the AMP and the South County Pipeline from pressure surges. Two new surge tanks were added when the OC-88 Pumping Plant modifications were completed in 2005. However, the air compressor was not upgraded at that time. A recently completed high-flow test at the OC-88 Pumping Plant identified that a second air compressor should be installed to adequately protect the AMP and the South County Pipeline. This project will upgrade the OC-88 Pumping Plant's surge tank system, install a second air compressor, replace flow meters and pumps, perform overhead crane improvements, upgrade the surge tank, fire protection, and HVAC systems; and perform other associated facility improvements. Preliminary design was authorized by the Board in August 2013.

The OC-88 and OC-88A pump stations feed directly off the Allen-McColloch Pipeline (AMP) and deliver water into the South County Pipeline to supply the Santa Margarita Water District, a member agency of the Municipal Water District of Orange County. Southern California Edison performed an efficiency test on the three existing pump motors located at the OC-88A pump station and found that improvements in motor efficiency could result in annual savings of approximately \$25,000 in electricity costs, and an estimated 235 tons of CO2 emissions. This project will also replace the three pumps at the OC-88A pump station with pumps that have high-efficiency motors equipped with variable frequency drives.

### **Olinda Pressure Control Structure Valve Replacement**

The Olinda Pressure Control Structure was constructed in 1969 to provide regulation of flows in the Lower Feeder between the Santiago Control Tower and Diemer Filtration Plant. This project will replace two conical plug valves to increase efficiency, reliability, and mitigate the vibrations caused by operating the valves. The structure's electrical components will also be evaluated and refurbished or replaced. Replacing the existing 49-year-old valves will improve operational control of the Lower Feeder between the Santiago Control Tower and the Diemer plant. If cost effective, relocation of the PCS will also be considered.

### **Orange and Riverside/San Diego County Operating Regions Valve Replacement**

Metropolitan's distribution system includes over 830 miles of pipelines and 5,400 individual structures that require regular maintenance and monitoring. The system is comprised of four regions: the Los Angeles County, Orange County, Riverside/San Diego County, and Western San Bernardino County regions. The subject project will replace valves within the Orange and Riverside/San Diego County operating regions. Replacement of these valves is a priority due to the age of the feeders and the number of critical valves that need to be replaced.

The valves on the Second Lower Feeder, Orange County Feeder, East Orange County Feeder, Lower Feeder, Santiago Lateral, and the Allen-McColloch Pipeline have been in service up to 50 years and have reached the end of their useful and expected service life. Failure of these valves or their associated components may result in an unplanned emergency shutdown of one of these pipelines impacting delivery to our member agencies. The scope of work is to replace approximately 70 deteriorated valves ranging in size from 1 to 12 inches in diameter on various pipelines in the Orange County Distribution System. Construction was authorized by the Board in September 2017.

The Riverside/San Diego County operating region serves Eastern Municipal Water District, Western Municipal Water District of Riverside County, and the San Diego County Water Authority. In this region, the valves to be replaced are located on the Lake Skinner Outlet Conduit and San Diego Pipelines Nos. 3, 4 and 5. These lines commenced operation between 1959 and 1972. The valves to be replaced include air release/vacuum valves that are installed at high points in the lines to exhaust or admit air during pipeline filling or dewatering operations, and small globe, plug, and butterfly valves. The latter valves are used for isolation of air release/vacuum valve assemblies, blow-off structures, and pressure control structures. Closing these isolation valves allows inspection and maintenance activities to proceed without requiring a shutdown of the feeder. The Board authorized design and procurement in April 2018.

### **Palos Verdes Feeder - Long Beach Lateral Turnout Structure Sta. 1442+15 Valve Replacements**

The Palos Verdes Feeder - Long Beach Lateral turnout structure, located in the County of Los Angeles, was constructed in 1938. The Long Beach Lateral turnout structure consists of seven valves that allows Metropolitan to continue delivering water upstream and downstream to member agencies during preventive maintenance, shutdowns, and emergencies. This project will replace the seven valves on the Palos Verdes Feeder/Long Beach Lateral Turnout Structure that are 80 years old. The structure will also be refurbished and include replacing the existing catwalk grating, a new precast concrete roof slab, lifting mechanism, security type entry hatches, and identify and restore all electrical components to like new condition. Electrical components consist of electrical panel boards and grounding system, sump pump and associated instrumentation.

**Rio Hondo Pressure Control Structure Valve Replacements**

The Rio Hondo Pressure Control Structure (PCS) on the Middle Feeder pipeline was constructed in 1983. Construction of the Rio Hondo PCS incorporated an existing valve structure, so the valves at this location have been in operation since 1953 as part of the original underground valve structure. The existing valves have been in continuous service for approximately 65 years, and over time have required frequent repairs/rebuilding.

The Eagle Rock Operations Control Center utilizes the Rio Hondo PCS to maintain the lower pressure zone on the southern half of the Middle Feeder, and to assure deliveries to member agency water demands in the southwestern service area. This project will replace failing valves at the Rio Hondo PCS. The work will include replacing dresser couplings, pipe spools, and pipe supports; providing adequate ventilation for the structure; rehabilitating the existing wastewater system; and identifying and restoring all electrical components to new condition. Electrical components consist of electrical panel boards and grounding system, sump pumps, and associated instrumentation.

**San Diego Canal Radial Gates Rehabilitation (V-06 & V-08)**

The protective coatings on the radial gate at the San Diego Canal and the operating components of the gates have begun to fail, and significant metal loss has occurred. In addition, the performance of the existing motor actuators used to open and close the gates has diminished. Should this gate fail, there would be loss of control to regulate flow into Lake Skinner from the San Diego Canal, along with loss of control in surface elevation that regulates flows through the Lake Skinner Bypass screening structures. The bypass structures supply the Skinner area raw water pipelines and the Skinner plant when Lake Skinner is being bypassed, typically due to a taste and odor issue in the lake. This project will rehabilitate or replace the San Diego Canal Radial Gates V-06 and V-08. The rehabilitation may include strengthening or replacing steel members as needed, replacing the radial gate actuator and controls, and preparing and coating steel surfaces with an approved coating, such as a galvanic metalized coating.

**San Diego Pipelines 3 & 5 Vacuum Valve Replacement**

This project will remove and replace 72 existing vacuum valves on San Diego Pipeline No. 3 (SDPL3) and San Diego Pipeline No. 5 (SDPL5). The existing valves on SDPL3 have been in service for almost 60 years, while those on SDPL5 have been in use for almost 40 years. All the valves have reached the end of their services lives, and the majority are not in a condition to be rehabilitated. All valves will be replaced in-kind. This project will lower corrective maintenance costs, and the risks of valve failures resulting in property or pipeline damage or unscheduled pipeline outages.

**San Dimas and Red Mountain Power Plants Standby Diesel/Engine Generator Replacements**

The emergency generator at Red Mountain Hydroelectric plant was installed during the original plant construction in 1983. The generator at the San Dimas Hydro Electric Power Plant was installed during original Pressure Control Structure construction in 1975. These generators are necessary to ensure all operating equipment performs the required flow transfers between the Hydroelectric Power Plant (HEP) and the Pressure Control Structure (PCS) during un-scheduled HEP interruptions and SDGE station-power failures. The scope of work is to design, procure, and construct two standby diesel engine generators, one each at the San Dimas and Red Mountain Power Plants. The project scope includes removal of the existing generators and fuel tanks, construction of a new unloading facility with spill containment, steel overhead canopies, and electrical and mechanical system upgrades to the replacement generator to meet current emission and fire code. Design was authorized by the Board in February 2016.

**San Dimas Hydroelectric Plant Rehabilitation**

The San Dimas Hydroelectric Plant was constructed in 1981, and the electrical and mechanical systems are exhibiting signs of normal wear and tear after 30 years of service. The scope of work is to rehabilitate the turbine, generator, and switchgear and to provide associated controls, seismic and other facility upgrades. Design was authorized by the Board in March 2013.

**San Jacinto Diversion Structure Slide Gates Rehabilitation**

The San Jacinto Diversion Structure, located at the base of the San Jacinto Mountains, was completed in 1939. The diversion structure divides incoming flow from the CRA to three different outlets, using slide gates to control each flow. Although the existing gates were originally designed for open/close operation only, they had historically also been used for throttling the flow, which had caused substantial damage to the gates. This project will replace the existing V-01 and V-02 cast iron slide gates and appurtenances at the San Jacinto Diversion Structure with a single stainless-steel slide gate designed for throttling. This project will increase the operational reliability of the structure and the connection to the Casa Loma Siphon No. 1 and CRA.

The V-03 gate was designed to shut off flow to the San Jacinto pipeline. The slide gate does not fully close to provide isolation when needed or provide flow regulation. This project will replace or rehabilitate and modify the existing V-03 cast iron slide gate and its appurtenances at the diversion structure. Under the General Manager's authority, design, procurement was authorized in February 2019.

**Santa Monica Feeder and Calabasas Feeder Bypass for Sectionalizing Valves**

The lack of a bypass line at the Santa Monica Feeder and Calabasas Feeder creates the potential for damage to the valves and their operators due to the inability to equalize pressure across the valves before operating. Further operation of these valves, without installing a bypass, will continue to place the valves and pipeline at risk for damage and potentially emergency or unplanned shutdown. This project will design, fabricate, and install bypass lines at three sectionalizing valve locations that currently do not have a bypass line.

**Santiago Lateral Station 216+40 Butterfly Valve Replacement**

The Santiago Lateral is a pre-cast concrete pipeline, ranging in size from 60-inch to 72-inch, and was constructed in 1955. It extends southerly from the Santiago Control Tower in the Anaheim Hills approximately 7.4 miles to Irvine Lake. The pre-cast concrete pipeline provides raw CRA water to Anaheim, IRWD and Irvine Lake. The 42-inch sectionalizing valve currently leaks resulting in unwanted flows to the south portion of the Santiago Lateral. This project will replace the valve and construct a bypass line to handle lower flow rates. The Board authorized preliminary design in August 2013.

**Sepulveda Canyon Control Facility Electrical and Mechanical Rehabilitation & Seismic Upgrades**

The Sepulveda Canyon Facility consists of a pressure control structure, hydroelectric plant, and two water storage tanks. The pressure control structure was constructed in the early 1970s to reduce pressure in the 9-foot-diameter Sepulveda Feeder as it conveys treated water from the Jensen Plant. The two water tanks have a combined capacity of 18 million gallons of water and are used to regulate flows through the pipeline. The hydroelectric plant, which was constructed in 1982, takes advantage of excess pressure in the Sepulveda Feeder to generate up to 8.6 megawatts of electricity with its single turbine. The facility is located on top of a large pad that was constructed by filling a steeply sloped V-shaped ravine. The pad is approximately 120 feet above the toe of the slope. The site is located within one mile of the Santa Monica Fault, which is capable of generating a 6.8 magnitude earthquake. Preliminary slope analyses indicate that the fill could slide down the slope during a major earthquake, causing significant damage to the pressure control structure, the water tanks, and the hydroelectric plant. This project will consolidate all seismic upgrade efforts for the entire Sepulveda Canyon Control Facility and seismically upgrade the facility. Design was authorized by the Board in March 2013.

The Sepulveda Canyon Hydroelectric Plant was constructed in 1982, and the electrical and mechanical systems are exhibiting signs of normal wear and tear after 30 years of service. The scope of work is to rehabilitate the electrical and mechanical components including the turbine/generator and upgrades to the protection and control systems. The project also includes rehabilitation and structural improvements to the switchyard. Design was authorized by the Board in March 2013.

**Sepulveda Feeder/East Valley Feeder Interconnection Electrical Upgrades**

The East Valley valve structure is located on the north sidewalk of the Rinaldi Street and Hayvenhurst Avenue intersection in Granada Hills. During the wet season, this structure receives intrusive storm water leakage causing the junction boxes, electrical enclosures, and conduits to corrode and short circuit. The extent of damage has accelerated, and storm water now enters the structure. This project will install new wiring and control panels for operation of the existing valve, remove the existing aboveground disconnect switch and install a new power distribution panel, install new duct banks and conduits to supply power to each of the critical structures, install additional bollards around the distribution panel to minimize damage from vehicles, repair damaged sidewalk, and assess potentially relocating the existing metering structures. Design was authorized by the Board in October 2018.

**Sepulveda-West Basin Interconnection Valve Replacements**

The Sepulveda-West Basin Interconnection was constructed in 1970. The interconnection allows Metropolitan's Sepulveda Feeder pipeline the flexibility to convey supplemental flow to the West Basin Feeder. The structure includes two 16-inch lines with sleeve valves and one 12-inch line with a globe valve. Each line may be isolated at the either end with plug valves. This project will replace three failing valves at the Sepulveda-West Basin Interconnection structure. The work will include replacing associated dresser couplings, pipe spools, and pipe supports. Additionally, work on the structure will include installing a new precast concrete roof slab, providing adequate ventilation for the structure, replacing a sump pump, structure modifications to address algae accumulation on adjacent sidewalk due to frequent water discharge from the sump pump, and identifying and restoring all electrical components to new condition. Electrical components will consist of electrical panel boards and grounding, sump pumps, and associated instrumentation. Design was authorized by the Board in October 2018.

**Service Connection LA-17 Rehabilitation**

Service Connection LA-17 is located in the city of Los Angeles at the terminus of the Eagle Rock Lateral. It includes three lines: (1) 17A is a 24-inch line with a capacity of 30 cfs, (2) 17B is a 48-inch line with a capacity of 100 cfs, and (3) 17C is an 85-inch line with a capacity of 310 cfs. Three venturi tubes at the LA-17 service connection have been in service for more than 60 years and require significant rehabilitation or replacement.

Significant coating deterioration and metal loss with extensive pitting and corrosion were identified on the bottom side of the 48-inch venturi tube. The wall thickness of this venturi tube is approximately 30% of its original thickness. Failure to replace this venturi tube will lead to eventual leakage, flooding the structure, and impacting water deliveries to the member agency. This project will replace the deteriorating LA-17B welded steel venturi tube located at the Service Connection LA-17 structure. The work will also recoat the LA-17A and LA-17C venturi tubes within this structure. Additionally, work will include replacing the sump pump and identifying and restoring all electrical components to new condition. Electrical components will consist of electrical panel boards and grounding, and associated instrumentation. Under the General Manager's authority, design was authorized in June 2019.

**Upper Newport Bay Blow-off Structure Rehabilitation**

The existing blow-off structure on the Orange County Feeder enables the pipeline to be dewatered in the event of an emergency and provides access for routine maintenance and inspection. Following 73 years of continuous operation in a moist environment near Upper Newport Bay, the blow-off valves and piping inside the structure have corroded and need to be replaced. In addition, due to ongoing erosion, the only road available to access the blow-off structure has been damaged and requires repairs. This project will restore access to the structure and replace its internal valves and piping. The planned repairs include regrading of the existing access road and reinforcement of crossings where the road intersects drainage channels; strengthening of the existing turn-around area adjacent to the blow-off structure, which will allow maintenance vehicles to set up for repair activities; installation of new valves and replacement of corroded piping; and modification of piping to ensure continued compliance with current California Division of Drinking Water regulations to prevent potential cross connections. In June 2019, the Board authorized entering into two agreements for the performance of mitigation to support rehabilitation this blow-off structure.



**Venice Hydroelectric Plant Rehabilitation**

The Venice Hydroelectric Plant (HEP) was constructed in 1982, and the electrical and mechanical systems are exhibiting signs of normal wear and tear after 30 years of service. The scope of work is to rehabilitate the electrical and mechanical components including the turbine generator and the protection and control systems. The project also includes rehabilitation and structural improvements to the switchyard. Design was authorized by the Board in March 2013.

**Venice PCS Valve and Security Upgrades**

Venice Pressure Control Structure (PCS) is the second of two pressure control structures located along the Sepulveda Feeder. Venice PCS performs the critical operational functions of reducing grade and controlling flows in the Sepulveda Feeder. The PCS consists of multiple control valves and associated piping. The valves are almost 47 years old and have been experiencing increased failures over the last 10 years. This project will refurbish several valves and will install multi-hazard security features for facility infrastructure protection.

**Wadsworth Pumping Plant Sleeve Valve Refurbishment**

Recent inspections have identified numerous deteriorated sleeve valves at the Wadsworth Pumping Plant. The sleeve valves originally installed in 1999 control the flow of water from DVL to the San Diego Canal. While operation of the pumping plant has not yet been impacted, failure of the valves could lead to an unplanned shutdown and interruption of water delivery to member agencies. This project will refurbish seven 66-inch by 42-inch sleeve valves at the Wadsworth Pumping Plant at DVL.

**Washington Street Pressure Control Structure Valve Replacement & Security Upgrades**

The Washington Street Pressure Control Structure (PCS) located on the Palos Verdes Feeder was constructed in conjunction with the Palos Verdes Feeder pipeline in 1941. The pipeline has a design capacity of 100 CFS in this area. This project will replace two failing hydraulically operated globe valves at the Washington Street PCS. The work will include identifying and restoring all electrical components to new condition. Electrical components consist of electrical panel boards and grounding, sump pump, and associated instrumentation. Additionally, a security assessment of the facility will be conducted to determine the need to reinforce or upgrade physical features for enhanced infrastructure protection.

**West Orange County Feeder OC-09 Rehabilitation**

The West Orange County Feeder was constructed in 1956 as a component of the Lower Feeder system. It delivers treated water from the Robert B. Diemer Water Treatment Plant in Yorba Linda to the northwestern portion of Orange County. Service Connection OC-09 on the West Orange County Feeder consists of a turnout tee, a venturi meter, and a shutoff valve. The turnout tee is encased in concrete and is located beneath the traffic lanes of Katella Avenue in the city of Garden Grove, adjacent to the boundary line with the city of Stanton. The meter vault is located below Dale Street. This structure contains a 14-inch conical plug valve, a venturi meter, and associated piping and electrical systems. Gradual corrosion from over 60 years of operation in a damp underground environment has led to deterioration of the equipment within the vault. This equipment needs to be replaced to maintain reliable deliveries from the service connection. Preliminary Design Phase was authorized by the Board in October 2017.

**West Orange County Feeder Valve Replacement**

The West Orange County Feeder was constructed in 1956 as a component of the Lower Feeder system. It delivers treated water from the Diemer plant in Yorba Linda to the northwestern portion of Orange County. A recent condition assessment identified that 13 structures require rehabilitation, including the replacement of air release/vacuum valve assemblies and adjacent plug valves. These valves were installed during the original construction of the feeder and have been in service for over 60 years. Six of the air release/vacuum valves will also be relocated from a manhole to an above ground cabinet within the street-side parkway zone to prevent the potential of treated water in the distribution system becoming exposed to contaminants under certain operating conditions. Relocation is needed to comply with California State Water Resources Control Board requirements. Design and valve procurement were authorized by the Board in October 2017.

**West Valley Feeder No. 1 - Access Road & Valve Structure Improvements**

In 2001, a condition assessment of West Valley Feeder No. 1 identified that most of the blow-off valves, air release/vacuum valves, and sectionalizing valves were deteriorating and needed to be replaced. The existing valves were installed when the line was constructed in 1962 and no longer seal properly. Furthermore, several of the valves were directly buried and cannot be accessed without excavating the pipeline. This project will replace deteriorated valves, add valve structures, and improve access for maintenance and repairs. The work was prioritized and divided into three stages over multiple shutdown seasons to minimize the duration of pipeline outages. The first stage, which addressed 42 structures over four shutdown seasons, was completed in 2006. The second stage, which addressed 14 structures over two shutdown seasons, was completed in 2012. The third stage of work, which includes urgent improvements to the DeSoto Valve Structure in the city of Chatsworth, will add new valve structures in Chatsworth Park and replace valves located near Rinaldi Avenue. Design was authorized by the Board in October 2017.

**Willits Street Pressure Control Structure**

The Willits Street Pressure Control Structure (PCS), located in the city of Santa Ana, was built in 1944. This pressure control structure located on the Orange County feeder regulates pressure and conveys treated water to the Irvine Regulating Structure. This PCS is an underground structure consisting of three parallel trains of pressure control valves. At full capacity, two trains are in operation while the third train acts as a stand-by. The existing structure is congested and does not provide suitable access for maintenance, repairs or the replacement of valves. The maintenance access was impacted during street widening that required the size of the structure to be reduced. The modified structure configuration does not have a lifting mechanism to remove or transport these valves out of the structure for replacement or repairs. Additionally, the existing catwalk does not have adequate coverage. This project will construct a new pressure control structure to replace the existing Willits street PCS located on the Orange County Feeder. The work includes a new concrete substructure, relocating and replacing the control and isolation valves, new sampling connections for water quality and all necessary electrical and ventilation equipment. Once the new structure is complete, the older structure will be abandoned, and the pipeline will be attached to the new structure during a brief outage.

**Yorba Linda Power Plant Enclosure & Control System Improvements**

The Yorba Linda Power Plant is located on the Yorba Linda Feeder at the inlet to the Diemer plant and can generate up to 5 megawatts. Installation of a new turbine generator was authorized in November 2013. This project will provide for needed equipment features and enhancements not included in the scope of original generator replacement project. Design was authorized by the board in September of 2018. The features will increase the plant's reliability and longevity and address future maintenance and repair aspects of the Yorba Linda Power Plant. The scope of work includes design and construction of the following improvements: enclosure modifications to protect the generator unit and equipment from water intrusion; emergency shutdown, alarm, and public address system improvements; upgrades to the Human Machine Interface (HMI) panel; and procurement of critical spare parts. A construction contract for installation of the enclosure was authorized by the board in July 2019.

## Pipelines, Tunnels, Canals Project Group

### **Casa Loma Siphon Barrel No. 1 - Improvements**

In November 2016, leaks were detected on Barrel No. 1 of the Casa Loma Siphon. It was determined that the pipe has had significant horizontal and vertical movements. The leaks do not immediately jeopardize the structural integrity of the aqueduct but if repairs are not performed, the continued leakage over time could erode soil, undermine the siphon, and cause damage to the siphon structures. The Casa Loma Siphon Barrel No. 1 is vital to Metropolitan's conveyance system moving water from the desert pumping plants to Lake Mathews. The work is conducted in two stages. Under Project 1, internal seals were installed on 13 joints as an interim measure to address the leaks. These repairs were completed in February 2017, during a planned shutdown of the CRA. Project 2 will develop options to permanently repair the pipe joints within the siphon. The potential repairs may include installation or replacement of the existing sleeve-type couplings along with installation of recently developed earthquake-resistant pipe joints. Final design was authorized by the Board for Project No. 2 in May 2018. Further in December 2019 the Board awarded a pipe procurement contract for Project No. 2.

### **Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection**

The Casa Loma Siphon No. 1 and the San Jacinto Pipeline cross the San Jacinto River in Hemet, CA. The river experiences periodic high flows during severe storms, exposing the pipelines at the river crossing to damage due to exposure, undermining, or flotation. The scope of the project is to construct a weighted protective cover system, consisting of cable-connected articulated concrete blocks, spanning approximately 200 feet in length over Casa Loma Siphon No. 1 and the San Jacinto Pipeline. This project will enhance infrastructure safety, security, and resiliency, and will improve the reliability of water deliveries.

### **Etiwanda Pipeline (South) Protection - Sta. 332+00 to 349+00**

The City of Rancho Cucamonga is planning to construct a grade separation on Etiwanda Avenue where the Etiwanda Pipeline is located, south of the Etiwanda Reservoir near the tie-in point to the Upper Feeder. Metropolitan is required to either relocate or protect its pipeline, at its own expense, to allow for improvements by the City. This project will protect or relocate the impacted portion of the Etiwanda Pipeline. Under the General Manager's Authority, a study to identify the scope and budget for design and construction was authorized in June 2019.

### **Etiwanda Pipeline Lining Replacement**

The Etiwanda Pipeline was constructed in 1993 to convey untreated water from the Rialto Pipeline to the Upper Feeder. This 6.4-mile-long welded steel pipeline is 144 inches in diameter. The northern portion of the pipeline, which is 5.4 miles long, conveys high-pressure water to the Etiwanda Power Plant. From that facility, the southern portion of the pipeline continues for one mile to an interconnection with the Upper Feeder. During an internal inspection, staff discovered that approximately 37 percent of the northern portion of the line has missing or delaminated mortar lining. At the present time, the structural integrity of the pipeline remains sound. Over time, however, the loss of mortar lining will expose the pipeline to accelerated rates of corrosion and eventual leakage. This project will remove existing and failing cement mortar lining and install a flexible polyurethane lining system. Stages 1 and 2 of this three-stage project have been completed, and rehabilitation of the remaining 5.5 miles of the middle reach of the feeder will be completed under Stage 3. The Board authorized design of lining repairs in June 2016.

**Lake Perris Bypass Pipeline Relining**

The Lake Perris Bypass Pipeline is a 2.44-mile-long, 120-inch diameter prestressed concrete cylinder pipeline constructed in 1981 that extends from the Department of Water Resources (DWR)'s Santa Ana Valley Pipeline to Metropolitan's Lake Perris Pressure Control Facility. The majority of the Lake Perris Bypass Pipeline was constructed in fee property that is owned by DWR. In 1982, DWR granted MWD an easement for the pipeline within a specified alignment. Under the terms of the easement, Metropolitan is required to either relocate or protect its pipeline, at its own expense, to allow for improvements by DWR. DWR has been evaluating the need for improvements to the Lake Perris emergency release facility over the last several years. In early 2019, DWR notified Metropolitan that the planned improvements at Lake Perris would impact the bypass pipeline. Following staff's evaluation of pipeline protection options, it was determined that lining approximately 1,200 feet of the Lake Perris Bypass Pipeline with a steel liner is the most effective method to protect the pipeline. Design was authorized by the Board in November 2019.

**Lakeview Pipeline Relining**

The Lakeview Pipeline was constructed in 1973 to provide water from the East Branch of the State Water Project (SWP) to the Skinner area. Since it was completed, the Lakeview Pipeline has been shut down on numerous occasions to repair leaking joints. The line has experienced significant deformation which has caused leaks at pipe joints and loss of mortar lining. Due to the significant potential for corrosion of the pipeline, and the lack of structural integrity in many locations, permanent repairs should proceed expeditiously. In March 2015, in response to the ongoing state-wide drought, the Stage 1 repairs were completed. This work included lining a one-mile portion of the Lakeview Pipeline known as the Bernasconi Tunnel with a steel liner. In conjunction with the recently completed Lakeview Pipeline/Inland Feeder intertie, this improvement enables up to 200 cubic feet per second (cfs) of water stored in Diamond Valley Lake to be delivered to the Mills plant. The Stage 2 work includes lining 3.7 miles of the Lakeview Pipeline between the Inland Feeder's PC-1 control structure and the Perris Control Facility, along with installation of a 1,000-foot-long reach of 9.5-foot-diameter pipe to bypass the Perris Control Facility. Upon completion of the Stage 2 work, the Lakeview Pipeline will be capable of delivering up to 340 cfs from Devil Canyon through the Inland Feeder to the Mills plant, providing an alternate delivery route to the plant as backup to the Santa Ana Valley Pipeline. The future Stage 3 repairs will include lining the remaining 6.7 miles of the Lakeview Pipeline that extends from PC-1 to the San Diego/Casa Loma Canal junction structure. Stage 2 final design was authorized in December 2015.

**Orange County Feeder Relining**

The Orange County Feeder conveys treated water from the F. E. Weymouth Water Treatment Plant in La Verne to six member agencies in Los Angeles and Orange Counties. Recent internal inspections of the feeder have identified significant deterioration of the existing coal-tar enamel lining, which is 75 years old. While the pipeline's structural integrity remains sound at present, the interior lining displays blistering and disbonding, which expose the pipeline to accelerated rates of corrosion and eventual leakage. The lining needs to be repaired in order to maintain long-term reliability of the pipeline.

This project repairs the lining on the 11-mile-long Feeder, which is being accomplished in three stages. Stage 1 of this three-stage project has been completed, Stage 2 is under construction, and rehabilitation of the remaining four miles of the middle reach of the feeder will be completed under Stage 3. The stage 3 work includes replacement of the lining, welding of corroded pipe joints, and also replacement of deteriorated valves along the feeder. Design was authorized by the Board in November 2014, the valve procurement was authorized by the Board in September 2017, and construction of Stage 2 was authorized in June 2019.

**Rehabilitation of Metallic and Concrete Pipelines Phase 1 - Select High Priority Feeders**

Metropolitan's water delivery system consists of 830 miles of pipelines, of which 670 miles are comprised of reinforced concrete, welded steel, and cast-iron pipe. The majority of Metropolitan's non-PCCP lines were installed over 50 years ago. Experience has shown that degradation from corrosion of reinforced concrete and metallic pipelines can often develop undetected. Some of these pipelines are also showing signs of deterioration, as evidenced by several recent lining and joint repair projects (e.g., Etiwanda Pipeline, Orange County Feeder, and Lakeview Pipeline).

Phase 1 for high priority pipelines, including Santa Monica Feeder, Upper Feeder, Lower Feeder, and Middle Feeder, will include a complete risk assessment and prioritization of pipeline inspections, condition assessment of these high priority pipelines using prequalified inspection technologies, and recommendations for inspection technologies to be used for future condition assessments.

**San Diego and Auld Valley Canals Concrete Repairs**

The scope of this project is a comprehensive repair of damaged concrete liner within the San Diego and Auld Valley Canals. The repair work will need to be performed during an extended shutdown of the two canals, to the extent that demands, and storage can be accommodated. An extended outage of approximately 30 days will facilitate repair to priority areas and reaches of the canals, will shorten the overall repair timeline, and will reduce the risk of further deterioration. Failure of the liner in either canal will interrupt or reduce raw water deliveries to the Skinner plant and to various downstream member agencies and sub-agencies. The canals are the sole conveyance route for Colorado River water and State Project water to the Skinner plant.

**San Diego Pipelines 1 and 2/Rainbow Tunnel Improvements**

The San Diego Pipelines 1 and 2 were built in the 1940's and have multiple diameters and pipe materials consisting of steel, precast concrete cylinder pipe, and precast non-cylinder pipe. Some of the steel section have cement mortar lining, the remaining sections all have coal tar lining. The Rainbow Tunnel has an approximate 72-inch diameter, and is horseshoe shaped. A recent inspection identified sections where the lining needs replacement. Several valves at turnout structures have reached the end of their service lives and require replacement. This project will perform a detailed evaluation of the pipelines and tunnel and appurtenant structures and replace the damaged lining and refurbish or replace other and components as needed.

**Santa Monica Feeder Cast Iron Pipe Rehabilitation**

The Santa Monica Feeder was constructed in 1941 as part of Metropolitan's original distribution system. The feeder is approximately 25 miles long, with a diameter ranging from 28 inches to 120 inches. The feeder has various reaches comprised of cast iron, welded steel, and reinforced concrete pipe. The Santa Monica Feeder delivers treated water from the Eagle Rock Control Facility in the city of Los Angeles to four member agency service connections before reaching its terminus in the city of Santa Monica. This project will assess the condition of the cast iron portion of the Santa Monica Feeder using emerging inspection technologies. The cast iron portion of the pipeline is eight miles in length and located between the Hollywood Tunnel North Portal to the Santa Monica Feeder terminus near the Santa Monica Service Connection SMN-01. This is the last section of cast iron pipe in Metropolitan's distribution system. The assessment is anticipated to include leak detection, pipe wall thickness inspection, and internal seal installation by contractor for joint repairs as needed. Following the condition assessment, a long-term plan will be prepared to monitor, and replace and/or rehabilitate the Santa Monica Feeder cast iron pipe. In anticipation of potential prolonged outages, various operational modes will be investigated and designed to maintain reliable flow to service connections. Also, hydraulic and structural analyses will be performed on the pipeline with design recommendations to address various operational conditions and scenarios such as, seismic events and pressure surge episodes.

**Upper Feeder - Lining Replacement at the Santa Ana River Bridge**

The Upper Feeder was constructed between 1933 and 1941 with a 116-inch-diameter steel pipe and lined with coal tar enamel liner (CTE). This portion of the Upper Feeder is located above ground and crosses the river bed via a bridge. Exposure to the sun subjects the pipeline to a thermal cycle that is continuous heating and cooling

of the pipe material. Over the past five years, staff have performed inspections on this segment of the Upper Feeder and determined that approximately 90% of the pipe's internal lining has failed. Mild to moderate pitting on the interior of the pipe indicate rust tuberculation and corrosion. This project will reline approximately 1,000 feet of the 116-inch diameter pipeline with an approved liner material.

## Distribution System - Other Project Group

### **Chloramine Booster Station at Three Locations within the Treated Water Distribution Systems**

Metropolitan uses chloramines, formed by combining chlorine and ammonia, as a disinfectant in our distribution systems. Internal research has determined the most effective chloramine concentration to prevent microbial growth at low flow conditions. Addition of chlorine and LAS in the treated water distribution systems will allow the total chlorine residual within the distribution system to be maintained at or above 1.8 mg/L, especially during low demand periods. LAS is recommended instead of aqueous ammonia because LAS has fewer regulatory requirements, as well as lower construction and operating costs. The project will determine the three optimum locations to install: (1) sodium hypochlorite and LAS tanks, (2) feed pumps and appurtenances, (3) piping, and (4) instrumentation and control systems to ensure the safety and reliability of the feed systems.

### **Diamond Valley Lake Crane Rehabilitation**

The scope of the project is repair and rehabilitation of the 25-ton gantry crane at the Diamond Valley Lake Inlet/Outlet Tower. The project will also include a study to evaluate the possibility of increasing the crane capacity to enable it to be used as an alternative lifting device for the emergency drop gate in the event of a failure of the drop gate's normal hydraulic lifting system. This project will enhance infrastructure safety, security, and resiliency, and will enhance the reliability of water deliveries.

### **Diamond Valley Lake Oxygenation System**

This project will construct a liquid oxygen (LOX) storage and feed system at Diamond Valley Lake to improve water quality, reduce impacts of cyanobacterial blooms, and maintain operational flexibility to ensure reliable and high-quality water deliveries under drought and emergency conditions. The LOX system will maintain oxygenated conditions in the deeper waters of DVL and prevent the formation of reduced compounds (sulfides, metals) that interfere with water treatment processes. This will allow for high-quality water to be released from the reservoir year-round. The system consists of: (1) a LOX tank; (2) evaporators to convert LOX to gas; (3) supply lines to deliver oxygen; (4) diffusers to mix the oxygen; (5) and a control system to regulate oxygen flow.

### **Diamond Valley Lake Forebay Concrete Joint Seal Replacement**

The concrete joint seals in the Diamond Valley Lake (DVL) Forebay have been in service for over 20 years and have far exceeded the typical service life of two to five years. Division of Safety of Dams (DSOD) had previously directed Metropolitan to address seal replacement at the DVL Spillway; that replacement was completed in 2018. Based on a Metropolitan inspection in July 2018, the Forebay seals are in similar condition to the Spillway seals. Non-compliance with DSOD's policy may result in issuance of written citations, limits on the reservoir's operating water surface level, or revocation of the dam's certified status. This project will remove deteriorated and de-bonded joint seals at the DVL Forebay (approximately 150,000 linear feet), and replace with a new, cost-effective and high-performance MWD-approved sealant.

### **East Lake Skinner Bypass & Bypass No. 2 Screening Structure Upgrade**

The East Lake Skinner Bypass Slide Gates were built 50 years ago in 1967 and are in need of rehabilitation. The gates are binding during operation which is rendering them inoperable. In addition, the East Lake Skinner Bypass Afterbay Trash Rack needs to be replaced with a new stainless-steel rack to minimize the corrosion which caused the existing galvanized material to collapse under the weight of a severe algae bloom during bypass operations. The scope of work consists of reconditioning three of the East Lake Skinner Bypass Slide

Gates, and to replace the East Lake Skinner Bypass Afterbay trash rack which is severely corroded and partially collapsed. In addition, this project will modify the East Lake Skinner Bypass Algae Screening Mechanisms Discharge Piping to bypass the Algae Shakers and upgrade the Lake Skinner Bypass No. 2 Forebay Trash Rack Lifting Mechanisms.

### **East Orange County Feeder No. 2 Seismic Retrofit at Diemer Water Treatment Plant**

A recent assessment identified a slope near the south western pad at the Diemer plant as having the potential to damage the East Orange County Feeder No. 2 pipeline during a significant earthquake. The pipeline may no longer meet current seismic codes and regulations. This structure requires further analysis to ensure that it meets Metropolitan's current structural standards and the facility is reliable in the event of seismic activity. This project will assess, design, and complete seismic retrofit construction near the south western pad at the Diemer plant.

### **Garvey Reservoir Ammonia Feed System**

This project will involve the design, procurement, and installation of liquid ammonium sulfate (LAS) storage feed systems at Garvey Reservoir. Addition of LAS at Garvey Reservoir influent and effluent will allow total chloramine residual within the distribution system to be maintained at or above 1.8 mg/L, especially during low demand periods. LAS is recommended instead of aqueous ammonia since LAS has fewer regulatory requirements and lower construction and operating costs. This project will include the installation of LAS tanks, feed pumps and appurtenances, piping, and instrumentation and control systems to ensure the safety and reliability of the feed system.

### **Garvey Reservoir Drainage & Erosion Control Improvements**

Garvey Reservoir was constructed in 1954 as a component of the Middle Feeder system. The reservoir receives treated water from the Weymouth plant and has a maximum storage volume of 1,600 acre-feet. The reservoir is located within the city of Monterey Park on a hill that is surrounded on the west and south by residential properties that are lower in elevation. During significant storm events, surface runoff collects and flows downhill through improved drainage systems and natural drainage courses to Metropolitan's property boundaries. Connecting off-site drainage systems that were constructed by developers more than 50 years ago do not meet current minimum design standards and have deteriorated over time. Recognizing the mutual benefit of addressing runoff issues from the reservoir, Metropolitan entered into an agreement with the city of Monterey Park to implement drainage and erosion control improvements both within Metropolitan's property, and improvements to drainage in city streets. There are 11 geographically defined drainage zones at Garvey Reservoir to be mitigated. In October 2016, Metropolitan's Board authorized design for 8 of the 11 zones. Construction for five drainage zones has been completed.

### **Garvey Reservoir Sodium Hypochlorite Feed System Upgrades**

Upgrades to the sodium hypochlorite feed system at Garvey Reservoir are needed to maintain treated water quality within the Central Pool portion of Metropolitan's distribution system. The existing hypochlorite system has exceeded its expected service life and has deteriorated over time, requiring frequent repairs. Failure of the chemical feed system would negatively affect water quality within the distribution system by not maintaining minimum chlorine residual. This project will replace the current hypochlorite system with new valves, piping, electrical systems, and instrumentation and updated controls that will allow both automated and remote control of the chemical feed system. Design was authorized by the Board in June 2013.

**Lake Mathews Aboveground Storage Tank Replacement**

The Lake Mathews existing diesel aboveground storage tank does not conform to current regulations and needs to be removed from service. In its present condition the tank cannot be operated in a safe manner. The Lake Mathews Spill Prevention Countermeasure and Control Plan cannot be certified as long as the diesel aboveground storage tank remains in service. This project will replace the existing 10,000-gallon diesel fuel aboveground storage tank (AST) with its associated containment dike, venting, fill system, level monitoring, fuel dispensing system, catwalk, and continuous release detection system with a new 6,000-gallon AST system, and design and construct a roof over the storage tank containment and unloading area. Under the General Manager's authority, design, procurement and construction was authorized in March 2019.

**Lake Mathews Electrical Reliability**

The existing electrical distribution system at Lake Mathews constructed during the 1930s needs to be upgraded for reliability. This system has been in service for over 75 years and serves the lake's outlet towers and junction shaft, hydroelectric plant, forebay, chlorination system, administrative offices, and maintenance and repair shops. The electrical distribution system is outdated, has experienced numerous overloads, and lacks capacity for planned additional equipment. The system needs to be upgraded to maintain reliability and meet future power demands. Planned upgrades include replacing the underground and overhead distribution lines; replacing the existing unit power centers and adding additional unit power centers where needed; and integrating the new electrical system with Metropolitan's system-wide supervisory control and data acquisition system. Preliminary design was authorized by the Board in March 2017.

**Lake Mathews Perimeter Fencing Upgrade**

Lake Mathews is the terminus of the CRA. Water is stored in Lake Mathews Reservoir, withdrawn through the lake's main outlet towers into the forebay, and is then conveyed through the Upper Feeder and Lower Feeder to the Weymouth and Diemer plants, respectively. The existing chain link fencing along the approximately 15-mile perimeter of the Lake Mathews facility has deteriorated and is ineffective at preventing intrusions. The fencing can be easily cut, resulting in an increase in break-ins and illegal dumping through the fencing. This project will replace the existing five-foot tall chain link fencing with eight-foot tall, anti-cut, anti-climb security fencing, constructed of steel or wrought iron. This project will enhance infrastructure safety, security, and resiliency, and will improve security and emergency response.

**Lake Mathews Sodium Hypochlorite Injection System**

Update and redesign the Lake Mathews sodium hypochlorite injection system to relocate the injection point to a location that will minimize the impacts of chlorine injection on the forebay and appurtenant structures. The design will also consider effective Quagga Mussel control, enhancing safety and reliability of the injection system, and adherence to water quality goals and requirements. The project will develop options to replace the existing interim sodium hypochlorite system at the Lake Mathews Forebay with a system at Lake Mathews Outlet Tower No. 1 and Outlet Tower No. 2, and to provide continuous chemical injections from the towers through the Lake Mathews Forebay, Power Plant, and into the Upper and Lower Feeders.

**Lake Skinner West Bypass Screening Structure Rehabilitation**

The San Diego Canal West Bypass Screening Structure is located at the terminus of the San Diego Canal and is the starting point for water which bypasses Lake Skinner to downstream users. The bypass screening structure is fitted with an electrically powered revolving screen extending across the channel, which dips into the channel to intercept and collect algae mats and other floating debris. This system prevents algae mats and other debris from entering the treatment plant or member agency water systems via the bypass pipelines. The screening equipment was installed in the 1960s and has reached the end of its useful life. The screens' rotating components are currently inoperable, so they function as stationary screens; material collects on the screens until the debris is manually removed. Clogged screens may reduce deliveries to downstream users. Preliminary design was authorized by the Board in September 2007.



**Live Oak Reservoir Bypass Pipeline Cathodic Protection**

Constructed in 1973, the Live Oak Reservoir Bypass (LORB), Inlet, and Outlet Pipelines are dielectrically coated welded steel pipelines with a diameter of 97 inches and are approximately 0.6 miles long. The 24-inch dielectrically coated Desilting pipeline ties in to the Outlet pipeline, crosses the Bypass pipeline and is approximately 800 feet long. The LORB connects the prestressed reaches of the Rialto Pipeline to the east and the west. The pipeline is one of the few reaches of welded steel pipe that is not yet cathodically protected. A failure of the Live Oak Reservoir Bypass would inhibit Metropolitan's ability to convey water through its system and potentially disrupt Metropolitan's ability to deliver water to several member agencies. The scope of work is to design and install a comprehensive cathodic protection system in the Live Oak Reservoir Bypass. Design was authorized by Metropolitan's Board in April 2018.

**Orange County C&D Team Support Facility**

O&M support functions for the 700-square-mile Orange County region of the distribution system are being performed from temporary trailers, shipping containers, and an aging warehouse. A permanent service center is required and will provide local storage of materials and equipment, house staff, and contain shops for minor repairs. A permanent facility will provide a safer and more efficient workplace to support shutdowns, routine maintenance activities, and urgent repairs. The scope of the construction contract includes: (1) site development work which includes: vehicle parking; perimeter lighting; storm water system; utility extensions including potable water, sewer, natural gas, and electrical service; and hazardous material storage; and (2) building construction which includes: offices and workspace for approximately 24 staff; a welding/fabrication shop with specialized equipment including a drill press, band saw, grinder, welder, parts cleaner, welding hood, and 3-ton bridge crane; a pipe and conduit-bending area; work bench and parts cleaning areas; and tool crib and storage areas for fabrication and welding supplies. Construction was authorized by the Board in March 2018.

**Orange County Feeder Cathodic Protection System Rehabilitation**

The Orange County Feeder conveys treated water from the F. E. Weymouth Water Treatment Plant in La Verne to its terminus at service connection CM-1 in Newport Beach. The feeder is approximately 41 miles long and was installed in 1942. The feeder consists of approximately 21 miles of welded and un-bonded steel pipe, 19 miles of precast concrete pipe, and one mile of prestressed concrete cylinder pipe. Previously, cathodic protection could not be effectively applied to the subject reach; however, recent pipeline rehabilitation has made cathodic protection a viable option to prevent external corrosion and thus prevent future pipe leaks. This project will install a new cathodic protection system on the Orange County feeder to protect approximately 11.2 miles of feeder. The scope of work includes design and installation of the anodes and rectifier system.

**Palos Verdes Reservoir Sodium Hypochlorite and Liquid Ammonia Sulfate Storage and Chemical Feed System and Security Upgrades**

This project will replace the 12,000-gallon fiber-reinforced plastic (FRP) sodium hypochlorite (NaOCl) storage tank and appurtenant fittings at the Palos Verdes Reservoir (PVR). The existing FRP tank, manufactured in 1992, is well past its recommended service life of 6-10 years. The FRP tank will be replaced with two 6,000-gallon titanium tanks, which are designed to last 50-70 years and do not corrode in the presence of sodium hypochlorite. Further, modifications to the tank farm feed systems are required to meet revised minimum flow and dosage requirements recently directed by Water Quality and Member Agency demands. Lastly, security cameras will also be added around the PVR facility in order to provide increased security monitoring.

**Platform Replacement at Various C&D Structures**

Platforms at various Conveyance and Distribution (C&D) structures are deteriorating due to age and damp environment. The steel platforms and support frames were installed almost 50 years ago, and do not meet current OSHA standards. This project will replace older steel platforms and support frame systems at various Western Region facilities, encompassing an area from Foothill Pressure Control Structure in Castaic to Yorba Linda Feeder in La Verne, as well as facilities in between. Approximately 2,700 square feet of steel platforms

have been identified for replacement with fiberglass reinforced plastic grating.

### **San Gabriel Tower and Spillway Improvements**

The San Gabriel Tower (SGT), 86-foot-tall free-standing with a 24-foot by 14-foot rectangular base, was constructed in 1936, north of the city of Azusa. It sits at the base of the steep and weathered San Gabriel Mountains, between the west portal of Monrovia Tunnel No. 1 and the east portal of Monrovia Tunnel No. 2. The tower is surrounded by Angeles National Forest and is adjacent to Morris Reservoir. The function of the SGT is to regulate and isolate flows from the Weymouth plant via the Upper Feeder pipeline to the Eagle Rock Control Facility located in the city of Los Angeles. It is situated between two active faults, the Sawpit and the Sierra Madre faults, which are both capable of generating a magnitude 6.5 earthquake. While the tower was designed and constructed to the codes and standards in place during the 1930s, significant advancements have been made since that time in predicting the response and performance of structures as a result of seismic ground shaking. Planned upgrades to the San Gabriel Tower include: (1) reducing the height of the tower to increase its structural stability; (2) capping the tower with a protective slab designed to withstand a potential debris slide or rockfall; (3) adding new vacuum relief valves for surge protection; (4) replacing the slide gates and actuators to restore isolation capability for the Upper Feeder; (5) improving access to the tower and spillway, including the river crossing; (6) repairing the spillway's concrete; and (7) stabilizing the adjacent rocky slope. Preliminary design was authorized in March 2018.

### **Santa Monica Feeder Cathodic Protection**

The Santa Monica Feeder is a mortar coated welded steel pipeline with a diameter of 49-inches and is approximately 4.25 miles long. The pipeline is one of the few reaches of welded steel pipe that is not yet cathodically protected. A failure of the Santa Monica Feeder would inhibit Metropolitan's ability to convey water through its system and potentially disrupt Metropolitan's ability to deliver water to several member agencies. The scope of work is to design and install a comprehensive cathodic protection system in the Santa Monica Feeder. Design was authorized by Metropolitan's Board in April 2018.

### **Santiago Control Tower Seismic Improvements**

The Santiago Control Tower acts as a control and diversion facility for water supplied to the Santiago Lateral pipeline, the Santiago Lateral Spillway Discharge Pipeline, and the Lower Feeder pipeline. This project will evaluate the Santiago Control Tower's ability to resist expected seismic forces based on the latest geotechnical and geological considerations. A detailed geotechnical analysis is required to determine the structure's interaction with surrounding soil and analyze the soil stability of the structure. The structure is located in close proximity to the Whittier Fault on a raised area adjacent to a slope.

### **Skinner Bypass Pipelines Cathodic Protection**

The Lake Skinner Bypass Pipeline # 1 (97-inch diameter), Lake Skinner Bypass Pipeline #3 (49-inch diameter), and Skinner Plant effluent Conduit # 1 (7-inch diameter) alignments have portions traversing inside and outside of the Skinner Treatment Plant property. The three pipelines are dielectrically coated steel pipelines. The original impressed current cathodic protection system was installed in 1980. The system was turned off as concerns emerged about exposing prestressed pipelines to cathodic protection. In addition, several modifications to the pipelines made the existing system unsuitable for the present pipeline configurations. The existing cathodic protection system requires full rehabilitation to adequately protect the pipeline from corrosion. A failure of the Feeders would inhibit Metropolitan's ability to convey water through its system and potentially disrupt Metropolitan's ability to deliver water to several member agencies. The scope of work is to design and install a comprehensive cathodic protection system in the feeders. Design was authorized by Metropolitan's Board in April 2018.

**Soto St. Facility - Security & HVAC Replacement**

The Soto Street Facility serves as the main headquarters for staff and equipment that support the Western Region Unit (WRU) Conveyance and Distribution System. The WRU Incident Command Post, located in the Administration Building, also serves as the backup Emergency Operations Center for the Eagle Rock Operations Center. The Soto Street Facility currently has two layers of access control protection during business hours: a single card reader at the outer vehicle gate, and a single contracted security guard. During periodic foot patrols of the facility, the access gate is left unmanned. In addition, the alarm system is currently inoperable, and there are no access card readers on any of the exterior building doors, which remain unlocked during business hours. There have been recent multiple security events at this facility. Finally, the existing air handling unit that serves the Soto Street Administration Building has been in service since the 1960s, when the building had a different configuration. The current HVAC system does not provide adequate airflow to all parts of the building.

This project will improve the security of the Soto Street Facility by adding access card readers and security cameras, providing security lamination to glass doors and windows, replacing the alarm system, and upgrading the HVAC system for the Administration Building.

**Upper Feeder Blow Off Structure Replacement**

Blow-off structures provide a means to completely drain a pipeline for emergencies, inspections, repairs, and general maintenance. The Upper Feeder Blow-Off Structure, located in the city of Sierra Madre, discharges the Upper Feeder directly into the Little Santa Anita Wash. The valves and piping in this structure have been in service for almost 80 years, and have reached the end of their service life. One valve is stuck in the closed position, and another is experiencing leakage. In addition to a variety of different sizes and configurations of pipe within the structure, the structure itself does not comply with some of the safety and design features of more modern structures. This project will replace and enhance the Upper Feeder Blow-Off Structure in order to ensure reliable dewatering capability and comply with OSHA standards.

**Wadsworth Pumping Plant Stop Logs**

The Wadsworth Pumping Plant was built with 12 pump/generation units. Units 1, 5, and 9 were decommissioned to allow DVL generation to be certified as "renewable energy" by the California Energy Commission. Hydroelectric plants are required to have a nameplate capacity of 30 MW or less to be certified. At 3.3MW per unit, the nine remaining units provide a generation capacity of 29.7MW. Generated energy must be certified renewable for electric utilities to meet the requirement that 33% of their energy come from renewable resources by 2020. The stop logs would provide a means to isolate the three decommissioned pumps from the DVL forebay keeping them out of the water and dry. Isolating the pumps from water contact reduces corrosion damage to the pumps and provides flexibility in the event pump/generation units need to be re-commissioned or repaired. This project will fabricate three sets of stop logs to isolate three decommissioned Wadsworth plant generation/pumping units from the forebay. Each set of stop logs consists of three stop log sections, for a total of nine sections of stop logs to isolate three pump units.

**Wadsworth Pumping Plant Fire Protection System Upgrades**

The Wadsworth Pumping Plant is located near Hemet at Metropolitan's Diamond Valley Lake (DVL). The pumping plant includes 12 vertical turbine pumps that are used to pump water into DVL or to generate electricity when water flows out of DVL into the forebay/San Diego Canal. Each pump/generator has a dedicated CO2 fire suppression system to prevent fires from spreading from one unit to another. However, the system is designed so that if the fire suppression system is inactive, the pump/generator will not operate. Some components of the current fire suppression system and control panels have been in service for almost 20 years and need to be replaced. In addition, the fire alarm system for the Wadsworth building is antiquated, and replacement parts are no longer available. This project will upgrade Wadsworth's fire suppression system by: (1) replacing the existing individual CO2 fire suppression systems for the operational vertical turbine pumps, and (2) upgrading the Wadsworth building fire alarm system.

**West Orange County Feeder Cathodic Protection**

The West Orange County Feeder (WOCF) was constructed in 1956, and is mortar and dielectrically coated welded steel pipeline with a diameter of 43-inches and 55-inches. The pipeline is approximately 13 miles long. The WOCF connects to the cathodically protected Orange County Feeder (OCF), prestressed and steel reaches of the Second Lower Feeder (SLF), and the cathodically protected Lower Feeder (LF). The pipeline is one of the few reaches of welded steel pipe that is not yet cathodically protected. A failure of the WOCF would inhibit Metropolitan's ability to convey water through its system and potentially disrupt Metropolitan's ability to deliver water. The scope of work is to design and install a comprehensive cathodic protection system in the WOCF. Design was authorized by Metropolitan's Board in April 2018.

## District Housing and Property Improvements Program

Fiscal Year 2020/21 Estimate: \$3.5 million

Fiscal Year 2021/22 Estimate: \$7.5 million

**Program Information:** *The District Housing & Property Improvements Program is comprised of projects to refurbish or upgrade workforce housing at Metropolitan to enhance living conditions to attract and retain skilled employees.*

### Accomplishments for FY 2018/19 and FY 2019/20

- Two new projects initiated during the last biennium:
  - District Housing Property Improvements
  - Employee Village Enhancement
- Major milestones achieved during the last biennium:
  - District Housing Property Improvements - began property assessments
  - Employee Village Enhancement - began master planning

### Objectives for FYs 2020/21 and 2021/22

Project	Total Project Estimate	Estimated Completion	Major Milestones
District Housing Improvements	\$ 71,000,000	2026	Complete assessments
Employee Village Enhancement	\$ 26,000,000	2028	Complete master planning

### Housing & Property Improvements Project Group

#### District Housing Improvements

Metropolitan owns 89 houses throughout the five CRA pumping plants and rents to employees involved in operation and maintenance of the CRA. Renovation of up to 89 houses was authorized by the Board in May 2017. A Pilot renovation project of 11 out of the 89 was completed in 2018. Another 9 will be renovated to complete the pilot effort, equaling a remaining total of 69 houses left to be renovated or replaced. Overview Assessment Report was completed in November 2019.

#### Employee Village Enhancement

Perform comprehensive master planning for four Colorado Pumping Plant Villages. The initial goal and objective are to develop a proof of conceptual master plan for Eagle Mountain Village that would focus on building a vibrant, healthy, and sustainable community for Metropolitan's staff. The conceptual master plan will also incorporate comments made the Board in December 2015, and feedback received from residents in 2019. When the conceptual master plan is approved, the scope of this project will extend to include the three other villages (Hinds, Iron, and Gene).

## Minor Capital Projects Program

Fiscal Year 2020/21 Estimate: \$3.8 million

Fiscal Year 2021/22 Estimate: \$5.4 million

**Program Information:** *The Minor Capital Projects (Minor Cap) Program is comprised of projects, with an estimated cost of less than \$400,000, that require rapid response to address unanticipated failures, safety or regulatory compliance concerns, or to take advantage of shutdown opportunities. The Minor Cap Program authorizes the General Manager to execute projects that meet defined criteria without seeking additional Board approval.*

### Accomplishments for FY 2018/19 and FY 2019/20

- New projects initiated during the last biennium thru December 2019:
  - Thirty-five projects were initiated during the last biennium
  
- Major milestones achieved during the last biennium thru December 2019:
  - Twenty-eight projects were completed during the last biennium

### Objectives for FYs 2020/21 and 2021/22

Project	Total Project Estimate	Estimated Completion	Major Milestones
Various projects costing less than the Board approved maximum project cost *	\$50,000,000 for projects in open and new Minor Cap Appropriations	2025	Complete all projects within 3 years of initiation
*Prior to Fiscal Year 2018/19 - \$250,000			
Currently - \$400,000			

## Prestressed Concrete Cylinder Pipe (PCCP) Reliability Program

Fiscal Year 2020/21 Estimate: \$30.3 million

Fiscal Year 2021/22 Estimate: \$23.6 million

**Program Information:** The PCCP Reliability Program is composed of projects to refurbish or upgrade Metropolitan's PCCP feeders to maintain water deliveries without unplanned shutdowns.

### Accomplishments for FY 2018/19 and FY 2019/20

- New projects initiated during the last biennium:
  - Second Lower Feeder PCCP Rehabilitation - Reach 9
  - Sepulveda Feeder PCCP Del Amo Blvd. Urgent Relining
  
- Major milestones achieved during the last biennium:
  - Three projects completed construction
    - Second Lower Feeder Reach 1
    - Second Lower Feeder Reach 4
    - Sepulveda Feeder PCCP Del Amo Blvd. Urgent Relining
  - Awarded procurement of large sectionalizing valves and over 200 smaller shut-off valves
  - One project completed design
    - Second Lower Feeder Reach 2

### Objectives for FYs 2020/21 and 2021/22

Project	Total Project Estimate	Estimated Completion	Major Milestones
Electromagnetic Inspections of PCCP Lines	\$ 12,000,000	Ongoing	Continue inspections in conjunction with pipeline shutdowns
Second Lower Feeder PCCP Rehabilitation - Reach 2	\$ 65,000,000	2020	Complete construction
Second Lower Feeder PCCP Rehabilitation - Reach 3	\$ 77,000,000	2024	Complete design and begin construction
Second Lower Feeder PCCP Rehabilitation - Reach 8	\$ 35,000,000	2022	Complete design and construction

## Allen McColloch Pipeline Project Group

### **Allen-McColloch Pipeline PCCP Rehabilitation**

The planned rehabilitation work involves lining the existing PCCP segments with steel liner pipe designed as a stand-alone pipeline which can accommodate full internal and external pressures on the line and replacing any identified damaged lining in non-PCCP segments. The project includes restoring the (Allen McColloch, Rialto Pipeline, Calabasas, Sepulveda, Second Lower) pipeline/feeder to "As Like New Conditions" as possible. This would include relocation of all air release and vacuum valves (AR/VV) that have not already been relocated above ground and evaluating and possible replacement of sectionalizing, service connection turnout, pumpwell, AR/VV, shutoff, and blowoff valves, etc. In addition, the project includes procurement of any needed permanent or temporary right of way and evaluation and possible replacement or modification of all master meters and meter structures.

## Calabasas Feeder Project Group

### **Calabasas Feeder PCCP Rehabilitation**

The planned rehabilitation work involves lining the existing PCCP segments with steel liner pipe designed as a stand-alone pipeline which can accommodate full internal and external pressures on the line and replacing any identified damaged lining in non-PCCP segments. The project includes restoring the (Allen McColloch, Rialto Pipeline, Calabasas, Sepulveda, Second Lower) pipeline/feeder to "As Like New Conditions" as possible. This would include relocation of all air release and vacuum valves (AR/VV) that have not already been relocated above ground and evaluating and possible replacement of sectionalizing, service connection turnout, pumpwell, AR/VV, shutoff, and blowoff valves, etc. In addition, the project includes procurement of any needed permanent or temporary right of way and evaluation and possible replacement or modification of all master meters and meter structures.

## Rialto Feeder Project Group

### **Rialto Pipeline PCCP Rehabilitation**

The planned rehabilitation work involves lining the existing PCCP segments with steel liner pipe designed as a stand-alone pipeline which can accommodate full internal and external pressures on the line and replacing any identified damaged lining in non-PCCP segments. The project includes restoring the (Allen McColloch, Rialto Pipeline, Calabasas, Sepulveda, Second Lower) pipeline/feeder to "As Like New Conditions" as possible. This would include relocation of all air release and vacuum valves (AR/VV) that have not already been relocated above ground and evaluating and possible replacement of sectionalizing, service connection turnout, pumpwell, AR/VV, shutoff, and blowoff valves, etc. In addition, the project includes procurement of any needed permanent or temporary right of way and evaluation and possible replacement or modification of all master meters and meter structures.



## Second Lower Feeder Project Group

### **Second Lower Feeder PCCP Rehabilitation**

The planned rehabilitation work involves lining the existing PCCP segments with steel liner pipe designed as a stand-alone pipeline which can accommodate full internal and external pressures on the line and replacing any identified damaged lining in non-PCCP segments. The project includes restoring the (Allen McColloch, Rialto Pipeline, Calabasas, Sepulveda, Second Lower) pipeline/feeder to “As Like New Conditions” as possible. This would include relocation of all air release and vacuum valves (AR/VV) that have not already been relocated above ground and evaluating and possible replacement of sectionalizing, service connection turnout, pumpwell, AR/VV, shutoff, and blowoff valves, etc. In addition, the project includes procurement of any needed permanent or temporary right of way and evaluation and possible replacement or modification of all master meters and meter structures.

## Sepulveda Feeder Project Group

### **Sepulveda Pipeline PCCP Rehabilitation**

The planned rehabilitation work involves lining the existing PCCP segments with steel liner pipe designed as a stand-alone pipeline which can accommodate full internal and external pressures on the line and replacing any identified damaged lining in non-PCCP segments. The project includes restoring the (Allen McColloch, Rialto Pipeline, Calabasas, Sepulveda, Second Lower) pipeline/feeder to “As Like New Conditions” as possible. This would include relocation of all air release and vacuum valves (AR/VV) that have not already been relocated above ground and evaluating and possible replacement of sectionalizing, service connection turnout, pumpwell, AR/VV, shutoff, and blowoff valves, etc. In addition, the project includes procurement of any needed permanent or temporary right of way and evaluation and possible replacement or modification of all master meters and meter structures.

## PCCP - Other Project Group

### **Electromagnetic Inspections of PCCP Lines**

All PCCP lines within the distribution system are inspected every three to seven years. The frequency is based on the condition and history of repairs for each feeder. Three cycles of electromagnetic testing have been completed to date on Metropolitan’s PCCP feeders. This project will perform the fourth cycle of inspections over the next five years. Planned activities for the inspections include: scheduling and coordination of shutdowns; conducting the electromagnetic inspections; conducting internal visual inspections; shutting down and dewatering the feeders and returning them to service; analyzing the inspection results; and preparing comprehensive inspection reports.

## Regional Recycled Water Program

Fiscal Year 2020/21 Estimate: \$ 0.2 million \*

Fiscal Year 2020/21 Estimate: \$0 million \*

\* Planned spending is only for completion activities for the Advanced Water Treatment Demonstration Plant and continuance of advance planning pending Board approval of an action plan.

**Program Information:** *The Regional Recycled Water Program includes the design and construction of the Advanced Water Treatment Demonstration Plant, which represents the initial step in development of a potential regional recycled water system for recharge of groundwater basins within Southern California. The biennial budget separately includes \$15 million per year for RRWP planning and design costs.*

### Accomplishments for FY 2018/19 and FY 2019/20

- Major milestones achieved during the last biennium:
  - Completed construction of a 0.5 mgd Advanced Water Treatment Demonstration Plant project

### Objectives for FYs 2020/21 and 2021/22

Project	Total Project Estimate	Estimated Completion	Major Milestones
Advanced Water Treatment Demonstration Facility	\$ 21,000,000	2022	Complete record drawings

### Regional Recycled Water Supply - All Project Group

#### Advanced Water Treatment (AWT) Plant

The Advanced Water Treatment Plant (AWT) will be located at Los Angeles County Sanitation District (LACSD)'s Joint Water Pollution Control Plant (JWPCP) in Carson. The 150 mgd AWT will treat water for Indirect Potable Reuse (IPR) and in the future for Direct Potable Reuse (DPR) purposes. The AWT will use membrane bioreactors (MBR), reverse osmosis, and Ultraviolet advanced oxidation processes (UV-AOP) to produce purified water that will be conveyed to recharge facilities for groundwater augmentation. The project will include engineering studies, preliminary and final design, bidding, construction, and construction management. Consideration of the Regional Recycled Water Program (RRWP) AWT by the Board of Directors is anticipated after 2022 after completion of the environmental documentation (PEIR), with construction to be completed by approximately 2031.

**Regional Recycled Water - Conveyance Facilities**

The conveyance facilities for the RRWP will convey purified water from the new Advanced Water Treatment Plant (AWT) located at LACSD's JWPCP in Carson to various recharge facilities along the backbone pipeline to the Santa Fe Dam area in Irwindale, CA, approximately 36 miles away. The RRWP will have a capacity of 150 mgd. The purified water will be used for IPR and in the future for DPR purposes. The conveyance project will include engineering studies, preliminary and final design, bidding, construction, and construction management. Consideration of the RRWP conveyance pipeline by the Board of Directors is anticipated after 2022 after completion of the environmental documentation (PEIR), with construction to be complete by approximately 2034.

**Regional Recycled Water - Programmatic EIR/Technical Assistance**

For large multi-year, multi-phase infrastructure programs like the RRWP, CEQA allows a tiered approach for environmental review. The environmental process will begin with an overall Programmatic Environmental Impact Report (PEIR). The PEIR will analyze the discernable effects of the entire program. Where data is not initially available to fully analyze the impacts, the analyses of these areas will be deferred, and a project-specific environmental analysis will be conducted. The PEIR will be supported with technical assistance and public outreach efforts as necessary.

**Advanced Water Treatment Demonstration Plant**

The Regional Recycled Advanced Purification Center (APC) is located at LACSD's JWPCP in Carson. The 0.5 mgd APC demonstration plant is testing the effectiveness of various advanced water treatment processes. Construction of the APC was completed in October 2019, with Phase 1 testing for tertiary MBR being performed through 2020. The demonstration plant will establish design criteria and confirm treatment costs for the full-scale facility, and will support the program's public outreach effort. Construction of the Demonstration Plant was authorized by the Board in July 2017.

**Demonstration Plant Direct Potable Reuse (DPR) Modifications**

Phase 1 operation and testing of Tertiary MBR started October 2019 and will continue through the end of 2020. Phase 2 operation and testing of Secondary MBR will begin in 2021 and will continue through 2022. To implement Direct Potable Reuse (DPR) into the RRWP, additional testing will be needed to establish new design criteria and to confirm treatment costs for a full-scale facility with the ability to treat recycled water for DPR. To perform this testing, additional treatment processes be required to be constructed at the existing APC. The additional testing will also support the program's outreach effort and provide information for the regulators on the viability of using membrane bioreactors for DPR.

## Right of Way and Infrastructure Protection Program

Fiscal Year 2020/21 Estimate: \$2.4 million

Year 2021/22 Estimate: \$5.7 million

**Program Information:** *The Right of Way Infrastructure Protection Program (RWIPP) is comprised of projects to refurbish or upgrade above-ground facilities and right-of-way along Metropolitan's pipelines in order to address access limitations, erosion-related issues, and security needs.*

### Accomplishments for FY 2018/19 and FY 2019/20

- Major milestones achieved during the last biennium:
  - One project completed design:
    - Orange County Region - Stage 1 Improvements
  - Two projects completed preliminary design
    - Western San Bernardino Region Improvements
    - Orange County Region - Stages 1 & 2 Improvements

### Objectives for FYs 2020/21 and 2021/22

Project	Total Project Estimate	Estimated Completion	Major Milestones
Programmatic Environmental Documentation for the Western San Bernardino County Operating Region	\$ 2,600,000	2022	Complete PEIR
Right of Way Infrastructure Protection Program - Orange County Operating Region	\$ 23,000,000	2025	Complete Stage 1 construction

### Los Angeles Region Project Group

#### Right of Way & Infrastructure Protection - Los Angeles County Region

This project identifies and addresses right-of-way and security issues; identifies and executes needed improvements within the Los Angeles County Operating Region; prepares environmental documentation; acquires regional programmatic environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction.

### Orange County Region Project Group

#### Right of Way & Infrastructure Protection - Orange County Region

This project identifies and addresses right-of-way and security issues; identifies and executes needed improvements within the Orange County Operating Region; prepares environmental documentation; acquires regional programmatic environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction.

## Riverside/San Diego Region Project Group

### **Right of Way & Infrastructure Protection Program - Riverside and San Diego County Region**

This project identifies and addresses right-of-way and security issues; identifies and executes needed improvements within the Riverside and San Diego County Operating Region; prepares environmental documentation; acquires regional programmatic environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction.

## Western San Bernardino Region Project Group

### **Right of Way & Infrastructure Protection Program - Western San Bernardino County Region**

This project identifies and addresses right-of-way and security issues; identifies and executes needed improvements within the Western San Bernardino County Operating Region; prepares environmental documentation; acquires regional programmatic environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction.

## ROWIPP - Other Project Group

### **Right of Way & Infrastructure Protection Program - Property Acquisition and Regulatory Compliance**

The scope of this project includes preparing and executing agreements with environmental regulatory agencies to assist in development; review and approval of environmental documentation; and issuance of applicable permits. These activities were authorized by the Board in April 2013.

This project will also include procurement of right-of-way or property to support access or needed repairs to pipelines and facilities; provide surveying and mapping services needed to identify right-of-way issues, prepare pre-appraisal documentation for acquisition of easements and right-of-way; conduct field surveys and topographic mapping; and ordering and reviewing title reports and supporting recorded documents. Activities include developing conceptual solutions, layout drawings, and final design criteria of needed improvements; preparing pre-appraisal documentation for acquisition of easements and right-of-way; conducting field surveys and topographic mapping; ordering and reviewing title reports and supporting recorded documents; initiating consultations with permitting agencies for required permits; preparing legal descriptions, exhibit maps, and other exhibits as needed for acquisition planning, permits, and real estate negotiations; completing right-of-way mapping and preparing Record of Survey maps to be filed with the county of origin; and setting monuments and witness posts.

### **Right of Way Infrastructure Protection Program - Colorado River Aqueduct**

The Right of Way Infrastructure Protection Program (RWIPP) identifies, prioritizes, and executes site improvements throughout Metropolitan's service area. This project encompasses site improvements along the CRA and addresses access limitations, erosion-related improvement work, and security needs along the surface of the CRA's rights-of-way. Under the initial stage of the program, site improvements needed along the CRA will be identified, a comprehensive regional compliance and permitting program will be developed, and a programmatic environmental document will be prepared to secure environmental approval for multiple projects along the CRA rather than pursuing individual approvals on a project-by-project basis. This project will add the CRA to the RWIPP, which already includes the Orange County, Western San Bernardino, Riverside/San Diego, and Los Angeles operating regions.

## System Flexibility/Supply Reliability Program

Fiscal Year 2020/21 Estimate: \$13.6 million

Fiscal Year 2021/22 Estimate: \$24.8 million

**Program Information:** *The System Flexibility/Supply Reliability Program is comprised of projects to increase the capacity and flexibility of Metropolitan's water supply and delivery infrastructure to meet service demands.*

### Accomplishments for FY 2018/19 and FY 2019/20

- Major milestones achieved during the last biennium:
  - One project completed construction:
    - Inland Feeder and Lakeview Pipeline Intertie - Valve Installation
  - One project completed design
    - Greg Avenue Pump Station Rehabilitation

### Objectives for FYs 2020/21 and 2021/22

Project	Total Project Estimate	Estimated Completion	Major Milestones
Greg Avenue Pump Station Rehabilitation	\$ 32,000,000	2021	Complete construction
Perris Valley Pipeline - Tunnels	\$ 65,000,000	2022	Complete design and begin construction

### System Flexibility/ Supply Reliability - All Project Group

#### Delta Properties Infrastructure Improvements

Recent legislation (SB 88) requires monitoring and reporting of certain diversions within the Delta. Metropolitan's Delta properties will need to comply. This project will investigate existing diversion points, identify permanent meter locations, coordinate with the Delta Watermaster, and install approximately 40 meters.

#### Greg Avenue PCS - Pump Modifications and New Control Building

The Greg Avenue Pump Station was originally constructed in the early 1960s to pump treated CRA water from the Weymouth plant into the West Valley area, and was then modified in the mid-1970s to include hydroelectric power generation capability to generate up to one megawatt by replacing one of the pumps with a pump/turbine. Since that time, the remaining original pump at this facility was operated intermittently during operational tests or when the Jensen plant was out of service. Over the past year, cracks have developed on the pump's mounting brackets and at the support gussets. These pumps need to be replaced, the inlet and outlet pipe manifolds need to be reconfigured, the electrical and control systems need upgrading, and the surge tanks need to be replaced.

In addition to rehabilitating the mechanical, electrical, and control components of the pump station to improve reliability of the facility, this project includes construction of a new control building is proposed to replace the existing control building that houses mechanical and electrical equipment, and maintenance shop, which is seismically vulnerable. A construction contract was authorized by the Board in February 2019.

**Lake Perris Seepage Water Conveyance Pipeline**

Metropolitan and DWR have partnered to design and construct facilities to capture and convey Lake Perris leakage water to the CRA. DWR will design and construct a seepage collection wellfield near the foot of the Lake Perris Dam, and this project will design and construct a conveyance pipeline extending from the DWR wellfield to the CRA. Metropolitan's Board authorized preliminary design in April 2017.

**Perris Control Facility & Hydroelectric Plant Upgrades**

The Lake Perris Control Facility (LPCF) includes a pressure control structure, pump back system with four electric and two diesel pumps, and a hydroelectric plant. This facility controls flows from delivered from the Department of Water Resources Silverwood Reservoir located at Devil's Canyon, and Lake Perris to the Lakeview Pipeline. To improve Mills Plant reliability, water from Diamond Valley Lake and Inland Feeder can be delivered to Mills Plant by gravity flow but would require some modifications to the Lake Perris Control Facility's pressure control structure and HEP. The project will upgrade the LPCF systems to handle the maximum head of 1934 feet (from the Inland Feeder) by upgrading components of the pressure control structure and replacement of the hydroelectric plant.

**Perris Valley Pipeline - Tunnels**

The objective of the Perris Valley Pipeline is to supply additional water deliveries from Mills plant to EMWD and WMWD per their request. Construction of this 6.5-mile-long pipeline was initiated in 2007, to be implemented under two contracts: the North Reach consisting of 2.7 miles of pipeline and two service connections (WR-24 and EM-23), and the South Reach consisting of 3.8 miles of pipeline and two additional service connections (WR-35 and EM-24). In 2009, the North Reach was completed and placed in service. In 2010, 3.3 miles of the South Reach were completed. The Perris Valley Pipeline Interstate 215 Crossing project will complete a remaining half-mile-long section approximately midway along the South Reach and enable placing the South Reach in service. This project consists of construction of an approximate 1,700-foot-long tunnel and tie-ins to the previously constructed reaches. Design of this portion of the Perris Valley Pipeline was authorized by the Board in 2006.

## System Reliability Program

Fiscal Year 2020/21 Estimate: \$44.9 million

Fiscal Year 2021/22 Estimate: \$52.5 million

**Program Information:** *The System Reliability Program is comprised of projects to improve or modify facilities located throughout Metropolitan's service area in order to utilize new processes and/or technologies and improve facility safety and overall reliability. These include projects related to Metropolitan's Supervisory Control and Data Acquisition (SCADA) system and other Information Technology projects.*

### Accomplishments for FY 2018/19 and FY 2019/20

New projects initiated during the last biennium:

- Automatic Meter Reading Remote Terminal Unit Replacements and Radio Modem Upgrade
- Asset Monitoring and Management System
- Data Center Modernization Upgrade Phase II
- Desert Microwave Tower Site Upgrades
- GIS Infrastructure Upgrade
- Fuel Management System Upgrade
- Headquarters Building Automation System Upgrades
- Headquarters Cafeteria Refrigeration System Upgrades
- HQ Fire Sprinkler Level P1 Replacement
- Maximo Mobile Computing Upgrade
- MWD HQ Boardroom Technology Upgrade
- New La Verne Warehouse
- Security Operations Center

Major milestones achieved during the last biennium:

- MWD HQ Boardroom Technology Upgrade - Started final design
- GIS Infrastructure Upgrade - Completed deployment
- Union Station Headquarters Building Improvements - Completed design
- 11 District Employee Houses at the Eagle, Gene, Iron, and Hinds Pumping Plants - Completed renovations
- Headquarters Security Upgrade - Completed Stage 2 final design
- SCADA RTU CPU and Operating System Upgrade - Completed deployment



## Objectives for FYs 2020/21 and 2021/22

<b>Project</b>	<b>Total Project Estimate</b>	<b>Estimated Completion</b>	<b>Major Milestones</b>
Water Quality Monitoring & Planning System	\$ 3,600,000	2023	Begin design
Control System Upgrade	\$ 4,465,000	2020	Complete Phases 1 & 2
La Verne Shops Improvements - Equipment Installation and Completion	\$ 17,000,000	2022	Complete construction
Wadsworth Pumping Plant Control & Protection	\$ 22,540,000	2021	Complete deployment
Business Systems Disaster Recovery Upgrade	\$ 2,800,000	2021	Complete deployment
IT Network Reliability Upgrades	\$ 7,200,000	2021	Complete deployment
Maximo Upgrade	\$ 840,000	2020	Complete deployment
Maximo Mobile Upgrade	\$ 550,000	2021	Complete deployment
Data Center Modernization Upgrade	\$ 8,350,000	2021	Complete Phase 2 design
Asset Monitoring and Management System	\$ 500,000	2020	Complete deployment
Desert Microwave Tower Site Upgrades	\$ 3,910,000	2021	Complete design and begin construction
Security Operation Center	\$ 8,600,000	2021	Complete construction
WiFi Upgrade	\$ 3,600,000	2021	Complete deployment at Headquarters
MWD Boardroom Technology Upgrade	\$ 7,800,000	2020	Complete design and begin construction
Water Ordering and Energy Scheduling System	\$ 450,000	2022	Complete deployment
Union Station Headquarters Improvements	\$ 65,000,000	2022	Complete construction

## IT/SCADA - Infrastructure Project Group

**AMR System RTUs and Radio Modem Upgrade Project**

The Automatic Meter Reading (AMR) system is a critical component for transmitting meter information to allow for billing of member agency water deliveries and analysis of official meter instrumentation. The current system was mostly installed between 2008 and 2009. Portions of the AMR System must be updated because of equipment obsolescence and diminishing vendor support, as they are approaching their end of life. This project is planned to be completed in two phases. The first phase will consist of replacement of the radio modems and radio master stations, including procurement, configuration, installation, project management, and internal labor to support implementation. The second phase will consist of replacement of the AMR RTUs. It is anticipated that the Control System Upgrade Conceptual Design project (Phase 2 of the Control System Upgrade) will recommend that the technology used in the AMR system be made consistent with the technology used in the SCADA (Supervisory Control and Data Acquisition) system. Thus, the second phase (AMR RTUs) will be started after the Control System Upgrade Phase 3 (procurement) is completed. The second phase of the AMR project will consist of replacement of RTUs, operator interface terminals, digital displays, configuration laptops, battery chargers, networking equipment, along with associated configuration, installation, and implementation.

**Applications-Servers Upgrade from Old Windows OS**

A significant number of Metropolitan's systems, including a number of critical enterprise-level business and water applications, are currently running on outdated Microsoft Windows platforms (Windows 2003, 2007, and 2008). These platforms are either already no longer being supported or will shortly cease to be supported by the Microsoft Corporation. Microsoft's support includes software updates and security-related patches to fix technical issues and mitigate potential new security risks. Losing these software and security updates will increase cyber-security risks for the unsupported platforms. This project will upgrade all older application environments to Windows 2016. Phase 1 of the project will identify and document required changes, and will group applications into four deployment waves. Phase 2 will deploy the upgrades on each of the four groups identified in Phase 1.

**Arc Flash Software Model Development**

An arc flash is the light and heat produced from an electric arc supplied with enough electrical energy to cause substantial damage, harm, fire, or injury. Arc flash risk analysis is required per National Fire Protection Association (NFPA), National Electrical Code (NEC), and Occupational Safety and Health Administration (OSHA) standards. Metropolitan currently uses a generic tabular approach to quantify the arc flash hazard; this approach is no longer in compliance with the latest NFPA 70E standards. Comprehensive modeling that considers the effects of the surrounding equipment and accurately identifies the arc flash hazards is now required. This project will develop software models for Metropolitan facilities that are susceptible to arc flash hazards. The models will provide complete and consistent information that will identify equipment improvements to improve safety and to meet regulatory compliance.

**Asset Monitoring and Management System**

This project will establish the foundation for leveraging data already maintained by Metropolitan (under multiple different software platforms) into a common framework in order to efficiently conduct future infrastructure reliability projects and assessments across Metropolitan. This project is needed to support a common condition monitoring framework across Engineering Services (ESG) and Water System Operations (WSO) groups, as well as to support condition-based maintenance initiatives as part of General Manager's initiatives and WSO's business plan.

This project includes building software tools to access and aggregate ESG, WSO, and other asset-related data, such as data from finance, to facilitate infrastructure reliability investigations on one class of assets (revenue meters). Eventually, the software tools developed as a part of this project will be used for future condition assessments in ESG and WSO.

**Business Systems Disaster Recovery Upgrade**

Upgrade the Disaster Recovery Facility with additional servers, storage, Oracle database licenses, and needed equipment to meet, or exceed, the 2017 Business Impact Analysis (BIA) business system recovery requirements. Upgrade compatible DBMS applications for a high availability 24x7 infrastructure for identified mission critical applications. The Board authorized the upgrades in December 2017.

### **Control System Upgrade**

Metropolitan's control system spans the CRA, Metropolitan's five water treatment plants, and the entire conveyance and distribution system. The system-wide control system upgrade is planned to be implemented in a phased approach through the following projects to upgrade hardware, software, and a communications network. Currently, the phases are planned to consist of the following projects:

- Phase 1 - Preliminary investigations
- Phase 2 - Conceptual design of the new control system
- Phase 3 - Selection and demonstration testing
- Phase 4 - Final Design of Mills Area
- Phase 5 - Implementation Mills Area
- Phase 6 - Final Design of Skinner Area
- Phase 7 and later - Continued final design and installation/construction of the new control system in multiple staged contracts

### **Data Center Backup Infrastructure Upgrade**

Critical business and water applications rely on backup processes to restore the applications as soon as possible in an emergency. As Metropolitan's data volume progressively increases, so does the duration of the processes to backup, restore, and recover operations. Metropolitan's current backup software was deployed 15 years ago and uses magnetic tape as the storage medium. This project will replace the backup infrastructure with newer and faster technology and will redesign the backup/restore processes and procedures using the latest components of the backup software.

### **Data Center Modernization Upgrade**

The purpose of this project is to assess, redesign, and upgrade the MWD Headquarters and Lake Mathews data centers to provide sufficient computing power and modernize the data centers to meet current and future capacity and reliability needs. This project will conduct a detail assessment, final design, and funding estimate to relocate the HQ and Lake Mathews data centers to improve their long-term reliability from Tier-1 to Tier-3.

### **Desert Microwave Tower Site Upgrades**

This two-phase project will improve the reliability, performance, and capacity to Metropolitan's microwave radio wide-area-networks (WANs). Phase 1 involves \$3.91M out of the \$12M total project budget to address the most critical components that need to be replaced or upgraded in the Desert Region microwave tower sites. Phase 1 will upgrade the most critical Desert sites and Phase 2 will upgrade LA Basin sites, plus remaining Desert sites. Lessons learned from the Diamond Valley Lake (DVL) microwave proof-of-concept will be used in this project. The microwave network uses wireless transmission over radio frequency energy in the 6-18 Giga Hertz range.

### **Engineering Information System Upgrade**

The goal of this project is to upgrade ProjectWise (Engineering's Information System) to the latest version, install and configure additional ProjectWise modules, and integrate ProjectWise with other Metropolitan systems such as Geographic Information System (GIS), Outlook, SharePoint, and Deliverables Management to implement additional functionalities in ProjectWise. The intent is to streamline the workflow in Engineering design and improve access to information and documents in ProjectWise.

**Enterprise Data Analytics**

Building an Enterprise Data Warehouse & Analytics to answer both operational and strategic questions facing Metropolitan. The Data Warehouse will be built of individual data marts modeling a specific business area providing integrated reporting through Extract/Transform/Load (ETL) procedures and common dimensions. This Enterprise Data Warehouse will contain both business and operational data. It will be designed to combine these two data types in order to provide a financial dimension to operational data. By linking data like EBS (Financial), SCADA, GIS and Water Supply/Demand, Staff can model different scenarios to answer questions and to discover trends and anomalies previously not visible due to isolated reporting.

**Enterprise GIS Disaster Recovery**

This project will add the Enterprise GIS (EGIS) infrastructure to the Metropolitan IT Disaster Recovery Facility (DRF) in Riverside County. This includes the purchase, installation, and configuration of new hardware and software to meet Business Impact Analysis (BIA) study requirements for the EGIS infrastructure. The current recovery time for EGIS infrastructure is estimated at greater than a week. The BIA Recovery Time Objective (RTO) for the EGIS infrastructure is less than 72 hours, meaning that the EGIS infrastructure should be functional within 72 hours after an outage. This project will reduce the RTO for the EGIS infrastructure from 72 hours to 1 hour, so that EGIS data could potentially be used to assist in emergency operations.

**Fuel Management System Upgrade**

This project's objective is to upgrade the ten-year-old Fuel Management System (FMS), which is no longer supported by manufacturer. The FMS provides essential management controls over fuel inventories, dispensing, and security. It identifies and authorizes the dispensing of fuel and records fuel transactions and fuel tank data in a centralized database. This project will replace the necessary hardware and software to upgrade the FMS and to integrate it with Metropolitan's Computerized Maintenance Management System (CMMS), Maximo.

**WiFi Upgrade**

This WiFi Upgrade project will improve the reliability, performance, and capacity to Metropolitan's wireless access point (WAP) local-area-networks (LANs) at Headquarters and various field facilities. It will also provide a secure, reliable and robust WiFi System to support increasing business demands and reliance on Metropolitan's wireless infrastructure. The scope for this project includes (1) migration and implementation design plan, (2) removal of obsolete access points and controllers, (3) installation of cable in building ceiling for access points, (4) installation of new access points, and (5) configuration and installation of new controllers.

**Hydraulic Modeling Analysis Toolkit and Water Quality Calibration**

Metropolitan's Engineering Services Group completed development of a system-wide hydraulic model in January 2017 after a multi-year development effort. Even while model development was still underway, many uses for the hydraulic model were identified. This project includes developing tools to support hydraulic model analysis to increase efficiency and enhance productivity while using the hydraulic model for analysis. The project also includes development and calibration of water quality modeling capabilities.

**Information Technology Service Management System**

Metropolitan's Information Technology Group (ITG) currently uses several different systems for managing Information Technology incidents (e.g., a computer not turning on) and work requests (e.g., new software needing to be installed). While this approach works well in meeting each team's specific needs, one of the major disadvantages is that gathering metrics for management is a tedious process involving coordination with multiple teams, learning multiple software packages, and manual correlation and data gathering. This project will implement a service management system to track and manage service requests, incidents, change requests, IT asset management, and other related functions. As an added benefit, this will allow the expedited future implementation of self-service capabilities for several of the more common ITG service requests (e.g., automatic software installs for commonly used software packages) and provide future integration capability with various monitoring tools currently in use.

**Information Technology System - Communication Infrastructure Reliability Upgrade**

This project addresses the need to replace Metropolitan's Siemens/Rolm 9751PBX-based telephone system. The current telephone switches are over 18 years old and are at the end of service life. The scope of this project is to develop a request for proposals, select the VoIP vendor, complete the technical design, work side-by-side with the telephone technicians while installing the new equipment, test the new system, and perform project management; a professional services agreement for consulting services to design and build the new telephone system; upgraded equipment and software for the new system and related IT unified communications components; training and incidental costs. The Board approved this project in February 2008.

**IT Network Reliability Upgrades**

Metropolitan's communication network hardware is aging, which has led to increased maintenance. Based on the rise in failure rates of older equipment, staff has determined that existing network hardware and associated network room support systems need to be upgraded to support ongoing projects, maintain reliability, and meet future needs. The Board authorized final design of electrical, cooling, and backup power system upgrades for network rooms located on each floor of Metropolitan's Headquarters Building. It also authorized preliminary design and field assessments of network equipment. The Board authorized a contract to upgrade the network rooms at Headquarters in August 2015.

**Lake Mathews IT Disaster Recovery Facility Upgrades**

The Lake Mathews DRF was expanded as part of the Business Systems Data Recovery project funded by the Board in April 2004. The original DRF structure was a communications room that was not designed to be an IT data center. The scope includes equipping the IT Lake Mathews Disaster Recovery Facility (DRF) with needed data center environmental system upgrades such as Air Conditioning (HVAC), uninterruptible electrical power supplies (UPS), fire suppression system, emergency generator, and remote monitoring capabilities. Also, seismic upgrades will be conducted due to recently identified seismic deficiencies.

**Maximo Mobile Upgrade**

The goal of this project is to replace existing mobile devices used in WSO with latest tablet technology and deploy additional devices to Engineering. The project will enable the use of capabilities of the existing mobile software system that are not available on the existing hardware devices.

The project includes an initial pilot evaluation with a purchase of 30 units to evaluate different models and test features. The overall goal will be to purchase 290 devices following the completion of the pilot evaluation. The new devices will eliminate or reduce the need for desktop computers at field sites and vastly increase the functionality of the existing Maximo mobile devices.

**Maximo Upgrade**

This project will upgrade the Maximo system, Metropolitan's enterprise-wide asset management program that is used for planning, scheduling, and reporting required maintenance of equipment deployed throughout the treatment plants and conveyance & distribution system. This project includes software upgrades and new hardware to accommodate this upgrade. This project was authorized by the Board in July 2017.

**MWD Headquarters Boardroom Technology Upgrade**

The existing equipment in the board and committee rooms is over nine years old and several components are reaching the end of useful life. The Board of Directors and external organizations use the board and committee rooms on a regular basis and the technology supporting these meetings must be reliable and the sound and video must be of high quality. This project will upgrade audio visual (AV) and information technology-related equipment in the main Board room and committee rooms in Metropolitan's headquarters building at Union Station.

### **Security Operations Center**

This is the second phase of the Cyber Security Upgrades project. The first phase concluded that additional cyber projects were needed to mitigate evolving threats. This phase will assess and remediate exposures and cyber security threats throughout Metropolitan with special emphasis on the business and SCADA networks. Maintaining a secure computing infrastructure requires application of ongoing cyber countermeasures to protect against new cyber threats that are identified on a continual basis. The scope of this project includes engaging a security consultant to perform an independent assessment of MWD's IT infrastructure and environment to identify potential vulnerabilities and make recommendations for strengthening our cyber security.

### **Standby Generator Relocation at Six WAN Sites**

Metropolitan's Wide Area Network (WAN) provides a critical communication and data link between facilities across the distribution system. The Standby generators at six WAN sites must be relocated for consistency with the current fire codes and to enhance safety. These generators are needed to provide backup power in the event of loss of primary power. The planned improvements will reduce the risk of damage to communication equipment and the buildings in the event of a fuel leak. Metropolitan forces will relocate the standby generators at six WAN sites to reduce the risk of fire damage to Metropolitan's communication systems. The standby generators will be moved to new locations in separate outdoor enclosures, consistent with current fire codes. Relocation was authorized by the Board in August 2016. The project is currently in progress.

### **Two-Way Radio System Upgrade**

Metropolitan's current Two-Way Radio system is approaching the end of its service life, and both vendor and after-market support will cease in the next few years. The existing Two-Way Radio system is Metropolitan's essential communication system for public/employee safety, and for communications when Metropolitan performs tasks involving member agencies. This project will upgrade specific components of the Two-Way Radio system, reusing the majority of the infrastructure; replace some unsupported radios; and will provide improvements to address poor reception at some locations. The upgraded Two-Way Radio system will include features anticipated to provide higher capacity, higher levels of cybersecurity, additional management and monitoring features, and multi-level resiliency.

### **Water Ordering & Energy Scheduling System**

The Water Ordering and Energy Scheduling System will have the capability of meeting several OCC scheduling needs in a single system. The water flow scheduler portion of the project consists of the development of a software tool allowing member agencies to efficiently submit flow changes and schedule requests via a secure web page. The current process requires that an OCC system operator manually record flow change requests via telephone and take handwritten notes in order to then make control adjustments to hydraulically accommodate the flow requests. Providing a self-service portal for member agencies to submit flow change requests online will allow system operators to focus on the monitoring and controlling of the distribution and conveyance system, reducing interruptions and more effectively managing member agency flow change requests. Additionally, the Water Ordering and Energy Scheduling System will include the capability of forwarding power production schedules directly to the PUC as required for hydroelectric plant operation. A unified solution will reduce the number of separate applications Metropolitan currently maintains with the added benefit of incorporating current and secure best practices. Furthermore, developing a single system under a combined project will be easier to maintain and operate, allowing for more simplified upgrades in the future.

**Water Quality Monitoring and Planning System (WQ MaPS)**

Existing distribution system online water quality analyzers, installed in 2002-03, are obsolete and in need of replacement. Instrumentation measures total chlorine, conductivity, pH, turbidity, ultraviolet absorption, and total ammonia. Data from analyzers is monitored by the Operations Control Center through the SCADA system and by Water Quality through a contaminant warning system. The WQ MaPS project will enable Metropolitan's continued use of online data to quickly identify water quality anomalies resulting from normal operations or emergency situations to minimize risk of water quality issues and potential compliance violations. This project will implement the action items identified in the WQ MaPS action plan to improve data reliability and increase customer access to data. This project will upgrade obsolete water quality analyzers at 21 locations and install analyzers at 14 additional locations, incorporate output from the existing water quality event detection system into an innovative GIS dashboard, integrate output from the ESG's hydraulic model into the GIS dashboard, and provide a self-service portal for internal and external customers to access approved water quality data.

**Water Quality Laboratory Instrumentation Modernization and Data Acquisition Automation**

Metropolitan's La Verne Water Quality Laboratory houses a significant number of analytical and water sampling instruments that support many of Metropolitan's business functions, including demonstrating regulatory compliance with drinking water standards and water treatment optimization. Historically, Metropolitan has approached replacement of obsolete instrumentation through individual purchases. This strategy has limited the rate of upgrades or replacement. In addition, many of the laboratory's instruments include vendor-provided dedicated computer workstations, loaded with software that is sometimes maintained by the vendor, and sometimes by Metropolitan's IT staff. This has resulted in cybersecurity vulnerability, as well as multiple non-standard computer images, operating systems, and software versions. Finally, the diversity of instrumentation in the laboratory has made it difficult to acquire data from the various instrumentation systems. This project will upgrade laboratory instrumentation to accommodate cybersecurity issues, prevent obsolescence of laboratory instrumentation, and allow integration of data acquisition efforts.

**Operations Support Project Group****CRA Housing Improvement - Renovation of 9 Houses**

Metropolitan owns and rents 89 houses throughout the five CRA pumping plants to employees involved in operation and maintenance of the CRA. Due to the remoteness of the CRA facilities, on-site housing is provided to staff to ensure an appropriate response time in the event of an emergency that could jeopardize aqueduct flows, damage equipment, or present a safety risk to employees or the general public. The aging houses are deteriorated and in need of repairs and renovations. The planned renovations for the 89 desert houses may include: upgrading electrical and plumbing systems; installing new doors and windows; installing new cabinetry and countertops for kitchens and bathrooms; replacing roofs and HVAC units; repairing structural components such as roof joists and floor foundations; replacing and upgrading flooring; interior and exterior painting; and abatement of hazardous materials, as needed. The extent of renovations will depend on the condition and needs of each house. Renovation of up to 89 houses was authorized by the Board in May 2017. This project will complete renovation of a total of 20 houses out of the 89 houses as originally planned. The construction of the eleven houses is completed and this project will be closed. The design and construction of the remaining nine houses will continue under this appropriation but with a new project number. The remaining 69 houses will be completed under Appropriation No. 15513.

### **CRA Housing Improvements - Renovation of Short-Term Accommodations at Eagle Mountain and Iron Mountain Pumping Plants**

Eagle Mountain and Iron Mountain Pumping Plants have kitchens and guest lodges that are used by staff during shutdowns and construction projects, and during extended periods of condition assessments and design of rehabilitation work. These facilities will be used frequently over the next decade as the planned rehabilitation of the 45 main CRA pumps moves forward.

The kitchen at Iron Mountain Pumping Plant has been in service for decades and while still functioning, its equipment is deteriorated and obsolete. The kitchen at Eagle Mountain Pumping Plant does not currently meet San Bernardino County Health Services' requirements for large-scale food storage, refrigeration, or handling. As a result, it has been removed from service. The 10-room guest lodge at Eagle Mountain Pumping Plant and the 16-room guest lodge at Iron Mountain Pumping Plant have both deteriorated after more than 40 years of service and require frequent short-term repairs. The planned kitchen renovations include replacement and refurbishment of existing floor and wall coverings, shelving, plumbing, electrical components, sinks, ranges, freezers, and walk-in refrigerators. At the guest lodges, the needed improvements include electrical, plumbing, and HVAC improvements and roof replacement. Design was authorized by the Board in May 2017. Prior to beginning design, a study was conducted by a consultant in April 2018. Preliminary Assessment was initiated by a consultant in August 2019. Results from Preliminary Assessment propose a replacement alternative for Kitchens & Lodges.

### **Eagle Rock Security Project**

The Eagle Rock Operations Control Center (OCC) was built in 1995 in the City of Pasadena. The OCC coordinates and controls Metropolitan's water conveyance and distribution system throughout its entire service area. As the main hub of this system, the OCC is pivotal for the management of water deliveries through Metropolitan facilities. The site currently consists of (1) a two-story building that houses the OCC, the Emergency Operations Center, and several staff offices, (2) a two-story older structure that holds the Business Incident Command Post, Security Water Center, several offices, and a Control Systems shop, and (3) several concrete structures used for transporting water. A vulnerability assessment of the OCC site was conducted in 2017. This assessment identified several security issues of concern as a result of trespassing onto the property. A security assessment identified the site's use by hikers in the area, site accessibility by individuals who have established homeless encampments in the area, and illegal dumping. Proposed site improvements include replacement of the main gate, additional security cameras, lighting fixtures, flood lights with motion detectors, signage, and other related security features.

### **Electrification of Fleet Vehicles & Expansion of Existing EV Charging Stations**

Identifying new ways to reduce greenhouse gas (GHG) emissions and reduce Metropolitan's carbon footprint is essential to the development of Metropolitan's Climate Action Plan. This project will install electric vehicle (EV) infrastructure across the district to incorporate electric vehicles into Metropolitan's fleet, as well as expand existing EV infrastructure for passenger vehicles. This project would be implemented in phases, starting with a comprehensive study to determine project priorities, potential GHG reduction based on projected use, provide a cost analysis, and develop a roadmap for subsequent phases.

### **HVAC System Assessments & Upgrades - Field Facilities**

Metropolitan's facilities include nearly 700 structures with over 2,000 pieces of heating, ventilation, and air conditioning (HVAC) equipment. Approximately 80% of the HVAC equipment used by Metropolitan supports process systems that are required to treat or distribute water, and for regulatory compliance. The majority of Metropolitan's HVAC equipment is over 30 years old, requiring more corrective maintenance to remain operational, and consuming more electricity than newer, more energy efficient units. This project consists of a five-year, phased replacement of outdated HVAC infrastructure with certified energy efficient equipment, and will address regulatory changes in EPA guidelines, which are phasing out the refrigerants currently used in most of MWD's HVAC systems. The project will also modernize HVAC controllers into a cohesive building automation network to allow Metropolitan staff to more efficiently respond to HVAC interruptions, more quickly troubleshoot problems, provide early detection of problems before catastrophic failures, and ensure optimal



performance of the HVAC systems.

### **La Verne Shops Improvements**

The La Verne Shops are located on the grounds of the F. E. Weymouth Water Treatment Plant and have been in service since 1941. The shops were expanded in the 1960s, and were expanded again in the 1980s to support a major rehabilitation of the pumps along the CRA.

A shop modernization program was started in 2002, and included building expansions and upgrades, and shop equipment replacement or refurbishment. Most of the shop equipment is 25 to 35 years old, with a few pieces close to 45 years old, and a 20-year-plan to replace and refurbish the shop equipment has been developed. The building expansions and upgrades included expanding the existing shop buildings, upgrading portions of the existing buildings, and replacing and refurbishing shop equipment. This project also focuses on design and procurement of shop equipment which will be installed under the Stage 4 Building completion contract. This equipment includes a hydraulic shear, hydraulic press brake, waterjet cutting system, and vertical milling. In January 2018, the Board awarded procurement contracts for three of these machines. Procurement of a vertical milling center will be the subject of a future board action. The Stage 4 building completion scope of work includes water line extensions, a new electrical circuit and unit power center, an air compressor and air lines, shop heaters, and safety enhancements including walkways and roof access ladders. In addition to the building work, the scope includes procurement and installation of a horizontal and vertical band saw, plasma cutter, and floor mill and blast booth refurbishment. The Board authorized design in December 2015.

Five additional pieces of shop equipment need to be replaced and refurbished to maintain Metropolitan's ability to respond to emergencies and perform planned maintenance. This is the final project to complete a 20-year shop modernization program. The following equipment has been identified for replacement or refurbishment: One medium and one large lathe to replace two existing lathes, one new medium sized floor mill to replace a non-functioning floor mill, a new large floor mill to work on Metropolitan's largest hydraulic machinery, like the pumps on the CRA system, and refurbishment of the large existing floor mill.

### **La Verne Field Engineering Building Replacement**

This project provides a new Field Engineering Building to replace the existing one, which does not meet Metropolitan's current seismic building standards, and is limited in function due to HVAC deficiencies and work space constraints. The Field Engineering Building, located at Metropolitan's La Verne Facility, was designed and built over 50 years ago in accordance with building codes current at that time.

This project will include a detailed value engineering study to confirm the recommended approach to construct a new building in lieu of retrofits to the existing structure. This project will also include a comprehensive siting study to ensure that the proposed footprint of the new building does not interfere with the current and future requirements of Metropolitan's La Verne Facility. This project will enhance infrastructure safety, security, and resiliency.

### **Lake Mathews Wastewater System Replacement**

The wastewater system at Lake Mathews has been in operation for nearly 80 years and is no longer reliable. Despite receiving regular maintenance, the system is exhibiting signs of failure including plumbing and septic tank backups, clogged leach fields, and slow-draining collection pipes. On-site treatment of the wastewater via septic tanks will be discontinued, and new collector lines will be connected to the local sewer system that was installed in the early 2000s. Western Municipal Water District has a nearby sewer main that includes a connection point specifically installed for Metropolitan's future use. This connection can accept wastewater by gravity from the entire on-site system. Staff recommends replacing the on-site wastewater system to reduce the risk of costly unplanned repairs and to maintain system reliability. The Board authorized design in May 2018.

**Meter Accuracy and Hydraulic Testing Facility**

Metropolitan had previously used its Yorba Linda Facility to evaluate and equipment, test operational concepts and qualify equipment. The water used for testing was obtained from the Santiago Lateral and discharged into the Santa Ana River. Environmental constraints on the discharge of water made the facility's use impractical, and the test facility was shutdown. This project constructs a new test facility at Etiwanda Reservoir in order to test new emerging technologies, emerging regulations related to metering, and to validate non-standard service connections. Specifically, a new facility would allow staff to test equipment such as valves, meters, coatings, and other treatment and distribution devices; conduct expedited test to maintain a pre-approved equipment list for low bid procurement; simulate problematic flow meter installations and low flow conditions; and test the accuracy of existing flow meter installations.

**New La Verne Warehouse**

The Central Stores Warehouse at La Verne is Metropolitan's main warehouse for storing materials, supplies and equipment used by field personnel to support Metropolitan's operations. A recently completed seismic evaluation found that the building may be damaged from a maximum credible earthquake. The cost to retrofit the building is cost prohibitive. In addition, the warehouse lacks the storage space necessary to house Metropolitan's materials, supplies and equipment. The warehouse also lacks equipment to handle large assets like the large diameter valves that are being procured for projects like the Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation Program. The new warehouse will support Metropolitan's PCCP Rehabilitation Program, existing operations and maintenance, and future infrastructure upgrades.

**System-wide Paving & Roof Replacements**

Similar to infrastructure throughout the Metropolitan, pavements and roofs deteriorate over time due to wear and tear from use, weathering and precipitation. The planned pavement and roofing rehabilitation projects will encompass water treatment plants, pumping plants, various maintenance facilities and access roads within Metropolitan's service areas. These projects will also improve the subgrade and drainage systems as required.

This project will allow various paving and roof replacements throughout Metropolitan's facilities to be authorized by the General Manager similar to the Minor Capital Projects Program. Establishing a project to fund a limited amount of paving and roof replacement on an annual basis will allow these needed replacement projects to proceed expeditiously.

**Water Quality Laboratory Building Seismic & HVAC Upgrades**

This project addresses seismic upgrades and other building improvements for the Water Quality Laboratory. The Water Quality Lab was constructed in accordance with the building codes at the time of construction and is treated as an essential facility. However, industry knowledge of earthquakes and seismic design has greatly improved over the years, leading to the development of more stringent, modern seismic codes for this type of facility. To minimize the risk of damage to the plant during a major earthquake, seismic upgrades are recommended. Also, new regulatory requirements associated with Quagga Mussels, per- and polyfluoroalkyl substances (PFAS), and other water quality concerns will be addressed.

In addition to the seismic upgrades, functional layout improvements such as laboratory and office space reconfiguration, lab equipment replacements, accessibility, HVAC improvements, roof repair and other related building improvements will also be included.

## System Reliability - Other Project Group

### **Building Automation System Upgrades**

The building automation system controls all lighting, carbon monoxide monitoring system, HVAC, and associated mechanical equipment in Metropolitan's Headquarters Building. The system is required to operate the building in an energy efficient manner, consistent with Title 24 energy efficiency standards. In the event of a building automation system failure, thermal control within the data center would be lost and garage exhaust fans within the parking garage would become inoperable, resulting in damage to critical facilities and unsafe conditions, respectively. The existing building automation system is obsolete and is no longer supported by the manufacturer.

This project will replace the existing building automation system with a new nonproprietary system and will support integration of the new fire and smoke control systems that will be installed under the Headquarters improvements project. In October 2019, the Board authorized an amendment to an engineering services agreement for design of this project.

### **Headquarters Improvements**

Analysis has confirmed that the Headquarters Building does not meet current building code criteria for an Essential Facility. While the building remains safe to occupy, seismic strengthening to meet updated code levels is recommended in order for operations and business functions to continue following a major earthquake. This upgrade will increase the Headquarters Building's level of seismic performance and safety to that of an existing state-owned building and will reduce the risk of significant damage and resulting business interruption due to a major earthquake.

Construction of the seismic upgrades poses logistical challenges associated with the major retrofit of a high-rise building while the facility remains operational. During the anticipated three-year duration of construction, two to three floors of the high-rise tower will be vacated sequentially to allow a contractor to execute the repairs. Metropolitan staff will be relocated in stages to the five-story wing of the building.

Seismic upgrade work provides an opportunity to complete improvements to specific building systems in a cost-effective manner, while the floors are unoccupied and building finishes are removed. The Headquarters Building is over 20 years old, and some of its features need to be upgraded or replaced. These features include the fire/life safety systems including existing fire sprinkler piping at the parking garage, some of the kitchen equipment and ceiling/wall finishes, HVAC system equipment including cooling towers and air handler units, and restroom facilities on several floors. The Board awarded a construction contract in November 2018.

### **Headquarters Security Improvements**

The comprehensive security upgrades for Metropolitan's Union Station Headquarters have been prioritized and staged to minimize rework and impacts to operations. The Stage 1 work, currently in construction, enhances perimeter windows and doors by providing needed blast protection. Stage 2 improvements, currently in design, will provide security system upgrades inside the building with entry validation, surveillance and intrusion protection, and additional security features in the board room, executive dining lounge, and security control room. Stage 3 improvements will provide security system upgrades outside the building with bollards and gates.

### **Security System Upgrade**

The electronic security system is the backbone of Metropolitan's physical security system. Studies indicate that replacement of the 15-year-old system is not yet required; however, incremental upgrades are needed to extend the life of the system. Work includes hardware and software upgrades to network controllers, computer servers, card readers, and the video management system. Design and installation was authorized by the Board in May 2017.

**Wadsworth/DVL Control & Protection System Upgrade**

This project is the final phase of the Wadsworth Pumping Plant/DVL control system upgrade and includes replacement of the entire Diamond Valley Lake (DVL) control and communications systems, the protection relay system, UPS, vibration monitoring system, and pump/turbine drive controls. This phase of the project was authorized by the Board in April 2017.

## Treatment Plant Reliability Program

Fiscal Year 2020/21 Estimate: \$48.6 million

Fiscal Year 2021/22 Estimate: \$27.6 million

**Program Information:** *The Treatment Plant Reliability Program is comprised of projects to replace or refurbish facilities and components of Metropolitan's five water treatment plants in order to continue to reliably meet treated water demands.*

### Accomplishments for FY 2018/19 and FY 2019/20

#### Diemer Plant

##### New Projects Initiated Last Period:

- Diemer Filter Valves Actuator Refurbishment
- Diemer Ozone Generator Open Loop Cooling Water System Improvements
- Diemer Slope Erosion Control Improvements

##### Major Milestones Achieved Last Period:

- Diemer Basin Rehabilitation - Started construction of the west basins
- Diemer Filter Outlet Conduit Seismic Upgrades - Completed construction
- Diemer Administration Building Seismic Upgrades - Completed construction
- Diemer Filter Building Seismic Upgrades - Started construction of seismic upgrades for the west filter building
- Diemer Filter Valve Replacement - Completed procurement of the actuators and started construction of valve replacement for the west filters
- Diemer Water Sampling System Improvements - Started construction
- Diemer Ozone Generator Open Loop Cooling Water System Improvements - Started construction

## Jensen Plant

### New Projects Initiated Last Period:

- Jensen Ozone PSU and Critical Component Upgrades
- Jensen Site Security Upgrades

### Major Milestones Achieved Last Period:

- Jensen Module No. 2 & 3 Traveling Bridge and Basin Rehabilitation - Completed preliminary design of traveling bridges
- Jensen Plant Electrical Upgrades
  - Stage 1 - Completed construction
  - Stage 2 - Completed design and started construction
- Jensen Modules 2 and 3 Flocculator Rehabilitation - Completed design and started construction
- Jensen Fluoride Tank Replacement - Completed construction
- Jensen Filter Backwash Biological Control System - Completed construction
- Jensen Inlet Water Quality Instrumentation Upgrades - Completed construction
- Jensen Ozone System PLC Control & Communication Equipment Upgrade - Completed construction
- Jensen Ozone PSU and Critical Component Upgrades - Started procurement
- Jensen Site Security Upgrade - Completed preliminary design

## Mills Plant

### New Projects Initiated Last Period:

- No projects were initiated during the last biennium.

### Major Milestones Achieved Last Period:

- Mills Electrical Upgrades - Started construction of Stage 1
- Mills Modules 3 & 4 Flash Mix Chemical Containment Upgrades - Completed design and started construction
- Mills Plant Perimeter Security and Erosion Control Improvements - Started design

### Skinner Plant

#### New Projects Initiated Last Period:

- Skinner Module 7 Filter Inlet Valve Gearbox Replacement
- Skinner Finished Water Reservoir Slide Gate Rehabilitation
- Skinner Ozone Generator PLC Control & Communication Equipment Upgrade

#### Major Milestones Achieved Last Period:

- Skinner Plant - Replacement of Plant 1 Filter Gate Stems and Nuts - Completed construction

### Weymouth Plant

#### New Projects Initiated Last Period:

- Weymouth Hazardous Waste Staging and Containment

#### Major Milestones Achieved Last Period:

- Weymouth Washwater Tank Seismic Upgrades - Completed construction of the west tank
- Weymouth Basins 5-8 and Inlet Channel Refurbishment - Completed preliminary design
- Weymouth Water Quality Instrumentation Improvements - Started construction
- Weymouth Hazardous Waste Staging and Containment - Completed preliminary design

### Objectives for FYs 2020/21 and 2021/22

<b>Project</b>	<b>Total Project Estimate</b>	<b>Estimated Completion</b>	<b>Major Milestones</b>
Diemer Basin Rehabilitation	\$ 63,500,000	2021	Complete construction of the west basins
Diemer Filter Building Seismic Upgrades	\$ 32,500,000	2021	Complete construction of west filter building
Diemer Filter Valve Replacement	\$ 13,400,000	2021	Complete construction of west filters
Jensen Control Room HVAC	\$ 600,000	2021	Complete design
Jensen Modules 2 and 3 Flocculator Rehabilitation	\$ 7,907,000	2021	Complete construction
Jensen Ozone PSU and Critical Component Upgrade	\$ 3,590,000	2023	Begin construction
Jensen Plant Electrical Upgrades	\$ 69,616,000	2023	Complete Stage 2 construction
Jensen Site Security Upgrade	\$ 1,800,000	2,022	Complete design
Jensen Chemical Feed Improvements	\$ 800,000	2021	Complete design and construction

<b>Project</b>	<b>Total Project Estimate</b>	<b>Estimated Completion</b>	<b>Major Milestones</b>
Mills Fluorosilicic Acid Tank Replacement	\$ 1,600,000	2020	Complete design and start construction of sulfuric acid tanks rehabilitation
Mills Modules 3 & 4 Flash Mix Chemical Containment Upgrades	\$ 1,750,000	2020	Complete construction
Mills Plant Electrical Upgrades	\$ 19,700,000	2023	Complete design of Stage 2
Weymouth Administration and Control Buildings Seismic Upgrades	\$ 13,838,000	2024	Complete design
Weymouth Basin 5-8 and Inlet Channel Refurbishment	\$ 48,512,000	2023	Complete design
Weymouth Chlorine System Upgrades	\$ 9,237,000	2020	Complete construction
Weymouth Filter Valve Replacement	\$ 24,500,000	2025	Complete design of Filter Bldg. No. 2
Weymouth Hazardous Waste Staging and Containment	\$ 812,000	2022	Complete design and construction
Weymouth Water Quality Instrumentation Improvements	\$ 2,538,000	2021	Complete construction

## Diemer Project Group

### Diemer Administration Building HVAC Replacement

The existing HVAC system in the Diemer plant's Administration Building consists of two 20-ton, chilled and hot water coiled air-handling units, which maintain multi-zone work-space environments on both floors. The 55-year-old units are beyond their expected operating life and have caused issues with regular maintenance activities. This project will replace the existing HVAC units with new energy efficient units and upgrade the temperature control system for the building. Seismic anchorage of the equipment will be incorporated to meet the current building code.

### Diemer AMP Gate Replacement

One of the components of the Diemer plant's Finished Water Reservoir (FWR) is a 14-ft by 20-ft outlet roller gate, intended to throttle the flow or isolate the reservoir from the downstream Allen-McColloch Pipeline (AMP). This gate recently failed due to previously undetected corrosion and coating failure. This project will replace the AMP outlet gate, gate guides, and actuation system. The planned upgrade work requires a total plant shutdown and includes replacing components located inside the reservoir (rolling gate and guides) and on top of the reservoir (the actuation system). The new gate and actuator will enhance operational reliability and safety during a seismic event.



**Diemer Basin and Filter Building Rehabilitation**

The mechanical, structural, and electrical components of the basins at the Diemer plant have deteriorated from over 50 years of continuous use. They need to be rehabilitated and seismically reinforced in order to maintain reliable treated water deliveries.

Key components to be upgraded include basin inlet gates; flocculator drives and shafting; baffle boards and supports; turntable assemblies, rakes, and catwalks; launders; and structural supports for the equipment. The electrical systems also need to be modified for compliance with current code. In addition, the flexible joint sealant and its adjacent concrete within the basins will be removed and replaced to comply with federal Toxic Substances Control Act (CSCA) regulations. The work will be completed in two phases in order to minimize operational impacts on the plant. Final design was authorized by the Board in February 2013; construction to rehabilitate the east basins has been completed; and construction to rehabilitate the west basins was awarded in October 2018.

The filter valve bodies exhibit corrosion and the rubber seats are worn. This project will replace the obsolete filter valves in the west and east modules of the plant with new valves that conform to American Water Works Association (AWWA) standards. In addition, the existing valve actuators in the west filters will be replaced. The actuators removed from the west filter valves will be refurbished and re-installed on the recently replaced east filter valves. Procurement of the valve actuators was authorized by the Board in September 2017. Installation of the west filter valves was awarded by the Board in October 2018.

Lastly, structural evaluations of the two filter buildings at the Diemer plant concluded that the filter buildings are seismically vulnerable and should be upgraded to reduce the risk of damage from a major seismic event. This project will upgrade the Diemer plant's Filter Buildings to provide operational reliability. This project will reinforce concrete columns in each filter control building, reinforce each clerestory at the roof line, and add new concrete piers within the sump area below the filters. As part of the filter upgrades, some existing mechanical and electrical equipment in the filter control buildings will be relocated. Construction of the east filter upgrades was authorized by the Board in February 2015 and has been completed. Construction of the west filter upgrades was awarded by the Board in October 2018.

**Diemer Chemical Feed System Improvements**

The chemical feed equipment for ammonia, alum/ferric chloride, sodium hydroxide, liquid polymer, and dry polymer at the Diemer plant has aged and its reliability has deteriorated over the years. Most equipment is over 20 years old and has experienced failures. Some of the repair parts are no longer manufactured and are difficult to obtain. Loss of chemical feed or inadequate feeding capacity could disrupt plant operations. In addition, design criteria for some of the chemicals have changed and the existing equipment is unable to cover the required range for chemical feed. This project will replace the worn-out feed equipment and optimize the system design to improve system reliability and to protect treated water quality. Design was authorized by the Board in March 2011.

A canopy over the caustic soda tank farm and a new fluoride tank farm is needed to improve operations at the Diemer plant. Heat tracing around caustic feed lines is required to feed 50% caustic soda during the winter months. However, rainwater trapped within the chemical containment area could submerge the heat tracing wires. A canopy will minimize rainwater accumulation within the containment area and eliminate electrical hazards. The plant's fluoride tanks have reached the end of their service life and lack access for inspection and maintenance. This project will install a canopy over the existing caustic soda feed equipment; and replace the two fluoride storage tanks, associated feed equipment, and the roof over the fluoride tank farm. Preliminary design was authorized by the Board in August 2012.

**Diemer Electrical Improvements**

Power and distribution panels that were installed during the original Diemer plant construction, are more than 55 years old. These panels, circuit breakers, and feeder conductors (wires that feed the panels) have exceeded their normal life span and have deteriorated. This project will upgrade the aged electrical equipment to meet the current electrical code and enhance the plant's reliability. The improvements will allow the electrical equipment to be taken out of service for preventive maintenance, replacement, and testing in a safe working condition.

**Diemer Emergency Ozone Backup Disinfection**

The Diemer plant's existing ozone backup disinfection system was designed to use a low concentration sodium hypochlorite solution to be added at the plant inlet in the event of an unplanned ozone system shutdown. However, the existing sodium hypochlorite storage is only sufficient to provide three hours of back-up disinfection. Manually switching to the liquid chlorine feed system is required after the three hours to meet the disinfection requirement. The sodium hypochlorite system has also proven susceptible to vapor locking. This project will modify the existing plant chlorine system to be used as backup disinfection system in the event of an ozone system shutdown. Construction has been initiated under the General Manager's authority.

**Diemer Erosion Control Improvements**

The Diemer plant is located on the top of a hill in the city of Yorba Linda and consists of numerous fill slopes. Due to the large water-bearing structures at the Diemer plant, some of these slopes are within the State of California Department of Water Resources Division of Safety of Dams (DSOD)'s jurisdiction. Some slopes within the Diemer plant have eroded and are in need of rehabilitation. This project will provide site improvements for grading, drainage, and erosion/sediment control to erosion-damaged slopes at the plant site. The board authorized geotechnical investigations in September 2018.

**Diemer Filter Rehabilitation**

The Diemer plant has 48 independent filter units that are normally operated from the main control room, although they also have the capability to be operated locally if needed. Over the life of the Diemer plant, staff has performed regular maintenance on the filters to support reliable plant operation. However, as regulations and source water conditions have changed, filter performance reliability has decreased. Metropolitan's Water Quality recently developed recommendations for the rehabilitation of all Weymouth filters, including reconfiguration of underdrains, media, troughs and surface wash systems. Due to the similarities between the filters at Diemer and Weymouth, staff recommends implementing the same filter modifications at the Diemer plant.

This project will rehabilitate all of the Diemer plant's filters to improve their performance and enhance treatment plant reliability. The planned rehabilitation work includes replacing the filter media with optimized size and depth specifications; replacing the surface wash system with larger piping and improved flow configuration; replacing the underdrains; modifying flow distribution flumes; and raising and replacing the existing troughs to accommodate a higher depth of filter media. This project will enhance infrastructure safety, security, and resiliency; improve the reliability of water deliveries; ensure water quality compliance, worker safety, and environmental protection; and will optimize water treatment and distribution.

### **Diemer Washwater Reclamation Facilities Reliability Improvement**

Approximately 40 percent of Diemer plant's existing Washwater Reclamation Plant (WWRP) is constructed on long slender piles and earthen fill, which form a level surface at the top of a slope. Seismic rehabilitation is required to ensure reliability of the WWRP facility. In addition, submerged WWRP equipment is continually subjected to abrasive and corrosive operating conditions caused by the solids in the used filter backwash water. The WWRP's two identical treatment trains share a common influent channel and both must be removed from service during maintenance. This project will install seismic stabilization facilities and retrofit the WWRP with reliability improvements, including a new coal grit removal facility and new headworks to allow independent shut-down of each individual process trains. This project will consider the use of plate settlers to reduce the footprint and cost of the facility while improving seismic resiliency and meeting water quality and operational objectives. The project also includes modifications to the existing chemical feed system, sludge line, and utilities at the west slope. Final design was authorized by the Board in May 2006.

### **Diemer Water Sampling System Improvements**

The existing sample lines at the Diemer plant do not meet the 10-minute turnover rate requirement from sample point to laboratory sample taps due to long sample lines and pressure limit for the existing polypropylene tubing used to transport the samples. This project will upgrade the existing sample lines and all sample pumps to allow higher operational pressure to shorten the transport time. In addition, new chlorine analyzers, turbidimeters, and pH analyzers will be installed closer to the sample locations to eliminate variable analytical results caused by algae growth, solids deposition, temperature variation, and excessive detention time in the sample lines. These local analyzers will reduce distances from sample point to analyzer to better represent actual conditions in the process stream. Construction was authorized by the Board in October 2018.

## **Jensen Project Group**

### **Jensen Bull Creek Repair**

The Bull Creek channel located on the east side of the Jensen plant has suffered significant erosion from continued stormwater flow during the past wet seasons. This project will rehabilitate approximately 800 feet of the Bull Creek channel to prevent erosion. The work includes: installation of rip rap and slurry backfill along the channel; repairing damaged concrete liner on the channel sides, and restoration of the broken apron next to the railroad bridge. In addition, a catch basin will be constructed along the San Fernando service road to the Jensen plant, to mitigate excessive erosion on the north bank of the Bull Creek.

### **Jensen Chemical Feed Improvements**

This project will improve several chemical feed systems at the Jensen plant, including replacing two fluorosilicic acid (fluoride) tanks, rehabilitation of sulfuric acid tanks, construction of a new caustic soda tank farm near the filtered water line, and containment upgrades for the liquid polymer system.

The Jensen plant relies on two 9,000-gallon cross-linked high-density polyethylene (HDPE) tanks for the storage of fluorosilicic acid. Internal inspections have identified cracks in the two fluorosilicic acid tanks. This project will replace the fluoride tanks with tanks of the same capacity and improved mechanical properties to provide an expected service life of 20 years. Design was authorized by the Board in April 2017.

A recent internal inspection of one of two sulfuric acid tanks at the Jensen plant identified corrosion in the tank wall material and welds. Reconfiguration of the transfer piping and basket strainer is needed to minimize clogging and facilitate chemical transfer between the tanks. This project will rehabilitate Jensen's two sulfuric acid storage tanks, apply new protective coating to the sulfuric acid tank farm, and complete minor modifications to the sulfuric acid feed system piping within the acid tank farm.

The Jensen plant's existing caustic soda tank farm was installed in 1970, and needs to be replaced. Caustic soda is used to increase the pH for corrosion control. The caustic soda dosage varies based on source water quality and the amount of other chemicals (e.g. sulfuric acid and alum) applied during the treatment process. Currently at the Jensen plant, sulfuric acid is added to suppress the pH and control bromate formation and then caustic soda is added to reduce corrosion in the distribution system. This project allow the Jensen plant to meet current water quality design criteria for bromate control with the addition of ammonia and chlorine added upstream of the ozone contactor. This approach would significantly reduce the plant's usage of both sulfuric acid and caustic and reduce overall chemical costs. With the ammonia-chlorine process to control bromate, caustic soda would only need to be added to the filtered water. This allows the new caustic soda tank farm to be sized, designed, and built specifically for adding caustic soda to the filtered water. This project will replace the existing tank farm with a new facility located near the filtered water line.

In addition, the liquid polymer unloading facility does not have a permanent spill containment system. This project will provide a permanent single concrete unloading facility for both chlorine neutralizing caustic soda and liquid polymer chemicals, equipped with a new sump and discharge piping to provide secondary containment. In addition, the ferric chloride handling facility and the Liquid Polymer Building will be removed. Final design was authorized by the Board in May 2013.

### **Jensen Control Room HVAC**

The Jensen plant was placed into service in 1972. During recent wildfire events, it was observed that existing HVAC systems do not meet the objective of reliably maintaining air quality in the control rooms that must be staffed at all times. This project will provide improved air quality in the Jensen control rooms to ensure that the plant can be reliably operated during periods of poor outdoor air quality. This project will: (1) install dedicated high-efficiency heating, ventilating, and air conditioning (HVAC) system for the main plant control room in the administration building and the secondary plant control room in the ozone generator building, and (2) seal the two control rooms from other portions of the building to reduce smoke or other air quality contaminants from entering the control room.

### **Jensen Entrance Improvements**

Both main Jensen plant gates at San Fernando and Balboa entrances need to be redesigned to improve security and traffic flow consistent with Metropolitan's other Treatment Plants. This project will enhance security of the Jensen plant's entrances. Project scope includes replacement of security gates; installation of traffic control devices to improve security at the entrance points of the Jensen plant; and installation of fire-resistant plants and irrigation along the west side of the plant. Final design was authorized by the Board in December 2006.

### **Jensen Hazardous Waste Containment Facility**

The Jensen plant currently stores its hazardous waste in a storage area that was repurposed from a general equipment storage area. The existing site has inadequate storage space for the facilities' needs. In addition, the waste containment area roof covering does not provide adequate protection from the rain and sun. This project will replace and relocate the Jensen plant Hazardous Waste Consolidation Site (commonly known as 90-day storage).

**Jensen Inlet Water Quality Instrumentation Upgrades**

The Jensen plant's inlet flow meter, water quality analyzers, and flow meter for service connection LA-35 are used to control the chemical addition and to balance water flows throughout the plant. Both of the flow meters need to be replaced. The existing models are obsolete, the manufacturer no longer supports the flow meter consoles, and spare parts are difficult to obtain. Furthermore, the water quality analyzers and plant inlet flow meter consoles are wall-mounted on the exterior of the plant inlet structure, where they are exposed to harsh ambient conditions, resulting in accelerated wear. The flow meter console for service connection LA-35 is located in a deep, confined vault. Two trained personnel with safety equipment are required to perform any maintenance within the vault. The environmentally-controlled enclosure will house the water quality instrumentation, the plant inlet flow meter console, the service connection LA-35 flow meter console, and related electrical equipment including a motor control center, power panel, and communication cabinet. Design was authorized by the Board in August 2014.

**Jensen Module 1 and Washwater Pump Rehabilitation**

Washwater pumps are used to pump water from the combined filter effluent to the washwater tanks. The tank water is then used to back wash filters. If washwater pumps are unavailable, the plant cannot perform filter backwashes that are necessary to maintain operation of the filtration process. Jensen's Module No. 1 washwater (WW) lift pumps were installed with the original plant construction and have been in service for 50 years. Inspection and testing has revealed significant corrosion in the pumps' housings, and diminished pump output. The pumps have reached the end of their useful life and should be rehabilitated. This project will rehabilitate the Module No. 1 vertical turbine washwater lift pumps, modify the piping for the Module No. 1 service water and washwater lift pumps, and will replace the open motors with closed motors.

**Jensen Modules 2 and 3 Flocculator Rehabilitation**

Module Nos. 2 and 3 flocculators have been in continuous service since their original installation in the early 1990s. The shafts have become misaligned and the metallic components have gradually deteriorated due to corrosion. This project will rehabilitate the flocculators in Jensen Module Nos. 2 and 3 by refurbishing the intermediate shafts, paddle arms, and paddle wheel hubs; replacing existing stub shafts and through shafts with stainless steel shafts; and replacing the basin pillow block housings and bushings. Improvements also include new FRP paddle blades, new stainless-steel lock collars, new couplings, and new stuffing box assemblies. The dry well bearing housing will also be refurbished and new bronze bushings will be provided in kind. Construction was authorized by the Board in May 2019.

**Jensen Modules 2 and 3 Traveling Bridge and Basin Rehabilitation**

This project will rehabilitate Modules Nos. 2 and 3 traveling bridges and sedimentation basins at the Jensen plant to enhance solids removal efficiency. Planned work includes replacing the existing traveling bridge end-truck structure, drive system, rails, and racks; retrofitting the suction piping, hoses and launder gates; upgrading the bridges control system and power supply; replacing the 48-existing basin inlet gate actuators; recoating bridge trusses; and replacing basin guardrails. Preliminary design for the traveling bridge repair was authorized by the Board in March 2014.

**Jensen Ozone PSU and Critical Component Upgrade**

Ozone is used as the primary disinfectant at Metropolitan's treatment plants. However, the critical systems associated with ozone generation have deteriorated or have become obsolete after 15 years of operation and need to be upgraded. This project will upgrade the units that provide power to the Jensen plant's ozone generators and will replace outdated components of other critical systems associated with the plant's ozone generation, which have reached the end of their service life, and are no longer supported by the original equipment manufacturer. The systems to be upgraded include the following areas: (1) power supply unit; (2) nitrogen supply system; (3) ozone destruct units; (4) dissolved ozone; (5) cooling water loop; (6) ozone generator dielectrics; (7) liquid oxygen vaporizers; and (8) other components of the ozone system.

### **Jensen Plant Electrical Upgrades**

The Jensen plant's electrical system was designed to meet then-current electrical codes when the plant was constructed over 40 years ago. The aging electrical equipment has deteriorated through long-term continuous use, lacks redundancy, and is difficult to maintain and repair. Much of the equipment is underrated by current standards and does not have adequate short-circuit interrupting capability, which results in an elevated risk of unplanned outages and equipment damage. This project will replace aging equipment and provide needed redundancy for critical components of the plant's electrical system. To expedite completion of the most critical electrical upgrades while minimizing impacts to plant operations, the upgrade work has been prioritized and staged. The Stage 1 work improved the medium voltage switchgear on the western portion of the plant and provided electrical infrastructure for the Jensen Solar Power Plant. Stage 2 improvements upgrade UPC-7, UPC-9, and their associated motor control centers to support critical process equipment such as the washwater pumps, service water pumps, washwater return pumps, filters, thickeners, sludge pumps, and ammonia facilities. Stage 3 improvements will upgrade the remaining components of the electrical system on the eastern portion of the plant. Construction of Stage 1 is complete, and construction of Stage 2 was authorized by the Board in July 2019.

### **Jensen Reservoir Bypass Gate Refurbishment**

The Jensen plant's existing reservoir bypass gates were installed in 1972 and allow the reservoirs to be isolated in case of water quality issues. The bypass gates are corroded and are currently inoperable because portions of the bronze bearings are degraded and missing. This project will enhance infrastructure safety, security, and resiliency, and will improve the reliability of water deliveries by replacing the reservoir bypass gates.

### **Jensen Site Security Upgrade**

The outdated Jensen plant's security system needs an upgrade to minimize risk of an intrusion. The existing camera system is undersized and aged. Planned upgrade includes installation of additional card readers in sensitive areas; upgrade to existing aging security cameras with high resolution cameras; addition of new cameras to monitor the perimeter of the plant; replacement of security signage to meet current code; security upgrades of first floor windows; addition of horizontal structural support to strengthen the existing gates; and addition of new defensive barrier plants and trees to screen the west side of the Jensen plant.

### **Jensen Solids Handling System Upgrades**

Efficient recovery of water from residual solids is critical for the operation and efficiency of the Jensen plant, the current system consisting of solids thickeners on the Jensen site, and solids lagoons located at the adjacent Los Angeles Department of Water and Power (LADWP) site.

The solids thickeners play a key role in the recovery of water from the residual solids. During thickener operation, operators rotate valves daily to divert flow of residual solids to different thickeners. These valves leak and are difficult to access. This project will reconfigure Solids Pump Station No. 2 to allow better access to the valves; and upgrade the solids splitter vault to facilitate remote operation.

Metropolitan has an ongoing lagoon use agreement with LADWP, which allows for Metropolitan's use of four of the lagoons located at the Los Angeles Aqueduct Filtration Plant (LAAFP) to process solids generated and conveyed from the Jensen plant. Under this agreement, two of the lagoons can be used until October 1, 2062, and the other two until October 1, 2022. To reliably support the Jensen plant operation and provide operational flexibility during unfavorable source-water quality or higher water demand, two new lagoons need to be constructed to replace the two existing lagoons that must be returned to LADWP. This project will design and construct two new lagoons, consisting of an earthen floor with rip-rap banks and reinforced concrete access ramps. The project will include piezometers with data loggers to monitor groundwater under the lagoons, manholes with pumps to convey overflow, decant, and underdrain water to the lagoon inlet distribution system, and electrical & control systems. Lagoon Nos. 9 & 10 will be located on the LAAFP site. In addition, modifications to the groundwater control system may also be considered in advance of the return of two lagoons to LADWP.

## Mills Project Group

### **Mills Basin Solids Removal Improvements**

Currently, the Mills plant removes solids from each sedimentation basin using a bridge-mounted siphon system and discharges the solids to the retention basins. However, the siphon flow cannot be adequately controlled. As a result, excessive amounts of water are often siphoned to the retention basins, causing increased solids drying time and reduced retention basin capacity. This project will upgrade the traveling bridges' solids removal equipment and controls to improve the solids removal process at the Mills plant's Modules Nos. 3 and 4. The new equipment and controls will allow the plant to optimize its solids removal process by simultaneously reducing the amount of water removed from the basin and reducing excessive solids build-up in the basins. Preliminary design was authorized by the Board in June 2005.

### **Mills Fluorosilicic Acid Tank Replacement**

The Mills plant relies on two 6,250-gallon cross-linked high-density polyethylene (HDPE) tanks for the storage of fluorosilicic acid. These tanks have a recommended service life of 10 years and have been in service since 2007. Recent inspections have identified leakage at the bolted connections of both tanks. This project will replace the fluorosilicic acid storage tanks with capacity of 7,000-gallon and improved mechanical properties to provide an expected service life of 20 years. The project will also replace coating in the containment area as necessary. Design was authorized by the Board in April 2017.

### **Mills Plant Electrical Upgrades**

The electrical system at the Mills plant has deteriorated through long-term use, is difficult to maintain and repair, and needs improved backup capability. Failure of a single electrical device could impact the treatment process. The electrical upgrades at the Mills plant will be completed in three stages. Stage 1 upgrades will address the highest priority work, including replacement of obsolete circuit breakers, expansion of the electrical building for UPC-9, installation of new air conditioning system, installation of MCCs and distribution of power feed to chemical feeds systems, washwater return pumps, modules 3 and 4 filter surface wash pumps, and improvement of power reliability for key process equipment. Stage 2 upgrades will add a second incoming 12 kV service from Riverside Public Utilities and upgrade the plant's main switchgear and standby generator switchgear. Stage 3 upgrades will modify electrical manholes, replace digital metering modules for all motor control centers, and add fiber optic cabling. Construction of Stage 1 project was authorized by the Board in August 2017.

### **Mills Modules 3 and 4 Flash Mix Chemical Containment Upgrades**

The existing flash mix areas at Mills Plant Modules 3 and 4 contain chemical feed equipment for ammonia, polymer, caustic, alum, sodium hypochlorite and chlorine. The equipment is contained within a low concrete curb. To reduce the risk of chemical releases, improved containment is needed. This project will replace the chemical piping in the area with double-walled piping with a leak detection system, replace flow meters and valves, relocate control panels, and install flow meter display units in a weatherproof enclosure outside of the containment areas. Final design was authorized by the Board in October 2016.

### **Mills Ozone PLC Control and Communication Equipment Upgrade**

The Mills plant ozonation equipment utilizes a type of Programmable Logic Controller (PLC) that was introduced to the commercial market in 1988. Computer hardware from that era is now outdated, and the PLC manufacturer has announced that it will no longer produce or support this equipment. Inventories of spare parts will no longer be maintained once exhausted. Failure of a PLC and/or its communication module could cause a disruption in the ozone control system. This project will replace the equipment and modify the software to operate with the new equipment for the Mills ozone control system. The upgraded system will feature Metropolitan-standardized PLCs in an open-architecture approach that staff will be able to maintain and upgrade in the future. In addition, the ozone power supply unit and dielectric will be upgraded, as these components have reached the end of their service life and are no longer supported by the original equipment manufacturer.

**Mills Plant Perimeter Security and Erosion Control Improvements**

The Mills plant has approximately 14,500 linear feet of perimeter fencing that is primarily a chain link with a height of six to eight feet. The fencing and several of the entry gates are deteriorating and may be vulnerable to security breaches. In addition, stormwater runoff has eroded an area on the southern boundary of the plant. This project will replace 7,700 feet of the existing fence with security fencing along the plant's southern, northern and western boundaries, and replace three existing gates with taller security gates with surveillance cameras. Grading and erosion control improvements, such as installation of v-ditches and flow re-direction, will also be performed to prevent sediment from leaving the site. All improvements will be consistent with Mills plant's architectural design guidelines, and with Metropolitan's approach to facility security. Preliminary design was authorized by the Board in October 2017.

**Skinner Project Group****Skinner Finished Water Reservoir Slide Gates Rehabilitation**

The three operational slide gates (Inlet, Outlet, and Bypass) that control the inlet and outlet flows from the Skinner Finished Water Reservoir have been exposed to a corrosive and wet environment since 1991. Visual inspections identified leaking gates and continuing deterioration of the slide gates' exterior coatings. These gates have been in service for 26 years and have not been blasted or recoated. This project will rehabilitate the three Skinner Finished Water Reservoir slide gates. The gates will be removed from the gate frames, thoroughly inspected for carbon steel material loss, blasted and recoated to extend their service life. In addition, the rejection structure will be modified to separate the stormwater and rejection water pipelines and prevent potential stormwater from flowing into the finished water reservoir.

**Skinner Fluorosilicic Acid Tank Replacement**

Fluorosilicic acid tanks will be removed and replaced with two 8,200-gallon aboveground (Fluoride) tanks at the Skinner Plant. New extrusion-molded linear HOPE tanks will be installed. To minimize changes in the tank farm, the new tanks will match the dimensions and capacity of the existing tanks. Scope will include modification to the tank farm to provide access during construction and associated piping work to connect the new storage tanks to the existing chemically compatible PVDF tank farm piping. The new tanks will be mounted on the existing tank pads.

**Skinner Module 7 Filter Inlet Valve Gearbox Replacement**

Replace existing sixteen (16) units of discontinued and failing filter inlet valve gearboxes on Module 7 East and West Filter basins with new gearboxes to maintain a reliable filter operation at Skinner Plant. Removal of existing gearboxes and installation of new units will be undertaken by Skinner District Forces with the assistance of Engineering. Scheduling of the equipment replacement will be in accordance with Skinner Plant's water treatment operational requirements and with the water demand and supply conditions within the Skinner service area. Minor field adjustments will be done to align the existing actuators and vertical valve extension stems with the new valve and gearbox assemblies at the bottom of the filter influent channel.

**Skinner Ozone Contactor Roof Elastomeric Coating**

Leakage through cracks in Skinner plant's ozone roof deck was found in 2010. Cracks in the concrete roof deck can allow rain and nuisance water to be drawn down into the contactors which then mixes with the freshly ozonated water, creating a potential cross-connection. The water and air penetrating through the existing concrete roof decks exposes the rebar and structural steel in the decks, creating the potential of eventual structural failure to the roof decks. In addition, in order to keep the constant vacuum in the contactors, the Ozone Destruct Units have to work excessively which consumes additional electricity and affects the Destruct Units reliability and long-term life span. This project will abrasive blast, apply primer, and coat 61,000 square-feet of the Ozone Contactor Building concrete roof deck with an elastomeric coating to reduce potential structural damage and operational impact.



**Skinner Ozone Contactors 1-2 and Influent Channel Concrete Refurbishment**

Ozone gas and ozonated water are extremely corrosive oxidizers and can penetrate concrete walls to cause significant corrosion of structural steel and equipment. This project will inject chemical grout into the existing concrete walls of the Skinner Ozone Contactor Nos. 1 and 2 and the influent channel, in order to prevent ozone gas and ozonated water from penetrating the concrete walls.

**Skinner Ozone Generator PLC Control & Communication Equipment Upgrade**

The Skinner plant ozonation equipment utilizes a type of Programmable Logic Controller (PLC) that was introduced to the commercial market in 1988. Computer hardware from that era is now outdated, and the PLC manufacturer has announced that it will no longer produce or support this equipment. In addition, inventories of spare parts will no longer be maintained once exhausted. Failure of a PLC and/or its communication module could cause a disruption in the ozone control system. This project will replace the equipment and modify the software to operate with the new equipment for the Skinner ozone control system. The upgraded system will feature Metropolitan-standardized PLC's in a new code format to enable future maintenance and modifications as may be operationally necessary.

**Skinner Plant 1 - Concrete Joint Sealant Replacement**

Concrete joint sealant throughout Skinner Plant 1 is cracked, delaminating, degraded, or missing as it has exceeded its service life. The degradation has allowed vegetation growth and moisture, sediment, and other outside contaminants to enter and penetrate into the concrete joints. This project will remove severely degraded concrete joint sealant throughout Plant 1, prepare and primer the existing joints, and replace with new concrete joint sealant.

**Skinner Plant 1- Modules 1, 2, and 3 Filter Weir Rehabilitation**

Filter weirs at the Skinner Plant 1 (Modules Nos. 1, 2, and 3) maintain water levels within the Module's filter weir forebays for appropriate backwash head pressure. Adjustment to the weirs heights is required as water temperatures change throughout the year and as the volume of water being treated changes. All 24 weirs in three modules are adjusted together to maintain a balanced flow from Plant 1. Weir heights need to be carefully adjusted to prevent frequent backwashes or loss of filter media. The current design only allows safe adjustment while the Module is at zero flow or is shut down for service. This project will rehabilitate Modules 1, 2, and 3 filter weirs (24 total) from stackable wooden 2x4s to mechanically operated weirs. The existing concrete weir openings will be modified to accept a stainless-steel weir gate guide and a double panel weir gate. A double panel weir gate will be installed with one panel stationary and one panel adjustable that allows flow adjustments. The weir gate is to be mechanically operated by tandem pedestal lifts mounted above the gate on the existing concrete deck.

**Skinner WTP Service Building 1 Rehabilitation**

Service Building 1 Rehabilitation will replace the sanitation facilities and roofing system and improve the staff work/meeting/lunch areas of the building. The scope includes the following: replace the roofing system; replace/upgrade all MEP and HVAC systems (mechanical; electrical; plumbing, heating, and air conditioning) to current building codes; upgrade IT requirements; comply with ADA requirements; improve employees shared facilities and offices (bathroom, locker rooms, break rooms, meeting rooms, cubicles); and abate all hazardous materials.

## Weymouth Project Group

### **Weymouth Basin 5 - 8 and Inlet Channel Refurbishment**

The basin inlet channels deliver water to each of the Weymouth plant's eight flocculation/sedimentation basins. The inlet channel serving Basins Nos. 1-4 is a concrete box culvert constructed in 1940, while the inlet channel serving Basins Nos. 5-8 was constructed in 1962. A structural assessment of the basin inlet channels has found that they should be upgraded to reduce the risk of damage from a major seismic event. Inspections have also identified that wooden baffle walls have deteriorated after repeated wet and dry cycles and have shown a propensity to support algae and microbial growth.

For the inlet channel serving Basins Nos. 1-4, this project will strengthen the conduit and will reconfigure the channel to provide additional flexibility. For the Basins Nos. 5-8 inlet channel, the project includes repairing the steel guides; replacing the drive and paddle shaft assemblies; replacing the baffle boards, supports, and paddle wheel boards in the flocculation section. The project also includes filling the interior corners of each cell with sloping concrete fillets to direct residual solids into the path of the rotating scrapers; refurbishing the structural members of the catwalks; refurbishing the sedimentation Basins Nos. 5-8 sludge collectors; and replacing launders in the sedimentation section. Additionally, the coal tar-coated rotating steel sludge rakes will be replaced with stainless steel rakes. Basin inlet gates and inlet channel structural improvements are also part of this project.

### **Weymouth Administration and Control Building Seismic Upgrades**

The Weymouth Administration Building has been in service since 1941 and houses the plant's control room and administrative staff. The building needs to be seismically upgraded to current standards since this building is over 75 years old and is a critical facility to the operation of the water treatment plant. The project includes reinforcement of the walls for the plant's filter outlet channel and abandoned inlet channel.

In conjunction with the seismic upgrades, the California Building Code (CBC) requires the installation of a fire sprinkler system and accessibility improvements. Electrical, mechanical, and plumbing components impacted by the upgrades will also be reconfigured. The Weymouth plant's water quality sampling laboratory and office space will also be updated and optimized where required. The existing laboratory has been in continuous service for nearly 30 years. The Board authorized final design of the building upgrades in January 2018.

### **Weymouth Basin Gates Improvements**

Influent gates for the Weymouth plant's eight sedimentation basins are between 55 to 77 years old and at the end of their service lives. The existing coal tar coating on each gate has deteriorated resulting in corrosion and leaking. The inability to provide a water-tight seal when isolating basins requires the use of sandbags and pumping to keep nuisance water out of the basins in order to perform maintenance. Additionally, the local controls used for the basin gates make it time-consuming to open or close the gates. This makes it difficult to respond to sudden changes in plant flow. This project will replace the deteriorated inlet gates in Basins Nos. 1-4 with stainless steel slide gates, install new gate actuators capable of SCADA monitoring and control from the plant control room, and construct a new influent conduit to Basins 3 & 4. Preliminary design was authorized by the Board in July 2012.

**Weymouth Basins 1 & 2 Rehabilitation**

Basins Nos. 1 & 2 were built in 1939 as part of the original Weymouth plant construction. Each basin has a treatment capacity of 57.5 million gallons per day. These basins were originally designed to treat Colorado River Water (CRW). With the addition of State Project Water (SPW), the plant periodically requires higher coagulant dosages than CRW. As a result, the basins operated at a higher solids loading rate than the rate for which the basins were originally designed. This situation has dramatically increased run time on the basins' circular sludge rakes, which remove sludge from the basins. As originally designed, the sludge rakes only operated 1 to 2 hours every 4-7 days. Under current conditions, the sludge rakes are operated 6 to 12 hrs each day which results in more frequent maintenance. These basins also have had issues with low solids-settling rates within the basins and high particle loading to the filters, or short-circuiting. The project includes the rehabilitation of the flocculation basins, settling basins, sludge collection equipment, baffling, and edge weirs. Study and preliminary design were authorized by the Board in September 2004.

**Weymouth Chlorine System Upgrade**

The chlorine feed system must be operational at all times to meet State Division of Drinking Water requirements. Chlorine is added downstream of the filters to form a chloramine residual and maintain disinfection in the distribution system. In addition, chlorine serves as the back-up primary disinfectant for the plant. There is insufficient chlorine capacity to meet these needs. In addition, maintenance of the feed equipment can only be performed during low-flow periods.

This project will upgrade the chlorine evaporator system at the Weymouth plant to enhance reliability, safety and meet water quality design criteria. The upgrade includes constructing six additional evaporators housed in a new structure adjacent to the existing chlorine containment building. The six new evaporators would serve as the second chlorine process train. Two additional chlorinators will also be installed to provide additional capacity redundancy and improve reliability. Construction was authorized by the Board in December 2018.

**Weymouth Combined Filter Effluent Mixing Improvement**

At the Weymouth plant, the combined filter outlet splits into two concrete channels upstream of the finished water reservoir. One channel, which is 140 inches wide, and continues to the east, the other channel, which is 120 inches wide, continues south. Proper mixing of caustic soda, ammonia, and chlorine occurs only when all of the plant's filter outlet flow is directed either to the 140-inch or the 120-inch channel. However, when the plant flow exceeds 300 million gallons per day (MGD), flow is divided between the two channels which results in poor mixing due to the proximity of the chemical injection points to the intersection of the 140-inch and 120-inch channels.

This project will evaluate mixing in the filter outlet channel, perform hydraulic studies, and assess options to improve mixing in the channels. These options may include operational changes, rehabilitation or replacement of valves and gates, structural modifications, and relocation of chemical injection points.

**Weymouth Dry Polymer System**

Cationic polymers are used as a coagulant aid for the washwater reclamation plant, and nonionic polymers are needed to meet filter performance regulations when treating high State Project Water (SPW) blends. Depending on the quality of the source water, both dry polymers may need to be applied simultaneously. However, the current dry polymer system only has one mixing train available. Since these feed systems share a common polymer mixer, it is difficult to operate both systems at the same time. Additionally, the existing dry polymer mixer uses a type of batch mixer that can only make a single batch at a time and frequently clogs. The mixer is housed in a metal structure that does not meet current seismic codes.

The project includes installation of a dry polymer mixing system to allow simultaneous mixing and feeding of cationic and nonionic polymers, independently; construction of a new building designed to current seismic standards to house the dry polymer mixing system; and construction of a covered containment area to house feed equipment and new polymer storage tanks. Final design was authorized by the Board in September 2014.

**Weymouth Filter Sump Corner Filled Rehabilitation**

The sump well located at the Weymouth plant's Filter Building No. 1 and 2 is experiencing sludge formation in the corners of the sump. This build-up of coal and sand in the corners of the sump is inhibiting the operation of the sparger during transfer of media to the coal removal structure. This project will rehabilitate the sparger and associated piping and will evaluate the effectiveness of in-filling the sump corners and building sloped concrete "angle of repose" structures to prevent build-up.

**Weymouth Filter Valve Replacement**

The original filter valves in Building No. 1 were installed in two stages in 1941 and 1949, and were replaced in the early 1970s with similar valves. These valves are not consistent with modern American Water Works Association (AWWA) standards. The filter valves in Building No. 2 were installed during the second plant expansion in 1962 and are similar in dimension to the valves in Building No. 1. The existing filter valve bodies exhibit corrosion, the rubber seats are worn, and many valves leak after 45 to 55 years of continuous operation. In addition, the frequency of repairs to the actuators is increasing, and spare parts are difficult to obtain. This project will replace all filter valves and actuators in both Filter Building Nos. 1 and 2 with Metropolitan furnished AWWA-standard valves and current industry-standard actuators. Award of the procurement contract was authorized by the Board in November 2017.

**Weymouth Hazardous Waste Staging and Containment**

The existing hazardous waste storage area requires a number of upgrades to enhance compliance with current codes and to provide enhanced safety measures, such as providing spill containment, eyewashes and safety shower, a canopy, leak detection, and sump. These utilities are all available at the existing sulfuric acid tank farm, which is no longer utilized. As the existing hazardous waste storage area does not provide containment to capture spills or leaks there is potential for hazardous waste to runoff to the storm drain system as well as exposure to plant personnel.

This project will relocate the existing Hazardous Waste Staging and Containment Facility to the existing sulfuric acid tank farm in order to account for deficiencies at the existing facility. The existing sulfuric acid tank farm, located approximately 100 feet from the existing hazardous waste area, is a 30' x 30' containment area with a roof, sump, SCADA controls, eyewash station, power, and potable water that can be cost effectively utilized to relocate the hazardous waste facility.

**Weymouth Solids Handling Rehabilitation**

Residual solids generated during the water treatment process are sent to the gravity thickeners to separate water from the solids before being sent to belt presses in the solids handling facility for further dewatering. Dewatered solids are then pumped to elevated hoppers for storage prior to offsite disposal. Mechanical equipment at the solids handling facility has experienced frequent failures, and the facility itself requires full-time staffing to operate. Regular failures occur with the system's bridge breakers, which break apart dewatered solids so that they can be pumped to the hoppers. The facility also experiences frequent issues with the hoppers. After the belt presses dewater the solids, polymer solution is added to the discharge side of the cake pumps to facilitate pumping. This produces a cake-like material that often sticks to the hoppers' mechanical components and impedes opening and closing of the hopper gates. Rehabilitation of the solids handling facility is necessary to maintain its long-term function, reduce maintenance and operational labor costs, and reduce chemical costs.

This project will identify and implement the most feasible rehabilitation of the facility and to evaluate the capacity of the facility's decant lines. Options for rehabilitation include: (1) eliminating the existing cake pumps and installing a conveyor belt system to transfer the dewatered solids to the hopper system without the addition of liquid polymer; and (2) transferring solids to a separate storage area where the solids are held prior to being hauled offsite. This project will also evaluate modifications within the building that would facilitate future equipment repairs and replacement.

**Weymouth Wastewater Pumpback Improvements**

When ozone is used as the plant's primary disinfectant, the ozone generators will produce the amount of ozone needed based on flow into the plant. The plant inlet flow can experience fluctuations when the washwater return pumps that send flow back to the head of the plant, cycle on and off. Ideally, the flow to the ozone contactors would be consistent. However, the existing pump station has a small forebay as compared to the capacity of the washwater pumps. The forebay receives flow from both the Washwater Reclamation Plant and the Oxidation Demonstration Plant (ODP) clearwell. Significant changes in flow from these two facilities may increase fluctuation in ozone dose requirements.

This project will modify the ODP clearwell pumps with variable speed pumps; improve washwater pump station pump programming to moderate changes in pump speed; reconfigure the ODP clearwell pumps so that one pump is dedicated for backwash, one pump is dedicated for pumpback, and one pump as a spare for either of the two pumps; and relocate the ODP clearwell pump discharge point to a point downstream of the forebay. Preliminary design was authorized by the Board in May 2014.

**Weymouth Water Quality Instrumentation Improvements**

Existing instrumentation used for process control of Title 22 regulatory monitored constituents, including turbidity, fluoride, chlorine, ammonia, pH, conductivity, dissolved oxygen, and temperature is currently located in the basement of the Weymouth Administration Building. This location is subject to flooding in the event that existing sump pumps fail and is over 500 feet from the sampling locations, which can cause inaccurate water quality results and a delay in receiving accurate data. A new instrumentation enclosure will be constructed to provide redundancy and isolation for maintenance purposes and will be in close proximity to the sample locations. Shorter sample lines to online analytical instrumentation would minimize the potential for interference of continuous measurements due to biological growth within the sample lines and provide more accurate results.

This project will construct a new water quality instrumentation enclosure closer to the sample points at the Finished Water Reservoir, purchase and install new sample pumps at the Reservoir Inlet, relocate the Reservoir Inlet sample points closer to the inlet gates to provide a more representative sample, and purchase and install new water quality monitoring instrumentation to provide reliable real time water quality monitoring of the Reservoir Inlet, Orange County Feeder, and the Upper Feeder. Final design was authorized by the Board in May 2014.

**Wheeler Gates Security Improvements**

Construction vehicles and chemical delivery trucks access the Weymouth plant through the Wheeler entrance gate. This project will provide security improvements to the Weymouth plant's Wheeler gate, including construction of a new guard enclosure; and improved lighting and communication features. This project is the third phase of the Weymouth plant's perimeter improvements. Final design was authorized by the Board in November 2006. Phases 1 and 2 are complete.

**Treatment - General Project Group****CUF Dechlorination System Upgrade**

The chlorine unloading facility (CUF) is used to transfer liquid chlorine from rail cars to cargo trailers for delivery to Metropolitan facilities. The goal of this project is to enhance compliance with discharge regulations and allow the transfer of liquid chlorine from rail cars to cargo trailers to occur over a wide range of operating conditions. This project will evaluate available technologies; perform a pilot study, if needed, to determine the most feasible technology; and will explore methods and technologies of neutralizing chlorine in order to improve chlorine transloading ability throughout the year. This project will upgrade the existing system that neutralizes chlorine at CUF.

## Water Quality/Oxidation Retrofit Program

Fiscal Year 2020/21 Estimate: \$0.02 million

Fiscal Year 2021/22 Estimate: \$0 million

**Program Information:** *The Water Quality/Oxidation Retrofit Program (ORP) is comprised of projects to add new facilities to ensure compliance with water quality regulations for treated water, located at Metropolitan's treatment plants and throughout the distribution system.*

### Accomplishments for FY 2018/19 and FY 2019/20

- No new projects initiated during the last biennium.
- Major milestones achieved during the last biennium:
  - Weymouth Hypochlorite Feed System - Completed construction, start-up and commissioning

### Objectives for FYs 2020/21 and 2021/22

Project	Total Project Estimate	Estimated Completion	Major Milestones
Weymouth Hypochlorite Feed Facilities	\$ 14,000,000	2020	Complete project
Weymouth ORP - Ozonation Facilities Construction, and Completion Activities	\$ 162,700,000	2020	Complete project
Mills Enhanced Bromate Control	\$ 2,100,000	2020	Complete final design

### WQ/ORP - All Project Group

#### Mills Enhanced Bromate Control Facilities

The Mills plant is currently using a temporary system built for bromate reduction. This system has been running successfully and has proven the effective use of chloramines in bromate control and the reduced operational costs over a wider range of influent water quality conditions. This project will replace the temporary feed, metering, monitoring, and injection (chlorine and ammonia) system with a permanent system which will incorporate new doubled walled piping, double wall containment, new flow metering, new chlorinators, new analyzers, and new ammonia feed tank. The full implementation of this project will significantly reduce the current operational costs of bromate control as well as provide greater control of bromate formation over a wide range of influent water quality conditions. The project also includes replacement of two existing chlorinators with new units for lower chlorine dosage control flexibility. Final design was authorized by the Board in February 2013.

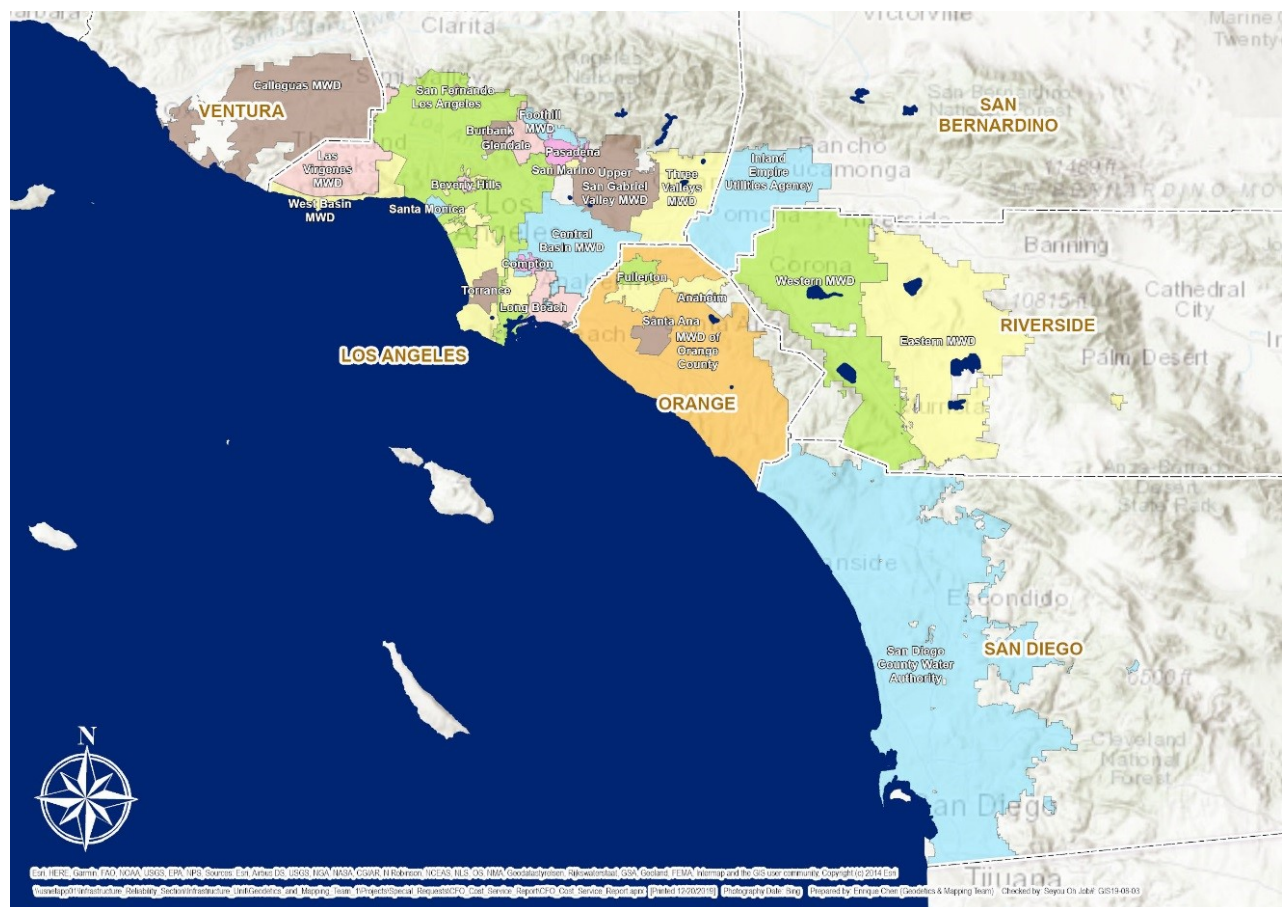
# SERVICE AREA ECONOMY

## Metropolitan Service Area

Metropolitan’s service area comprises approximately 5,200 square miles and includes portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura. When Metropolitan began delivering water in 1941, its service area consisted of approximately 625 square miles. Its service area has increased by 4,500 square miles since that time. The expansion was primarily the result of annexation of the service areas of additional member agencies. Metropolitan has historically provided between 40 and 60 percent of the water used annually within its service area.

### Service Area Map

The map below shows the area served by Metropolitan. It includes parts of six of the ten counties that comprise Southern California (Six County Area) consisting of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. Although these counties comprise Metropolitan’s service area, Metropolitan’s territory does not encompass all of the area within each of the six counties.





## Selected Demographic and Economic Information for Metropolitan's Service Area

The area served by Metropolitan represents the most densely populated and heavily industrialized portions of Southern California. Metropolitan estimates that approximately 18.9 million people lived in Metropolitan's service area in 2017, based on official estimates from the California Department of Finance and on population distribution estimates from the Southern California Association of Governments (SCAG) and the San Diego Association of Governments (SANDAG). Population projections prepared by SCAG in 2012 and SANDAG in 2013, as part of their planning process to update regional transportation and land use plans, show expected population growth of about 18 percent in Metropolitan's service area between 2010 and 2035.

The economy of Metropolitan's service area is exceptionally diverse. In 2018, the economy of the six counties which contain Metropolitan's service area had a gross domestic product larger than all but twelve nations of the world. The Six County Area economy ranked between South Korea (\$1.619 trillion) and Australia (\$1.432 trillion), with an estimated gross domestic product (GDP) of just over \$1.538 trillion. The Six County Area's gross domestic product in 2018 was larger than all states except California, Texas, and New York.

Table 14. Ranking of Areas by Gross Domestic Product

<b>Country</b>	<b>Dollars (in Billions)</b>
United States	20,580
China	13,608
Japan	4,971
Germany	3,997
United Kingdom	2,968
California	2,825
France	2,778
India	2,726
Italy	2,074
Brazil	1,868
Texas	1,776
Canada	1,713
New York	1,676
Russian Federation	1,658
South Korea	1,619
Six County Area	1,538
Australia	1,432
Spain	1,426
Mexico	1,224

Source: Countries - World Bank; U.S. - Bureau of Economic Analysis; California and Six County Area - U.S. Department of Commerce

## Summary of Recent Trends and Outlook for the Six County Area Economy

The national economy is in the ninth year of economic expansion. GDP growth since the third quarter of 2014 is shown below. GDP growth in the 2nd and 3rd quarters of 2019 declined to near 2%. Reported job growth averaged 189,000 per month in 2017, 204,000 per month in 2018 and 179,000 per month so far in 2019. Recent job growth has resulted in average hourly earnings rising by 3.0% over the 12 months ending October 2019 and the unemployment rate declining to 3.6% in October 2019.



On October 30, 2019, the Federal Reserve Bank lowered the federal funds rate to between 1.5% and 1.75%--the third decline in 2019. At the same time the Federal Reserve Bank signaled no more rate changes are currently planned in the near term. Inflation is now averaging close to 2% on an annual basis and wage gains have risen to above 3% on an annual basis.

The national economy faces potential slowing in the coming years from three factors--possibility of continuing higher tariffs, a decline in labor force growth from baby boomer retirements, and slowing world economic growth. The UCLA national forecast is shown below with declining GDP and job growth in 2020 and 2021. Congressional Budget Office forecasts GDP growth of 2.1% in 2020, 1.7% for 2021-2024 and 1.8% for 2024-2029.

The Six County Area has regained all the jobs lost during the recession and more . Year-over-year job gains continued into 2019 with year-over-year gains ranging from a high of 2.3% in Riverside-San Bernardino metro area to a low of 0.4% in Ventura County. Job growth for the entire Six County Area for the 12 months ending September 2019 was 139,000 jobs or a gain of 1.5% compared to a 1.9% increase in jobs for the nation for the comparable period. Unemployment rates in the Six County Area have declined sharply between 2010 and September 2019. In September 2019 unemployment rates ranged from a low of 2.4% in Orange County to a high of 4.5% in Los Angeles County.

California and the Six County Area are experiencing growth in both domestic and foreign visitors. Hotel rates and occupancy are increasing in the Six County Area and the same is true for employment in the hotel and amusement park sectors. In 2018 Los Angeles County set tourism records for the fourth year in a row in visitors, 50 million up 3.1% over 2017, according to data from the Los Angeles Tourism and Convention Board. In 2018 passenger travel at Los Angeles International Airport was up 3.5% to 87.5 million trips to set an all-time record. Air passenger travel at the major airports in the Six County Area reached record levels in 2018 and is up 1.9% through August 2019 to 135.3 million trips led by gains Burbank, Ontario and San Diego airports.

Population growth in the Six County Area since 2000 compared with previous decades. Population growth slowed after 2005 as high housing prices and large job losses contributed to larger levels of out-migration to other areas of California and other states. Population growth averaged 160,000 between 2010 and 2018 according to the California Department of Finance (DOF) estimates, and growth slowed in the past three years. The Six County Area had 22.3 million residents in 2018, approximately 56% of the State's population.

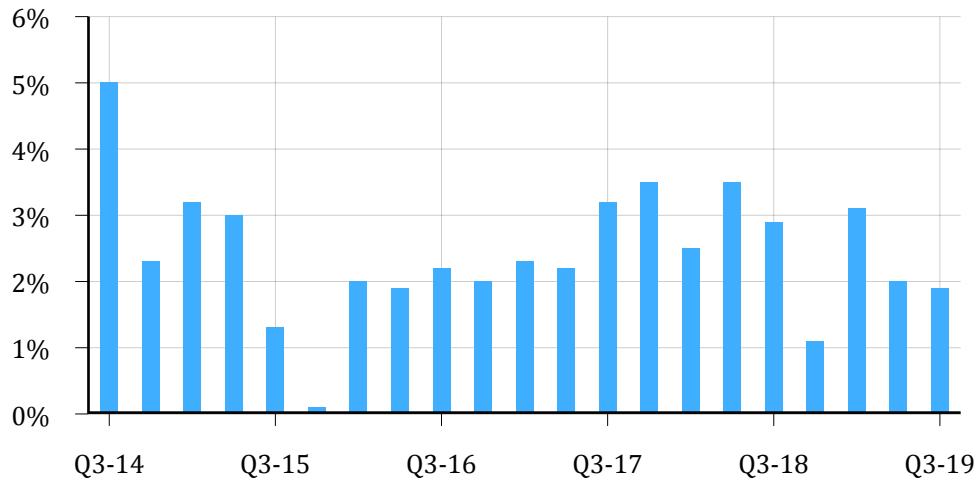
Income, taxable sales and assessed valuation in the Six County Area increased since 2013 along with record levels in foreign trade and film permits. Gains in income, taxable sales and assessed valuation are all outpacing the growth in consumer price indices in the Six County Area all of which are helping local government revenue growth.

Long-term job growth is driven by the Six County Area's economic base—those sectors that sell most of their goods and services in national and world markets outside of the Six County Area. Recent projections by the Center for Continuing Study of the California Economy (CCSCE), the Southern California Association of Governments (SCAG) and the San Diego Association of Governments (SANDAG) report that the Six County Area will see job growth that slightly exceeds the national average during the next 10 to 30 years, led by gains in Professional and Business Services, Wholesale Trade, Tourism and Entertainment and Health Care.

### An Update on the U.S. Economic Outlook

The national economy is in the ninth year of economic expansion. GDP growth since the third quarter of 2014 is shown below. GDP growth in the 2nd and 3rd quarters of 2019 declined to near 2%.

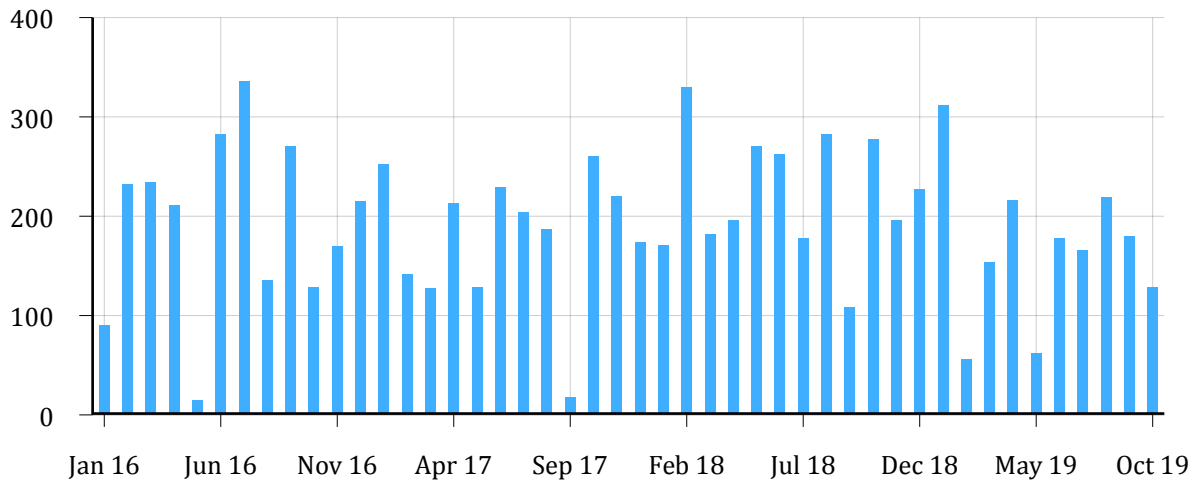
#### U.S GDP Growth



Source: Bureau of Labor Statistics, U.S. Department of Commerce

The nation continues to add jobs supported by more workers rejoining the labor force and more previously unemployed workers finding jobs. Reported job growth averaged 189,000 per month in 2017, 204,000 per month in 2018 and 179,000 per month so far in 2019. A large portion of recent job growth has come from existing residents finding jobs and not from population growth. Recent job growth has resulted in average hourly earnings rising by 3.0% over the 12 months ending October 2019.

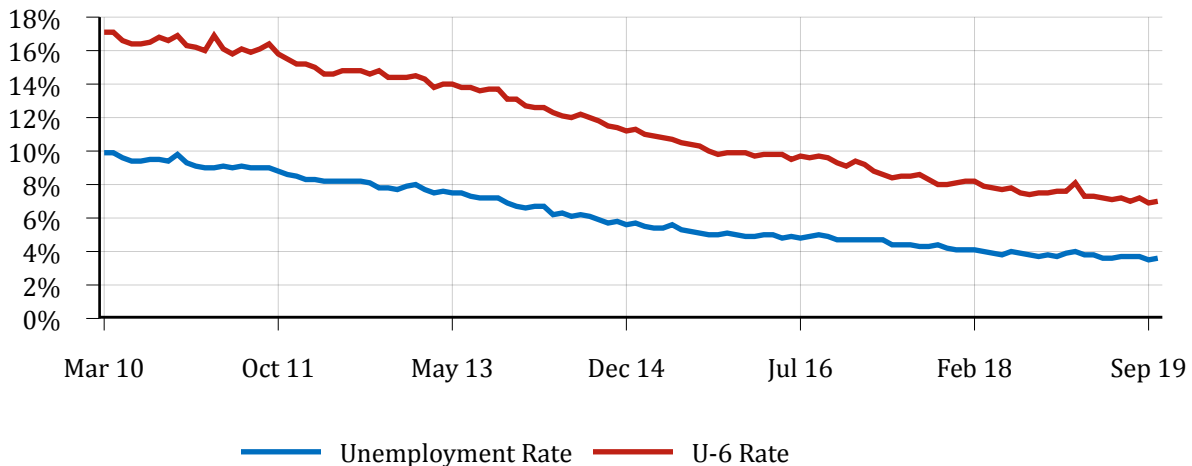
#### U.S Job Trends Jan 2016-Oct 2019



Source: Bureau of Labor Statistics, U.S. Department of Labor

The unemployment rate in the nation has declined from near 9.9% in March 2010 to 3.6% in October 2019. The U-6 unemployment rate shown below, which includes people working part-time but wanting full-time work and those marginally attached (not currently in the labor force but wanting to work), was 7.0% in March 2019 below the pre-recession level of 7.9% but also well below the 17.1% high in late 2009. Both unemployment rates have declined slightly in recent months.

### U.S. Unemployment Rate

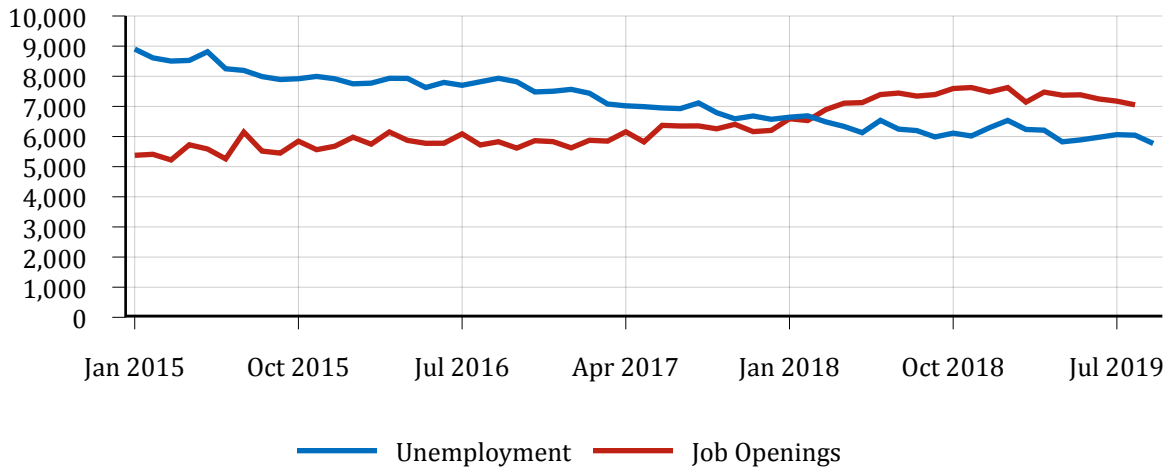


Source: Bureau of Labor Statistics, U.S. Department of Labor

Two other labor market indicators confirm that the job market remains tight. The labor force participation rate declined after 2007 during the recession. But recent strong job growth has brought some workers back into the labor force. The overall participation rate is below the 2007 level as a result of the aging of the workforce pushing more workers into age groups with low participation rates but it has increased slightly in recent months despite increasing numbers of retirements.

In addition, for the 17 straight months the number of job openings has exceeded the number of unemployed workers. In August 2019 there were 7.1 million job openings and just 6.0 million unemployed workers. These trends point to the strength of the current labor market but also to the difficulty in finding workers for future job growth. (See figure on the next page.)

### Job Openings and Unemployment

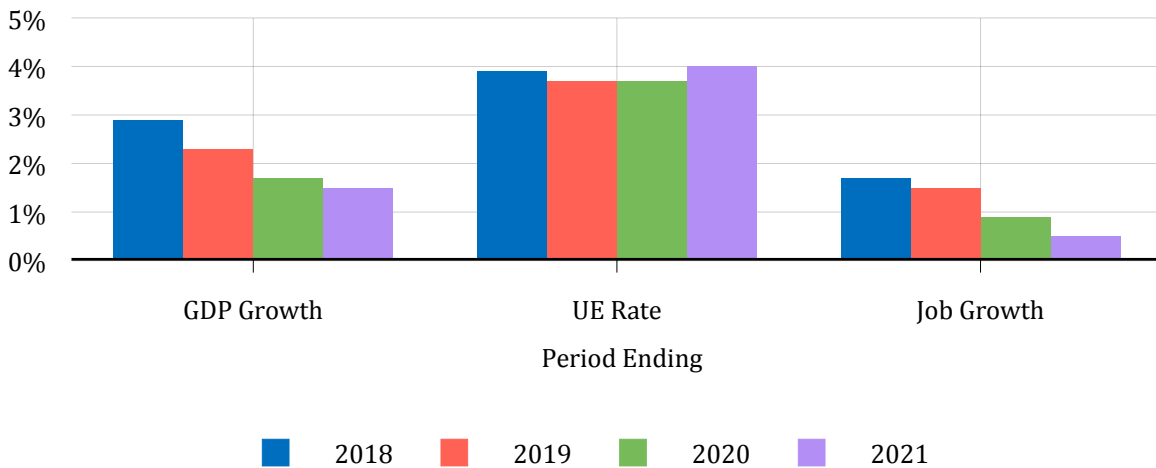


Source: Bureau of Labor Statistics, U.S. Department of Labor

On October 30, 2019, the Federal Reserve Bank lowered the federal funds rate to between 1.5% and 1.75%--the third decline in 2019. At the same time the Federal Reserve Bank signaled no more rate changes are currently planned in the near term. Inflation is now averaging close to 2% on an annual basis, wage gains have risen to above 3% on an annual basis and 30-year mortgage rates have declined to near 3.75% in October 2019.

The national economy faces potential slowing in the coming years from three factors--the possibility of continuing higher tariffs, a decline in labor force growth from baby boomer retirements, and slowing world economic growth. The UCLA national forecast is shown below with declining GDP and job growth in 2020 and 2021. Congressional Budget Office forecasts GDP growth of 2.1% in 2020, 1.7% for 2021-2024 and 1.8% for 2024-2029.

### UCLA Forecast Sept. 2019



## Recent Six County Area Job Growth Trends

The Six County Area has regained all the jobs lost during the recession and more. Year-over-year job gains (see the table below) continued into 2019 with year-over-year gains ranging from a high of 2.3% in Riverside-San Bernardino metro area to a low of 0.4% in Ventura County. Job growth for the entire Six County Area for the 12 months ending September 2019 was 139,000 jobs or a gain of 1.5% compared to a 1.9% increase in jobs for the state for the comparable period.

Job growth was aided by gains in foreign trade, tourism and professional services as well as a rebound in construction and related sectors and continuing growth in health care and food services.

**Table 15. Recent Employment Trends (Non-Farm Wage and Salary Jobs in Thousands)**

County	2007	2010	2017	2018	Sept 18	Sept 19	Sept 18-19 % Change
Los Angeles	4,254.2	3,923.2	4,448.3	4,510.1	4,506.2	4,556.7	1.1%
Orange	1,524.0	1,370.3	1,617.0	1,649.4	1,649.4	1,670.9	1.3%
Riverside-San Bernardino	1,289.9	1,150.7	1,454.9	1,504.2	1,502.6	1,537.7	2.3%
San Diego	1,323.8	1,242.0	1,453.2	1,484.6	1,484.4	1,515.0	2.1%
Ventura	298.4	275.5	296.5	300.4	307.8	309.1	0.4%
Total Six County Area	8,690.3	7,961.7	9,269.9	9,448.7	9,450.4	9,589.4	1.5%

Source: California Employment Development Department

Unemployment rates in the Six County Area have declined sharply between 2010 and September 2019 (See the table below). In September 2019 unemployment rates ranged from a low of 2.4% in Orange County to a high of 4.5% in Los Angeles County.

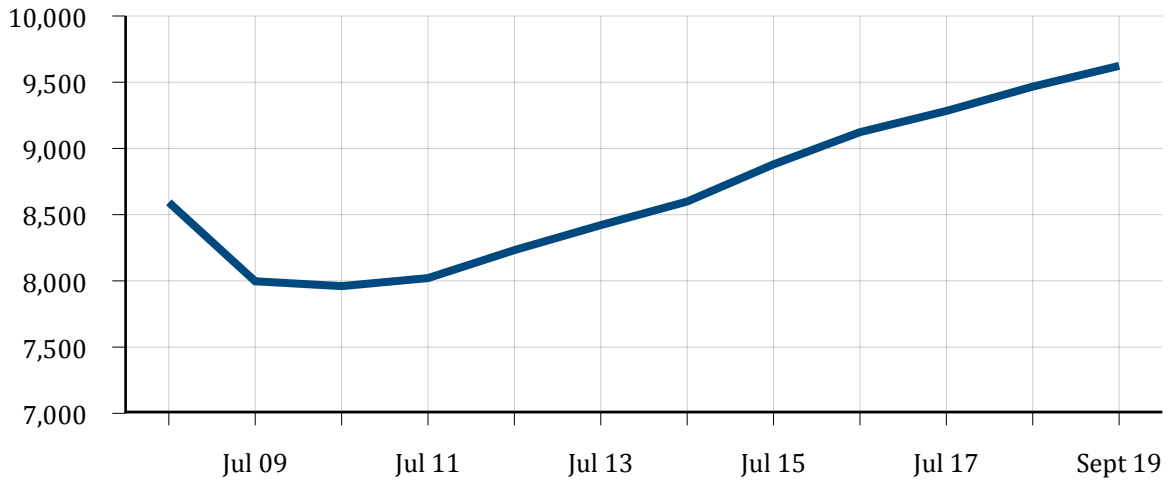
**Table 16. Unemployment Rates**

	2000	2006	2010	2017	2018	Sept 18	Sept 19
Los Angeles County	5.4%	4.8%	12.5%	4.8%	4.7%	4.7%	4.5%
Orange County	3.5%	3.4%	9.7%	3.5%	2.9%	2.8%	2.4%
Riverside County	5.4%	5.0%	13.8%	5.2%	4.4%	4.3%	3.8%
San Bernardino County	4.8%	4.8%	13.5%	4.9%	4.0%	3.8%	3.3%
San Diego County	3.9%	4.0%	10.8%	4.0%	3.3%	3.1%	2.7%
Ventura County	4.5%	4.3%	10.8%	4.5%	3.8%	3.7%	3.2%
United States	4.0%	4.6%	9.6%	4.4%	3.9%	3.7%	3.5%
State of California	4.9%	4.9%	12.2%	4.8%	4.2%	4.1%	4.0%

Source: U.S. Bureau of Labor Statistics and EED; U.S. and California estimates for August are seasonally adjusted.

The Six County Area moved from substantial job losses during the recession to sustained job growth over the past 7 years. (See the figure below). The Six County Area has outpaced the nation in job growth since the beginning of 2013. By September 2019 job levels were 904,400 or 10.4% above the pre-recession peak level in July 2007.

### Six County Area Jobs (Thousands)

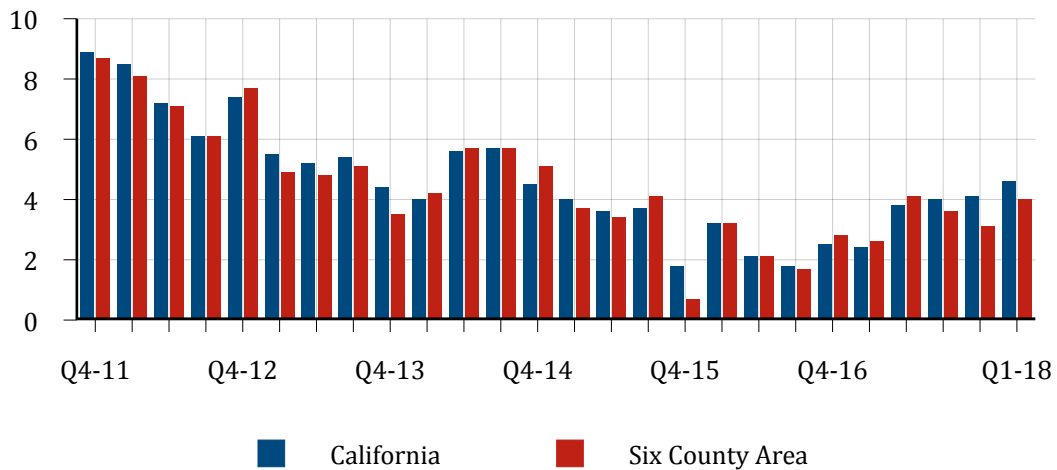


Source: EDD; data are seasonally adjusted

### Taxable Sales and Income

Taxable sales in the Six County Area increased by 4.9% in 2014, 2.8% in 2015, 2.4% in 2016 and 3.4% in 2017 though the rate of gain declined in the last two quarters of 2017 as shown below. The Six County Area accounts for 55% of statewide taxable sales and future results are forecast to reflect the pattern of statewide gains. Taxable sales have grown more slowly than personal income as a higher share of spending is on services and other non-taxable items. The data below go only through Q1-2018 so do not reflect events in the past 18 months.

### Change in Taxable Sales From Year Earlier



Source: California Board of Equalization

Taxable sales in the Six County Area have rebounded from 2010 levels and all the recession losses have been recovered, helping local government revenues. Taxable sales rose faster than inflation in all counties in each year since 2010. Taxable sales in the Six County Area increased in 2017 by 3.4% while the consumer price index increased by 2.8%.

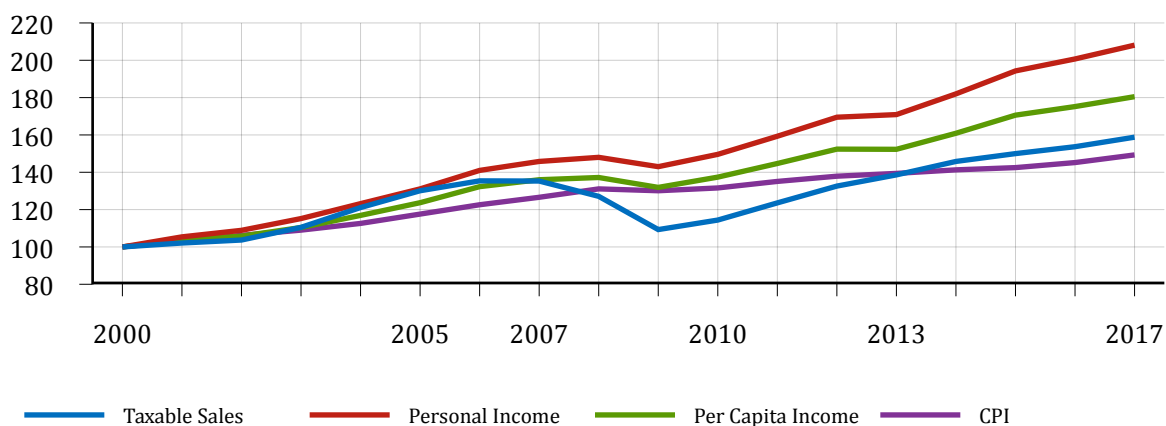
Table 17. Taxable Sales (Dollars in Billions)

	2000	2006	2010	2016	2017	% Change 2000-17	% Change 2006-17
Los Angeles County	\$106.7	\$136.2	\$116.9	\$154.2	\$159.3	49%	17%
Orange County	44.5	57.2	47.7	62.5	64.6	45%	13%
Riverside County	17.0	29.8	23.2	34.2	36.1	112%	21%
San Bernardino County	18.9	31.3	24.7	37.0	38.1	102%	22%
San Diego County	36.2	47.8	41.6	55.4	57.0	57%	19%
Ventura County	9.1	12.3	10.2	13.7	13.9	53%	13%
<b>Total Six County Area</b>	<b>\$232.4</b>	<b>\$314.6</b>	<b>\$264.3</b>	<b>\$357.0</b>	<b>\$369.0</b>	<b>59%</b>	<b>17%</b>
Los Angeles Area Consumer Price Index (1982-84=100.0)	171.6	210.4	225.9	249.2	256.2	49%	22%

Source: Taxable Sales-California Board of Equalization, Consumer Price Index-U.S. Bureau of Labor Statistics

Total personal income reached a record \$1.23 trillion in 2017 in the Six County Area. Per capita personal income reached a record level of \$55,188 in 2017 and the gain in per capita income between 2000 and 2017 now far exceeds the increase in consumer prices. Taxable sales growth kept pace with total income growth through 2005 but has lagged far behind income for the period since 2000 although it has exceeded the increase in consumer prices as shown below. The growth in income and taxable sales is expected to outpace the increase in consumer prices for most future years.

### Growth in Taxable Sales, Income and Consumer Prices in Six County Area



Sources: California Board of Equalization, U.S. Bureau of Economic Analysis and U.S. Bureau of Labor Statistics

## Construction Activity

Residential building permit levels in the Six County Area declined sharply after 2004 falling from 108,322 to 17,932 units in 2009. Permit levels have rebounded since 2009 reaching 59,444 in 2017 and 56,400 units in 2018. Permit levels are down 11% for the first nine months of 2019 compared to 2018. Multi-family residential permits are the majority in Los Angeles, Orange and San Diego counties while most permits in Riverside and San Bernardino are for single family homes. Projected long-term job and population growth will support a much higher level of residential construction than is currently occurring. State and regional policies that would make housing easier to build are under discussion.

Table 18. Residential Building Permits

County	2004	2009	2016	2017	2018	Jan-Sept 2018-19
Los Angeles	26,395.0	5,653.0	20,369.0	22,479.0	23,222	(14%)
Orange	9,322	2,200	12,134	10,294	8,105	8%
Riverside	34,226	4,190	6,701	7,335	9,168	(13%)
San Bernardino	18,470	2,495	3,872	6,831	5,086	(5%)
San Diego	17,306	2,990	10,100	1,016	9,570	(23%)
Ventura	2,603	404	1,663	2,489	1,249	14%
Total Six County Area	108,322	17,932	54,839	59,444	56,400	(11%)

Source: Construction Industry Research Board and California Homebuilding Foundation

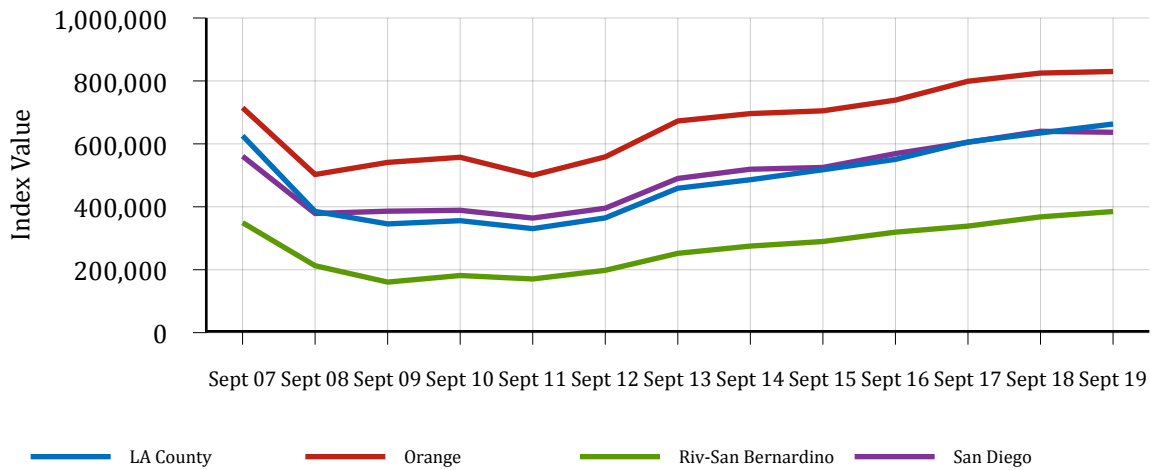
## Housing Trends in the Six County Area Economy

The housing market recovery that began in 2012 has continued into 2019. Housing prices increased, the number of new residential building permits rose and the number of new foreclosure filings declined. Mortgage rates have declined in recent months and remain relatively low historically and the number of homes in the unsold inventory is low by historic standards according to the California Association of Realtors (CAR).

Median resale housing prices in Six County Area markets have risen substantially in recent years though the rate of increase has slowed recently. In the seven years ending September 2019 median resale prices rose 82% in Los Angeles County, 49% in Orange County, 94% in Riverside-San Bernardino County area and 61% in San Diego County and are exceeding or nearing pre-recession levels. (See the figure on the following page).



### Median Resale Housing Prices

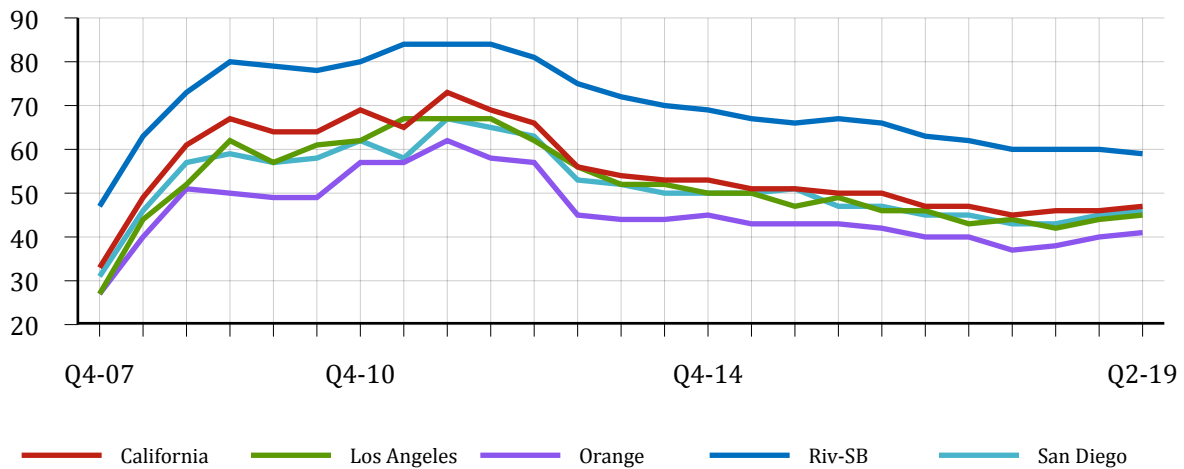


Source: California Association of Realtors

The rise in home prices has led to a decline in housing affordability for first-time homebuyers throughout the Six County Area since 2014 as measured by CAR. Affordability inched up in Q2-2019 in all areas except Riverside-San Bernardino counties.

The long-term demand for housing based on job and population growth remains well above current levels according to projections from SCAG, SANDAG and CCSCE.

### First-Time Buyer Affordability Index



Source: California Association of Realtors

## Nonresidential Construction

Nonresidential construction permit levels reached a record \$15.6 billion in 2018, up 16% over 2017 levels. Permit levels are down 9% in the first nine months of 2019 compared to a year earlier.

The largest gains in 2018 were in Los Angeles, Orange and Riverside counties. All counties except San Bernardino have surpassed pre-recession 2007 levels and the regional total is up nearly 40% since 2007. Public construction, not shown in the table below, has also increased. The increase in residential, nonresidential and public construction is supporting job growth in construction and related industries.

Table 19. Total Nonresidential Construction Permit Valuation (Dollars in Billions)

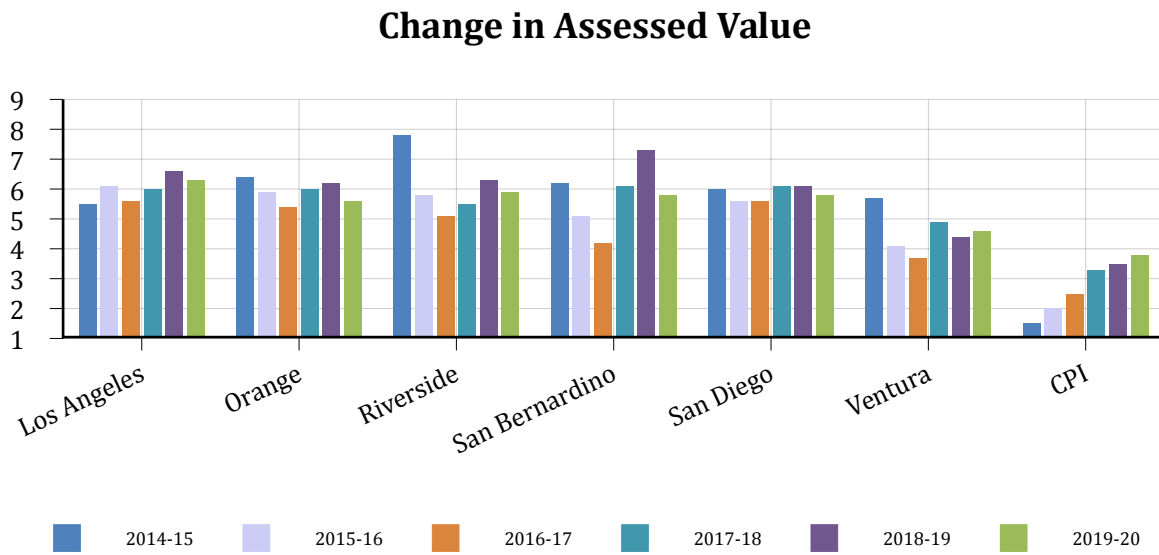
County	2007	2009	2016	2017	2018	Jan-Sept 2018-19
Los Angeles	4.7	2.7	5.3	6.0	6.7	(14%)
Orange	2.0	1.0	2.5	2.1	3.5	(22%)
Riverside	1.5	0.4	1.3	1.4	2.0	(18%)
San Bernardino	1.4	0.3	1.0	1.3	1.1	21%
San Diego	1.4	0.6	1.8	2.4	1.9	26%
Ventura	0.3	0.2	0.2	0.2	0.4	(42%)
Total Six County Area	11.3	5.1	12.1	13.4	15.6	(9%)

Source: Construction Industry Research Board and California Homebuilding Foundation

## Assessed Valuation

Assessed valuation in the Six County Area has rebounded and outpaced inflation in recent years after a long downturn during the last recession that was another source of fiscal pressure on local communities throughout the Six County Area. Assessed values increased again for the 2019-20 fiscal year with gains ranging from 4.6% in Ventura County to 6.3% in Los Angeles compared to a 3.6% increase in the Consumer Price Index (CPI) (See figure below). For seven years in a row assessed valuation growth has outpaced inflation in each county in the Six County Area.

Figure 20. Change in Assessed Value

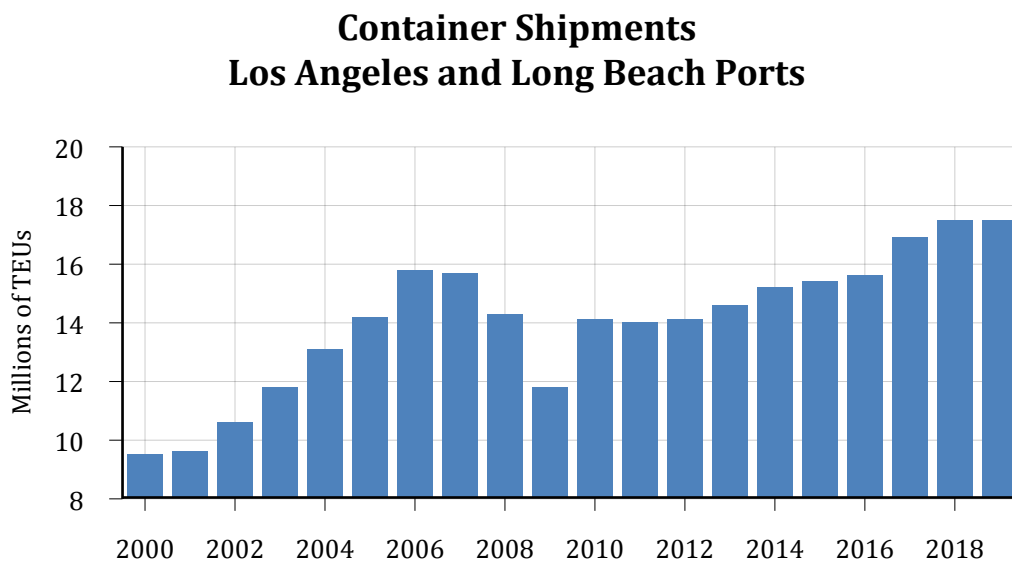


Source: County Assessor's Offices

### International Trade

The recession led to a decline in the dollar volume and physical volume of international trade in the Six County Area after 2006. Container volumes have recovered since 2009 and reached record levels in 2018, up 3.7% over 2017 levels. Tariff increases and slowing world growth resulted in no trade growth in 2019 through September.

Figure 21. Container Shipments (Los Angeles and Long Beach Ports)



Source: Ports of Los Angeles and Long Beach

Over the longer term, international trade has been a leading growth sector in the Six County Area. Container volume rose 84% between 2000 and 2018 despite the large drop in 2008 and 2009. Trade volume increased by 6.1% in 2018 to \$619.9 billion including \$545.9 billion in the Los Angeles Customs District leading all U.S. ports, and \$74.0 billion in the San Diego Customs District. This growth supports jobs and economic activity in the transportation, wholesale trade and warehousing industries as the Six County Area is a gateway for U.S. trade with Pacific Rim countries. For example in the Riverside-San Bernardino metro area where many imports are stored and shipped from saw an increase in warehousing jobs from 16,500 to 64,900 between 2007 and 2018 occurred, along with 13,000 jobs added in trucking and wholesale trade with all three sectors exceeding pre-recession job levels.

Long-term growth in the United States and in its trading partners can boost international trade levels of activity in the coming years as will new trade agreements. The outlook for foreign trade expansion particularly with China and Mexico has become uncertain with the election results and the campaign statements of the new President about foreign trade agreements.

### Income, Wages and Poverty Rates

Counties in the Six County Area have income and wage levels and poverty rates that range from below the national average to above the national average. Orange and Ventura counties have the highest household income levels within the Six County Area. Orange and Ventura counties have the highest household income levels within the Six County Area. Los Angeles, Orange and San Diego counties have the highest wage levels, well above the national average. San Diego County income and wage levels are also above the national average. Riverside and San Bernardino counties have per capita income and wage levels that are below the national average. Median household income in 2018 was above the national average in each of the counties in the Six County Area.

Per capita income and median household income measures are affected by demographic trends. Per capita income measures in the region are pushed downward by the above average percent of children in the Six County Area population compared to the national average, while median household income measures are pushed upward by the above average number of wage earners per household in the Six County Area. Income and wage trends in the Six County Area have been comparable to national trends since 2000. Poverty rates exceed the national average in 2017 in Los Angeles and San Bernardino counties and were below the national average elsewhere in the Six County Area.

Per capita income is based on total personal income divided by population while median household income is based on money income, which is lower than total personal income. The table below shows median household income, per capita income, wage levels and poverty rates for each of the counties in the Six County Area, as well as for California and the United States, in 2018.

Income and poverty levels improved in 2018 throughout the Six County Area (See table below). Median household income grew faster than inflation in all counties except Ventura. Average wage growth lagged the nation in 2018 in most counties and grew more slowly than inflation except in Los Angeles and San Diego counties. Poverty rates fell throughout the Six County Area although these rates do not take into account the rapid rise in rents and home prices throughout the Six County Area.

Table 22. Income and Wages

	Per Capita Income	Median Household Income	Average Wage	Poverty Rate
Los Angeles County	62,224	68,093	64,921	14.1%
Orange County	69,268	89,759	62,414	10.5%
Riverside County	40,637	66,964	45,097	12.7%
San Bernardino County	40,316	63,857	46,906	14.9%
San Diego County	61,386	79,079	61,926	11.4%
Ventura County	61,712	84,566	55,235	8.9%
California	63,557	75,277	68,478	12.8%
United States	54,446	61,937	57,266	13.1%

Source: Per Capita Income - U.S. Department of Commerce; Median Household Income and Poverty Rate-U.S. Census Bureau (American Community Survey); Average Wage-U.S. Bureau of Labor Statistics

Table 23. Change in Income and Wages 2017-18

	Per Capita Income	Median Household Income	Average Wage	Poverty Rate
Los Angeles County	5.4%	4.7%	3.1%	(0.8%)
Orange County	5.4%	4.1%	1.7%	(1.0%)
Riverside County	4.3%	4.7%	2.3%	(0.2%)
San Bernardino County	4.3%	5.7%	2.8%	(1.3%)
San Diego County	5.7%	3.8%	3.4%	(0.4%)
Ventura County	5.0%	2.1%	1.5%	(0.4%)
California	5.7%	4.8%	4.0%	(0.5%)
United States	4.9%	2.7%	3.4%	(0.3%)

Source: Per Capita Income-U.S. Department of Commerce; Median Household Income and Poverty Rate-U.S. Census Bureau (American Community Survey); Average Wage-U.S. Bureau of Labor Statistics

## Population

Population growth in California and the Six County Area has been slowing since 2000 compared with previous decades. Population growth averaged 174,100 per year between 2000 and 2010 compared to 219,300 between 1990 and 2000. Population growth slowed after 2005 as high housing prices and large job losses contributed to larger levels of out-migration to other areas of California and other states.

Population growth averaged 160,000 between 2010 and 2018 according to the DOF estimates, growth slowed in the past three years. The Six County Area had 22.3 million residents in 2018, approximately 56% of the State's population.

Table 24. Six County Area Population (in Thousands)

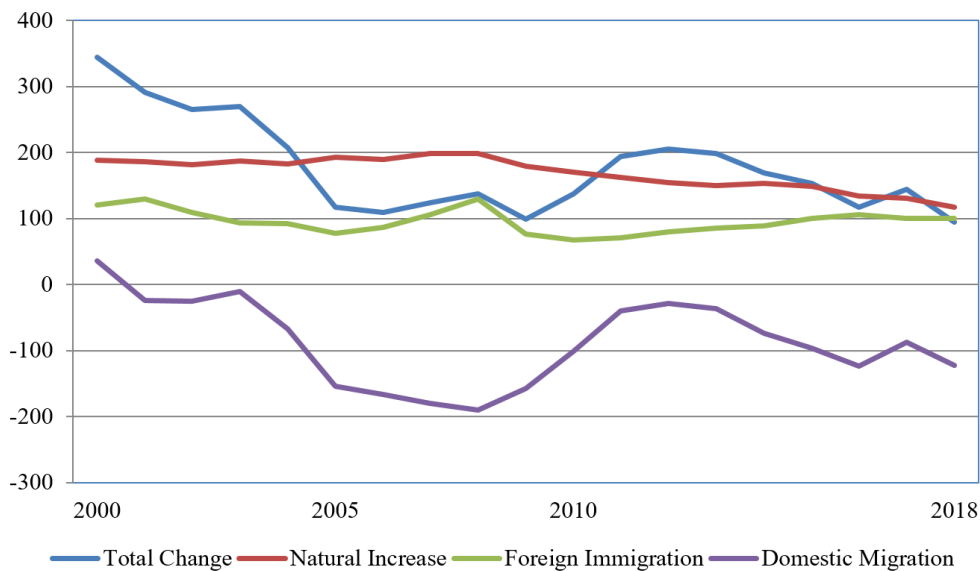
County	1990	2000	2005	2010	2016	2017	2018
Los Angeles	8,860.0	9,544.0	9,810.0	9,837.0	10,215	10,262.0	10,279
Orange	2,412	2,854	2,957	3,015	3,182	3,206	3,217
Riverside	1,188	1,557	1,935	2,196	2,362	2,393	2,420
San Bernardino	1,432	1,719	1,943	2,044	2,145	2,164	2,178
San Diego	2,505	2,828	2,970	3,100	3,297	3,320	3,344
Ventura	669	757	797	824	854	855	855
Total Six County Area	17,066	19,259	20,412	21,016	22,055	22,199	22,294

Source: California Department of Finance as of July 1

Six County Area population growth is determined by three major components-natural increase, which is the number of births minus the number of deaths, net foreign immigration, which is the number of people moving to the region from abroad minus the number moving abroad, and net domestic migration, which is the number of people moving from other regions of the state and nation minus the number moving out to these areas. Natural increase was the largest component of population growth from 2000 through 2018 averaging near 169,000 per year. Declining birth rates in recent years have reduced natural increase to near 117,000 in 2018.

Net foreign immigration has averaged 96,000 per year since 2000 while net domestic migration has been negative since 2000 averaging -87,000 per year. Foreign immigration declined during the recession but has rebounded to more than 100,000 per year since 2015. Net out migration is still negative but at lower levels than during the recession.

Components of Change in Six County Area Population (Thousands)



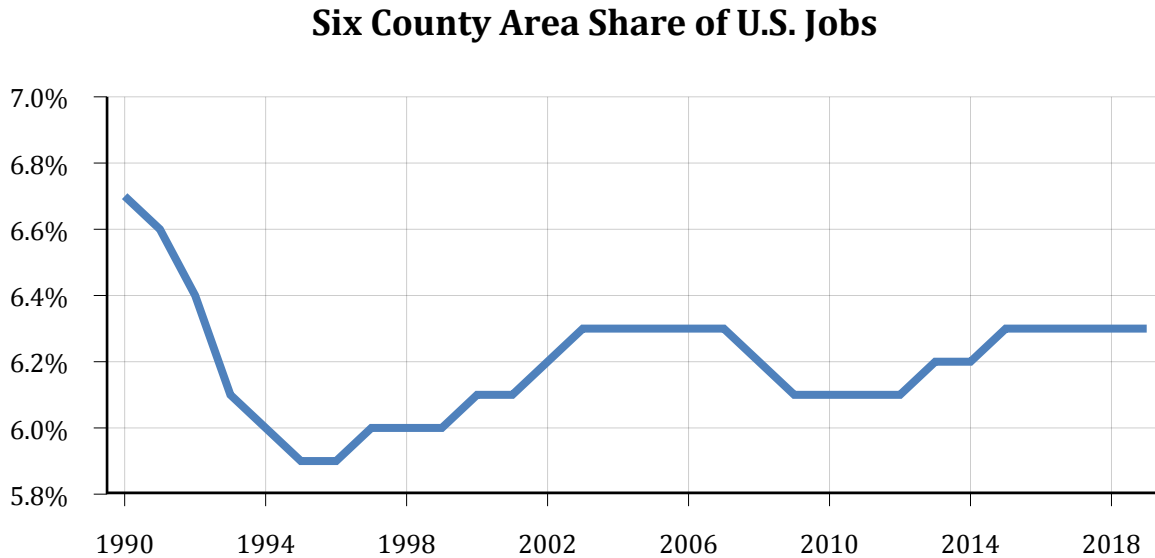
Source: California Department of Finance as of July 1

Population projections for 2040 for the Six County Area from DOF show expected population growth of approximately 3.5 million for the Six County Area, an increase of 16% between 2015 and 2040. This is lower than their previous projection of an 18% increase as a result of falling birth rates.

### Economic Structure of the Six County Area and Long-Term Prospects

The Six County Area has steadily increased its share of national jobs in recent years. In September 2019 the Six County Area accounted for 6.3% of the nation’s non-farm wage and salary jobs, close to the pre-recession highs. The Six County Area economy usually outpaces the nation in growth periods and lags behind in recessions as in the periods after 1990 and 2007.

Figure 25. Six County Share of US Jobs



Source: EDD; data are seasonally adjusted

In 2018 Education and Health Services was the largest major industry sector in the Six County Area measured by jobs, with just fewer than 1.5 million jobs or almost 16% of the Six County Area total (see the table on the following page).

The next largest sectors in 2018 were Professional and Business Services and Government followed by Leisure and Hospitality, Retail Trade and Manufacturing. Three sectors accounted for 60% of the job growth since 2010: Educational and Health Services, Leisure and Hospitality, and Professional and Business Services. Six County Area job levels in 2018 were more than 750,000 above 2007 levels despite large losses in Manufacturing and smaller declines in other sectors. Between 2010 and 2018 the Six County Area added more than 1.5 million jobs.

Since 2010 most sectors have seen job growth. Construction jobs have rebounded but are still below pre-recession levels. There was strong growth in Professional and Business Services reversing all of the recession job losses. Wholesale Trade activity also rebounded along with port traffic and the growing economy. Financial Services and Information recovered only a small portion of recession job losses.

Long-term job growth is driven by the Six County Area’s economic base—those sectors that sell most of their goods and services in national and world markets outside of the Six County Area. Recent projections by CCSCE, SCAG and SANDAG report that the Six County Area will see job growth that slightly exceeds the national average during the next 10 to 30 years, led by gains in Professional and Business Services, Wholesale Trade, Information and the tourism component of Leisure and Hospitality.

Table 26. Six County Area Employment by Major Sector (Jobs in Thousands)

	2000	2007	2010	2018	Change 2007 - 2010	Change 2010 - Nov 2018
Farm	67.7	63.8	59.8	54.3	-4.0	-5.0
Natural Resources and Mining	6.3	7.8	7.3	4.8	-0.4	-1.2
Construction	374.0	479.0	298.9	457.9	-180.0	158.9
Manufacturing	1,114.1	888.9	735.8	743.7	-150.9	6.3
Wholesale Trade	387.5	430.0	382.4	424.7	-46.6	45.2
Retail Trade	835.5	948.6	849.5	946.8	-98.6	95.4
Transp, Warehousing and Utilities	286.8	298.0	274.8	404.6	-24.3	124.5
Information	344.1	293.6	260.6	284.3	-34.0	26.0
Financial Activities	449.2	524.0	442.5	478.2	-81.3	35.2
Professional and Business Services	1,178.0	1,286.8	1,134.6	1,377.7	-153.4	244.3
Educational and Health Services	831.0	1,097.0	1,201.0	1,546.7	106.2	342.2
Leisure and Hospitality	740.7	897.2	861.0	1,164.5	-36.0	305.5
Other Services	271.2	293.9	272.4	321.2	-21.5	48.8
Government	1,171.1	1,245.8	1,240.9	1,302.4	-4.9	61.5
Total Wage and Salary Jobs	8,057.2	8,754.4	8,021.5	9,512.3	-729.7	1,487.6

Source: EDD

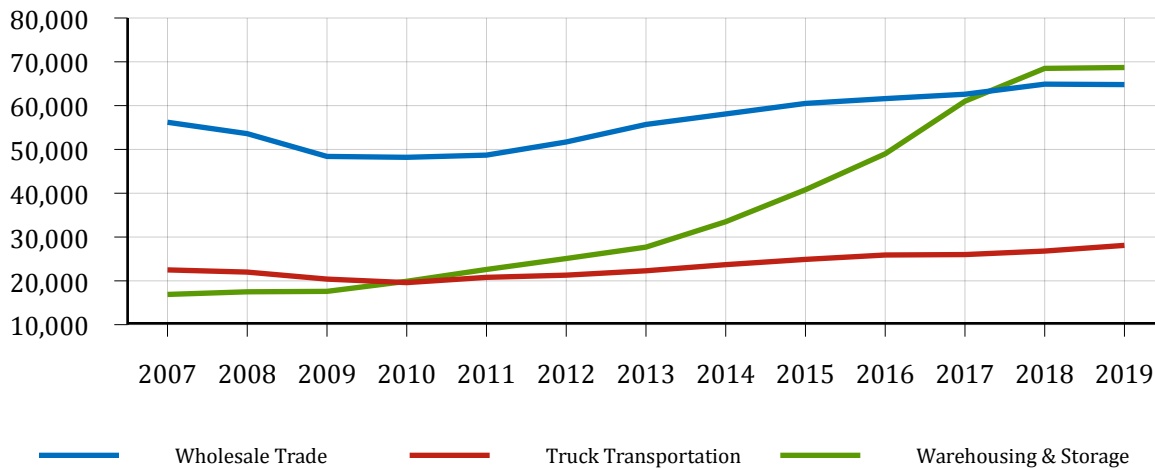
The Six County Area economy has an economic base that is diversified and well positioned to participate in U.S. and world economic growth over the next ten years. Job levels are expected to grow in the high-wage and fast-growing professional, scientific, technical and information services sectors, which include architecture, design, computer, research and development, advertising, legal, accounting, and Internet-related and management services. Other fast-growing sectors over the next ten years include entertainment and tourism industries and health care.

The Six County Area has an above-average share of four additional fast-growing sectors—Wholesale Trade and Transportation, tied to the area’s projected growth in foreign trade; Information, which includes motion pictures; and the tourism component of Leisure and Hospitality, tied to growth in disposable income in the U.S. and worldwide.

The expansion of foreign trade and the growth of distribution centers such as Amazon in the Inland Empire have contributed to a surge in logistics (wholesale trade, warehouse and trucking) jobs in the Riverside-San Bernardino metro area. (See figure on the following page). Between 2007 and 2018 these jobs increased by 64,600 or 68%. The imposition of tariffs has slowed growth in 2019.



### Logistics Jobs in the Riverside-San Bernardino Metro Area



Source: EDD

The diversity of the Six County Area economy has led to GDP growth since that slightly exceeded the national average in 2017. Average GDP growth in nominal dollars in 2017 was 4.5% and real GDP growth was 2.1% for the nation and 3.0% for the state. In 2017 the Six County Area GDP was just short of \$1.5 trillion.

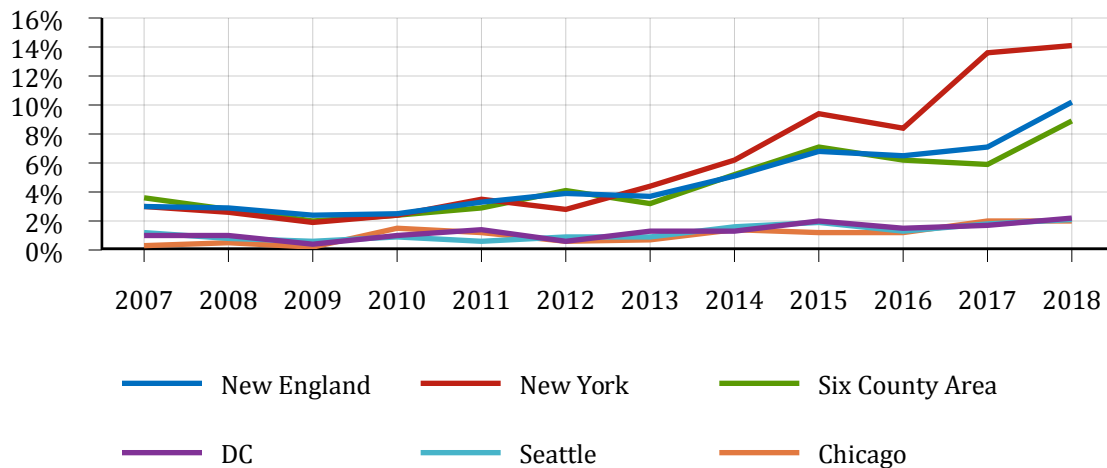
Table 27. Six County Area GDP (Billions of Current Dollars)

Metro Area				Average Annual Growth Rate	
	2015	2016	2017	Current \$ 2016-17	Real \$ 2016-17
LA-Orange	967.1	996.4	1,043.7	4.7%	2.8%
Ventura	49.7	49.9	50.8	1.8%	(0.4%)
Riv.-San Bern.	144.1	150.6	157.9	4.9%	2.9%
San Diego	211.8	223	231.8	4.0%	2.2%
Six County Area	1,372.7	1,419.9	1,484.4	4.5%	2.6%

Source: U.S. Department of Commerce; 2017 estimates are preliminary

The Bay Area is by far the largest recipient of new venture capital (VC) funding with \$60.9 billion in 2018 funding. The Six County Area has been one of the top three VC markets behind the Bay Area for the past decade, outpacing the Chicago, Seattle and Washington, DC areas in total funding (see the figure below). In 2018 the Six County Area accounted for \$8.9 (a record high VC funding level) behind New York metro and New England. In the first three quarters of 2019 Six County Area funding was up 31% passing New England for that period.

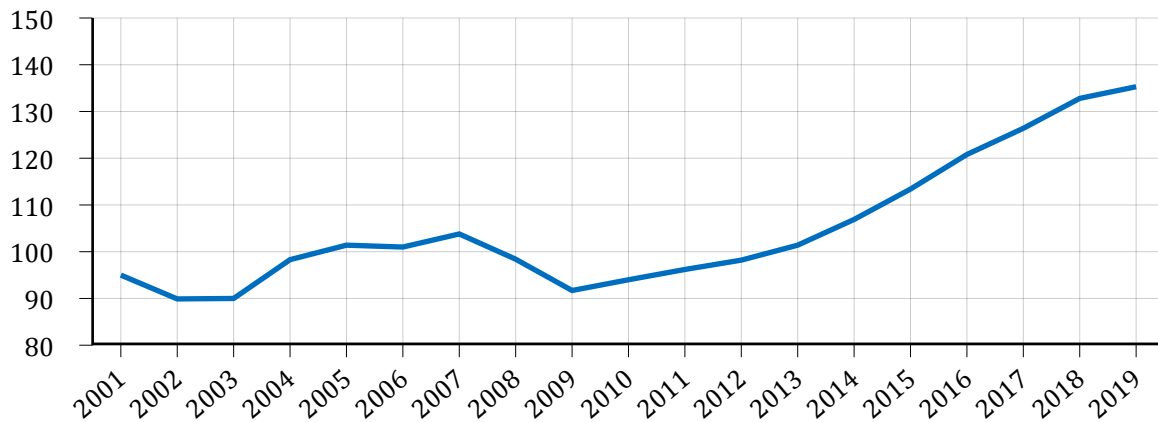
### VC Funding (\$Billions)



The motion picture and tourism sectors are two major components of the Six County Area economic base. Film LA reports an increase in the number of filming shoot days since 2010. (See the chart on the following page) However, the mix of production days changed over time with long-term losses in the production of major feature films (though levels have been flat since 2010) and TV drama series offset by larger gains in commercials, other kinds of TV filming and web-based and reality shows, which according to Film LA have lower dollar values per production day of activity. In September 2014 California approved an increase in the state film tax credit to \$330 million per year from \$100 million starting in 2015. Production days increased in 2018 and set a recent record in 2016 or 39,627 production says. Production levels in 2018 were the second highest in recent history.

California and the Six County Area are experiencing growth in both domestic and foreign visitors. Hotel rates and occupancy are increasing in the Six County and the same is true for employment in the hotel and amusement park sectors. In 2018 Los Angeles County set tourism records for the fourth year in a row for visitors, 50 million up 3.1% over 2017, according to data from the Los Angeles Tourism and Convention Board. Foreign travel to the region surged with gains of 6.9% for China, 4.5% or Canada and 3.0% for the UK. In 2018 passenger travel at Los Angeles International Airport was up 3.5% to 87.57 million trips to set an all-time record. Air passenger travel at the major airports in the Six County Area reached record levels in 2018 and is up 1.9% through August 2019 to 135.3 million trips led by gains at Burbank, Ontario and San Diego airports. (see chart below).

## Passengers at Major Airports in the Six County Area



Source: Airport websites-Los Angeles International, Burbank, John Wayne, Ontario and San Diego

The positives for long-term economic growth include the strength of the region as a center for knowledge-based and creative activities and international trade, tourism and investment with the Pacific Rim. For example, the Six County Area does not have a large number of automotive industry production jobs but nearly all large worldwide auto companies have a major design studio in the Six County Area.

### Risks for the Long-Term Forecast

Housing and transportation challenges pose risks to the long-term economic competitiveness and quality of life in the Six County Area. Recent housing shortages have contributed to relatively large increases in home prices and rents. If more housing is not built, continuing increases in housing costs could affect location decisions of firms and families.

The state Department of Housing and Community Development has recently released the Regional Housing Needs Assessment (RHNA) goals for SCAG and SANDAG. The total goal for the Six County Area for the period from 2021 to 2029 is 1.5 million units or nearly three times the recent annual permit levels. More than half of the units are for residents making less than 120% of the area median income. Roughly half of the units are to make up for current shortages and half for projected growth.

In the past three years, the State legislature passed housing legislation to ease development restrictions and to set aside money for subsidized housing. In 2020, the State legislature will consider additional legislation that will make it easier to build housing at all income levels with special attention on housing barriers in jurisdictions that are not meeting the housing targets in their plans.

In addition, the Six County Area needs substantial transportation investment, at least \$500 billion to 2040, to serve the growing number of residents and businesses. The two major planning agencies serving the Six County Area, SANDAG and SCAG, have plans to address these housing and transportation challenges but they require cooperation from local jurisdictions in siting housing and funding for both transportation and below market housing projects in addition to state and local laws that reduce barriers to and costs of building housing and transportation improvements.

The Six County Area economy is connected to the national and world economies, especially the Pacific Rim, and is subject to fluctuations and changes in long-term demographic trends around the world and changes in national policies that affect the economy.

Two new potential challenges emerged in 2018 and continue today. The federal administration is implementing tariff increases that are prompting retaliation and a potential decline in foreign trade, which is one of the key sectors

in the Six County Area economy. In addition changes to federal immigration policy that could reduce the number of immigrants allowed into the country are under consideration. The Six County Area economy has a far above average share of immigrants in the work force at all skill levels and reductions in immigration could have a detrimental effect on the economy in the Six County Area.

Trade and immigration policies also pose risks for future U.S. economic growth. Restricting immigration would come at a time when baby boomer retirements will slow labor force growth and remove experienced workers from the workforce. As of October 2019 new trade and immigration policies are still being negotiated.

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# FINANCIAL POWERS (MWD ACT)

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## THE METROPOLITAN WATER DISTRICT ACT

### Sec. 18. [Fiscal Year]

The fiscal year of any metropolitan water district shall commence on the first day of July of each year and shall continue until the close of the 30th day of June of the year following.

### Sec. 61. [Ordinances, Resolutions and Orders]

The board may make and pass ordinances, resolutions and orders necessary for the government and management of the affairs of the district, for the execution of the powers vested in the district and for carrying into effect the provisions of this act.

Amended by Stats. 1969, ch. 441

### Sec. 123. [Borrowing, Limitation]

A district may borrow money and incur indebtedness and issue bonds or other evidence of such indebtedness, except that no district shall incur indebtedness which, in the aggregate, shall exceed 15 percent of the assessed valuation of all the taxable property included within the district, as shown by the assessment records of the county or counties.<sup>1</sup>

#### CASE NOTE

A contract between the State and a metropolitan water district for a water supply from the State Water Resources Development System was a contract for the furnishing of continued water service in the future, payments by the district being contingent upon performance of contractual duties by the State and not incurred at the outset, so the district did not incur an indebtedness in excess of that permitted by former Section 5(7) of the Metropolitan Water District Act (now Sec. 123).

*Metropolitan Water District v. Marquardt*, 59 Cal.2d 159, 28 Cal. Rptr. 724 (1963)

### Sec. 124. [Taxes, Levy and Limitation]

A district may levy and collect taxes on all property within the district for the purposes of carrying on the operations and paying the obligations of the district, except that such taxes, exclusive of any tax levied to meet the bonded indebtedness of such district and the interest thereon, exclusive of any tax levied to meet any obligation to the United States of America or to any board, department or agency thereof, and exclusive of any tax levied to meet any obligation to the state pursuant to Section 11652 of the Water Code, shall not exceed five cents (\$.05) on each such one hundred dollars (\$100) of assessed valuation. The term "tax levied to meet the bonded indebtedness of such district and the interest thereon" as used in this section shall also include, but shall not be limited to, any tax levied pursuant to Section 287 to pay the principal of, or interest on, bond anticipation notes and any tax levied under the provisions of any resolution or ordinance providing for the issuance of bonds of the district to pay, as the same shall become due, the principal of any term bonds which

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<sup>1</sup> The assessed valuation of all taxable property as of June 30, 2011 used in calculating the ad valorem tax limitation was more than \$2 trillion (\$2,050,497,523,732), fifteen percent of this amount is \$307.6 billion (\$307,574,628,560).

under the provisions of such resolution or ordinance are to be paid and retired by call or purchase before maturity with moneys set aside for that purpose.

Amended by Stats. 1969, ch. 441

#### CASE NOTE

An article in a contract between the State and a metropolitan water district for a water supply from the State Water Resources Development System which article is based upon Water Code Section 11652, requiring the district to levy a tax to provide for all payments due under the contract, does not contravene former Section 5(8) of the Metropolitan Water District Act, imposing a limit on taxation, as Section 11652 is a special provision relating only to taxation to meet obligations from water contracts with state agencies, whereas said Section 5(8) is a general provision relating to taxation by a district for all purposes and the special provision controls the general provision.

*Metropolitan Water District v. Marquardt*, 59 Cal.2d 159, 28 Cal. Rptr. 724 (1963).

#### Sec. 124.5. [Ad valorem Tax Limitation]

Subject only to the exception in this section and notwithstanding any other provision of law, commencing with the 1990-91 fiscal year any ad valorem property tax levied by a district on taxable property in the district, other than special taxes levied and collected pursuant to annexation proceedings pursuant to Articles 1 (commencing with Section 350), 2 (commencing with Section 360), 3 (commencing with Section 370), and 6 (commencing with Section 405) of Chapter 1 of Part 7, shall not exceed the composite amount required to pay (1) the principal and interest on general obligation bonded indebtedness of the district and (2) that portion of the district's payment obligation under a water service contract with the state which is reasonably allocable, as determined by the district, to the payment by the state of principal and interest on bonds issued pursuant to the California Water Resources Development Bond Act as of the effective date of this section and used to finance construction of facilities for the benefit of the district. The restrictions contained in this section do not apply if the board of directors of the district, following a hearing held to consider that issue, finds that a tax in excess of these restrictions is essential to the fiscal integrity of the district, and written notice of the hearing is filed with the offices of the Speaker of the Assembly and the President pro Tempore of the Senate at least 10 days prior to that date of the hearing.

Added by Stats. 1984, ch. 271.

#### Sec. 130. [General Powers to Provide Water Services]

A district may do all of the following:

- (a) Acquire water and water rights within or without the state.
- (b) Develop, store, and transport water.
- (c) Provide, sell, and deliver water at wholesale for municipal and domestic uses and purposes.
- (d) Fix the rates for water, and the amount of any water standby or availability service charge or assessment. Any such water standby or availability service charge or assessment shall be deemed to be amounts paid by the member public agency to the district on tax assessments.
- (e) Acquire, construct, operate, and maintain any and all works, facilities, improvements, and property necessary or convenient to the exercise of the powers granted by this section.

Amended by Stats. 1984, ch. 271.

### Sec. 133. [Fixing of Water Rates]

The board shall fix the rate or rates at which water shall be sold. Such rates, in the discretion of the board, may differ with reference to different sources from which water shall be obtained by the district. The board, under conditions and on terms found and determined by the board to be equitable, may fix rates for the sale and delivery to member public agencies of water obtained by the district from one source of supply in substitution for water obtained by the district from another and different source of supply, and may charge for such substitute water at the rate fixed for the water for which it is so substituted.

### Sec. 134. [Adequacy of Water Rates; Uniformity of Rates]

The Board, so far as practicable, shall fix such rate or rates for water as will result in revenue which, together with revenue from any water stand-by or availability service charge or assessment, will pay the operating expenses of the district, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by the district, and provide for the payment of the interest and principal of the bonded debt subject to the applicable provisions of this act authorizing the issuance and retirement of the bonds. Those rates, subject to the provisions of this chapter, shall be uniform for like classes of service throughout the district.

Amended by Stats. 1984, ch. 271

### Sec. 134.5. [Water Standby or Availability of Service Charge]

(a) The board may, from time to time, impose a water standby or availability service charge within a district. The amount of revenue to be raised by the service charge shall be as determined by the board.

(b) Allocation of the service charge among member public agencies shall be in accordance with a method established by ordinance or resolution of the board. Factors that may be considered include, but are not limited to, historical water deliveries by a district; projected water service demands by member public agencies of a district; contracted water service demands by member public agencies of a district; service connection capacity; acreage; property parcels; population, and assessed valuation, or a combination thereof.

(c) The service charge may be collected from the member public agencies of a district. As an alternative, a district may impose a service charge as a standby charge against individual parcels within the district.

In implementing this alternative, a district may exercise the powers of a county water district under Section 31031 of the Water Code, except that, notwithstanding Section 31031 of the Water Code, a district may (1) raise the standby charge rate above ten dollars (\$10) per year by a majority vote of the board, and (2) after taking into account the factors specified in subdivision (b), fix different standby charge rates for parcels situated within different member public agencies.

(d) Before imposing or changing any water standby or availability service charge pursuant to this section, a district shall give written notice to each member public agency not less than 45 days prior to final adoption of the imposition or change.

(e) As an alternative to the two methods set forth in subdivision (c), a district, at the option of its board, may convert the charge to a benefit assessment to be levied pursuant to Sections 134.6 to 134.9, inclusive.

Added by Stats. 1984, ch. 271.

### Sec. 239.2. [Limitation on Amount of Revenue Bonds]

No revenue bonds shall be issued under this chapter, except for refunding, unless the amount of equity of the district, as shown on its balance sheet as of the end of the last fiscal year prior to the issuance of such bonds, equals at least 100 percent of the aggregate amount of revenue bonds to be outstanding following the issuance of such bonds.

Added by Stats. 1972, ch. 169



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# FINANCIAL POLICIES (MWD ADMINISTRATIVE CODE)

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## FINANCIAL POLICIES

### § 2431. Duties and Functions.

The Engineering and Operations Committee shall study, advise and make recommendations with regard to:

- (a) Plans, specifications and bids;
- (b) The initiation, scheduling, contracting, and performance of construction programs and work, and the equipment or materials to be used, replaced, disposed of, or salvaged;
- (c) Such matters as may come to its attention on inspection trips of the aqueduct works which the committee shall make at least once a year;
- (d) The operation, protection, and maintenance of the plants and facilities required for the production, exchange, sale, storage, treatment, and delivery of water and power and for the storage and treatment of water; and for the distribution of electrical energy to the aqueduct pumping plants;
- (e) The providing of storage and distribution facilities and connections for the delivery of water;
- (f) Construction claims;
- (g) Engineering aspects of State Water Project facilities;
- (h) The selection of engineering and geologic consultants and the determination of the scope of their assignments;
- (i) Energy matters in general;
- (j) Water treatment technologies for complying with drinking water regulations;
- (k) Water quality policies and standards;
- (l) Policies regarding the quality of imported, reclaimed, reused and stored water;
- (m) The effect on the District of existing and proposed federal, state, and local water quality statutes and regulations;
- (n) Proposed amendments to the Metropolitan Water District Act and Code affecting the engineering and operations functions of the District and water quality;
- (o) Proposed rules and proposals regarding business development opportunities for intellectual property transactions; and.

(p) The District's Capital Investment Program and appropriations for capital projects.

Organization and Procedures of the Board - July 19, 1976; Sections 211.3.2 amended and paragraph (j) [formerly Section 211.3.2.10] added by M.I. 32924 - September 18, 1979. Section 211.3.2 repealed and Section 2431 adopted by M.I. 36464 - January 13, 1987, effective April 1, 1987; former paragraph (j) renamed (o), and new paragraphs (j), (k), (l), (m), and (n), added by M.I. 43587 - June 8, 1999; paragraphs (j)-(n) repealed, (o) renumbered to (k) and amended, and new paragraphs (j)-(u) added by M. I. 44582 - August 20, 2001; amended and paragraphs (l)-(u) deleted by M. I. 44745 - January 8, 2002; paragraph (c) - (k) renumbered and amended and new paragraphs (h) - (j) added by M. I. 46983 - February 13, 2007; new paragraphs (d)-(e) and (i)-(l) added, former paragraphs (d)-(f) renamed (f)-(h), former paragraphs (g-j) renamed (n)-(q), paragraphs (n) and (p) amended by M.I. 48081 - November 10, 2009; paragraph (o) deleted, former paragraph (p)-(q) renamed (o)-(p) by M.I. 48624 - April 12, 2011; amended paragraph (p) by M.I. 51417 - December 11, 2018.

#### § 4301. Cost of Service and Revenue Requirement.

(a) The District shall fix rates for water such that anticipated water revenues, together with anticipated revenues from any water standby or availability of service charge (such as the readiness-to-serve charge or capacity charge) or assessment, ad valorem tax revenues, and other revenues pay the expenses of the District, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by the District, and provide for the payment of the interest and principal of the District's outstanding bonded debt. Subject to the foregoing, such rates and charges shall reflect the costs of the District's major service functions, including water supply, conveyance, power, storage, distribution and treatment to the greatest degree practicable.

#### § 4304. Apportionment of Revenues and Setting of Water Rates.

(a) Not later than at its February meeting the General Manager shall present to the Finance and Insurance Committee of the Board:

(1) Determinations of the revenue requirements and cost of service analysis supporting the rates and charges required during the biennial period beginning the following July 1, as determined by the General Manager in accordance with current Board policies, and,

(2) Recommendations of rates including, but not limited to, the System Access Rate, Water Stewardship Rate, System Power Rate, Treatment Surcharge, and the Supply Rates for the various classes of water service to become effective each January 1 of the biennial period. These recommended rates shall be the General Manager's determination, made in accordance with current Board policies, of the rates necessary to produce substantially the revenues to be derived from water sales during the biennial period beginning the following July 1.

(b) Not later than at its February meeting, the General Manager shall also present to the Finance and Insurance Committee recommendations regarding the continuation of a water standby charge or the imposition of an availability of service charge (such as the readiness-to-serve charge and capacity charge), which shall be the General Manager's determination, made in accordance with current Board policies, of the charge necessary to produce substantially the revenues to be derived from fixed revenue sources, if any, exclusive of taxes, during the biennial period beginning the following July 1 which the Finance and Insurance Committee has determined to be necessary.

(c) Not later than its February meeting the Finance and Insurance Committee shall set a time or times for, and shall thereafter hold, one or more meetings of the Finance and Insurance Committee, to be held prior to its regular April meeting, at which interested parties may present their views regarding the proposed water rates and availability of service charges to said committee. The Finance and Insurance Committee shall direct the General Manager to cause the publication of a notice of such public hearing to be published in newspapers of general circulation within the District's service area. Such notice shall be published not less than 10 days prior to the public hearing.

(d) Not later than its regular April meeting the Finance and Insurance Committee shall make its determination regarding the revenue requirement to be paid from water rates and the water rates to become effective each January 1 of the biennial period and shall recommend said water rates to the Board no later than the Board's regular April meeting.

(e) Not later than its April meeting, the Board shall establish water rates for deliveries beginning each January 1 of the biennial period.

(f) Proposals for changes in water rates to become effective at times other than on January 1 shall require adequate notice to the public and a hearing before such proposals are acted upon by the Board, unless the Board finds that an immediate change in water rates is urgent.

Section 311.5 - M.I. 32924 – September 18, 1979, as clarified by M.I. 33059 – January 15, 1980; paragraph (g) [formerly Section 311.5.7] amended by M.I. 34867 – September 13, 1983. Section 311.5.7 repealed and Section 4304 adopted by M.I. 36464 – January 13, 1987, effective April 1, 1987; amended, new paragraphs (d), (f), (i) and (j) added and other paragraphs renumbered by M.I. 39976 – December 8, 1992; paragraphs (b) through (g), (i) and (j) amended by M.I. 41389 – May 9, 1995; paragraphs (a)–(d) amended by M.I. 42193 – December 10, 1996; paragraphs (b) through (g), and (i) and (j) amended by M.I. 43587 – June 8, 1999; paragraphs (a) through (k) amended by M. I. 44582 – August 20, 2001; paragraphs (a) – (g), (i), and (j) amended by M. I. 44812 – March 12, 2002; paragraph (a) amended, (a) (i) & (a) (ii) added, paragraphs (b) & (c) deleted, paragraphs (d) (e) (f) renumbered to (b) (c) (d), paragraph (g) renumbered to (e) and amended, paragraphs (h) (i) renumbered to (f) (g), and paragraphs (j) (k) renumbered to (h) (i), by order of M. I. 45537 – October 14, 2003; paragraphs (a)–(e) and (g)–(h) amended by M. I. 46064 – January 11, 2005; paragraphs (a) through (e), (g) and (h) amended (committee name change) by M. I. 46148 – March 8, 2005; paragraphs (a)–(i) amended by M.I. 46983 February 13, 2007; paragraph(b) and (c) amended, paragraph (d) deleted and renumbered by M.I. 47636 – September 9, 2008; paragraphs (c)–(e) amended by M.I. 48171 – February 9, 2010; paragraphs (a)–(g) amended by M.I. 48534 – January 11, 2011; amended § 4304 title, amended paragraphs (a)–(f), deleted former paragraphs (f) and (g), and renumbered former paragraph (h) by M.I. 49187 – September 11, 2012.

### § 5101. Investment of Surplus Funds.

(a) Pursuant to Government Code Section 53607, this Board shall delegate to the Treasurer of the District annually the authority to invest or to reinvest funds of the District subject to the terms and conditions set forth in this Section 5101. The Treasurer shall report each month transactions made pursuant to this delegation.

(b) The terms and conditions of this delegation to the Treasurer are as follows:

(1) The Treasurer shall assume full responsibility for all transactions hereby delegated.

(2) The Treasurer may invest such portion of any money in any sinking fund of the District, or any surplus moneys in the District's treasury not required for the immediate necessities of the District, as the Treasurer deems wise or expedient, in any of the securities authorized for investment by local agencies pursuant to Government Code Section 53601 or any successor statute; provided that such investments meet the requirements of the most current Statement of Investment Policy approved by the Board, pursuant to Section 5114 below.

(3) The Treasurer may make any investment by direct purchase of any issue of the specified securities at their original sale or after they have been issued.

(4) The available cash amount and maximum period for any such investment by the Treasurer shall be determined by the General Manager. The Treasurer shall not liquidate any such investment except:

(i) To meet the District's cash requirements, which shall be determined by the General Manager; or

(ii) To generate cash for reinvestment whenever the General Manager determines that such reinvestment is in the District's interest.

The Treasurer shall not exchange any such investment unless the General Manager determines that such exchange is in the District's interest.

Subject to the above provisions of this subsection 5101(b)(4), the Treasurer may enter into a reverse repurchase agreement, so long as the proceeds of the reverse repurchase agreement are invested solely to supplement the income normally received from the securities involved in the agreement.

(5) The General Counsel shall review monthly and, if appropriate, approve as to eligibility the securities invested in by the Treasurer in the preceding month and report the determinations to the Board.

(6) Investment of Deferred Compensation Fund.

(i) The Treasurer may invest funds held by the District pursuant to the District's deferred compensation plan in accordance with this Section 5101, and may liquidate such investments to comply with the provisions of the plan in accordance with the determinations of the General Manager.

(ii) The Treasurer may also deposit for purposes of investment funds held by the District, pursuant to the District's deferred compensation plans, in the Metropolitan Water District Federal Credit Union to the limit insured by the National Credit Union Share Insurance Fund.

(c) The Treasurer is authorized to enter into safekeeping agreements, in form approved by the General Counsel, and thereafter may deposit for safekeeping the bonds, notes, bills, debentures, obligations, certificates of indebtedness, warrants or other evidences of indebtedness in which the money of the District is invested pursuant to the terms and conditions of this Section 5101 with any state or national bank with which there is a safekeeping agreement and which has sufficient security, as required by law, to secure the amount of any collections. All net collections which may be made by the bank from time to time pursuant to said safekeeping agreement shall immediately be deposited in a deposit account held by a state or national bank within this state which is supported by sufficient security, as required by law, to secure the amount of such collections. The Treasurer shall take from such bank a receipt for securities so deposited either in definitive form in such bank or held in book-entry form on the books of the Federal Reserve Bank. All securities purchased shall be held in safekeeping under such agreements and shall only be released from safekeeping pursuant to such agreements.

Res. 7695 - December 7, 1976; Section 471.2 amended by M.I. 33083 - January 15, 1980; paragraph (b)(6) [formerly Section 471.2.2.6] amended by M.I. 33208 - April 18, 1980; paragraph (b)(2)(vi) [formerly Section 471.2.2.2.6] added by M.I. 34811 - August 17, 1983; paragraph (b)(2) [formerly Section 471.2.2.2] amended by M.I. 35122 - May 8, 1984; paragraph (b)(5) [formerly Section 471.2.2.5] amended by M.I. 35462 - January 8, 1985; paragraphs (b)(2)(vii) and (b)(2)(viii) [formerly Sections 471.2.2.2.7 and 471.2.2.2.8] and paragraph (b)(6)(ii) [formerly Section 471.2.2.6.2] added and paragraph (b)(6) renumbered by M.I. 35555 - March 12, 1985; paragraph (b)(2)(iv) [formerly Section 471.2.2.2.4] amended and paragraph (b)(2)(ix) [formerly Section 471.2.2.2.9] added by M.I. 36272 - September 9, 1986. Section 471.2 repealed and Section 5101 adopted by M.I. 36464 - January 13, 1987, effective April 1, 1987; paragraph (b)(2)(vii) amended by M.I. 36492 - February 10, 1987 and by M.I. 36761 - August 18, 1987; amended by M.I. 36811 - September 22, 1987; amended by M.I. 38234 - May 8, 1990; paragraph (B)(2) amended by M.I. 38577 - November 20, 1990; paragraph (B)(2) amended by M.I. 39171 - August 20, 1991; paragraph (B)(2)(vi) amended by M.I. 39497 and (B)(2)(x) added by M.I. 39496 - March 10, 1992; paragraph (B)(2) amended by M.I. 39785 - August 20, 1992; paragraph (b)(2) amended and subparagraphs of (b)(2)(i) through (x) repealed by M.I. 40682 - February 8, 1994; paragraph (a) amended by M.I. 42275 - February 11, 1997; paragraph (c) amended by M.I. 42559 - August 19, 1997.

### §. 5107. Biennial Budget Process.

(a) There shall be prepared each even-numbered year, under the direction of the General Manager, a proposed biennial budget covering District operations for the following two fiscal years. The proposed biennial budget shall be submitted to the Board no later than the date of the regular Board meeting in June immediately preceding the first fiscal year of the biennium to which the budget applies. The proposed biennial budget shall indicate by fund all anticipated expenses and required reserves and the source of revenues to be used to meet such expenses and provide such reserves. The proposed biennial budget will at a minimum include a five-year financial forecast. At least one Board Workshop on the proposed biennial budget will be conducted prior to submission of the proposed biennial budget for Board approval. The Finance and Insurance Committee shall review the proposed biennial budget in its entirety, together with the recommendations from the Board workshop, and report its recommendations to the Board.

(b) After considering the proposed biennial budget and making any revisions thereto that it may deem advisable, the Board shall adopt the biennial budget before the beginning of the biennial period to which the budget applies. The amounts provided in the adopted budget for the biennial period for total expenses for operations and maintenance, including minimum and variable operations and maintenance charges under water or power contracts with the State, for capital charges under such contracts, and for debt service shall be deemed to be appropriated from the funds indicated in the budget.

(c) The adoption of the budget shall have no effect upon appropriations for capital projects and continuing expenditures not susceptible to immediate direct allocation, as described in Section 5108 hereof, and shall not establish any limitations on expenditures for such purposes.

(d) The total operations and maintenance budget shall be measured against the regional rate of inflation as measured by the five-year rolling average change in the Consumer Price Index (CPI) for the Los Angeles-Riverside-range County area, not seasonally adjusted, for all items as reported by the U. S. Bureau of Labor Statistics. The budget will include explanations of increases greater than the CPI due to unique conditions, growth or expansion of services.

Ords. 127 and 129; repealed by Ord. 146; Section 471.8 added, as amended, by M.I. 32690 - April 10, 1979; amended by M.I. 36110 - June 10, 1986. Section 471.8 repealed and Section 5107 adopted by M.I. 36464 - January 13, 1987, effective April 1, 1987; paragraph (a) amended by M.I. 36535 - March 10, 1987; paragraph (a) amended by M.I. 40231 - May 11, 1993; paragraph (a) amended by M.I. 41755 - February 13, 1996; paragraphs (a) and (b) amended by M.I. 42060 - September 10, 1996; paragraph (a) amended by M.I. 42193 - December 10, 1996; paragraph (a) amended by M. I. 44095 - July 11, 2000; paragraph (a) amended by M. I. 44582 - August 20, 2001; paragraph (a) amended and paragraph (d) added by M. I. 45904 - September 14, 2004; paragraph (a) amended by M. I. 46064 - January 11, 2005; paragraph (a) amended by M.I. 46148 - March 8, 2005; paragraph (a) amended by M.I. 46983 - February 13, 2007; paragraph (a) amended by M.I. 48534 - January 11, 2011; section title and paragraphs (a)-(b) amended by M.I. 48800 - September 13, 2011; paragraphs (a), (b), and (d) amended by M.I. 49187 - September 11, 2012

The District operates as a single enterprise fund for financial statements and budgeting purposes. Through its administrative code the District identifies a number of accounts, which are referred to as funds, to separately track uses of monies for specific purposes.

### §. 5108. Appropriations.

(a) No expenditure shall be made unless an appropriation has been approved by the Board for the purpose intended.

(b) Appropriations may from time to time be authorized by the Board for capital projects not set forth in the Capital Investment Plan and for funding of continuing expenditures not susceptible to immediate direct allocation, including those for undistributed payroll and fringe benefits, for operating equipment, and for materials and equipment inventories. Appropriations for capital projects set forth in the Capital Investment

Plan shall be authorized as described in Section 5108 (e). Appropriations for all other purposes shall be authorized on a biennial basis in accordance with Section 5107 hereof.

(c) Appropriations, whether made hereunder or under any other section of this Code, may be amended or closed by the Board provided such action does not impair any obligation which has been incurred by the District. Upon completion of all projects under capital appropriation, the General Manager shall close that appropriation after all work has been completed and all other costs have been paid. Unused appropriation balances shall be returned to funds available for appropriation. All appropriations shall be reviewed at least quarterly to determine the status of work and charges. The General Manager shall report annually to the Board on the status of appropriations for which no activity is being recorded to permit the Board to consider which, if any, of such appropriations should remain open or be closed.

(d) The General Manager is authorized to designate the source of funds for appropriations to pay capital program expenditures. Such funding shall comply with the MWD Act; Board resolutions authorizing security sales; Federal tax laws and U.S. Treasury regulations; tax and nonarbitrage certificates; and letters of instruction from bond counsel. The General Manager shall report quarterly to the Board all changes in sources of funding from those designated at time of approval of the appropriation.

(e) Following adoption of the biennial budget, the General Manager shall request that the Board appropriate funds required for the projects identified in the Capital Investment Plan for the next two fiscal years. If, during the biennial budget period, Capital Investment Plan expenditures are expected to exceed the appropriated amount, the General Manager shall request that the Board appropriate additional funding and submit a report supporting said request. Notwithstanding the foregoing, the Board at its discretion may appropriate only such amounts as it deems necessary for the completion of any Capital Investment Plan project.

Ords. 29, 113, and 129; repealed by Ord. 146; Section 471.9 added, as amended, by M.I. 32690 - April 10, 1979; amended by M.I. 36110 - June 10, 1986; paragraphs (b) and (c) amended by M.I. 36367 - November 18, 1986. Section 471.9 repealed and Section 5108 adopted by M.I. 36464 - January 13, 1987, effective April 1, 1987; paragraph (c) amended by M.I. 38739 - February 12, 1991; paragraph (d) added by M.I. 39209 - September 17, 1991; paragraph (b) amended by M.I. 47636 - September 9, 2008; paragraph (b) amended by M.I. 49187 - September 11, 2012; amended paragraphs (b) and (c), and added new paragraph (e) by M.I. 51353 - October 9, 2018.

#### § 5109. Capital Funding from Current Revenues.

To preserve debt capacity for evolving or unexpected financial needs Metropolitan shall fund replacements and refurbishments, capital projects costing less than \$1 million, or capital projects with useful lives less than the typical bond terms, and reimbursable capital projects from annual revenues. The Board's objective shall be to fund annually on a pay-as-you-go basis these elements of the capital investment plan to maintain stable water rates and charges, strong financial ratios, debt capacity and appropriate reserve levels. The amount of annual expenses paid from current revenues shall be determined by the Board as part of the biennial budget process and shall include the costs of:

- (a) Capital facilities or projects totaling \$1,000,000 or less.
- (b) Capital assets with estimated payback periods or useful lives shorter than the calculated average life of alternative long-term bond financing.
- (c) Capital improvement program studies.
- (d) Replacements and refurbishment of Metropolitan facilities or portions thereof.
- (e) Reimbursable capital projects.

The costs relating to provisions (a) through (c) above shall be paid from operating revenues, including revenues derived from water standby or availability service charges or benefit assessments, and proceeds from disposals of surplus property made available for expenditure by the Board.

M.I. 37449 - December 13, 1988; paragraph (c) added and renumbered (d) by M.I. 37530 - February 14, 1989; amended by M.I. 37679 - May 9, 1989; amended by M.I. 41580 - September 12, 1995; first paragraph and (d) amended by M.I. 43434 - March 9, 1999; paragraph (d) amended by M. I. 44907 - June 11, 2002; Section renamed, paragraph (d) amended and paragraph (e) added by M. I. 45904 - September 14, 2004; paragraph amended by M.I. 48800 - September 13, 2011; unnumbered introductory paragraph, and item(d) amended by M.I. 49187 - September 11, 2012.

#### § 5114 (a). Reporting Requirements of the Treasurer.

The Treasurer shall:

(a) Render, not later than the June Board meeting, a Statement of Investment Policy for the following year, to be considered for approval by the Board.

#### §. 5200. Funds Established.

To provide for accountability of public moneys in accordance with applicable federal and state law and regulations and Board policies, the following funds active or prospectively active have been established in the Treasury of the District:

(a) General Fund (Fund No. 1001, established 1929). Moneys not specifically allocated or appropriated may be placed in this fund and used for general purposes of the District. Expenditures for reimbursable work and water conservation capital and indirect costs under the contract with Imperial Irrigation District are paid from this fund.

(b) Replacement and Refurbishment Fund (Fund No. 5001, established 1988). Used to finance certain capital program expenditures from current revenues in accordance with Section 5109, subject to the conditions contained in Section 5202(b).

(c) State Contract Fund (Fund No. 5701, established 1960). Used for the payment of capital charges under the State Water Contract, including the capital charges for off-aqueduct power facilities, subject to the conditions contained in Section 5201(d).

(d) Special Tax Fund (Fund No. 5702, established 1951). Annexation fees (cash payments and special tax collections) are deposited in this fund and transferred to the State Contract Fund to pay a portion of State Water Contract capital charges.

(e) Water Revenue Fund (Fund No. 1002, established 1975). Receipts from water sales are deposited in this fund and are transferred to various other funds in accordance with revenue bond covenants and Board resolutions to pay in order of priority:

- (1) Operation and maintenance expenditures;
- (2) Principal of, premium, if any, and interest on the Prior Lien Waterworks Revenue Bonds and any required deposits into any reserve funds or accounts therefore;
- (3) The interest on and bond obligation of Subordinate Lien Water Revenue Bonds and Parity Obligations issued pursuant to Master Resolution 8329 (the Master Resolution) adopted by the Board on July 9, 1991 and any Supplemental Resolutions thereto;



- (4) All other payments required for compliance with the Master Resolution, and any Supplemental Resolutions;
- (5) Principal of and interest on Commercial Paper Notes and other amounts due a provider of a liquidity facility;
- (6) Deposits into the Water Standby Charge Fund in accordance with resolutions imposing such charges; and
- (7) Any other obligations which are charges, liens, or encumbrances upon or payable from net operating revenues.

Moneys remaining at the end of each month, after the foregoing transfers, are transferred to the Revenue Remainder Fund.

(f) Operation and Maintenance Fund (Fund No. 1003, established 1975). Used to pay all operation and maintenance expenditures, including State Water Contract operation, maintenance, power and replacement charges, subject to the conditions contained in Section 5201(f).

(g) Revenue Remainder Fund (Fund No. 1004, established 1975). Used to maintain working capital and may be used for any lawful purpose by the District, subject to the conditions contained in Section 5202.

(h) Water Rate Stabilization Fund (Fund No. 5501, established 1987). Used to reduce future water revenue requirements or, as directed by the Board, for other lawful purposes, in accordance with Section 5202.

(i) Water Treatment Surcharge Stabilization Fund (Fund No. 5502, established 1988). Used to mitigate required increases in the surcharge for water treatment or, as directed by the Board, for other lawful purposes, in accordance with Section 5202.

(j) Revolving Construction Fund (Fund No. 5003, established 1988). Capital expenditures made from this fund are to be reimbursed from proceeds of security sales to the extent such expenditures are authorized uses of debt proceeds under the Act, subject to the conditions and restrictions contained in Section 5201(g).

(k) Employee Deferred Compensation Fund (Fund No. 6003, established 1976). Compensation deferred by employees under Section 457 of the Internal Revenue Code of 1986, as amended, is deposited in this fund and is withdrawn in accordance with Articles 2 and 3 of Chapter 7 of Division VI of this Administrative Code.

(l) Iron Mountain Landfill Closure/Postclosure Maintenance Trust Fund (Fund No. 6005, established 1990). Used as a trust fund to maintain moneys sufficient to cover the costs of closure and postclosure maintenance of the District's solid waste landfill facility at Iron Mountain, in accordance with regulations of the California Integrated Waste Management Board, and subject to the conditions contained in Section 5201(l).

(m) Water Standby Charge Fund (Fund No. 1005, established 1992). Used to separately hold revenues attributable to water standby charges; amounts deposited in this fund are used exclusively for the purpose for which the water standby charge was authorized.

(n) Water Transfer Fund (Fund No. 1007, established 1995). Used for moneys set aside for the purchase of water through transfers or similar arrangements, and for the costs of filling the Eastside Reservoir Project.

(o) Self-Insured Retention fund (Fund No. 1008, established 1999). Used to separately hold amounts set aside for emergency repairs and claims against the District as provided in Section 5201(o).



(p) Lake Mathews Multi Species Reserve Trust fund (Fund 6101, established 1997.) Used as set forth in agreement between Metropolitan and the Riverside County Habitat Conservation Agency for the Multi Species Reserve.

(q) There shall be established in the Treasury of the District such funds and accounts as are required pursuant to bond covenants, tax and non-arbitrage certificates, bond counsel letters of instruction and related documents, to provide for accountability of District funds and compliance with applicable federal and state law and regulations. Such funds and accounts shall be established for each issue of bonds, notes or other obligations of the district as required in the respective bond or note resolution and closing documents.

(r) Water Stewardship Fund (Fund No. 1009 established 2005). Used to collect revenue from the Water Stewardship Rate and to pay costs associated with water recycling, seawater desalination, conservation, brackish water desalination, or other demand management programs. These funds can also be used to fund administrative costs associated with these programs. Funds may be used as directed by the Board, for other lawful purposes, in accordance with Section 5201(p) and Section 5202(d).

38241 – May 8, 1990; amended and paragraph (bb) added by M.I. 38305 – June 12, 1990; paragraphs (cc), (dd) and (ee) added by M.I. 38999 – June 11, 1991; amended and paragraphs (ff), (gg), (hh) and (ii) added by M.I. 39171 – August 20, 1991; paragraphs (jj), (kk), and (ll) added by M.I. 39785 – August 20, 1992; paragraph (k)(6) added, paragraph (jj) added, paragraphs (kk) – (mm) renumbered by M.I. 39925 – November 10, 1992; new paragraphs (nn) through (uu) added by M.I. 40272 – June 15, 1993; paragraph (bb) amended by M.I. 40273 – June 15, 1993; paragraphs (vv) through (bbb) added by M.I. 40388 – August 24, 1993; paragraphs (i) and (q) amended, paragraph (r) deleted and remainder of section renumbered by M.I. 40443 – September 21, 1993; paragraph (q) amended by M.I. 40976 – August 19, 1994; paragraph (bbb) added by M.I. 41581 – September 12, 1995; paragraphs (a) through (bbb) amended and new paragraphs (bbb) through (sss) added by M.I. 42817 – February 10, 1998; paragraphs (ttt) through (aaaa) added April 1998, by authority granted to the General Counsel by M.I. 42817 – February 10, 1998; paragraphs (bbbb) through (jjjj) added September 1998, by authority granted to the General Counsel by M.I. 42817 – February 10, 1998; paragraph (kkkk) added by M.I. 43434 – March 9, 1999; paragraph (a) amended, old paragraphs (c), (g)-(j), (m), (n), (p), (q), (u)-(x), (z), (bb)-(hh), (jj)-(aaa), and (ccc)-(jjjj) deleted, remaining paragraphs renumbered, and new paragraphs (q) and (r) added by M. I. 45249 – March 11, 2003; paragraph (b) amended, paragraph (e) repealed and paragraphs (f) – (r) renumbered by M. I. 45904 – September 14, 2004; new paragraph (r) added by M. I. 46266 – June 14, 2005; paragraph (g) amended by M. I. 46838 – October 10 2006.

#### §. 5201. Restricted Funds.

Cash and securities to be held in the various ledger funds shall be as follows:

- (a) General Obligation Bond Interest and Principal Funds and the Waterworks General Obligation Refunding Bonds Interest and Principal Funds, the cash and securities in each as of June 30, shall be at least equal to the debt service for the ensuing 18 months, less revenues anticipated to be derived from the next succeeding tax levy specifically for such debt service.
- (b) For the Waterworks Revenue Bonds Interest and Principal Funds, the Water Revenue Bonds Reserve Funds, the Water Revenue Refunding Bonds Interest and Principal Funds and the Water Revenue Refunding Reserve Bonds, the cash and securities in each shall be at least equal to the minimums required by the resolutions of issuance for such bonds.
- (c) For the Bond Construction Funds there shall be no minimum requirements; provided that any cash and securities in such funds shall be restricted to use for the purposes such finances were required.
- (d) For the State Contract Fund, cash and securities on hand June 30 and December 31 shall equal the capital payments to the State Department of Water Resources that are due on July 1 of the same year and January 1 of the following year, respectively.
- (e) For the Special Tax Fund, there shall be no minimum requirement.

(f) For the Operation and Maintenance Fund, cash and securities shall be at least equal to the minimum required by the resolutions of issuance for revenue bonds.

(g) For the Revolving Construction Fund, there shall be no minimum requirement. Cash and securities in this fund, unless restricted as to use by resolution of the Board, shall be available for transfer to the Water Rate Stabilization Fund and the Water Treatment Surcharge Stabilization Fund at the discretion of the Board.

(h) For the Commercial Paper, Series A, Note Payment Fund, and the Commercial Paper, Series B, Note Payment Fund, the District shall deposit amounts sufficient to pay principal of, and interest on, such Commercial Paper Notes in an amount at least equal to one-half of the projected interest payments due on such notes in the subsequent fiscal year.

(i) For the Water Standby Charge Fund, there shall be no minimum requirement; provided that any cash and securities in such fund shall be restricted to use for the purposes such moneys were authorized.

(j) For the General Obligation Bond Excess Earnings Funds, the Waterworks General Obligation Refunding Bond Excess Earnings funds, the Water Revenue Bond Excess Earnings Funds and the Water Revenue Refunding Bond Excess Earnings Funds, the minimum requirement shall be the amounts deposited into this fund in accordance with the provisions of the Tax and Nonarbitrage Certificates and Resolutions for the Bonds.

(k) For the Waterworks General Obligation Refunding Bonds, 1993 Series A1 and A2, Escrow Account Fund, the minimum requirement shall be the amounts necessary to pay the principal, if any, and the interest on the Series A1 and A2 Bonds to the crossover date, and to defease certain maturities of outstanding prior general obligation bonds.

(l) For the Iron Mountain Landfill Closure/Postclosure Maintenance Trust Fund, cash and securities as of June 30, shall be at least equal to the Chief Executive Officer's latest estimates of closure and postclosure maintenance costs.

(m) For the Optional General Obligation Bond Redemption Fund and the Optional Revenue Bond Redemption Fund, the minimum requirement shall be the amount necessary to redeem such untendered, refunded bonds which have been called for redemption.

(n) For the Water Transfer Fund, all amounts budgeted or pledged for purchase of water through transfers or similar arrangements, and for the costs of filling the Eastside Reservoir Project, shall be set aside in such fund and used solely for such purpose.

(o) For the Self-Insured Retention fund, all amounts in such fund shall be set aside and used solely for emergency repairs and claims against the District. The minimum cash and securities to be held in such fund as of June 30 of each year shall be \$25 million.

(p) For the Water Stewardship Fund, there shall be no minimum requirement; all amounts in such fund shall be used to fund the Conservation Credit Program, Local Resources Program, seawater desalination, brackish water desalination, and similar demand management programs, including the departmental operations and maintenance costs for administering these programs.

Section 331.1 - M.I. 32735 - May 8, 1979, effective July 1, 1979 [Supersedes M.I. 30984 - August 19, 1975; M.I. 31826 - June 14, 1977 and M.I. 32292 - June 13, 1978]; paragraph (f) [formerly Section 331.1.6] added by M.I. 35309 - September 11, 1984. Section 331.1 repealed and Section 5200 adopted by M.I. 36464 - January 13, 1987, effective April 1, 1987; amended by M.I. 36676 - June 9, 1987; paragraph (g) added by M.I. 37449 - December 13, 1988; renumbered to Section 5201 and paragraphs (a) and (c) amended by M.I. 38241 - May 8, 1990; paragraph (c) amended and paragraph (h) added by M.I. 38999 - June 11, 1991; paragraphs (b) and (c) amended by M.I. 39171 - August 20, 1991; paragraphs (b) and (c) amended by M.I. 39785 - August 20, 1992; paragraph (i)

added by M.I. 39925 – November 10, 1992; paragraphs (a)(b)(c) amended and paragraph (j)(k) added by M.I. 40272 – June 15, 1993; paragraph (h) amended and paragraph (l) added by M.I. 40273 – June 15, 1993; paragraphs (a), (b), and (j) amended by M.I. 40388 – August 24, 1993; paragraph (j) amended and paragraph (m) added by M.I. 40443 – September 21, 1993; paragraph (n) added by M.I. 41581 – September 12, 1995; paragraphs (b)(c)(h)(j)(k) (l)(n) amended by M.I. 42817-- February 10, 1998; paragraphs (b), (c), and (j) amended April 1998 by authority granted the General Counsel by M.I. 42817 – February 10, 1998; paragraph (o) added by M.I. 43434 – March 9, 1999; paragraphs (a)–(c), and (j) amended by M. I. 45249 – March 11, 2003; paragraph (n) amended by M. I. 45775 – June 8, 2004; paragraph (p) added by M. I. 46266 – June 14, 2005.

#### §. 5202. Fund Parameters.

The minimum cash and securities to be held in the various ledger funds as of June 30 of each year shall be as follows:

- (a) For the Revenue Remainder Fund cash and securities on hand of June 30 of each year shall be equal to the portion of fixed costs of the District estimated to be recovered by water revenues for the eighteen months beginning with the immediately succeeding July. Such funds are to be used in the event that revenues are insufficient to pay the costs of the District.
- (b) For the Replacement and Refurbishment Fund, any unexpended monies shall remain in the Fund for purposes defined in Section 5109, or as otherwise determined by the Board. The end-of-year fund balance may not exceed \$95 million. Available monies in excess of \$95 million at June 30 shall be transferred to the Water Rate Stabilization Fund, unless otherwise determined by the Board.
- (c) Amounts remaining in the Revenue Remainder on June 30 of each year after meeting the requirements set forth in Section 5202(a) shall be transferred to the Water Rate Stabilization Fund and to the extent required under Section 5202(d), to the Water Treatment Surcharge Stabilization Fund.
- (d) After making the transfer of funds as set forth in Section 5202(c), a determination shall be made to substantially identify the portion, if any, of such transferred funds attributable to collections of treatment surcharge revenue in excess of water treatment cost and to collections of water stewardship rate revenue in excess of costs of the Conservation Program, Local Resources Program seawater desalination and similar demand management programs, including the departmental operations and maintenance costs of administering these programs. Such funds shall be transferred to the Water Treatment Surcharge Stabilization Fund and the Water Stewardship Fund, respectively, to be available for the principal purpose of mitigating required increases in the treatment surcharge and water stewardship rates. If such determination indicates a deficiency in treatment surcharge or water stewardship rate revenue occurred during the fiscal year, a transfer of funds shall be made from the Water Treatment Surcharge Stabilization Fund or the Water Stewardship Fund, as needed and appropriate, to reimburse funds used for the deficiency. Notwithstanding the principal purpose of the Water Treatment Surcharge Stabilization Fund and the Water Stewardship Fund, amounts assigned to these fund shall be available for any other lawful purpose of the District.
- (e) Amounts in the Water Rate Stabilization Fund shall be held for the principal purpose of maintaining stable and predictable water rates and charges. The amount to be held in the Water Rate Stabilization fund shall be targeted to be equal to the portion of the fixed costs of the District estimated to be recovered by water revenues during the two years immediately following the eighteen-month period referenced in Section 5202(a). Funds in excess of such targeted amount shall be utilized for capital expenditures of the District in lieu of the issuance of additional debt, or for the redemption, defeasance or purchase of outstanding bonds or commercial paper of the District as determined by the Board. Provided that the District's fixed charge coverage ratio is at or above 1.2 amounts in the Water Rate Stabilization Fund may be expended for any lawful purpose of the District, as determined by the Board of Directors, provided that any funds distributed to member agencies shall be allocated on the basis of all water sales during the previous fiscal year, such sales to include sales under the Interim Agricultural Water Program, Replenishment Service Program and all Full Service water sales.

Notwithstanding the fund parameters set forth in this Section 5202, including, but not limited to, any minimum fund balances or specified uses and purposes, all amounts held in the foregoing funds shall be available to pay interest on and Bond Obligation (including Mandatory Sinking Account Payments) of Water Revenue Bonds issued pursuant to Resolution 8329 adopted by the Board on July 9, 1991, as amended and supplemented (the Master Resolution), and Parity obligations. Capitalized terms not defined in this paragraph shall have the meanings assigned to such terms in the Master Resolution.

Section 331.2 - M.I. 32735 - May 8, 1979, effective July 1, 1979 [Supersedes M.I. 30984 - August 19, 1975; M.I. 31826 - June 14, 1977 and M.I. 32292 - June 13, 1978]; amended by M.I. 35309 - September 11, 1984; amended by M.I. 35730 - July 9, 1985. Section 331.2 repealed and Section 5201 adopted by M.I. 36464 - January 13, 1987, effective April 1, 1987; paragraph (a) amended and paragraph (b) added by M.I. 36676 - June 9, 1987; paragraph (a) amended by M.I. 36731 - July 14, 1987; paragraph (b) amended and paragraph (c) added by M.I. 37007 - February 9, 1988; amended by M.I. 37449 - December 13, 1988; paragraph (a) amended by M.I. 37679 - May 9, 1989; renumbered to Section 5202 by M.I. 38241 - May 8, 1990; paragraphs (c) and (d) amended by M.I. 38304 - June 12, 1990; paragraph (a) amended by M.I. 39794 - August 20, 1992; paragraph (e) added by M.I. 41581 - September 12, 1995; Section renamed and paragraphs (a)-(c) and (e) amended by M.I.43434 - March 9, 1999; paragraph (e) amended by M.I. 43587 - June 8, 1999; paragraph (b), (c) and (e) amended by M. I. 44907 - June 11, 2002; paragraph (b) amended by M. I. 45904 - September 14, 2004; paragraph (d) amended by M. I. 46266 - June 14, 2005; paragraph (e) amended by M. I. 46838 - October 10, 2006; final paragraph added by M.I. 47286 - November 20, 2007.

#### §. 5203. Indirect Credit of District.

The Chief Executive Officer may negotiate with the Department of Water Resources on the basis of using the indirect credit of the District to finance State Revenue Bonds so long as the obligation of the District thereunder does not exceed the obligation required under the State Contract.

Section 331.2 renumbered 331.3. Section 331.3 repealed and Section 5202 adopted by M.I. 36464 - January 13, 1987, effective April 1, 1987; renumbered to Section 5203 by M.I. 38241 - May 8, 1990.

#### §. 5204. Compliance with Fund Requirements and Bond Indenture Provisions.

As of June 30 of each year, the Chief Executive Officer shall make a review to determine whether the minimum fund requirements outlined in this Chapter have been met and whether the District has complied with the provisions of the articles and covenants contained in the resolutions of issuance for all outstanding District bond issues during the preceding fiscal year. The Chief Executive Officer, after consulting with the General Counsel, shall report the results of his review in writing to the Board of Directors annually.

Section 331.4 - M.I. 34190 - April 13, 1982. Section 331.4 repealed and Section 5203 adopted by M.I. 36464 - January 13, 1987, effective April 1, 1987; amended by M.I. 36676 - June 9, 1987; renumbered to Section 5204 by M.I. 38241 - May 8, 1990

## OPERATING POLICIES

O.P. NUMBER	TITLE	ISSUE DATE	REVISION DATE
F-01	Operating, Expensed and Capital Equipment	3/17/97	5/29/02

<b>SUMMARY</b>	This policy relates to the purchase, assignment, tracking, maintenance, and retirement of operating, expensed and capital (OEC) equipment.
<b>SUPERSESION</b>	This Operating Policy supersedes Operating Policy F-01 dated March 17, 1997.
<b>AUTHORITY</b>	The Chief Executive Officer (CEO) delegates the authority to establish and maintain OEC equipment policies and procedures to the Chief Financial Officer and Business Services Section, respectively.
<b>DEFINITIONS</b>	<p><b>Operating Equipment:</b> a discrete piece of equipment that is not a component part of a fixed asset or stationary facility. The equipment must have:</p> <ul style="list-style-type: none"> <li>• An original purchase cost equal to or greater than \$5,000. The capitalized amount includes the cost of the equipment, tax, transportation, delivery, third-party installation, and other acquisition costs.</li> <li>• A useful life of at least five years from the date of acquisition (four years for vehicles).</li> </ul> <p><b>Expensed Equipment:</b> a discrete piece of equipment that is not a component part of a fixed asset or stationary facility and has an original purchase cost of less than \$5,000. Attachments and improvements to expensed equipment are also expensed.</p> <ul style="list-style-type: none"> <li>• <b>Trackable:</b> expensed equipment that must be tracked because it is loss prone or incurs monthly charges. Items that incur monthly charges, such as cell phones, are tracked by their coordinators.</li> </ul>

- **Nontrackable:** those pieces of expensed equipment that do not meet the criteria stated above.

**Capital Equipment:** equipment that is charged to capital projects and entered at zero cost in the Oracle Asset Tracking System (OATS).

## POLICIES

1. Operating equipment is purchased through the operating equipment appropriation and general fund. Operating equipment is capitalized and depreciated.
2. Expensed equipment is acquired through the Operations and Maintenance (O&M) budget fund under the Equipment Expensed account. Expensed equipment is not capitalized.
3. Capital equipment is charged to the appropriate capital project. Operating equipment purchased to support a capital project or contract is depreciated against the life of the project. When the equipment is sold, the net proceeds are credited against the project cost.
4. Metropolitan assets classified as OEC equipment are purchased, received, tracked, and retired in the operating equipment database (OATS). Access to the OATS database is granted only to regular employees.
  - OEC equipment is assigned only to regular employees by their managers or supervisors.
  - Upon receipt, OEC equipment is barcoded by designated site receivers or their alternates.
5. Operating equipment upgrades extend the life or increase the functional capability of major pieces of operating equipment and are capitalized, provided the upgrade meets the following criteria:
  - Cost exceeds \$5,000
  - Cost is greater than 50% of the original total purchase price of the equipment
  - Upgrade extends the estimated life of the equipment by at least three years

O.P. NUMBER	TITLE	ISSUE DATE	REVISION DATE
F-07	Capitalization & Retirement of Plant Assets	3/6/02	3/12/09

**SUMMARY** This document establishes the policies governing the capitalization and retirement of plant assets.

**SUPERSESION** This Operating Policy supersedes Operating Policy F-07 originally issued September 23, 1998; revised March 6, 2002.

**AUTHORITY** The General Manager delegates the authority to establish and maintain policies regulating the capitalization and retirement of plant assets to the Chief Financial Officer/Assistant General Manager or designee.

**DEFINITIONS** Component Equipment – equipment considered to be part of a plant, usually determined when the item is permanently affixed in one location (as opposed to operating equipment as defined in Operating Policy F-01, Operating, Expensed and Capital Equipment).

Plant Assets – a new facility, betterment, replacement/refurbishment, or equipment which is a component part of a plant and that has both:

- A total cost of at least \$50,000
- A useful life of at least five years

Replacement/Refurbishment – the substitution/repair of a new facility or component of an existing facility. A replacement always involves a replacement of facilities or component, and a refurbishment may involve the replacement of facilities or component.

Retirement – the result of the replacement of existing facilities with new facilities designed to accomplish the same function, or as the result of the sale or abandonment of facilities that are no longer of economic use.

Service Connection – a pipeline, with its appurtenances, that branches off or connects the water distribution system to customer facilities.

Integrated Software – computer software that is integrated into and necessary to operate general plant and equipment (e.g., Supervisory Control and Data Acquisition system [SCADA], telephone system, and computer-operated lathes), rather than perform an application.

**POLICIES**

1. Any item of cost that conforms to the criteria of plant assets shall be capitalized as a plant asset; otherwise the cost is charged to operations and maintenance expense.
2. When multiple components of a plant asset are acquired or built, and the components have individual costs of less than \$50,000, the cost of these items is an operations and maintenance expense. If the components have useful lives of five years or more, they are capitalized when:
  - The aggregate total costs exceed \$50,000, and
  - The components are added simultaneously or within a planned short period of time.
3. Service connections are capitalized as plant assets and are not subject to the \$50,000 cost criterion. Customers pay the cost of acquiring and installing service connections. The customer contribution is recorded as contributed capital.
4. Integrated software is considered part of the plant and equipment of which it is an integral part and capitalized and depreciated accordingly. The aggregate cost of the hardware and software is used to determine whether to capitalize or expense the costs.
5. Replacement or refurbishment costs are charged to operations and maintenance expense provided such costs do not exceed the capital cost and useful life criteria for the assets involved.
6. Plant assets replaced, sold or abandoned are removed from accounting records. The Engineering Services Section notifies the Controller of plant assets to be retired.
7. Costs of replacement plant assets are accumulated under separate and identifiable project numbers. Project descriptions identify, to the extent practicable, the plant assets being retired.



## STATEMENT OF INVESTMENT POLICY (June 09, 2015)

### I. INVESTMENT AUTHORITY

In accordance with Section 53600 et seq. of the Government Code of the state of California, the authority to invest public funds is expressly delegated to the Board of Directors for subsequent re-delegation to the Treasurer. Investments by the Treasurer pursuant to the delegation hereby made by this Statement of Investment Policy are limited to those instruments specified by the Board in Section 5101 of the Metropolitan Water District Administrative Code, and as further defined in this Statement of Investment Policy.

### II. STATEMENT OF OBJECTIVES

Per Section 53600.5 of the California Government Code, the primary objective of the Treasurer shall be to safeguard the principal of the funds under his control when investing public funds.

The secondary objective shall be to meet all liquidity requirements and the third objective shall be to achieve a return on the funds under his control.

In order of priority, three fundamental criteria shall be followed in the investment program:

1. Safety of Principal – Investments shall be undertaken in a manner which first seeks to ensure the preservation of principal in the portfolio. Each investment transaction shall be entered into after taking into consideration the quality of the issuer, the underlying security or collateral, and diversification of the portfolio. Cash flow analysis will be conducted and utilized to avoid the need to sell securities prior to maturity and to reduce market risk.
2. Liquidity – In an effort to ensure that Metropolitan's portfolio will be sufficiently liquid to meet current and anticipated operating requirements, a cash flow analysis will be performed on an ongoing basis. Investments shall be made so that the maturity date is compatible with cash flow needs and safety of principal.
3. Return on Investment – Investments shall be undertaken to produce an acceptable rate of return after first considering safety of principal and liquidity and the prudent investor standard.

The Investment Strategy is subordinate to the Statement of Objectives, i.e., implementing the investment strategies listed below is not intended to supersede the objectives of Safety, Liquidity and Return.

Investment Programs – The portfolio is divided into long-term, short-term and bond reserves segments. The long-term segment of the portfolio will be actively managed, and performance measured against the Bank of America Merrill Lynch, Corporate and Government, 1 to 5 years, A Rated and above index or other index determined by the Finance and Insurance Committee. The duration of the long-term segment will be limited to the duration of the index plus or minus 1.5.

The short-term segment of the portfolio will be managed to meet Metropolitan's cash flow needs. The total return of the short-term segment of the portfolio will be measured against the total return of the Bank of America Merrill Lynch 3-Month Treasury Bill index, or other index determined by the Finance and Insurance Committee. The duration of the short-term segment is limited to the duration of the index plus or minus 0.2. Also, for purposes of the duration calculation, Local Agency (e.g., a California municipality), securities that provide Metropolitan the right to redeem the security at par on a daily, weekly, or monthly basis will be considered to have a maturity of no more than 30 days. The bond reserves segment shall be invested in high quality securities, with the goal of earning

a return that minimizes any potential negative arbitrage experienced by each bond reserve fund. The bond reserve funds may be invested in securities issued by a Local Agency including securities issued by Metropolitan. Bond reserve funds may also be invested in money market and fixed income investments.

All investment activity shall be consistent with the prudent investor standard.

### III. **PRUDENT INVESTOR STANDARD**

As applicable to Metropolitan and its fiduciaries, the prudent investor standard is a standard of conduct whereby any person authorized to make investment decisions on behalf of Metropolitan acts with care, skill, prudence and diligence under the circumstances then prevailing, including but not limited to, the general economic conditions and the anticipated needs of Metropolitan, that a prudent person acting in like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and meet the liquidity needs of Metropolitan.

### IV. **PORTFOLIO**

Any reference to the portfolio shall mean the total of Metropolitan's cash and securities under management by the Treasurer, excluding cash and securities held in escrow or trust on behalf of Metropolitan. The Treasurer may invest in any security authorized for investment under the state law, subject to the limitations described herein:

#### 1. Maturity Limitations

- a. The Treasurer is authorized to invest special trust funds in investments with a term to maximum maturity in excess of five years. These funds include, but are not limited, to the following:

Water Revenue Bond Reserve Funds

Escrow Funds

Debt Service Funds

Iron Mountain Landfill Closure

Post closure Maintenance Fund

Lake Mathews Conservancy

- b. For certain instruments, the term of the investment is limited by market convention or as otherwise prescribed herein.
- c. The Short-Term portfolio may be invested in United States Treasury, Federal Agency and California Local Agency securities (including securities issued by Metropolitan) with stated maturities in excess of five years. All other securities held in the short-term portfolio are limited to maximum maturities of 5 years or as otherwise specified in Section V, Authorized Securities.
- d. The Long-Term portfolio may be invested in United States Treasury and Federal Agency securities with maturities in excess of five years.

## 2. Investment Transactions

- a. Information concerning investment opportunities and market developments will be gained by maintaining contact with the financial community.
- b. Confirmations of all investment transactions will be sent directly to the Controller for audit.
- c. Annually the Treasurer shall transmit a copy of the current Statement of Investment Policy to all approved dealers. Each dealer is required to return a signed statement indicating receipt and understanding of Metropolitan's investment policies.
- d. When practical, the Treasurer shall solicit more than one quotation on each trade. All investment trades will be awarded on a competitive bid basis.
- e. Each day's listing of market indices and quotations shall be recorded and retained by the Treasurer for a period of five years.

## 3. Sale of Securities

- a. Securities may be sold to provide needed liquidity, to restructure the portfolio to reduce risk or to increase the expected return of the portfolio. In no instance shall a sale of securities be used for speculative purposes.

## 4. Prohibited Investments

- a. Prohibited investments include inverse floaters, range notes, interest only strips derived from a pool of mortgages (Collateralized Mortgage Obligations), and any security that could result in zero interest accrual if held to maturity. (Zero interest accrual means the security has the potential to realize zero earnings depending upon the structure of the security. Zero coupon bonds and similar investments that start at a level below the face value are legal because their value increases.)

## 5. Portfolio Adjustments

- a. Portfolio percentage limitations for each category of investment are applicable only at the date of purchase. Should an investment percentage of portfolio limitation be exceeded due to an incident such as a fluctuation in portfolio size, the portfolio manager is not required to sell the affected securities.
- b. Should a security held in the portfolio be downgraded below the minimum criteria included in this Statement of Investment Policy, the Treasurer or investment manager shall sell such security in such a manner to minimize losses on the sale of such security. If the security is downgraded to a level that is less than investment grade, the Treasurer or investment manager shall sell such affected security immediately; however, if immediate liquidation of the security is not in the best interests of Metropolitan, the Treasurer or investment manager, in consultation with an ad hoc committee made up of the Chairman of the Board, the Chairman of the Finance and Insurance Committee and the General Manager, and with the concurrence of the General Counsel, may dispose of the security in an orderly and prudent manner considering the circumstances, under terms and conditions approved by a majority of the members of such ad hoc committee. If the security matures within 60 days of the rating change, the Treasurer or investment manager may choose not to sell the security. The Treasurer shall include a description of any securities that have been downgraded below investment grade and the status of their disposition in his monthly report.

6. Safekeeping

- a. All securities transactions, including collateral for repurchase agreements entered into by Metropolitan shall be conducted on a delivery versus payment (DVP) basis.
- b. Securities will be held by an independent custodian designated by the Treasurer and held in safekeeping pursuant to a safekeeping agreement.
- c. All financial institutions that provide safekeeping services for Metropolitan shall be required to provide reports or safekeeping receipts directly to the Controller to verify securities taken into their possession.

V. **AUTHORIZED INVESTMENTS**

Money market securities described in this section must be of prime quality of the highest letter and number rating (A1, P1, F1 or higher) as provided by a nationally recognized statistical rating organization (NRSRO). NRSRO for the purpose of this section are Moody's Investors Service, Standard and Poor's Ratings Services, and Fitch Ratings. Money market securities include Bankers' Acceptances, Commercial Paper, Negotiable Certificates of Deposit, and Time Deposits.

1. U.S. Government and Agencies

- a. Investments in individual U.S. Treasury and Federal Agency securities shall not be subject to any maturity limitations, provided that the duration of the portfolio managed by any manager in which such investments are held does not exceed the applicable limitation described under "STATEMENT OF OBJECTIVES – Investment Strategy" above.
- b. Investments in Treasury or Federal Agency obligations shall not exceed 100 percent of all investments.
- c. United States Treasury securities consist of notes, bonds, bills or certificates of indebtedness, or those for which the faith and credit of the United States are pledged for the payment of principal and interest.
- d. Federal Agency securities consist of obligations, participations, or other instruments issued by United States federal agencies or government-sponsored enterprises, including those issued by or fully guaranteed as to principal and interest by federal agencies or United States government-sponsored enterprises.

2. Bankers' Acceptances

Restrictions are as follows:

- a. Investments in prime bankers' acceptances may not exceed 40 percent of the portfolio in effect on the date of purchase of any such investment.
- b. No more than 25 percent of this category of investments may be invested in any one commercial bank's acceptances.
- c. The maximum maturity shall be limited to 180 days.

3. Negotiable Certificates of Deposit

Restrictions are as follows:

- a. Investments in negotiable certificates of deposit may not exceed 30 percent of the total portfolio in effect on the date of purchase of any such investment.
  - b. The total investment in an eligible financial institution shall not exceed 25 percent of the total portfolio available for investment in this investment category.
  - c. To be eligible, a negotiable certificate of deposit must be issued by a nationally or state-chartered bank, a state or federal savings and loan association or savings bank, or by a state-licensed branch of a foreign bank.
  - d. The investment shall not exceed the shareholders' equity of any depository bank. For the purpose of this constraint, shareholders' equity shall be deemed to include capital notes and debentures.
  - e. The investment shall not exceed the total of the net worth of any depository savings and loan association, except that investments up to a total of \$500,000 may be made to a savings and loan association without regard to the net worth of that depository, if such investments are insured or secured as required by law.
  - f. The maximum maturity shall be limited to two years.
4. Commercial Paper

Restrictions are as follows:

- a. Investments in commercial paper shall not exceed 25 percent of the portfolio in effect on the date of purchase of any such investment.
- b. Each investment shall not exceed 270 days maturity.
- c. No more than 10 percent of the outstanding commercial paper of an issuing corporation may be purchased. In addition, the entity that issues the commercial paper shall meet the following conditions in Option 1 or Option 2:

Option 1:

- a. Is organized and operating in the United States as a general corporation and has total assets in excess of \$500 million.
- b. Has debt other than commercial paper, if any, that is rated "A" or higher by a nationally recognized rating agency.

## Option 2:

- a. Is organized within the United States as a special purpose corporation, trust or limited liability company.
- b. Has program-wide credit enhancements including, but not limited to, over-collateralization, letters of credit or surety bond.
- c. Has commercial paper that is rated "A-1" or higher by a nationally recognized rating agency.

5. Repurchase Agreements

A repurchase agreement is a purchase of authorized securities (other than commercial paper) with terms including a written agreement by the seller to repurchase the securities on a later specified date for a specified amount. Restrictions are as follows:

- a. The percentage limit for investment in repurchase agreements shall be 50 percent of the total portfolio.
- b. Purchases of repurchase agreements will be limited to a maximum maturity of one year.
- c. Repurchase agreements shall be made only with primary dealers in government securities or financial institutions with a Moody's Investors Service, Inc., or equivalent, rating of A or better.
- d. Such investments shall provide for purchased securities with a market value at least 102 percent of the amount of the invested funds. Value shall be adjusted not less than quarterly.
- e. Purchased securities are limited to Treasury bills, bonds and notes, or other investments that are direct obligations of or fully guaranteed as to principal and interest by the United States or any agency thereof; negotiable certificates of deposit; and bankers' acceptances eligible for acceptance under Federal Reserve rules. Zero coupon and stripped coupon instruments are not acceptable.
- f. Such investments shall provide for transfer of ownership and possession of the purchased securities either to Metropolitan directly or to a custodian depository institution which shall take record title and shall establish and maintain a sub-account in its financial records for the securities in Metropolitan's name, and such custodian shall not be the dealer from which the securities were purchased.
- g. Each repurchase agreement shall provide a contractual right to liquidation of the purchased securities upon the bankruptcy, insolvency or other default of the counterparty.
- h. Purchased securities shall have maturities within 60 months of the date of investment.

## 6. Reverse Repurchase Agreements

A reverse repurchase agreement is a sale by the Treasurer of securities in the portfolio with terms including a written agreement to repurchase the securities on or before a specified date for a specified amount.

- a. Subject to the approval of the Board of Directors, the Treasurer may enter into a reverse repurchase agreement provided that the proceeds are invested solely to supplement the income normally received from the securities involved in the agreement. These agreements shall only be performed with primary dealers of the Federal Reserve Bank of New York.
- b. Reverse repurchases may be entered into to meet temporary liquidity needs and not for leverage.
- c. Investments in reverse repurchase agreements are limited to 20 percent of the base value of the portfolio. For the purpose of this constraint, base value of the portfolio shall be the total of Metropolitan's cash and securities under management by the Treasurer, excluding any amounts obtained through selling securities by reverse purchase agreements, securities lending agreements, or similar borrowing methods.
- d. The investment purchased with the proceeds of a reverse repurchase agreement must match or closely approximate the maturity of the reverse repurchase agreement(s).
- e. Purchases of securities with proceeds from reverse repurchase agreements may not be subject to a reverse repurchase agreement.
- f. Reverse repurchase agreements will be limited to a maximum maturity of 92 days.
- g. Securities used to make reverse repurchase agreements must be paid for and held for a minimum of 30 days prior to the transaction.

## 7. Time Deposits

For purposes of this policy, collateralized time deposits shall be considered investments.

The following criteria will be used in evaluating financial institutions and the form of collateral to determine eligibility for deposits:

- a. The financial institution must have been in existence for at least five years.
- b. Credit requirements may be waived for the maximum deposit amount that is insured by the Federal Deposit Insurance Corporation.
- c. The deposit shall not exceed the shareholders' equity of any depository bank. For the purposes of this constraint, shareholders' equity shall be deemed to include capital notes and debentures.
- d. The deposit shall not exceed the total of the net worth of any depository savings and loan association, except that deposits not exceeding a total of five

hundred thousand dollars (\$500,000) may be made to a savings and loan association without regard to the net worth of that depository, if such deposits are insured or secured as required by law.

- e. The total deposits shall not exceed the shareholders' equity of any depository bank.
- f. In order to secure such deposits, the financial institution shall maintain in the collateral pool, securities having a market value of at least 10 percent in excess of the total amount deposited.
- g. Promissory notes secured by real estate mortgages or deeds of trust may not be accepted as collateral.
- h. When other factors are equal, appropriate consideration will be given to a financial institution that either individually or as a member of a syndicate bids on or makes a substantial investment in Metropolitan's bonds; contributes service to Metropolitan or a member public agency; or offers significant assistance to Metropolitan, in order to provide for distribution of total deposits among eligible financial institutions.
- i. Purchased time deposits will be limited to a maximum maturity of one year.

#### 8. Medium-Term Notes

Restrictions are as follows:

- a. Investment in medium-term notes are limited to corporations organized and operating within the United States or by depository institutions licensed by the United States or any state and operating within the United States.
- b. Notes eligible for investment shall be rated in a rating category of at least "A" or its equivalent or better by a nationally recognized rating service.
- c. Purchases of medium-term notes may not exceed 30 percent of the portfolio.
- d. Purchases of medium-term notes will be limited to a maximum maturity of five years.
- e. The total investment in the medium-term notes of an issuer shall not exceed 25 percent of the total portfolio available for investment in this investment category.

#### 9. Mortgage Obligations and Asset Backed Securities

This category of investments includes any mortgage pass-through security, collateralized mortgage obligation, mortgage-backed or other pay-through bond, equipment lease-backed certificate, consumer receivable pass-through certificate, or consumer receivable-backed bond.

Restrictions are as follows:

- a. Mortgage pass-through, collateralized mortgage obligation, mortgage-backed or other pay-through bond, equipment lease-backed certificate, and consumer



receivable pass-through certificate are subject to a maximum maturity of five years.

- b. Securities eligible for investment shall be issued by an issuer having an "A" or higher rating for the issuer's debt as provided by a nationally recognized rating service and rated in a rating category of "AAA" by a nationally recognized rating service.
- c. Purchase of securities authorized by this subdivision may not exceed 20 percent of the portfolio.
- d. The total investment in the mortgage-backed or asset-backed securities of an issuer shall not exceed 25 percent of the total portfolio available for investment in this category.

#### 10. Local Agency Investment Fund Deposits

Deposits for the purpose of investment in the Local Agency Investment Fund of the State of California may be made up to the maximum amount permitted.

#### 11. Shares of Beneficial Interest

The Treasurer may invest in shares of beneficial interest issued by eligible diversified management companies that (1) invest in authorized securities such as United States Treasury notes, bonds, bills; registered state warrants or treasury notes and bonds for the State of California, obligations of local agencies; commercial paper; negotiable certificates of deposit; repurchase agreements or reverse repurchase agreements and medium term notes or (2) are money market funds registered with the Securities and Exchange Commission under the Investment Company Act of 1940. These companies must meet the following criteria:

- a. Attain the highest ranking of the highest letter and numerical rating provided by not less than two nationally recognized statistical rating agencies.
- b. Retain an investment adviser registered or exempt from registration with the Securities and Exchange Commission with not less than five years' experience investing in authorized securities and obligations listed above.
- c. Assets under management shall be in excess of \$500 million.
- d. The purchase price of the shares of beneficial interest purchased shall not include any commission that the companies may charge and shall not exceed 20 percent of the Portfolio. However, no more than 10 percent of the Portfolio may be invested in shares of beneficial interest of any one mutual fund described above.

#### 12. Investment Contracts

Funds held by a trustee or fiscal agent and pledged to the payment or security of bonds may be invested in accordance with the statutory provisions governing the issuance of those bonds or other forms of debt. These funds may also be invested in accordance with the ordinance, resolution, indenture or agreement executed by Metropolitan. Other forms of debt include, but are not limited to, the following: (a) obligations under a lease, and (b) an installment sale or other agreements. Eligible investments would consist of the following:

- a. Guaranteed Investment Contracts
- b. Forward Delivery Agreements collateralized with U.S. Treasury or Agency Securities
- c. Other investment contracts collateralized with U.S. Treasury or Agency Securities
- d. These investments may be purchased with maturities in excess of five years as noted in Section IV 1. of this policy.

### 13. California Local Agency Securities

- a. Investments in California local agency securities, including securities issued by Metropolitan, shall not be subject to any maturity limitations, provided that the duration of the portfolio managed does not exceed the applicable limit described under "STATEMENT OF OBJECTIVES – Investment Strategy"
- b. California local agency securities with a maturity in excess of five years must have a credit rating of at least AA (may be insured) and an underlying credit rating of A or better by a nationally recognized rating service
- c. The purchase of California local agency securities may not exceed 30 percent of the portfolio.
- d. The total investment in California local agency securities of an issuer shall not exceed 25 percent of the total portfolio available for investment in local agency securities. Investments in Metropolitan's tendered bonds may exceed the 25 percent limitation by issuer.
- e. The maximum limit of 30 percent specified in c. of this section is waived to the extent that such investments are for the purpose of purchasing Metropolitan's tendered bonds as a temporary investment. In other words, the investment portfolio may consist of Metropolitan- issued debt in amounts greater than 30 percent, but only Metropolitan securities.

## VI. **REPORTING**

In accordance with Administrative Code Section 5114, the Treasurer shall submit a monthly report to the Board Executive Secretary of the Board of Directors via the General Manager indicating the types of investment by fund and date of maturity, and shall provide the current market value of all securities, rates of interest, and expected yield to maturity. The Treasurer shall also submit a monthly summary report to the Board of Directors via the General Manager showing investment activity, including yield and earnings, and the status of cash by depository.

## VII. **MONITORING SAFETY AND LIQUIDITY OF DISTRICT FUND**

The Treasurer shall monitor or cause to be monitored the extent to which financial institutions with which Metropolitan maintains deposits or investments are consistent with Metropolitan's policies regarding business activities within countries that may jeopardize the safety and liquidity of Metropolitan funds or violate other Metropolitan policies. Such matters shall be reported to the Finance and Insurance Committee as part of the Treasurer's monthly report.

**VIII. ADMINISTRATION**

The Treasurer may, at any time, establish more restrictive requirements for the securities approved for investment as deemed appropriate in this Statement of Investment Policy. These restrictions may include, but are not limited to, higher credit ratings, lower percentage limits by security type or issuer, shorter maturities and additional collateral for repurchase agreements.

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## GLOSSARY OF TERMS

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**20 x 2020** — 2009 Water Conservation Act goal of twenty percent reduction in per capita regional water use by 2020.

**ACE** — Association of Confidential Employees; an employee bargaining unit at Metropolitan.

**Accrual** — An accounting method that records revenues when earned and expenses when incurred regardless of the timing of when the cash is actually paid or received.

**Acre-Foot** — A unit of measure equivalent to 325,851.4 gallons of water and weighs approximately 62.4 pounds, which meets the needs of two average families in and around the home for one year.

**ACWA** — Association of California Water Agencies.

**AFSCME** — American Federation of State, County, and Municipal Employees, Local 1902.

**Appropriation** — Money set aside for a specific purpose. The designation of the use to which a fund of money is to be applied.

**Bay Delta** — An environmentally sensitive area of the Sacramento/San Joaquin River Delta through and from which water flows to reach portions of California from the San Francisco Bay Area to San Diego. Moving water across the delta during the high-demand summer months is becoming more difficult as additional water is set aside to mitigate for environmental impacts.

**Budget** — A report of all anticipated expenditures and required reserves and the source of moneys to be used to meet such expenditures and provide such reserves.

**Budgeted Position** — A staff position approved by the Board of Directors for the fiscal year.

**California WaterFix (CA WaterFix)** — California WaterFix is a comprehensive science-based solution proposed by the state to modernize critical water delivery infrastructure of the State Water Project. The California WaterFix proposes construction of new water intakes in the north Delta and two 40-foot diameter tunnels under the Delta terminating at a forebay in the South Delta. This would fulfill the requirement of the 2009 Delta Reform Act to contribute toward meeting the coequal goals of providing a more reliable water supply for California and protecting, restoring and enhancing the Delta ecosystem. In May 2019, the Department of Water Resources (DWR) withdrew approval of the California WaterFix project.

**Capital Investment Plan (CIP)** — Metropolitan's CIP is designed to refurbish existing facilities needed to ensure a reliable distribution system, expand treatment facilities to meet current and future water quality regulations, and expand storage and conveyance facilities to meet current and future storage requirements.

**Capital Project** — A project that results in a new asset (e.g., a facility, betterment, replacement, equipment, etc.) that has a total cost of at least \$50,000 and a useful life of at least five years. Computer software can be capitalized if it costs \$250,000 or more and has a useful life of at least three years.

**The California Environmental Quality Act (CEQA)** — A statute that requires state and local agencies to identify the significant environmental impacts of their actions, and to avoid or mitigate those impacts, if feasible.

**Colorado River Aqueduct (CRA)** — The 242-mile-long water conveyance system built by Metropolitan to carry water from the Colorado River to its Southern California service area.

**Conservation Program** — A program where Metropolitan provides financial assistance for the development of conservation programs at the local level (e.g. energy efficient washing machines, low flush toilets, etc.).

**CUWCC** — California Urban Water Conservation Council, a non-profit 501c3 formed as a partnership of water suppliers, environmental groups, and others interested in conserving California's greatest natural resource, water.

**Debt Service** — The annual cost of repaying outstanding debt.

**Delta Conveyance** — The Department of Water Resources (DWR) is pursuing a new environmental review and planning process for a single tunnel project to modernize the State Water Project's Bay-Delta conveyance. The formal environmental review process is expected to begin with a Notice of Preparation under CEQA anticipated to be issued by DWR in the late 2019 timeframe. Planning, environmental review and conceptual design work by DWR for a proposed single tunnel project is expected to take approximately 18 to 36 months. A single tunnel project to be proposed under the new planning effort and environmental review process to be undertaken by DWR may be designed and configured differently than previously analyzed single tunnel alternatives. Information regarding the Delta conveyance project is located on Metropolitan's website at <http://www.mwdh2o.com/DocSvcPubs/DeltaConveyance/index.html>.

**Department of Water Resources (DWR)** — A department within the California Resources Agency which is responsible for the state's management and regulation of water usage.

**Distribution System** — Refers to the network of pipelines and canals used for the conveyance of water from Metropolitan's terminal reservoirs to member agency service connections.

**DVL** — Diamond Valley Lake. A reservoir built by Metropolitan with a capacity of 800,000 AF.

**EIR** — Environmental Impact Report.

**EMS** — Energy Management System.

**Endangered Species Act (ESA)** — An act of the federal government enacted in 1973 that provides for the conservation of species that are endangered or threatened and the conservation of the ecosystems on which they depend. A species is considered endangered if it is in danger of extinction throughout all or a significant portion of its range. A species is considered threatened if it is likely to become an endangered species within the foreseeable future.

**Enterprise Fund** — To account for operations that are financed and operated where the intent is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges.

**Ethics Program** — State law (SB 60) mandates that Metropolitan maintain a program to address and seek to avoid potential ethical abuses relating to business relationships, solicitation and/or receipt of campaign contributions, and public notice and approval procedures for contracts of \$50K or more. This program includes on-going training for board members and employees regarding ethics in the workplace.

**FERC** — Federal Energy Regulatory Commission.

**Fund** — A self-balancing set of accounts recording cash and other financial resources, together with all related liabilities and residual equities or balances, and changes therein, which are segregated for the purpose of

carrying on specific activities or attaining certain objective in accordance with special regulations, restrictions, or limitations.

**Fund Balance** — Created from excess revenues over expenditures. This can be a combination of collections/ revenues being higher than budget and actual expenditures being lower than budget.

**IID/Metropolitan Conservation Agreement** — Water conservation agreement with the Imperial Irrigation District (IID) that allows for the development of certain water conservation capital structures by Metropolitan in the Imperial Valley. Metropolitan, in turn, gets the quantity of water conserved during the term of this agreement, four years during construction, and 35 years after completion. It encompasses both the operating and maintenance, in direct, and capital cost of developing and implementing the program. This agreement is renewable.

**IRWMP** — Integrated Regional Water Management Plan.

**Integrated Resources Plan (IRP)** — An open and participatory planning process that takes a broad view of all water resource options available to the region and searches for the right combination of investments to achieve water supply objectives in a cost-conscious and environmentally responsible manner.

**Local Resources Program (LRP)** — A program in which Metropolitan provides financial assistance to its member agencies for the development of local groundwater recycling and groundwater recovery projects.

**MAPA** — Management and Professional Employees Association, Local 1001.

**Member Agency** — Refers to any of the 26 cities or public water agencies that comprise the Metropolitan Water District and whose representatives constitute the Board of Directors of Metropolitan.

**MAF (million acre-feet)** — A unit measure of water.

**Minute 319** — Agreement that amends the 1944 Treaty between Mexico and the United States by establishing new rules in sharing Colorado River water and provides immediate plans to address current challenges. Parties to the agreement include Metropolitan Water District of Southern California, Southern Nevada Water Authority, Central Arizona Water Conservation District. Minute 319 allows Mexico to store water in Lake Mead as Intentionally Created Mexican Apportionment for future delivery and environmental flows. Stored water will be exchanged among the parties to the agreement.

**MWDOC** — Municipal Water District of Orange County; one of 26 member agencies that comprise Metropolitan.

**MOU (Memorandum of Understanding)** — Legal agreements entered into between Metropolitan and any of the four employee bargaining units that dictate terms and conditions of employment.

**Operating Equipment** — Any portable equipment costing \$5,000 or more and having a useful life of five years or more.

**Operations Maintenance Power & Recovery (OMP&R)** — A component of the State Water Contract that is billed to the contracting agencies to maintain the system.

**OPEB** — Other Post Employment Benefits.

**ORP** — Oxidation Retrofit Program.

**Ozone** — It is an unstable form of oxygen composed of three-atom molecules that break down readily to normal oxygen and nascent oxygen. The latter is a powerful oxidizing agent and has germicidal action. Ozone is usually produced with on-site generators by passing high-voltage electricity through dry atmospheric air or pure

oxygen between stationary electrodes. This process converts a small percentage of the oxygen in the air into ozone. It is usually injected into the water to be treated in a highly baffled mixing chamber.

**PAYGO** — The practice of funding construction expenditures from current operating revenues in lieu of using debt proceeds.

**PVID** — Palo Verde Irrigation District.

**Palo Verde Land Management and Water Supply Program** — Calls for the development of a flexible water supply of between 25,000 and 111,000 acre-feet per year for 35 years through a land management and crop rotation program to be implemented by participating farmers in the Palo Verde Valley. The maximum water supply that could be developed would be about 3.63 million acre-feet during the 35-year term while the minimum water supply required to be developed would be 1.76 million acre-feet.

**Performance Measure** — An indicator of progress toward completing an initiative, achieving a goal, or implementing a strategy. Performance measures are quantifiable and tracked over time. Measures can indicate problem areas that need attention or be a guide for continual performance improvement through specific initiatives and actions.

**PCCP** — Pre-stressed Concrete Cylinder Pipe.

**Power Recovery** — Energy generated from the operation of sixteen Metropolitan-owned hydroelectric generating facilities. The term "recovery" derives from the capture of potentially wasted electrical energy from Metropolitan's water distribution system.

**Quagga Mussel** — A destructive non-native species of mussel from the Ukraine region that could clog pipes and water line.

**Quantification Settlement Agreement (QSA)** - The Quantification Settlement Agreement (QSA) and related agreements, executed by Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Metropolitan, and other parties in October 2003, establishes Colorado River water use limits for IID and CVWD, and provides for specific acquisitions of conserved water and water supply and delivery arrangements for up to 110 years. The QSA and related agreements provide a framework for Metropolitan to enter into other cooperative Colorado River supply programs and set aside several disputes among California's Colorado River water agencies.

**Regional Recycled Water Program (RRWP)** — The first phase was the construction of an advanced water treatment demonstration facility that takes treated wastewater and purifies it through various advanced treatment technologies to produce a safe, high-quality water source; the project was a partnership between Metropolitan and the Sanitation Districts of Los Angeles County and was completed in August 2019. Testing and operation of the plant to confirm treatment costs and provide the basis for regulatory approval of the proposed treatment process and technical recommendations concerning design, operation, and optimization of the full-scale RRWP will be completed in 2020. The RRWP will have the flexibility to be expanded in the future to implement Direct Potable Reuse ("DPR") through raw water augmentation at the two Metropolitan treatment plants. The State Water Resources Control Board Division of Drinking Water is in the process of developing a framework for the regulation of DPR in California, and the current anticipated date for promulgation is 2023. Information regarding the RRWP is located on Metropolitan's website at <http://www.mwdh2o.com/DocSvcPubs/rrwp/index.html#home>

**Replacement and Refurbishment (R&R)** — Capital projects that invest in Metropolitan's aging infrastructure by restoring them to optimal operating status.

**Reserves** — Funds set aside to comply with bond covenants, working capital policy, or other board policies as part of a prudent financial strategy.

**Revenue Remainder Fund** — See Financial Policies for description.

**SCADA** — Supervisory Control and Data Acquisition; automated systems that are used to monitor, operate, and control Metropolitan's water conveyance, treatment, and distribution systems.

**SDCWA** — San Diego County Water Authority; one of 26 member agencies that make up Metropolitan.

**Senate Bill 60 (SB 60)** — This bill requires Metropolitan to place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures and, commencing February 1, 2001, to prepare and submit to the Legislature a prescribed annual report relating to water conservation.

**State Water Contract (SWC)** — State Water Contracts are the basis for all SWP construction and ongoing operations. As the largest of the now 29 contractors, Metropolitan is entitled to slightly less than half of all SWP supplies. Water supplies from the SWP are conveyed to Metropolitan via the SWP's 444-mile California Aqueduct, which was made possible pursuant to Metropolitan's State Water Contract.

**State Water Project (SWP)** — The SWP is the largest state-built, user-financed water supply and transportation project in the country. The SWP serves urban and agricultural agencies from the San Francisco Bay area to Southern California. Its facilities were constructed with several general types of financing, the repayment of which is made by the 29 agencies and districts that participate in the SWP through long-term contracts (the State Water Contractors). The State Water Contractors also pay for the operations, maintenance, power, and replacement costs of the SWP.

**System Overview Study** — An analysis of Metropolitan's current delivery and treatment capacities versus projected needs during the planning horizon. The System Overview Study, coupled with the Integrated Area Study, analyzes various portfolios of projects that could be used to meet future demand and then develops a potential CIP. Finally, the System Overview Study analyzes the potential impact to rates from the proposed facilities.

**TAF (thousand acre-feet)** — A unit of measure of water.

**Total Dissolved Solids (TDS)** — Refers to the total organic carbon concentration in water. Measurement of TDS removal is used as a surrogate for disinfection by-product precursor removal.

**Treatment Plants** — Facilities used by Metropolitan for the treatment of water to remove contaminants or total dissolved solids thus ensuring that such water is potable before it is distributed to member agencies.

**U.S. Department of the Interior, Bureau of Reclamation (USBR)** — Largest wholesaler of water and second largest supplier of hydroelectric power in the American West. Promotes water conservation, recycling, and reuse.

**Vacancy Factor** — A calculated reduction to the O&M labor budget that attempts to account for vacancies that occur within organizations throughout the year. Budgeted labor dollars assume that budgeted positions will be filled for the entire fiscal year (2,080 hours). However, positions routinely become vacant throughout Metropolitan for part of the year as staff transfer to other positions or leave employment in the company and time elapses during the recruitment period to refill the vacated positions.

**WRSF** — Water Rate Stabilization Fund. See Financial Policies for description.



**WRM** — Water Resource Management (group); an organization within Metropolitan that focuses on water resource planning and management, including conservation.

**WSF** — Water Stewardship Fund. See Financial Policies for description.

**Water Supply Allocation Plan (WSAP)** — This plan is intended to be implemented during periods of regional water shortages to promote conservation of scarce water supplies. The WSAP was created to approach limiting supplies in a manner that is regionally fair and minimizes impacts by establishing accurate and fair baselines for each of Metropolitan's 26 member agencies.

**Water Supply Programs** — Water transfer and storage programs that supplement Colorado River and State Water Project supplies.

**Water Surplus Drought Management Plan (WSDM Plan)** — This plan directs Metropolitan's resource operations to help attain the region's reliability goal. The WSDM Plan recognizes the interdependence of surplus and shortage actions and is a coordinated plan that utilizes all available resources to maximize supply reliability. The overall objective is to ensure that shortage allocation of Metropolitan's imported water supplies is minimized.

**Working Capital** — A measure of both a company's efficiency and its short-term financial health. The working capital ratio is calculated as:  $\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$ .

**WSO** — Water System Operations (group); an organization within Metropolitan responsible for operating and maintaining Metropolitan's water conveyance, treatment, and distribution system and its appurtenant systems.

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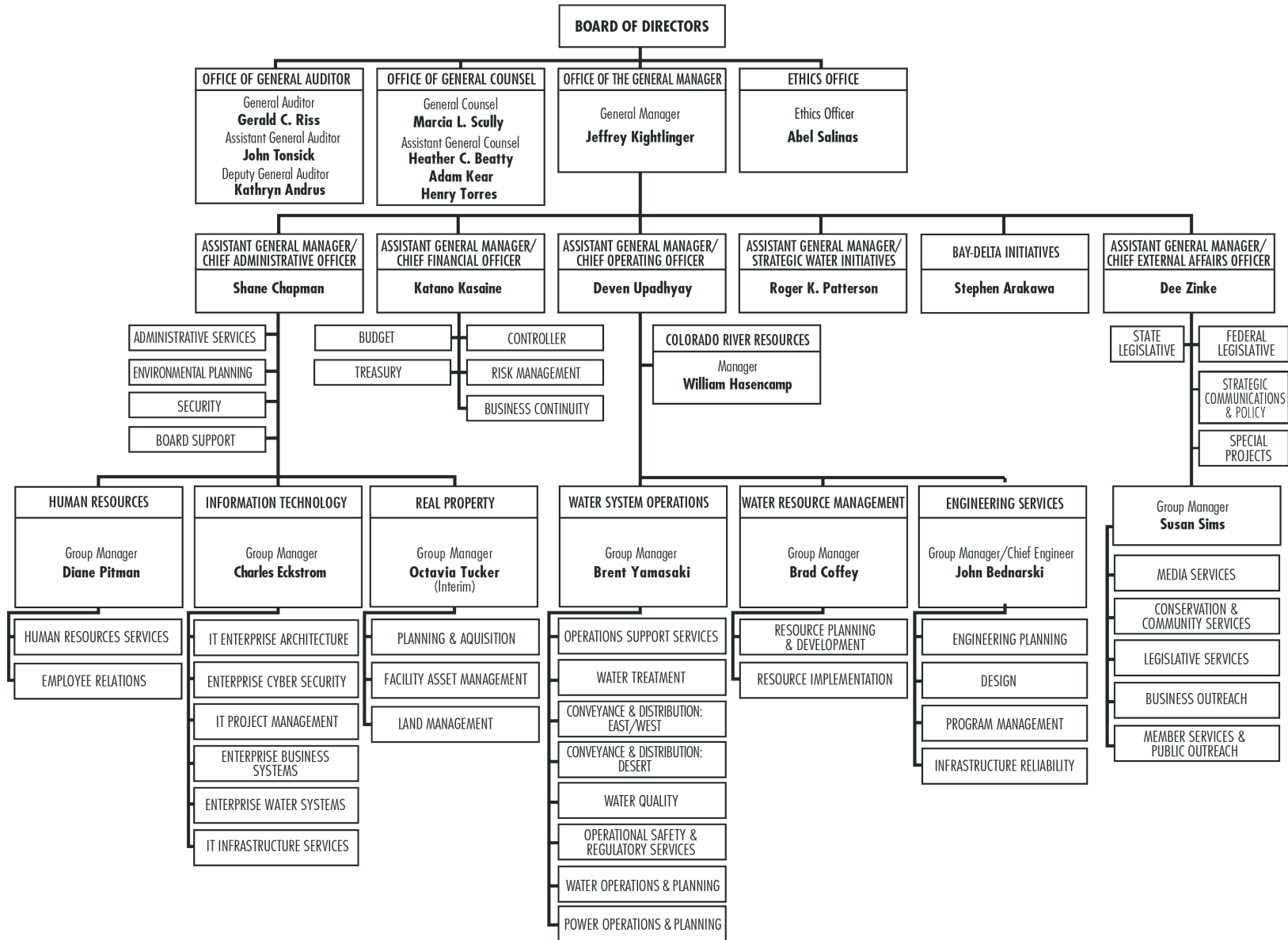
## **RESOLUTIONS AND ORDINANCES**

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To be provided in adopted budget document

(Pages 367 thru 428)

# METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA



## Metropolitan Water District of Southern California

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### FISCAL YEARS 2020/21 and 2021/22 COST OF SERVICE REPORT FOR PROPOSED WATER RATES AND CHARGES

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## EXECUTIVE SUMMARY

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Metropolitan's current rate design was adopted by its Board of Directors in October 2001 through a lengthy and open process. Metropolitan is required to adopt rates and charges that are reasonable, and cost of service is one reasonable method. In 2001, Metropolitan chose to adopt a cost of service rate structure that it found reasonable for recovering the costs of providing full-service water service (treated and untreated) and wheeling service to its 26 member agencies, as defined in Metropolitan's Administrative Code. The rate structure is designed in accordance with the Rate Structure Action Plan of December 12, 2000; the Composite Rate Structure framework of April 11, 2000; the Strategic Plan Policy Principles of December 14, 1999; and the Strategic Plan Steering Committee Guidelines of January 6, 2000. The Board adopted the rate structure on October 16, 2001. This report describes the rate structure in detail including the cost of service process that supports the proposed rates and charges for calendar years 2021 and 2022, which are based on the Proposed Biennial Budget for Fiscal Years 2020/21 and 2021/22 prepared for the Board and committee meetings scheduled in February 2020 (the "Biennial Budget") through April 2020.

The rate structure supports the strategic planning vision that Metropolitan is a regional provider of services, encourages the development of additional local supplies through programs such as recycling, encourages conservation, and accommodates a water transfer market. Through its regional services, Metropolitan ensures a baseline of reliability and quality for imported water deliveries in its service area. Metropolitan's rate structure recognizes the foregoing and other unique aspects of Metropolitan's services, governance structure, and operational circumstances. Although there are general tenants that are important in cost of service industry guidelines, all guidelines recognize that customization of cost of service is necessary to reflect the service being provided. Accordingly, Metropolitan's cost of service and the rate structure developed therefrom is in line with industry guidelines and Metropolitan's unique operational circumstances.

### Objectives

In accordance with the Strategic Plan Policy Principles adopted in 1999, the rate structure is designed to accomplish the following:

**Accountability.** Define the linkage among costs, charges, and benefits through a cost of service approach consistent with industry guidelines.

**Regional Provider.** Ensure that regional services are provided to meet the existing and growth needs of member agencies.

**Equity.** Ensure that users, including member agencies and other entities, pay the same rates and charges for like classes of services and provide fair and reasonable allocation of costs through rates and charges.

**Environmental Responsibility.** Encourage wise environmental stewardship and effective demand management by funding conservation and recycling projects and programs and using pricing<sup>1</sup> to encourage investments in conservation, recycling, and other economical local supplies.

**Choice and Competition.** Offer choices for services to member agencies and accommodate the development of a water transfer market.

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<sup>1</sup> Metropolitan's rate structure does not use pricing in its service rates to encourage conservation and local resource development by member agencies. Metropolitan's rates reflect the cost of providing its services. Metropolitan invests in demand management, by providing incentives to those conserving and developing local resource projects that reduce the price of those projects for the participants. Those demand management investments lower system costs and reduce the need for Metropolitan to import additional supplies into the service area.

**Water Quality.** Support source quality improvements and water treatment systems that are required to ensure safe drinking water and the feasibility of water recycling and groundwater management programs.

**Financial Integrity.** Establish a financial commitment from the member agencies that provides financial security for Metropolitan and does not transfer undue risk to member agencies, individually or as a whole.

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## DISTRICT OVERVIEW

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This Report provides an overview of Metropolitan generally, its governance structure, operational characteristics, and the services it provides to its member agencies. The District Overview provides context for the cost of service process applied, which result in the proposed rates and charges.

### District Profile

The Metropolitan Water District of Southern California (Metropolitan) is a metropolitan water district created in 1928 under authority of the Metropolitan Water District Act (California Statutes 1927, Chapter 429, as reenacted in 1969 as Chapter 209, as amended (the Act)). Metropolitan has 26 member public agencies and its primary purpose is to provide its members with a reliable wholesale water supply service for domestic and municipal uses. To do so, Metropolitan imports water from the Colorado River and Northern California. Metropolitan also helps its member agencies develop increased water conservation, recycling, storage, and other local resource programs.

Metropolitan is authorized to develop, store, and distribute water for domestic and municipal purposes and other beneficial uses if excess water is available, and may provide, generate, and deliver electric power within or without the state for the purpose of developing, storing, and distributing water. All powers, privileges and duties vested in or imposed upon Metropolitan are exercised and performed by and through its Board of Directors. Metropolitan is governed by a 38-member Board of Directors representing the 26 member agencies. Metropolitan directors are selected by their respective member agencies and some of those directors also serve on the governing body of their member agency. Board and committee meetings are open to the public and are broadcast on the Internet through Metropolitan's website, [www.mwdh2o.com](http://www.mwdh2o.com). A schedule of Board and committee meetings, as well as current and archived Board materials, is available at the same website.

Metropolitan was established to obtain an allotment of Colorado River water and to construct and operate the 242-mile Colorado River Aqueduct (CRA), which runs from an intake at Lake Havasu on the California-Arizona border, to an endpoint at Metropolitan's Lake Mathews reservoir in Riverside County. Metropolitan owns and operates an extensive portfolio of capital facilities including the CRA, 16 hydroelectric facilities, nine reservoirs, 830 miles of large-scale pipes, and five water treatment plants.

In 1960, Metropolitan, followed by other public agencies, signed a long-term contract with the state Department of Water Resources (DWR) to participate in the State Water Project (SWP). The SWP is the largest state-built, user-financed water supply and transportation project in the country. Its facilities were constructed with several general types of financing, the repayment of which is made by the 29 agencies and districts that participate in the SWP through long-term contracts (the State Water Contractors). The State Water Contractors also pay for the operations, maintenance, power, and replacement (OMP&R) costs of the SWP, as the State Water Contracts are the basis for all SWP construction and ongoing operations. DWR manages and operates the SWP. As the largest of the now 29 contractors, Metropolitan is allocated slightly less than half of all SWP supplies. Water supplies from the SWP are conveyed to Metropolitan via the SWP's 444-mile California Aqueduct, which was made possible pursuant to Metropolitan's State Water Contract. The SWP serves urban and agricultural agencies from the San Francisco Bay area to Southern California.

To secure additional supplies, Metropolitan also has groundwater banking partnerships and water transfer arrangements within and outside of its service area. Metropolitan also provides financial incentives to its member agencies for local investments in demand management programs and projects. An increasing

percentage of Southern California's water supply comes from these conservation programs and local resources projects, including water recycling and recovered groundwater.

To pay for its costs, the Act authorizes Metropolitan to: levy property taxes within its service area; establish water rates; collect charges for water standby and service availability; incur general obligation bonded indebtedness and issue revenue bonds, notes and short-term revenue certificates; execute contracts; and exercise the power of eminent domain for the purpose of acquiring property. In addition, Metropolitan's Board is authorized to establish terms and conditions under which additional areas may be annexed to Metropolitan's service area.

## District Mission

The mission of Metropolitan is to provide its 5,200-square-mile service area with an adequate and reliable supply of high-quality water to meet present and future needs in an environmentally and economically responsible way.

## Metropolitan Service Area

Metropolitan's service area comprises approximately 5,200 square miles and includes portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura. When Metropolitan began delivering water in 1941, its service area consisted of approximately 625 square miles. Its service area has increased by 4,500 square miles since that time. The expansion was primarily the result of annexation of the service areas of additional member agencies. Metropolitan has historically provided between 40 and 60 percent of the water used annually within its service area.

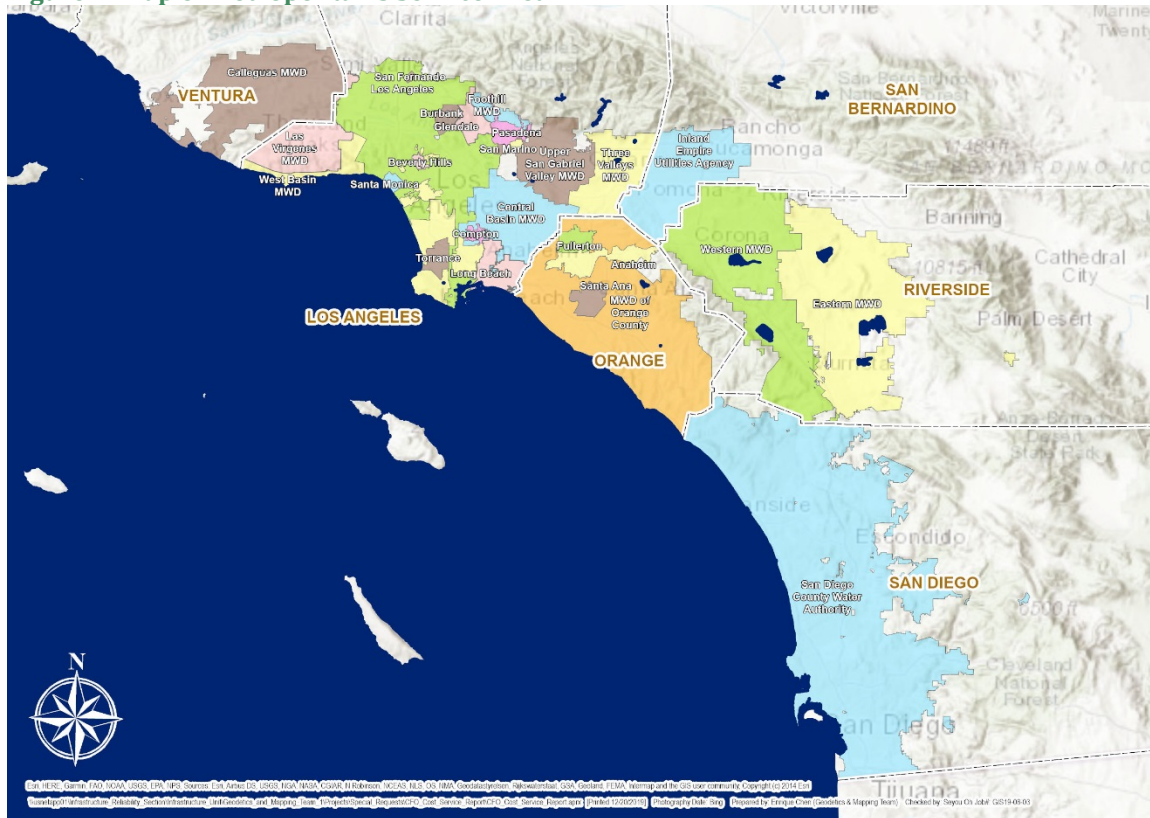
The area served by Metropolitan represents the most densely populated and heavily industrialized portions of Southern California. Metropolitan estimates that approximately 19 million people lived in Metropolitan's service area in 2019, based on official estimates from the California Department of Finance and on population distribution estimates from the Southern California Association of Governments (SCAG) and the San Diego Association of Governments (SANDAG). Population projections prepared by SCAG in 2012 and SANDAG in 2013, as part of their planning process to update regional transportation and land use plans, show expected population growth of about 18 percent in Metropolitan's service area between 2010 and 2035.

The economy of Metropolitan's service area is exceptionally diverse. In 2018, the economy of the six counties which contain Metropolitan's service area had a gross domestic product larger than all but twelve nations of the world. The Six County Area economy ranked between South Korea (\$1.619 trillion) and Australia (\$1.432 trillion), with an estimated gross domestic product (GDP) of \$1.538 trillion. The Six County Area's gross domestic product in 2018 was larger than all states except California, Texas, and New York.

The climate in Metropolitan's service area ranges from moderate temperatures throughout the year in the coastal areas to hot and dry summers in the inland areas. Annual rainfall in an average year has historically been approximately 13 to 15 inches along the coastal area, up to 20 inches in foothill areas and less than 10 inches inland.

## Service Area Map

Figure 1 below shows the area served by Metropolitan. It includes parts of six of the ten counties that comprise Southern California (Six County Area) consisting of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. Although these counties comprise Metropolitan's service area, Metropolitan's territory does not encompass all of the area within each of the six counties.

**Figure 1: Map of Metropolitan's Service Area**

## Organization Structure

### Board of Directors

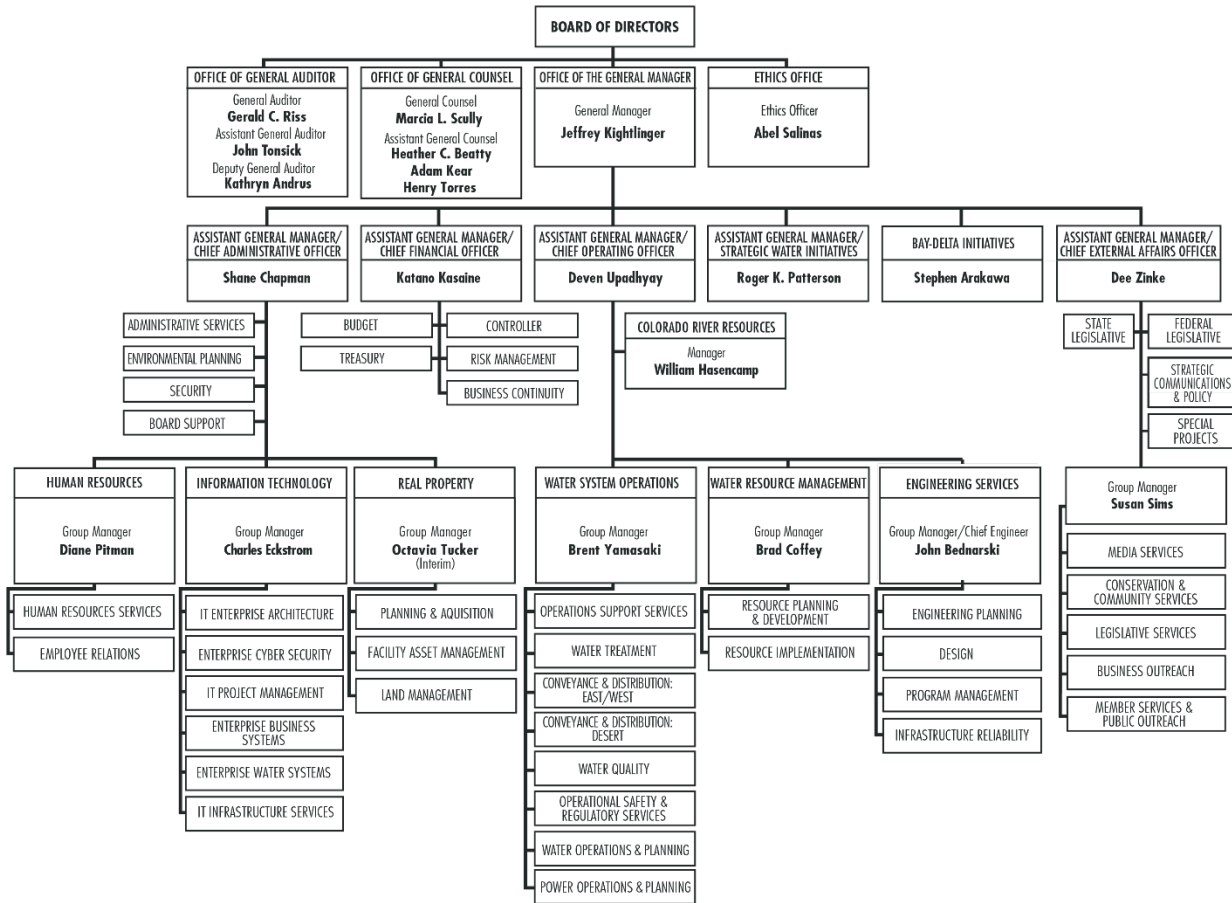
Metropolitan is governed by a 38-member Board of Directors. Each member public agency is entitled to have at least one representative on the Board, plus an additional representative for each full five percent of the total assessed valuation of property in Metropolitan's service area that is within the member public agency. Accordingly, the Board may, from time to time, have more than 38 directors. There are also limits on reductions in the number of directors. Changes in relative assessed valuation do not terminate any director's term. In 2019, California Assembly Bill 1220 (Garcia) amended the Act to provide that "A member public agency shall not have fewer than the number of representatives the member public agency had as of January 1, 2019."

The Board includes business, professional and civic leaders. Directors serve on the Board without compensation from Metropolitan. Voting is based on assessed valuation, with each member agency being entitled to cast one vote for each \$10 million or major fractional part of \$10 million of assessed valuation of property within the member agency, as shown by the assessment records of the county in which the member agency is located. The Board administers its policies through the Metropolitan Water District Administrative Code (the Administrative Code), which the Board adopted in 1977. The Board periodically amends the Administrative Code to reflect new policies or changes in existing policies that occur from time to time.

Metropolitan's day-to-day management is under the direction of its General Manager, who serves at the pleasure of the Board, as do Metropolitan's General Counsel, General Auditor, and Ethics Officer. Metropolitan's organization chart is shown in Figure 2; Table 1 provides a listing of Metropolitan's Senior Management.

Figure 2: Metropolitan Organization Chart

### METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA



Updated as of January 22, 2020

Table 1: Metropolitan Senior Management

Jeffrey Kightlinger	General Manager
Marcia Scully	General Counsel
Gerald Riss	General Auditor
Abel Salinas	Ethics Officer
Katano Kasaine	Assistant General Manager/Chief Financial Officer
Deven Upadhyay	Assistant General Manager/Chief Operating Officer
Roger Patterson	Assistant General Manager/Strategic Water Initiatives
Dee Zinke	Assistant General Manager/Chief External Affairs Officer
Shane Chapman	Assistant General Manager/Chief Administrative Officer
Rosa Castro	Board Administrator



## Member Agencies

Table 2 lists the 26 member agencies of Metropolitan which include 11 municipal water districts, 14 cities and one county water authority.

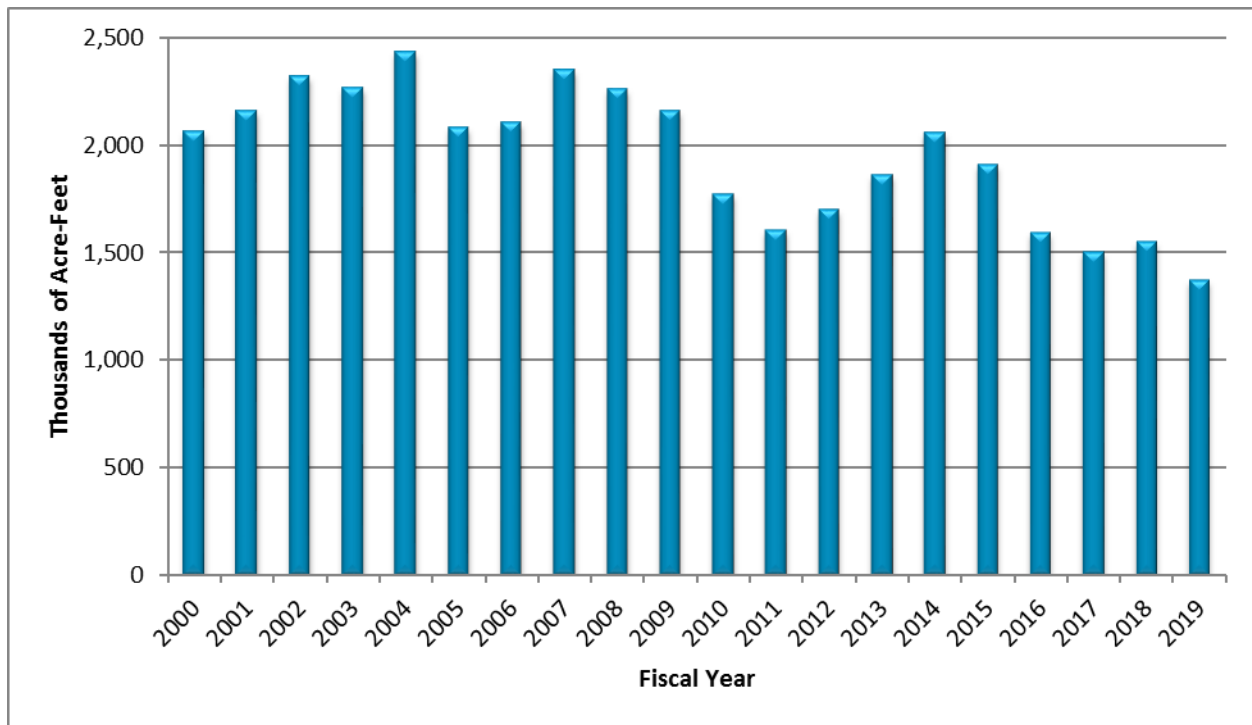
**Table 2: Metropolitan Member Agencies**

Municipal Water Districts	Cities	County Water Authority
Calleguas	Anaheim	San Diego
Central Basin	Beverly Hills	
Eastern	Burbank	
Foothill	Compton	
Inland Empire Utilities Agency	Fullerton	
Upper San Gabriel Valley	Glendale	
Western of Riverside County	Long Beach	
Las Virgenes	Los Angeles	
Orange County	Pasadena	
Three Valleys	San Fernando	
West Basin	San Marino	
	Santa Ana	
	Santa Monica	
	Torrance	

## Metropolitan's Water Transactions with Member Agencies

Due to Metropolitan's role as a voluntary cooperative of, and supplemental supplier to, member agencies with varying degrees of reliance on Metropolitan, and other factors described below, water transactions are highly variable and unpredictable from year to year. In the past 20 years, water transactions have been as high as 2.4 million acre-feet in FY 2003/04 and as low as 1.4 million acre-feet in FY 2018/19, as shown in Figure 3. Figure 3 includes total transactions by fiscal year, which includes water sales, exchanges, and wheeling. Variation occurs for many reasons. The demand for supplemental supplies is dependent on water use at the retail consumer level and the amount of local water supplies available to member agencies. Consumer demand and locally supplied water vary from year to year, resulting in variability in Metropolitan's water transactions. Both economic growth and recessions can also lead to increases and decreases in demand. Weather also affects demands. Wet cool weather not only increases the availability of local supplies, it also decreases retail demands. Conversely, hot and dry weather results in significant increases in retail demand. In recent years, demands have been affected by wet and cool weather conditions and lingering effects of water use restrictions during the last drought. Member agencies also rely on Metropolitan during times of operational emergencies. Examples include: power outages, when member agencies need gravity-fed supplies to replace energy-dependent operations; water quality issues, such as when contaminants in groundwater force member agencies to shut down wells; and fires, when member agencies rely on Metropolitan for increased flows.

**Figure 3: Historic Water Transactions FY 2000-2019 <sup>1</sup>**



<sup>1</sup> Occur period Water Transactions.

Table 3 identifies the amounts paid by member agency, including fixed and volumetric charges, as well as the volume of water transactions by Metropolitan member agencies for FY 2019. Water transactions include sales, exchanges, and wheeling.



**Table 3: Metropolitan Water Transactions with Member Agencies, Year Ended June 30, 2019**(Accrual Basis, Dollars in Thousands) <sup>1, 2</sup>

Agency	Revenues				Water Transactions	
	Fixed Charges (\$ thousands)	Volumetric Charges (\$ thousands)	Total (\$ thousands)	Percent of Total	AF	Percent of Total
Anaheim	\$ 1,287	\$ 9,828	\$ 11,115	0.89%	10,913	0.81%
Burbank	800	14,471	15,271	1.22%	18,800	1.40%
Beverly Hills	1,151	10,213	11,364	0.91%	9,905	0.74%
Compton	35	0	35	0.00%	0	0.00%
Calleguas	8,068	89,047	97,115	7.79%	87,422	6.49%
Inland Empire	4,181	44,336	48,517	3.89%	77,359	5.74%
Central Basin	1,101	18,553	19,654	1.58%	21,560	1.60%
Eastern	7,209	76,062	83,271	6.68%	83,993	6.24%
Fullerton	527	5,688	6,215	0.50%	5,521	0.41%
Foothill	629	7,801	8,430	0.68%	7,591	0.56%
Glendale	1,338	14,431	15,768	1.26%	14,849	1.10%
Los Angeles	32,880	129,974	162,855	13.06%	145,123	10.78%
Long Beach	2,172	26,280	28,452	2.28%	25,822	1.92%
Las Virgenes	1,790	20,151	21,941	1.76%	19,628	1.46%
MWDOC	13,863	146,324	160,187	12.85%	273,136	20.28%
Pasadena	1,602	18,861	20,464	1.64%	18,596	1.38%
Three Valleys	4,670	53,423	58,093	4.66%	62,746	4.66%
Santa Ana	685	7,928	8,612	0.69%	7,705	0.57%
San Diego CWA	23,993	203,977	227,970	18.29%	152,622	11.33%
San Fernando	2	0	1	0.00%	-	0.00%
Santa Monica	776	3,283	4,059	0.33%	3,239	0.24%
San Marino	94	860	954	0.08%	840	0.06%
Torrance	1,264	14,072	15,336	1.23%	16,348	1.21%
Upper San Gabriel	753	33,963	34,715	2.78%	48,136	3.57%
West Basin	11,699	112,487	124,185	9.96%	149,511	11.10%
Western MWD	4,101	57,950	62,051	4.98%	85,276	6.33%
<b>Total</b>	<b>\$ 126,671</b>	<b>\$ 1,119,961</b>	<b>\$ 1,246,632</b>	<b>100.00%</b>	<b>1,346,640</b>	<b>100.00%</b>

<sup>1</sup> Water Transactions include sales, exchanges, and wheeling.<sup>2</sup> Water Transactions as billed.

Due to differences in local supply resources and demand characteristics, usage profiles differ significantly among the member agencies. Table 4 summarizes the usage characteristics of the member agencies for the ten calendar years ended 2018. As can be seen from this table, individual agency purchases vary substantially from year to year, and the Metropolitan system accommodates usage behavior that varies widely among member agencies. The table shows that Metropolitan's transactions can vary as much as  $\pm 30$  percent from average. This range of variability is not typical for a retail water utility but does demonstrate the degree to which Metropolitan's commitments to meet varying demands can impact operations.

**Table 4: Member Agency Water Usage Profiles**Calendar Years 2009-2018 <sup>1, 2, 3</sup>

Agency	Average (AF)	Maximum (AF)	Minimum (AF)	Peak Day (CFS)
Anaheim	18,897	29,203	13,267	44.8
Beverly Hills	11,042	12,102	9,498	32.7
Burbank	15,206	18,979	10,432	22.6
Calleguas	104,089	133,688	87,759	240.8
Central Basin	51,511	73,685	26,388	94.7
Compton	893	2,772	-	6.9
Eastern	101,866	113,109	83,878	267.4
Foothill	8,658	10,832	7,297	24.3
Fullerton	8,484	11,050	5,417	37.4
Glendale	18,072	20,941	15,842	56.0
Inland Empire	84,651	103,526	63,287	153.9
Las Virgenes	21,215	24,639	19,154	46.1
Long Beach	34,252	45,221	25,953	80.4
Los Angeles	288,826	444,526	116,666	782.5
MWDOC	329,749	361,491	299,506	489.5
Pasadena	18,947	21,103	16,501	52.5
San Diego	481,820	600,211	376,058	1,138.2
San Fernando	36	108	-	4.9
San Marino	829	1,112	309	7.5
Santa Ana	11,642	16,675	4,747	20.0
Santa Monica	6,067	11,796	2,989	25.0
Three Valleys	67,427	75,952	55,988	178.6
Torrance	17,307	19,208	15,209	42.8
Upper San Gabriel	34,805	56,829	6,347	79.1
West Basin	148,154	156,213	138,883	230.2
Western	95,929	114,317	83,498	214.4
<b>Total</b>	<b>1,980,374</b>	<b>2,479,291</b>	<b>1,484,872</b>	<b>4,373.4</b>

<sup>1</sup> Water Transactions include sales, exchanges, and wheeling.

<sup>2</sup> Occur period Water Transactions.

<sup>3</sup> Peak Day from May 1 through September 30, excluding replenishment.

Based on the variability of supplemental wholesale water transactions and unpredictability of future hydrologic conditions, transaction projections are based on long-term average forecasts consistent with Metropolitan's latest Board-adopted Integrated Resources Plan (2015 IRP Update). Metropolitan is currently updating its IRP and anticipates completion of the Update in 2020.

## Metropolitan's Water Resources and Facilities

Metropolitan's total water system has been built over time to meet the widely differing needs of its member agencies and the sources of water available to Metropolitan. Some agencies have no local water resources and rely on Metropolitan for 100 percent of their annual water needs. Other agencies have adequate local surface supplies and storage and/or groundwater basins that provide them with the majority of their water supplies during wet and average years. However, during dry periods these agencies rely on Metropolitan to make up

any shortfalls in local water supplies. All members rely on the entirety of the system and in particular for reliability during any emergency or shortage period. Therefore, Metropolitan operates its system to attempt to ensure the availability of its services to all its member agencies. Similar coordination challenges arise in managing water available from the SWP, the Colorado River, and water supply projects of Metropolitan.

Metropolitan's water delivery system is comprised of three integrated conveyance and delivery components:

- SWP;
- CRA; and
- Distribution System.

The California Aqueduct of the SWP and the CRA convey imported water into the Metropolitan service area. This water is then delivered to Metropolitan's member agencies via a regional network of canals, pipelines, and appurtenant facilities, which constitute the Distribution System. Supply, treatment, and storage facilities augment the Distribution System.

### Water Conveyance System

For purposes of this report, components of the conveyance system are considered to include only those major trunk facilities that transport water from primary supply sources to either regional storage facilities or feeder lines linked to the primary conveyance facilities. All other water transport facilities, including pipelines, feeders, laterals, canals and aqueducts, are considered to be distribution facilities. Distribution facilities can be further identified in that they generally have at least one connection to a member agency's local distribution system. Existing regional conveyance facilities include both the SWP and CRA facilities. SWP facilities transport water from the Sacramento-San Joaquin Delta southward through a series of pumps, aqueducts, siphons, and tunnels that comprise the California Aqueduct. Conveyance facilities in or near Metropolitan's service area include the East Branch and West Branch of the California Aqueduct, the San Bernardino Tunnel, the Devil Canyon Power Plant, and the Santa Ana Valley Pipeline, which constitute the terminus of the reaches of the SWP facilities used and allocable to Metropolitan under its State Water Contract. The characteristics of the California Aqueduct are described more fully under the "State Water Project" heading below. A summary of conveyance facilities is presented in Table 5. Metropolitan operates the CRA. The CRA transports water from the Colorado River approximately 242 miles to its terminus at Lake Mathews in Riverside County. The characteristics of the CRA are more fully described under the "Colorado River Aqueduct" heading below.

**Table 5: Components of Metropolitan's Water Conveyance System**

Facility Name	Design Capacity (cfs)
East Branch SWP to Devil Canyon (a)	1,500
West Branch SWP (a)	1,490
Santa Ana Valley Pipeline (a)	420
Colorado River Aqueduct	1,605
Inland Feeder	1,000

(a) The availability of additional capacity is dependent on coordination of Metropolitan's needs and the needs of other SWP Contractors

Metropolitan's conveyance facilities deliver available water to meet regional supplemental water demands either through direct deliveries or through deliveries to storage for later use. The two most important factors considered in evaluating water conveyance needs are:

- Availability of water supplies; and
- Supplemental water demands, including both:
  - Consumptive demands; and
  - Deliveries to storage during water surplus periods.

Additional factors that are considered in modeling operational needs and planning for additional water conveyance facilities include:

- Water quality blend requirements,
- System reliability in an emergency or unusual supply year; and
- System flexibility under other-than-normal operating conditions.

Conveyance system planning and operational needs are evaluated using both 1) computer simulation models, which indicate how much imported water is available during a given year, and 2) a distribution system mass balance model, which indicates system capacity constraints. These models use available imported supplies based on historical hydrology, and then map these supplies over projected supplemental water demands on a monthly basis. Modeling results are analyzed to determine if shortages occur because of conveyance constraints or water supply constraints under various wet, dry, and normal conditions. The need for additional conveyance facilities is governed by the most restrictive of the conveyance constraints.

### State Water Project (SWP)<sup>2</sup>

One of Metropolitan's two major sources of water is the SWP, which is managed and operated by DWR, and is an integral part of Metropolitan's conveyance system. The SWP 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 for 750,000 acres of farmland, primarily in the San Joaquin Valley, and provides municipal and industrial water for approximately 25 million of California's estimated 39.2 million residents.

The SWP consists of a complex system of dams, reservoirs, power plants, pumping plants, canals and aqueducts to deliver water. SWP water consists of water from rainfall and snowmelt runoff that 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, and at four delivery points near the northern and eastern boundaries of Metropolitan's service area. The SWP facilities are shown in Figure 4.

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. The design pumping capacity at Banks Pumping Plant is 10,670 cubic feet-per-second (cfs) but only 4,480 cfs at the Edmonston Pumping Plant, located at the base of the Tehachapi Mountains.

In addition to the delivery of SWP water, the SWP is also used to convey transfers of SWP water and non-SWP water. SWP operations are closely coordinated and integrated with the federal Central Valley Project (CVP) and the San Luis Reservoir and San Luis Canal section of the California Aqueduct are shared SWP/CVP facilities. The SWP is also connected to other water sources upstream of the Sacramento-San Joaquin Delta, and along the California Aqueduct as it passes through Central Valley.

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<sup>2</sup> For historical and current information regarding the SWP, refer to Bulletin 132, published periodically by DWR since 1963. The most recently published Bulletin is Bulletin 132-17 dated January 2019 and titled "Management of the California State Water Project". Appendices to the Bulletin are also updated separately. Both are available at: <https://water.ca.gov/Programs/State-Water-Project/Management/Bulletin-132>.

**Figure 4: Facilities of the State Water Project**



In 1960, Metropolitan signed the first water supply contract (as amended, the State Water Contract) with DWR, which had a term of 75 years. Metropolitan is one of 29 agencies (State Water Contractors) that are participants in the SWP through long-term contracts with DWR, and is the largest agency in terms of the number of people in its service area (approximately 19 million), the share of SWP water that it is allocated pursuant to the State Water Contract (approximately 46 percent), and the percentage of total annual payments made to DWR by the State Water Contractors.

State Water Contractors participate in the SWP through responsibility for costs of the SWP in exchange for delivery of water conserved and stored by the SWP, an allocated portion of that total supply, and other

participation rights. Each year, DWR determines the percentage of the total contracted amount it estimates will be available to the State Water Contractors (the DWR allocation). Under a 100 percent allocation, Metropolitan would receive 1,911,500 acre-feet of SWP water. Late each year, DWR announces an initial allocation estimate for the upcoming year but may revise the estimate throughout the year if warranted by developing precipitation and water supply conditions. State Water Contractors are obligated to pay all costs of the SWP, except for those attributable to recreation, flood control, and other costs not associated with water deliveries to the State Water Contractors, regardless of the annual allocation determined by DWR. In addition to SWP water, Metropolitan also obtains water from water transfers, groundwater banking and exchange programs delivered through the California Aqueduct. From calendar years 2004 through 2018, the amount of water received by Metropolitan from the SWP, including water from water transfer, groundwater banking and exchange programs delivered through the California Aqueduct (described under “Water Transfer, Storage and Exchange Programs” below), varied from a low of 593,000 acre-feet in calendar year 2015 to a high of 1,800,000 acre-feet in 2004. In calendar year 2018, DWR’s allocation to State Water Contractors was 35 percent of contracted amounts, or 669,025 acre-feet, for Metropolitan. In calendar year 2019, DWR’s allocation to State Water Contractors was 75 percent of contracted amounts, or 1,433,625 acre-feet, for Metropolitan.

On November 30, 2018, DWR announced an initial calendar year 2019 allocation of 10 percent. On January 25, 2019, DWR increased the allocation estimate to 15 percent. Improved hydrologic conditions, including above-average precipitation in the month of January, led to a further allocation increase to 35 percent on February 20, 2019. DWR again increased the allocation estimate on March 20, 2019 to 70 percent. The allocation estimate of 70 percent reflects substantial improvements in runoff forecasts and storage in SWP conservation reservoirs aided by the third wettest February on record in the Northern Sierra since 1921. For calendar year 2020, DWR’s initial allocation was announced on December 2, 2019 and was 10 percent of contracted amounts. The initial allocation will likely change depending on rain and snowfall received this winter.

In addition to being a source of water for diversion into the SWP, the Bay-Delta is also the source of water for local agricultural, municipal and industrial needs, and, in addition, supports significant resident and anadromous fish and wildlife resources and important recreational uses of water. Both the SWP’s upstream reservoir operations and its Bay-Delta diversions can at times affect these other uses of Bay-Delta water directly, or indirectly, through impacts on Bay-Delta water quality. A variety of proceedings and other activities are ongoing with the participation of various State and federal agencies, as well as California’s environmental, urban and agricultural communities, in an effort to develop long-term, collectively-negotiated solutions to the environmental and water management issues concerning the Bay-Delta, and Metropolitan actively participates in these proceedings. Metropolitan cannot predict the ultimate outcome of any of the litigation or regulatory processes.

The State Water Contract has been amended over the years. More recently, the State Water Contract was amended and extended. The State Water Contractors have the option to continue participation in the SWP beyond the initial 75-year period on substantially the same terms and conditions as in the existing contract. Accordingly, in May 2013, DWR and the State Water Contractors began negotiations to extend the State Water Contract. In June 2014, DWR and the State Water Contractors reached an Agreement in Principle (AIP) to extend the State Water Contract to 2085 and to make certain other revisions to the contract aimed at improving the financial management and fiscal integrity of the SWP. The AIP served as the framework for the language of the actual amendment to the State Water Contract (Contract Extension Amendment), which was finalized in February 2018. As required by statute, the Contract Extension Amendment was presented to the state Legislature in two informational sessions held in July and September 2018.

The AIP also served as the “proposed project” for purposes of environmental review conducted under the California Environmental Quality Act (CEQA). DWR circulated a Draft Environmental Impact Report (EIR) for the proposed project in August 2016. DWR released the final EIR in November 2018 and then certified the final EIR and issued a Notice of Determination on December 11, 2018. Concurrently, Metropolitan considered the certified final EIR and approved the Contract Extension Amendment at its December 11, 2018 Board meeting. That same day, DWR filed a lawsuit seeking to validate the Contract Extension Amendment. Since FYs 2020/21 and 2021/22 Cost of Service Report



then, two separate CEQA complaints have been filed challenging DWR's final EIR and approval of the Contract Extension Amendment. In August 2019, all of these cases were assigned to a single judge, but no hearing dates have been set.

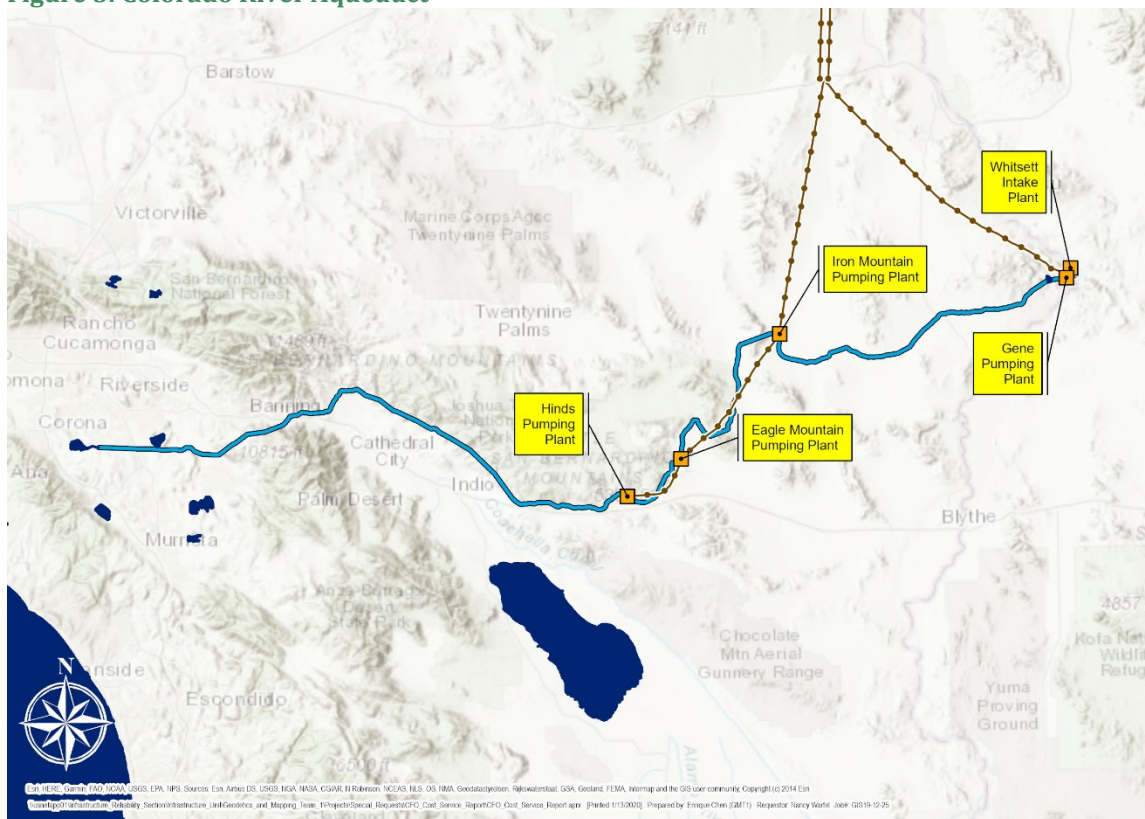
### Colorado River Aqueduct (CRA)

The other major source of water for Metropolitan is the Colorado River through the CRA. Metropolitan was established to obtain an allotment of Colorado River water, and its first mission was to construct and operate the CRA. The CRA consists of 5 pumping plants, 450 miles of high voltage power lines, 1 electric switching station, 4 regulating reservoirs, and 242 miles of aqueducts, siphons, canals, conduits and pipelines terminating at Lake Mathews in Riverside County.

The Colorado River was Metropolitan's original source of water after Metropolitan's establishment in 1928. Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. Water from the Colorado River and its tributaries is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming (the Colorado River Basin States), resulting in both competition and the need for cooperation among these holders of Colorado River entitlements. In addition, under a 1944 treaty, Mexico has an allotment of 1.5 million acre-feet of Colorado River water annually except in the event of extraordinary drought or serious accident to the delivery system in the United States, in which event the water allotted to Mexico would be curtailed. Mexico also can schedule delivery of an additional 200,000 acre-feet of Colorado River water per year if water is available in excess of the requirements in the United States and the 1.5 million acre-feet allotted to Mexico.

The CRA, which is directly owned and operated by Metropolitan, transports water from the Colorado River approximately 242 miles to its terminus at Lake Mathews in Riverside County. The CRA is shown in Figure 5. Up to 1.25 million acre-feet of water per year may be conveyed through the CRA to Metropolitan's service area, subject to availability of Colorado River water for delivery to Metropolitan as described below.

**Figure 5: Colorado River Aqueduct**



California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California and Nevada. Under the 1931 priority system that has formed the basis for the distribution of Colorado River water made available to California, Metropolitan holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment. In addition, Metropolitan holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment. Until 2003, Metropolitan had been able to take full advantage of its fifth priority right as a result of the availability of surplus water and water apportioned to Arizona and Nevada that was not needed by those states. However, during the 1990s Arizona and Nevada increased their use of water from the Colorado River, and by 2002 no unused apportionment was available for California. In addition, a severe drought in the Colorado River Basin reduced storage in system reservoirs, ending the availability of surplus deliveries to Metropolitan. As a result, California has been limited to 4.4 million acre-feet since 2003. Prior to 2003, Metropolitan could divert over 1.25 million acre-feet in any year, but since that time, Metropolitan's net diversions of Colorado River water have ranged from a low of nearly 633,000 acre-feet in 2006 to a high of approximately 1,176,000 acre-feet in 2014. Metropolitan has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water.

The Quantification Settlement Agreement (QSA) and related agreements, executed by Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Metropolitan, and other parties in October 2003, establishes Colorado River water use limits for IID and CVWD, and provides for specific acquisitions of conserved water and water supply and delivery arrangements for up to 110 years. The QSA and related agreements provide a framework for Metropolitan to enter into other cooperative Colorado River supply programs and set aside several disputes among California's Colorado River water agencies.

Specific programs under the QSA and related agreements include lining portions of the All-American and Coachella Canals, which conserve approximately 96,000 acre-feet annually. Included under the QSA is an allocation agreement, in which Metropolitan assigned about 80,000 acre-feet of conserved canal lining water per year to the San Diego County Water Authority (SDCWA) for 110 years. Also included is an exchange agreement with SDCWA, under which SDCWA makes available to Metropolitan at Lake Havasu the conserved canal lining water and conserved transfer water from IID, and in exchange Metropolitan delivers a like quantity of water to SDCWA in its service area. Also included under the QSA is the delivery and exchange agreement between Metropolitan and CVWD that provides for Metropolitan, when requested, to deliver annually up to 35,000 acre-feet of Metropolitan's SWP contractual water to CVWD by exchange with Metropolitan's available Colorado River supplies. Metropolitan and CVWD also share in 105,000 acre-feet annually of water conserved by IID, with Metropolitan receiving no less than 85,000 acre-feet. In 2021, the transfer of water conserved annually by IID to SDCWA is expected to reach 205,000 acre-feet. With full implementation of the programs identified in the QSA, at times when California is limited to its basic apportionment of 4.4 million acre-feet per year, Metropolitan expects to be able to annually divert to its service area approximately 900,000 acre-feet of Colorado River water plus water from other water augmentation programs it develops, including the Palo Verde Irrigation District (PVID) program, which provides up to approximately 133,000 acre-feet of water per year.

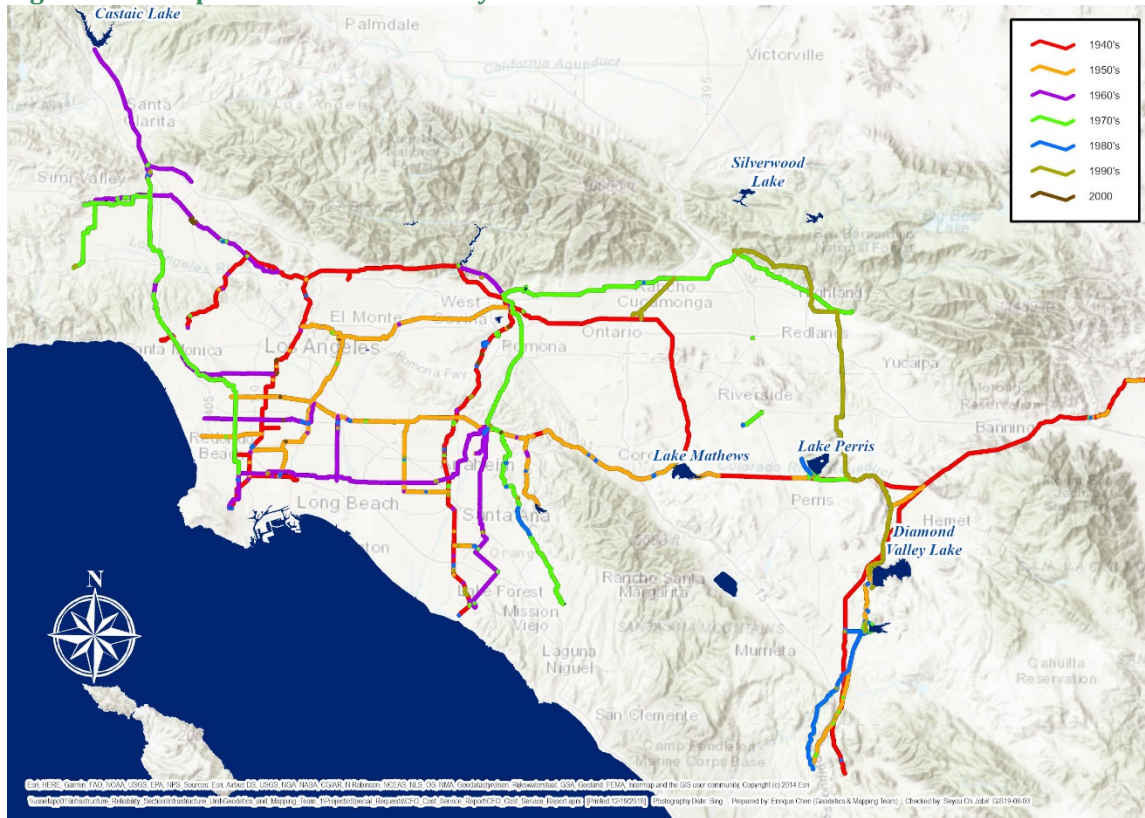
## **Distribution System**

All water transport facilities not specifically identified as part of the regional conveyance system are considered to be distribution facilities (Distribution System). While conveyance and aqueduct system components are regional in nature and do not link directly to local agency distribution systems, Distribution System facilities do ultimately connect to local agency systems. As a result, these facilities rely on conveyance and aqueduct facilities to import water from regional supply sources. The Distribution System is a complex network of facilities which routes water from the SWP and CRA to storage reservoirs and treatment plants within Metropolitan's member agencies and also to the member agencies. Beginning at the terminal delivery points of the CRA and SWP, Metropolitan's Distribution System includes approximately 775 miles of pipelines, feeders, and canals. The Distribution System includes components dating from the 1930's up to the



present day, as shown in Figure 6. Distribution System operations are coordinated from the Operations Control Center in Eagle Rock. The control center plans, schedules, and balances daily water operations in response to member agency demands and the operational limits of the system as a whole. Metropolitan's storage and treatment facilities augment the Distribution System. Metropolitan operates and maintains separate untreated and treated distribution facilities.

**Figure 6: Metropolitan's Distribution System**

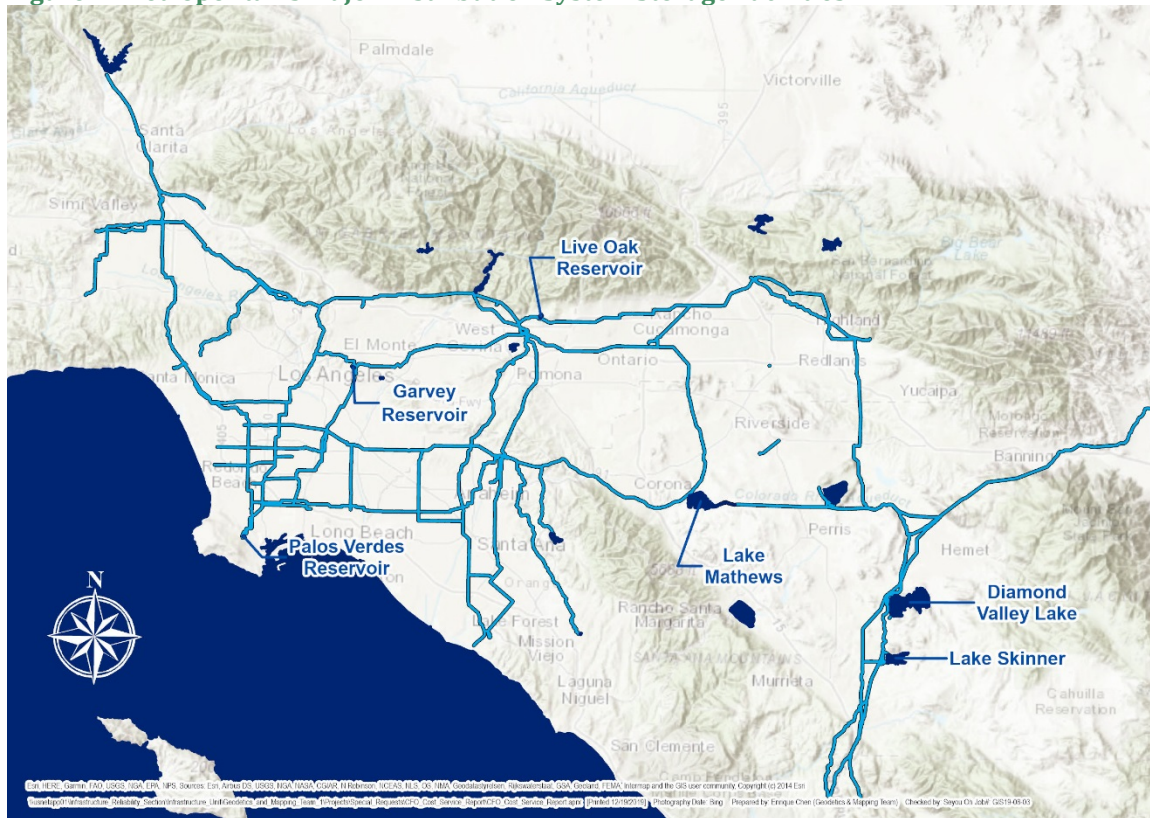


<sup>1</sup> Figure includes Colorado River Aqueduct and Inland Feeder which are part of the Conveyance and Aqueduct Facilities.

## Storage Facilities

Existing imported water storage available to the region consists of Metropolitan's raw water reservoirs, a share of the SWP's raw water reservoirs in and near the service area, and the portion of the groundwater basins used for conjunctive-use storage. Figure 7 shows the geographical location of Metropolitan's major storage facilities. Table 6 lists surface water storage facilities owned and operated by Metropolitan. With some limitations, these reservoirs can be used to help meet the region's water storage requirements. Total storage capacity currently available to Metropolitan in these existing reservoirs is about 1,041,830 acre-feet. Metropolitan's water storage is divided into three categories: emergency, regulatory, and drought carryover storage. Emergency storage capacity is intended to provide the Metropolitan service area with a supply of water in the event of a major regional catastrophe isolating Southern California from its imported water supplies.

Regulatory storage requirements are based on historical reservoir cycling and known cycling targets intended to meet the delivery schedules of the member agencies. Drought carryover storage is intended to prevent water shortages during dry years and is evaluated using computer simulation models, incorporating historic hydrologic data, projections of future demand, and information on currently available storage levels.

**Figure 7: Metropolitan's Major Distribution System Storage Facilities****Table 6: Capacity of Metropolitan's Distribution System Storage Facilities**

Storage Facilities	Capacity (Acre-feet)
Etiwanda Reservoir	400
Garvey Reservoir	1,610
Orange County Reservoir	212
Palos Verdes Reservoir	1,108
Live Oak Reservoir	2,500
Lake Mathews	182,000
Lake Skinner	44,000
Diamond Valley Lake	810,000
<b>Total Storage Capacity</b>	<b>1,041,830</b>

In addition to the storage facilities shown above, DWR owns and operates four major reservoirs in or near Metropolitan's service area as part of the SWP. Castaic Lake, Elderberry Forebay, and Pyramid Lake are located on the West Branch of the California Aqueduct. Silverwood Lake and Lake Perris are on the East Branch of the California Aqueduct. The total storage capacity of these five reservoirs is approximately 721,600 AF. When cost allocation factors from DWR Bulletin 132 Appendix B, Table B-2 are applied to the operational storage capacities, Metropolitan's share of storage in these five DWR reservoirs is approximately 644,000 AF. Within these reservoirs, up to 220,000 acre-feet of additional storage is provided for by the

Monterey Amendment to the State Water Contract<sup>3</sup>. During an emergency or drought, Metropolitan may access more or less than 644,000 AF, based on the availability at the reservoirs and need of all State Water Contractors with access to the reservoirs.

Under a conjunctive-use groundwater program, groundwater basins are used to store imported supplies during years when water is abundant. The stored water is then used during shortages and emergencies, reducing demand on imported supplies. Consequently, groundwater conjunctive use enables member agencies to better capture surplus surface flows Metropolitan receives from the SWP and the CRA and reduces demand that would otherwise be placed on Metropolitan's system during dry periods.

## Treatment Plants

In addition to raw water supply, Metropolitan provides treated water to supplement the potable water needs of its member agencies. Table 3 identifies Metropolitan's water treatment plants and related design capacities.

### Metropolitan's Water Treatment Plants

**Table 7: Water Treatment Plants**

Water Treatment Plants	Design Capacity (cfs)
Diemer Filtration Plant	803
Jensen Filtration Plant	1,163
Mills Filtration Plant	341
Skinner Filtration Plant	543
Weymouth Filtration Plant	803
Total	3,652

Metropolitan's water treatment plants are listed in Table 7 and shown geographically in Figure 8. More than 60% of Metropolitan's demand for supplemental treated water is located in a region of the service area referred to as the "Central Pool". Agencies located partially or entirely within the Central Pool include Los Angeles, Orange, and Ventura Counties. Three existing Metropolitan treatment plants serve the Central Pool's treated water needs:

- The Jensen plant in Granada Hills;
- The Weymouth plant in La Verne; and
- The Diemer plant in Yorba Linda.

While some areas of the Central Pool are served by one plant, the three plants together also jointly serve a common area of the Central Pool referred to as the "Common Pool". The Mills plant and the Skinner plant do not serve the Common Pool, but serve areas in the eastern part of Metropolitan's service area.

<sup>3</sup> The Monterey Amendment is explained in further detail at Operational Function Costs, Conveyance and Aqueduct: SWP.



**Figure 8: Metropolitan's Treatment Plants' Geographical Location**

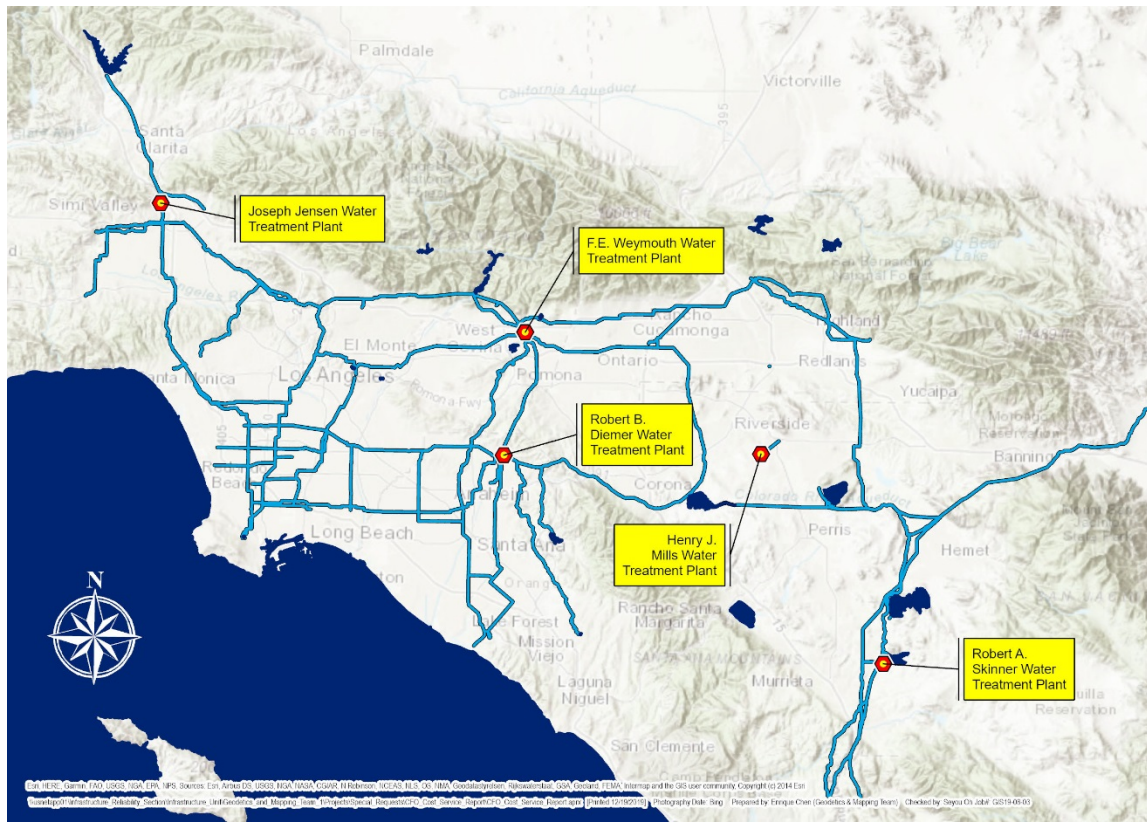


Table 8 shows Metropolitan's treated and untreated water transactions by member agency for FY 2018/19. Approximately 53 percent of Metropolitan's water transactions in FY 2018/19 were treated.

**Table 8: Treated and Untreated Water Transactions by Member Agency, FY 2019**

**Acre-Feet**<sup>1, 2</sup>

<b>Agency</b>	<b>Treated (AF)</b>	<b>Untreated (AF)</b>	<b>Total (AF)</b>
Anaheim	6,643	4,379	11,022
Beverly Hills	9,905	-	9,905
Burbank	5,865	12,109	17,973
Calleguas	84,638	-	84,638
Central Basin	14,706	5,340	20,046
Compton	0	-	0
Eastern	50,134	37,121	87,255
Foothill	7,605	-	7,605
Fullerton	5,519	-	5,519
Glendale	14,185	-	14,185
Inland Empire	-	63,870	63,870
Las Virgenes	19,628	-	19,628
Long Beach	25,512	-	25,512
Los Angeles	68,653	73,222	141,875
MWDOC	111,587	71,541	183,128
Pasadena	17,996	-	17,996
San Diego	58,835	287,576	346,411
San Fernando	-	-	-
San Marino	840	-	840
Santa Ana	7,743	-	7,743
Santa Monica	3,157	-	3,157
Three Valleys	33,236	27,435	60,671
Torrance	14,176	-	14,176
Upper San Gabriel	5,420	40,776	46,195
West Basin	117,109	-	117,109
Western	42,696	22,821	65,517
<b>Total</b>	<b>725,786</b>	<b>646,190</b>	<b>1,371,976</b>

<sup>1</sup> Water Transactions include sales, exchanges, and wheeling.

<sup>2</sup> Water Transactions are based on occur period.

## Hydroelectric Facilities

Metropolitan's Distribution System has 16 small hydroelectric plants located throughout the service area. The plants are located in Los Angeles, Orange, Riverside, and San Diego Counties as shown in Figure 9. The combined generating capacity of these plants and the generating capacity at Diamond Valley Lake (DVL) are approximately 131 megawatts. Depending upon annual water deliveries, projected annual income for the next several years is expected to range between \$11 million and \$13 million.

Power from ten of the plants is sold to DWR at a contract rate. Power from four plants is sold to the Southern California Public Power Authority based on a contract rate. Power generation from the Sepulveda Canyon Plant is sold to the Los Angeles Department of Water and Power based on a contract rate. Power from the Etiwanda Power Plant has been sold to the Pacific Gas and Electric Company based on contract rates. Power generated by DVL is sold into the wholesale market.

Electricity generated by Metropolitan hydroelectric facilities is sold rather than used internally because of the costs and inefficiencies that would be associated with building an internal electric distribution network for transmitting the electricity throughout the Metropolitan system. The costs associated with contracting for such transmission services from others would be similarly prohibitive.

**Figure 9: Metropolitan's Hydroelectric Facilities**



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## DEVELOPMENTS

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Today, Metropolitan finds that its challenges and goals are evolving. The Board of Directors in the 1990s was deeply concerned with member agencies relying too much on importing supplies from Northern California and the Colorado River. Programs to regionalize conservation efforts and to incentivize new local supplies such as the LRP were developed. This approach was developed through regional long-term planning via Metropolitan's Integrated Water Resources Plan (IRP) initiated in 1996.

Today, there is a shifting water landscape. Population growth and water demands, in large part due to tremendous strides in water use efficiency, are far less than once predicted. Metropolitan's water transactions, which include sales, exchanges, and wheeling, in fiscal year 2019 were the lowest in nearly 40 years. A new generation of larger local supply projects are in the planning stages.

Delivery of imported supplies will always be a foundation to meet ongoing regional demands, even with climate change, and importantly so will storage of imported water for droughts and emergencies. The evolving mix of Southern California's future water portfolio is still to be determined and will be impacted by future policies and decisions made by Metropolitan's Board.

### Delta Conveyance

Within the region's water portfolio, supplies from the SWP remain an essential baseline water source for Southern California. Water from Northern California delivered through the SWP has provided key supplies in wet years to manage against dry years, and it is the only imported supply that can physically reach significant portions of Metropolitan's service area. This water source faces uncertainties due to climate change and the Delta's badly outdated delivery system; these problems are compounded by a declining ecosystem and 1,100-mile levee systems that are increasingly vulnerable.

California WaterFix was a comprehensive science-based solution proposed by the state to modernize critical water delivery infrastructure of the SWP. The California WaterFix proposed construction of new water intakes in the north Delta and two 40-foot diameter tunnels under the Delta terminating at a forebay in the south Delta. This would have fulfilled the requirement of the 2009 Delta Reform Act to contribute toward meeting the coequal goals of more reliably delivering water for California and protecting, restoring and enhancing the Delta ecosystem.

The estimated cost of California WaterFix was about \$17 billion in 2017 dollars, with Metropolitan's share about 26 percent of that, or \$4.3 billion. Metropolitan's Board authorized funding its share of the project and also the acquisition of an unsubscribed share of the project, for a total of up to 64.6% with an approximate cost of \$10.8 billion.

On April 29, 2019, Governor Newsom issued an executive order directing State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system that included consideration of a single-tunnel Delta conveyance facility instead of the approved two-tunnel WaterFix project. In light of this order, DWR and the State Water Contractors deleted the WaterFix cost provisions from the current amendment process leaving only the water management provisions and embarked on a new public process to further negotiate proposed amendments related to cost allocation for a potential new Bay-Delta conveyance project. **As a result, the costs of any such new project are yet unknown and Metropolitan's projected up to \$10.8 billion costs for California WaterFix are no longer included in its current or future budgeting or projections.**

Metropolitan intends to work with the Newsom administration on developing a refined Delta conveyance project that addresses the needs of cities, farms and the environment. The Biennial Budget includes



Metropolitan's planned contribution of \$25 million in FY 2020/21 and \$25 million in FY 2021/22 for Delta conveyance project planning activities. This contribution follows Board policy that staff work with the State to find solutions to improve Delta conveyance. The focus over the next two years will be supporting the DWR as it seeks permits for a Delta conveyance project; participating in the Delta Conveyance Design and Construction Authority; and continuing to put forward sound scientific research to help inform and improve Delta management decisions. If staff determines that Metropolitan's appropriate contribution toward planning activities should exceed the budgeted amount, the General Manager will request authorization from the Board for additional funding. Additionally, the Board will separately consider Metropolitan's participation in a new Delta conveyance project once that proposed project is finalized by DWR. Information regarding the Delta conveyance project is located on Metropolitan's website at <http://www.mwdh2o.com/DocSvcsPubs/DeltaConveyance/index.html>.

## Regional Recycled Water Program

The Regional Recycled Water Program (RRWP), is a partnership between Metropolitan and the Sanitation Districts of Los Angeles County. On July 11, 2017, Metropolitan's Board voted to award a contract for the construction of an advanced water treatment demonstration facility that will take treated wastewater and purify it through various advanced treatment technologies to produce a safe, high-quality water source to replenish the region's groundwater basins. The RRWP's demonstration facility will produce 500,000 gallons per day and will be operated for at least one year to generate information needed to increase the efficiency of the treatment processes that may be used in a potential full-scale recycled water facility. The potential full-scale project, viewed as a potential third source of water for Metropolitan, would provide a reliable, drought-proof, climate-resilient, local supply for indirect potable reuse (IPR) through groundwater basin recharge, direct potable reuse (DPR) through raw water augmentation at Metropolitan's treatment plants, and direct industrial use. If approved, the full-scale project will produce 150 million gallons per day (mgd), or approximately 168,000 acre feet (AF) per year (AFY), of purified water.

Construction of the 0.5 mgd advanced water treatment demonstration plant was approved in 2017 and was completed in August 2019. Testing and operation of the plant to confirm treatment costs and provide the basis for regulatory approval of the proposed treatment process and technical recommendations concerning design, operation, and optimization of the full-scale RRWP is to be completed in 2020. **The Board has not yet committed to a full-scale project; however, the planning costs for the backbone system of the RRWP is included in the Biennial Budget in the order of \$15 million in each year.** Information regarding the RRWP is located on Metropolitan's website at <http://www.mwdh2o.com/DocSvcsPubs/rrwp/index.html#home>.

## 2020 IRP Update

The IRP is a plan for providing reliable and affordable water to Southern California for the next 25 years, from its inception in 1996 and then from regular updates, most recently in 2015. It broadly identifies and aligns regional and local needs, priorities, resources and opportunities, both in the scale of actions and in their timing. The emphasis is on its broad collaborative approach to planning.

Each IRP sets important targets for actions such as developing local supply, water use efficiency, or average-year expectations from the Colorado River and the SWP. It does not signal that Metropolitan will build or pay for any specific initiative or project to meet those targets, nor does it assume any particular local supply project will be funded or constructed. The IRP is a method for setting targets and reassessing them approximately every five years along with the Urban Water Management Plan.

Metropolitan is preparing to develop the 2020 IRP Update during calendar year 2020. During this update Metropolitan's Board will be faced with deciding the vision for Metropolitan's second century – to provide service at reduced levels of demand or stand by ready to provide the insurance of a system able to serve at



higher capacity. This vision will help drive the direction of the 2020 IRP Update as well as many other decisions.

## Rate Structure Review

Since its creation Metropolitan has shifted from receiving the bulk of its revenues from a single source, ad valorem property taxes, to a mix of fixed charges and volumetric rates. This shift took place over decades for numerous reasons, including the availability of water to deliver to Metropolitan's member agencies. Currently about 80 percent of Metropolitan's revenues come from the volumetric rates and the remaining 20 percent comes from fixed sources such as the fixed charges, ad valorem property taxes, and miscellaneous revenue sources including interest income, hydroelectric power sales, leases and grant funding.

Member agencies' purchases and use of Metropolitan's system have always varied for a variety of reasons, with member agencies able to call on Metropolitan's services at various levels from year to year. Because Metropolitan's deliveries to its member agencies have generally remained consistent on a long-term basis (as opposed to year-to-year), the volumetric revenue base has provided consistent necessary revenue for Metropolitan. **However, if through the IRP process the Board determines that reliance on Metropolitan will be less consistent, such as a standby insurance provider, then the current rate structure may not be consistent with that role.** Any changes to the rate structure should seek to maintain a structure that is sustainable for the long-term and remains equitable to Metropolitan's member agencies throughout the service area.

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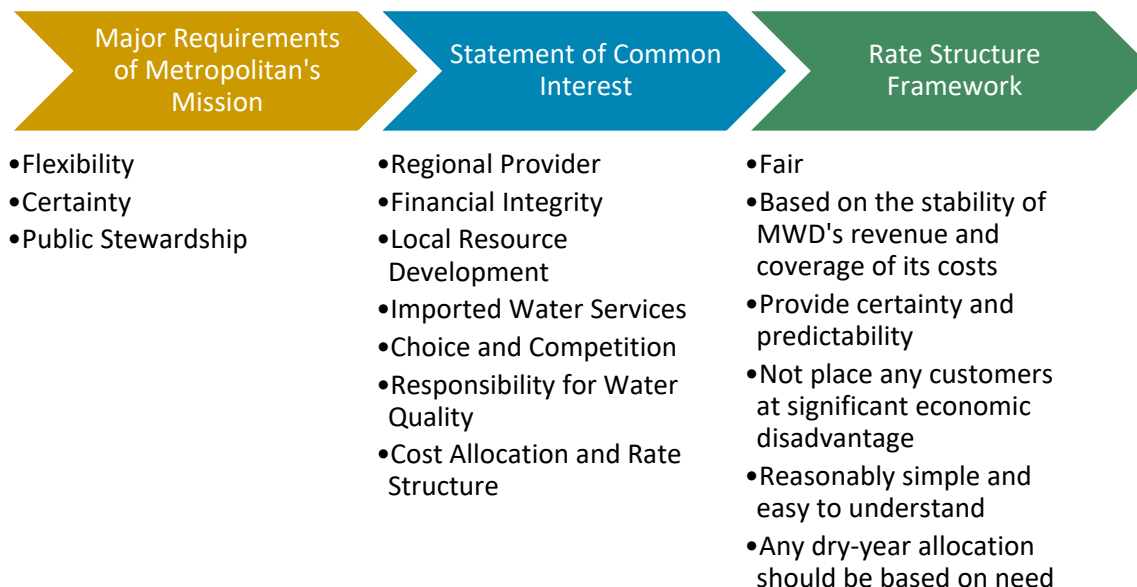
# RATE STRUCTURE

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## Framework

The Rate Structure Framework evolved through a comprehensive strategic planning process initiated in 1998. As depicted in the following figure, the first step of the process was to identify the “Major Requirements of Metropolitan’s Mission,” which was reflected in the Strategic Plan Policy Principles. The Statement of Common Interests formed the basis of Metropolitan’s strategic plan to address these mission requirements. One of the most important common interests was “Cost Allocation and Rate Structure.” In determining the most appropriate Cost of Service (COS) and rate structure, a set of pricing objectives, or guiding rate principles, was developed. These guiding rate principles defined Metropolitan’s Rate Structure Framework by which various COS and rate-setting methodologies could be evaluated.

### Development of the Rate Structure Framework



The strategic planning process which established the foundation of the Rate Structure Framework is discussed below.

### Major Requirements of Metropolitan’s Mission

As one of the first steps in the strategic planning process in 1998, the Board developed a list of three mission requirements in its Metropolitan vision statement – flexibility, certainty, and public stewardship:

- **Flexibility.** Metropolitan is aware of the legislative and economic pressures which make flexibility in providing water services for a changing demand and in a competitive water market paramount. Fair compensation for wheeling through Metropolitan’s conveyance systems is an essential element of Southern California’s developing market.

- **Certainty.** The certainty that Metropolitan’s water supply is reliable, and that the COS is appropriate is of utmost importance to member agencies and their retailers who are endeavoring to provide not only water, but value to the residents in their service area.
- **Public Stewardship.** As public stewards of much of Southern California’s water supply, Metropolitan and its member agencies are responsible for making certain that the water is provided in a cost-effective and environmentally sound manner.

### Statement of Common Interests

From the strategic planning mission requirements, the Board developed a list of seven areas of common interest that formed the major focus elements of the Metropolitan strategic plan:

- **Regional provider.** This area includes the concerns of protecting regional infrastructure and providing service during drought periods. Regional water must be provided to meet the needs of the member agencies, and water supplies must be equitably allocated during drought periods based on the Water Surplus and Drought Management Plan principles.
- **Financial integrity.** It is a common interest of the members for Metropolitan to assure the financial integrity of the agency in all aspects of its operations.
- **Local resource development.** Metropolitan supports local resources development by working in partnership with its member agencies and by providing member agencies with financial incentives for water conservation and for local projects.
- **Imported water service.** Metropolitan is responsible for providing imported water to meet the committed needs of its member agencies.
- **Choice and competition.** After Metropolitan provides imported water for the member agencies’ committed demands, a member agency can choose the most cost-effective additional water supplies for its customers. These choices include either Metropolitan, local resource development, market transfers, or some combination of these secondary options. Metropolitan and its member agencies can decide how to provide these additional supplies collaboratively while balancing local, imported, and market opportunities with affordability.
- **Responsibility for water quality.** Metropolitan must advocate source water quality and implement in-basin water quality for the imported water it supplies. This is necessary to guarantee compliance with primary drinking water standards and to meet the water quality requirements for water recycling and ground water replenishment.
- **Cost allocation and rate structure.** The framework for a revised rate structure will be established to address allocation of costs, financial commitment, unbundling of services, and fair compensation for services including wheeling, peaking, growth, and others.

### Rate Structure Framework

A major element of common interest was “*Cost Allocation and Rate Structure.*” In addressing this element, a set of pricing objectives, or guiding rate principles, had to be developed to evaluate alternative COS and rate setting approaches, or methodologies. As a result, the Board adopted a set of rate principles which was defined as the *Rate Structure Framework*. The Rate Structure Framework provided the principles for the Strategic Planning Steering Committee to develop a preferred rate structure. The Rate Structure Framework includes the following principles:

- The rate structure should be *fair*;
- It should be based on the *stability* of Metropolitan’s revenue and coverage of its costs;
- It should provide certainty and predictability;

- It should not place any customers at *significant economic disadvantage*;
- It should be reasonably *simple and easy to understand*; and
- Any dry-year allocation should be *based on need*.

The 2001 COS and rate structure was adopted by the Board to address the Rate Structure Framework.

## Rate Structure Design

The elements of the rate structure, and the rates and charges for calendar year 2020 are summarized in Table 9 below:

**Table 9: Rate Elements, Calendar Year 2020**

Rate Design Elements	Functional Costs Recovered	Type of Charge	Rate or charge effective January 1, 2020
Tier 1 Supply Rate	Supply, Drought Storage	Volumetric (\$/af)	\$208
Tier 2 Supply Rate	Reflects cost of transfers from north of the Delta	Volumetric (\$/af)	\$295
System Access Rate	Conveyance/Distribution (Average Capacity), portion of Regulatory/Emergency Storage	Volumetric (\$/af)	\$346
Water Stewardship Rate	Demand Management	Volumetric (\$/af)	\$65
System Power Rate	Power on CRA and SWP	Volumetric (\$/af)	\$136
Treatment Surcharge	Treatment	Volumetric (\$/af)	\$323
Capacity Charge	Peak Distribution Capacity, portion of Regulatory Storage	Fixed (\$/cfs)	\$8,800
Readiness-to-Serve Charge	Available Conv. & Dist. Capacity, Emergency Storage	Fixed (\$M)	\$136

## Supply Rates

### Purpose

The rate structure recovers supply costs through a two-tiered price structure. The amount of water a member agency may purchase at a lower Tier 1 Supply Rate, water sales within a member agency's Tier 1 maximum, is established by either a purchase order agreement or calculated as 60% of its Revised Base Firm Demand.

### Tier 1 Supply Rate

The Tier 1 Supply Rate is a volumetric rate charged on Metropolitan's water sales that are within a member agency's Tier 1 maximum. The Tier 1 Supply Rate supports a regional integrated approach through the uniform, postage stamp rate. The Tier 1 Supply Rate is calculated as the amount of the total revenue requirement functionalized as supply divided by the estimated amount of Tier 1 water sales.

### Tier 2 Supply Rate

The Tier 2 Supply Rate is a volumetric rate that reflects Metropolitan's cost of purchasing water transfers north of the Delta. The Tier 2 Supply Rate is charged on Metropolitan water sales that exceed a member agency's Tier 1 maximum. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation.

### Implementation

Because the Tier 1 maximum is set at a total member agency level and not at a meter level, all system water delivered will be billed at the Tier 1 Supply Rate. Any water delivered that exceeds the Tier 1 maximum will be billed an additional amount equivalent to the difference between the Tier 2 and Tier 1 Supply Rates.

For member agencies without purchase orders and member agencies with purchase orders that accrue a cumulative Tier 2 obligation at the end of year five of the purchase order, the Tier 2 Supply Rate will be applied in the month where the Tier 1 maximum is surpassed on all applicable deliveries. Otherwise, any obligation to pay the Tier 2 Supply Rate will be calculated over the ten-year period, consistent with the calculation of any purchase order commitment obligation.

## System Access Rate (SAR)

### Purpose

The SAR recovers the costs of Conveyance, Distribution, and Storage that is used on an average annual basis through a uniform, volumetric rate. All member agencies pay the SAR for access to conveyance and distribution capacity in the Metropolitan system.

### Implementation

The SAR is charged for each acre-foot of water transported by Metropolitan, regardless of the ownership of the water being transported. All member agencies using the Metropolitan system to transport water pay the same SAR for the use of the system conveyance and distribution capacity used to meet average annual demands.

**As explained further below, the rate for wheeling service which has included the SAR is inapplicable in calendar years 2021 and 2022.**

## Water Stewardship Rate (WSR)

### Purpose

The WSR provided a dedicated source of funding for Metropolitan's demand management function through a uniform, volumetric rate recovered through the end of calendar year 2020. Metropolitan's demand management operations functions include past and future conservation and local resources projects. Because of the uniform benefits conferred on all system users by investments in conservation and local resources, all users of Metropolitan's conveyance and distribution system paid the WSR except for exchange deliveries to SDCWA in calendar years 2018 through 2020.

### Implementation

The WSR was charged to each acre-foot of water delivered by Metropolitan through the end of calendar year 2020, regardless of the water being transported, except for the noted exchange deliveries. All system users benefit from avoided system infrastructure costs through conservation and local resources development, and from the system capacity made available by investments in Demand Management Programs like Metropolitan's Conservation Program and Local Resources Program. Therefore, all users paid the WSR through the end of calendar year 2020, except on water delivered to SDCWA pursuant to the Exchange Agreement in calendar years 2018, 2019, and 2020.

Metropolitan's Board suspended the billing and collection of the WSR for calendar years 2018, 2019, and 2020 on exchange deliveries to SDCWA pending Metropolitan's completion of a cost allocation study of its demand management costs. Having completed the demand management cost allocation process, in December 2019 Metropolitan's Board directed staff: (1) to incorporate the use of the 2019/20 fiscal-year-end balance of the Water Stewardship Fund to fund all demand management costs in the proposed FY 2020/21 and 2021/22 biennial budget; and (2) to not incorporate the WSR, or any other rates or charges to recover demand management costs, with the proposed rates and charges for CYs 2021 and 2022. This decision

provided the Board additional time to consider a rate design alternative for recovery of future demand management costs.

Therefore, as a result of this Board decision, the WSR is not incorporated in this COS analysis and Report. The full-service rate will not include the WSR element during the biennial period. Further, because the rate at Metropolitan Administrative Code Section 4405(b) for wheeling service to member agencies for a period of up to one year—as defined in Sections 4119 and 4405(a)—includes the Water Stewardship Rate, the rate for wheeling service at Section 4405(b) is deemed inapplicable during that period. Any wheeling service to any member agency pursuant to Section 4405(a) will be provided at a price for the transaction to be agreed upon by Metropolitan and the member agency (as is already the case for wheeling of over one year to member agencies and wheeling of any duration to third parties).

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

### **Purpose**

The SPR recovers the costs of energy required to pump water to Southern California through the SWP and CRA. The cost of power is recovered through a uniform, volumetric rate.

### **Implementation**

The SPR is applied to all deliveries of Metropolitan water to member agencies. Under Metropolitan Administrative Code Section 4405(b), member agencies pay for actual cost (not system average) of power needed to move the water for wheeling transactions under section 4405(a). Therefore, the SPR is not applicable to wheeling arrangements. However, as explained above, the rate for wheeling service at Section 4405(b) is not applicable during the biennial period. Still, it is anticipated that charges for wheeling by any party will include the actual costs of power needed to move water and not the SPR. For example, a third party wheeling water through the California Aqueduct would pay the variable power cost associated with using the SWP transportation facilities.

## **Treatment Surcharge**

### **Purpose**

The Treatment Surcharge recovers all of the costs of providing treatment capacity and operations through a uniform, volumetric rate per acre-foot of treated water transactions.

### **Implementation**

The Treatment Surcharge is charged to all treated water transactions.

## **Capacity Charge**

### **Purpose**

The Capacity Charge recovers the costs incurred to provide peak capacity within the Distribution System. The Capacity Charge also provides a price signal to encourage agencies to reduce peak demands on the Distribution System and to shift demands that occur during the May 1 through September 30 period into the October 1 through April 30 period, resulting in more efficient utilization of Metropolitan's existing infrastructure and deferring capacity expansion costs.

### **Implementation**

Each member agency will pay the Capacity Charge per cubic feet per second (cfs) based on a three-year trailing peak (maximum) day demand, measured in cfs. Each member agency's peak day is likely to occur on different days; therefore, this measure approximates peak week demands on Metropolitan.

## Readiness-To-Serve Charge (RTS)

### Purpose

The RTS recovers the cost of the portion of system that is available to provide emergency service and available capacity during outages and hydrologic variability.

### Implementation

The RTS is a fixed charge that is allocated among the member agencies based on a ten-fiscal-year rolling average of firm demands. Water transfers and exchanges are included for purposes of calculating the ten-year rolling average<sup>4</sup>. The Standby Charge is collected at the request of some member agencies that have elected to use the charge as a direct offset to the member agency's RTS obligation.

## Purchase Order Option

### Purpose

The current rate structure allows member agencies to choose to purchase water from Metropolitan by means of a Purchase Order. Purchase Orders are voluntary agreements that determine the amount of water that a member agency can purchase at the Tier 1 Supply Rate. They allow member agencies to purchase a greater amount of water at the lower Tier 1 Supply Rate than would otherwise be authorized by the Administrative Code. In exchange for the higher Tier 1 Maximum, the member agency commits to purchase a specific amount of water (based on past purchase levels) over the term of the agreement. Such agreements allow member agencies to manage costs and provide Metropolitan with a measure of secure revenue.

In November 2014, the Metropolitan Board approved new Purchase Orders effective January 1, 2015 through December 31, 2024 (the "Purchase Order Term"). Twenty-one of the twenty-six-member agencies have Purchase Orders, which commit the member agencies to purchase a minimum amount of supply from Metropolitan (the "Purchase Order Commitment").

The key terms of the Purchase Orders include:

- A ten-year term, effective January 1, 2015 through December 31, 2024;
- A higher Tier 1 limit based on the Base Period Demand, determined by the member agency's choice between (1) the Revised Base Firm Demand, which is the highest fiscal year purchases during the 13-year period of fiscal year 1989/90 through fiscal year 2001/02, or (2) the highest year purchases in the most recent 12-year period of fiscal year 2002/03 through 2013/14. The demand base is unique for each member agency, reflecting the use of Metropolitan's system water over time;
- An overall purchase commitment by the member agency based on the Demand Base period chosen, times ten to reflect the ten-year Purchase Order term. Those agencies choosing the more recent 12-year period may have a higher Tier 1 Maximum and commitment. The commitment is also unique for each member agency.
- The opportunity to reset the Base Period Demand using a five-year rolling average;
- Any obligation to pay the Tier 2 Supply Rate will be calculated over the ten-year period, consistent with the calculation of any Purchase Order commitment obligation; and
- An appeals process for agencies with unmet purchase commitments that will allow each acre-foot of unmet commitment to be reduced by the amount of production from a local resource project that commences operation on or after January 1, 2014.

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<sup>4</sup> The SDCWA exchange water transactions are excluded from the calculation of the ten-year rolling average per the terms of the parties' exchange agreement.



Member agencies that do not have Purchase Orders in effect are subject to Tier 2 Supply Rates for amounts exceeding 60 percent of their base amount (equal to the member agency's highest fiscal year demand between 1989/90 and 2001/02) annually.

### Implementation

Purchase Order Commitments are unique for each member agency. The commitment is calculated based on the demand base chosen (the "Base Period Demand") and multiplied by ten to reflect the ten-year Purchase Order Term. If a member agency opted to use the Revised Base Firm Demand, which is the highest fiscal year purchases during the original 13-year period of fiscal year 1989/90 through fiscal year 2001/02 for their Purchase Order, their Commitment is 60% of the 2003 Initial Base Firm Demand, the same as the previous Amended and Restated Purchase Order agreement, multiplied by ten. If a member agency opted to use the more recent 12-year period of fiscal year 2002/03 through fiscal year 2013/14 for their Purchase Order, their Commitment is 60% of the highest year in the period of fiscal year 2002/03 through fiscal year 2013/14, multiplied by ten. The Purchase Order Commitment is fixed for the Purchase Order Term.

At the end of the Purchase Order Term, if the member agency has not purchased enough firm supply to meet its Purchase Order Commitment, it will be billed for the remaining balance of the Purchase Order Commitment at the average of the Tier 1 Supply Rate in effect during the Term. This payment may be prorated with interest evenly over the next 12 invoices.

If a member agency fulfills its Purchase Order Commitment prior to the end of the Purchase Order Term, then the member agency has met its obligation under the Purchase Order. The member agency may continue to purchase up to 90 percent of its cumulative Base Period Demand over the Term at the Tier 1 Supply Rate for the duration of the Purchase Order Term.

Firm water purchases made under the terms of the Purchase Order agreements are subject to reduction in accordance with the shortage allocation provisions of the Water Surplus and Drought Management Plan (WSDM Plan) implemented through the Water Supply Allocation Plan (WSAP). In the event that Metropolitan's Board or General Manager determines to reduce, interrupt or suspend deliveries of water, any outstanding balance of the Purchase Order Commitment at the end of the Term will be reduced by the "Purchase Order Commitment—Annual Average" for each and every fiscal or calendar year that a reduction, interruption or suspension occurred.

The following water transactions will be counted toward the Purchase Order Commitment:

- Full-service sales (Tier 1 or Tier 2 Supply Rates) of treated or untreated water
- Conjunctive Use sales
- Cyclic sales.

The current bundled full-service costs are shown in Table 10.



**Table 10: Bundled Full-Service Costs<sup>5</sup>**

Rate Type	Type of Charge	Rate or charge effective January 1, 2020
Tier 1 Full-Service Untreated Cost	Volumetric (\$/af)	\$755
Tier 2 Full-Service Untreated Cost	Volumetric (\$/af)	\$842
Tier 1 Full-Service Treated Cost	Volumetric (\$/af)	\$1,078
Tier 2 Full-Service Treated Cost	Volumetric (\$/af)	\$1,165

The Tier 1 Full-Service Untreated Cost consists of the following rate elements: The Tier 1 Supply Rate, the System Access Rate, the System Power Rate, and the Water Stewardship Rate.

The Tier 2 Full-Service Untreated Cost consists of the following rate elements: The Tier 2 Supply Rate, the System Access Rate, the System Power Rate, and the Water Stewardship Rate.

The Tier 1 Full-Service Treated Cost consists of the following rate elements: The Tier 1 Supply Rate, the System Access Rate, the System Power Rate, the Water Stewardship Rate, and the Treatment Surcharge.

The Tier 2 Full-Service Treated Cost consists of the following rate elements: The Tier 2 Supply Rate, the System Access Rate, the System Power Rate, the Water Stewardship Rate, and the Treatment Surcharge.

<sup>5</sup> Nineteen of Metropolitan's member agencies have invoices prepared using bundled rates; seven of Metropolitan's member agencies have invoices prepared using the unbundled rate elements.

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## COST OF SERVICE

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A cost of service (COS) report contains analysis of costs using a methodology to equitably allocate the revenue requirements of a utility between the various users of service. Costs of operating a utility are not accounted for on a specific user or service basis. Many costs are incurred for the joint benefit of all users, while other costs may benefit only the users of certain services. Metropolitan uses the COS methodology to functionalize, allocate and distribute costs to services provided. The unbundled rate structure is used to collect revenue based on the services provided to different member agencies. Metropolitan provides two services to its member agencies, full-service water (treated and untreated) and wheeling. Exchanges and other arrangements are provided on a contractual basis.

### AWWA Guidelines

The American Water Works Association (AWWA) is the professional association which, among other functions, identifies water industry standards for financial management and rate-setting practices. AWWA publishes a document on these topics in its Manual of Water Supply Practices series, which is the AWWA's M1, Principles of Water Rates, Fees, and Charges, Seventh Edition.

AWWA manual M1 Seventh Edition delineates a number of guidelines and principles that are intended to be observed in the broad development of cost of service and rate setting steps<sup>6</sup>. The COS process reflects the M1 Seventh Edition guidelines and principles, which were carefully considered in the conceptual design of the Metropolitan COS. Major AWWA guidelines and principles considered in the proposed COS approach are outlined below.

- One of the most effective methods used to accommodate the impact of rapidly increasing costs on rate design is the use of a "forward looking" or prospective rate period. This procedure is frequently used by government-owned utilities in determining cost of service. The COS follows this approach by incorporating budget data for upcoming fiscal years, using projected debt service and State Water Contract payment obligation data, and applying annual escalation factors to operations and maintenance costs.
- The purpose of performing functional assignment of costs is to express the utility's cost of service in terms that make it possible to allocate and then distribute costs to services in accordance with the costs of serving each class of customer, or in Metropolitan's case, each function type. In keeping with AWWA recommendations, the functional assignment and commodity/demand allocation modules of the COS allow identification of functional cost components at a level that allows the unbundling of Metropolitan's rates.
- The cash-needs approach to identifying revenue requirements is one of two methodologies endorsed by AWWA principles and is frequently used by government-owned utilities. The COS's revenue requirements module is consistent with this approach.
- In areas where seasonal usage patterns impose significant demands on the utility, consideration may be given to separate charges for such use. System costs associated with accommodating seasonal use may be recovered either through rates applied to separate metering for such services or through charges applied based on seasonal use. This principle is consistent with the conceptual design of the COS's allocation module.

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<sup>6</sup> The majority of the M1 Seventh Edition is written for utilities providing retail service or combined retail and wholesale service. The distinction in practices for wholesale-only utilities is indirect; care must be taken to be attuned to these distinctions such that the guidelines are not incorrectly applied or misrepresented.

General principles for establishing charges state that:

- Beneficiaries of a service should pay for that service.
- The level of service charges should be related to the cost of providing the service.
- The price of services may be used to change user behavior and demand for the good or service.<sup>7</sup>

The proposed COS process is consistent with these principles.

AWWA's M1 Seventh Edition provides rate-setting objectives as a basis for evaluating water utility rate designs. These objectives have all been considered in the development of the proposed COS process and resulting rates, fees and charges for service<sup>8</sup>.

- Effectiveness in yielding total revenue requirements (full cost recovery).
- Revenue stability and predictability.
- Stability and predictability of the rates themselves from unexpected or adverse changes.
- Promotion of efficient resource use (conservation and efficient use).
- Fairness in the apportionment of total costs of service among the different ratepayers.
- Avoidance of undue discrimination (subsidies) within the rates.
- Dynamic efficiency in responding to changing supply and demand patterns.
- Freedom from controversies as to proper interpretation of the rates.
- Simple and easy to understand.
- Simple to administer.
- Legal and defensible.

It should be noted that there are circumstances in which some of these objectives can be in conflict with each other. For example, competing objectives could be conservation and revenue stability. To incentivize conservation, a utility might develop a rate structure that was 100 percent volumetric. To provide revenue stability, the same utility might develop a rate structure that was 100 percent fixed. Because of such conflict potential, all of the AWWA pricing objectives must be carefully balanced when selecting a preferred COS and rate setting approach.

## Cost of Service

Prior to discussing the specific rates and charges that make up the rate structure, it is important to understand the cost of service process that supports the rates and charges. The AWWA M1 Seventh Edition sets out the steps in the COS process as: (1) identify which costs should be recovered through rates and charges (the revenue requirement); (2) organize costs into operational functions (functionalize); (3) allocate operational function costs on the basis for which the cost was incurred (allocate); and (4) distribute costs to rate elements (distribute). The process acronym is FAD: functionalize, allocate, distribute. The balance of this report uses this nomenclature, while tailoring the process to Metropolitan's unique service obligations and member agency needs.

The purpose of sorting Metropolitan's costs in a manner that reflects the type of function (e.g., supply vs. conveyance), the characteristics of the cost (e.g., fixed or variable) and the reason why the cost was incurred

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<sup>7</sup> Metropolitan's rate structure does not use pricing in its service rates to encourage conservation and local resource development by member agencies. Metropolitan's rates reflect the cost of providing its services. Metropolitan invests in demand management, by providing incentives to those conserving and developing local resource projects that reduce the price of those projects for the participants. Those demand management investments lower system costs and reduce the need for Metropolitan to import additional supplies into the service area.

<sup>8</sup> Manual of Water Supply Practices, M1, Principles of Water Rates, Fees and Charges, American Water Works Association, Seventh Edition, pg.4

(e.g., to meet peak or average demand) is to create logical cost of service “building blocks”. The building blocks can then be arranged to design rates and charges with a reasonable nexus between costs and benefits.

## Cost of Service Process

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

### Step 1 - Development of Revenue Requirements

In the revenue requirement step, the costs that Metropolitan must recover through rates and charges, after consideration of revenue offsets (such as property tax revenue, interest income, and miscellaneous income), are identified. The cash-needs approach, an accepted industry practice for government-owned utilities, has historically been used in identifying Metropolitan’s revenue requirements<sup>9</sup>. Although the utility approach would be acceptable under AWWA guidelines, the cash-needs approach was applied for the purposes of this study. All of Metropolitan’s costs fall under the broad categories of either Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific departments within Metropolitan. General District Requirements primarily consist of requirements associated with the CRA, SWP, Supply Programs, Demand Management Programs, and capital financing costs. General District Requirements also include reserve fund transfers required by bond covenants and Metropolitan’s Administrative Code. Under the cash needs approach, revenue requirements include operating costs and annual requirements for meeting financed capital items (debt service and funding of the CIP from operating revenues).

### Step 2 - Functionalization of Costs

Allow for the development of rates that properly reflect the costs of providing different service types (full-service (treated and untreated) and wheeling), revenue requirements should be categorized based on the operational functions associated with each cost. In the functional assignment step, revenue requirements are assigned to different categories based on the operational functions associated with each cost. The functional categories are identified in such a way as to allow the development of logical assignment bases. The functional categories used in this cost of service process include:

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

These functional assignments reflect the unique functions that Metropolitan undertakes and enable the ultimate unbundling of services consistent with the Strategic Plan Policy Principles. In order to provide more finite functional assignment, many of these functional categories are subdivided into more detailed sub-functions in the COS process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions SWP, CRA, and Other. Similarly, costs in the Storage function are broken down into the sub-functions Emergency Storage, Drought Carryover Storage, and Regulatory Storage.

### Step 3 - Allocation of Costs

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<sup>9</sup> The primary difference between the two methods is how capital-related costs are approached. The cash-needs approach uses debt service on bonds and capital funded from rates; the utility approach uses depreciation and a return on Rate Base or Investment.

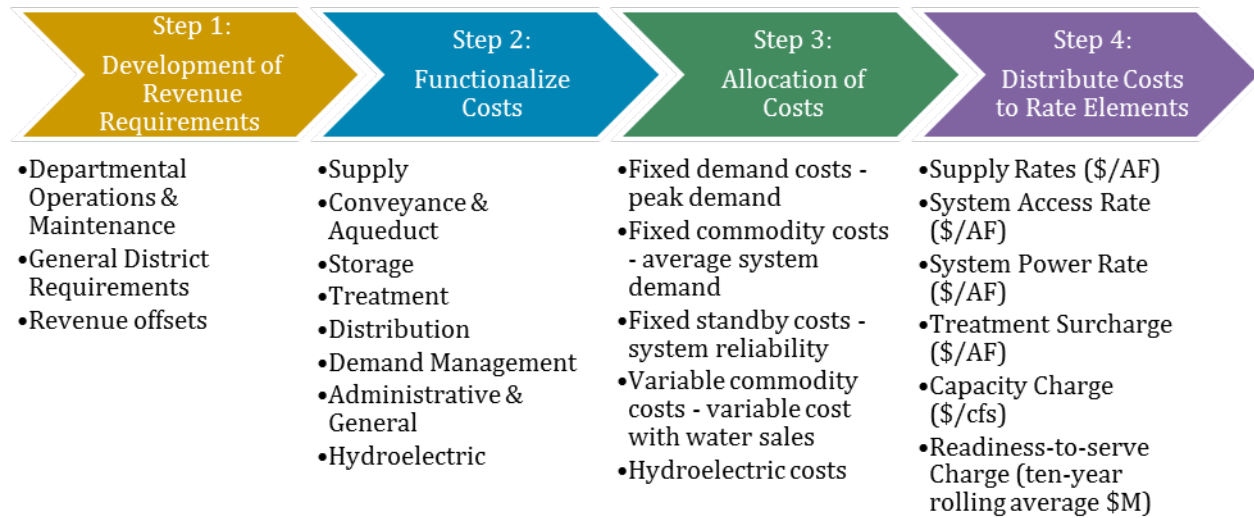
In the cost allocation step, functionalized costs are separated into categories according to their causes and behavioral characteristics. Proper cost allocation is critical in developing a rate structure that recovers costs in a manner consistent with the causes and behaviors of those costs. Under AWWA guidelines, cost allocation may be done using either the Base/Extra-Capacity approach or the Commodity/Demand approach. In the simplest sense, these approaches offer alternative means of distinguishing between utility costs incurred to meet average or base demands and costs incurred to meet peak demands. The Commodity/Demand approach was selected because it: (1) is best suited for systems where design criteria are focused on peaking patterns within a long-term time frame, such as peak month and peak week, (2) it works well in situations where complex cost relationships exist in the service area and attempting to allocate costs to peak day and peak hour functions would be complicated and often impractical, and (3) it allows for the development of the most appropriate COS classification bases because of the way Metropolitan's financial and operational data is organized. The Commodity/Demand approach was modified for its application to Metropolitan's rate structure by adding a separate cost allocation for costs related to Metropolitan's standby function. Analysis of system operating data indicated that a modified Commodity/Demand approach was most appropriate for developing Metropolitan's cost of service allocation bases.

#### **Step 4 - Distribution to Rate Elements**

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

With regard to treatment-related costs, all costs, whether for average, peak, or standby, are recovered by dollar per acre-foot rates and are distributed based on the volume of treated water purchased. The following figure summarizes the Metropolitan COS process.

## Cost of Service Process



## Revenue Requirements

The estimated revenue requirements presented in this report are for FY 2020/21 and 2021/22. Throughout the report, the fiscal years are used as the “test years” to demonstrate the application of the cost of service process. Schedule 1 and Schedule 2 summarize the FY 2020/21 and FY 2021/22 revenue requirements, respectively, by the major budget line items used in Metropolitan’s budgeting process.

Current estimates indicate Metropolitan’s annual expenditures (including capital financing costs, but not construction outlays financed with bond proceeds) will total approximately \$1.84 billion in FY 2020/21 and \$1.91 billion in FY 2021/22. These expenditures support sales of 1.60 million-acre-feet (MAF) in FY 2020/21 and 1.60 MAF in FY 2021/22, which are average demands-based analyses prepared by Water Resource Management (WRM), and assume a 50 percent allocation on the SWP, consistent with average allocations, and CRA diversions of 0.75 MAF in FY 2020/21 and 0.73 MAF in FY 2021/22.

The rates and charges do not have to cover the entire amount of estimated expenditures. Metropolitan generates a significant amount of revenue from interest income, hydroelectric power sales and miscellaneous income. These internally generated revenues are referred to as revenue offsets and are expected to generate about \$58 million in FY 2020/21 and \$60 million in FY 2021/22. It is expected that Metropolitan will also generate about \$140 million in ad valorem property tax revenues (assuming that ad valorem tax rates are maintained at 0.0035 percent of assessed valuation) in FY 2020/21 and \$140 million in FY 2021/22. Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, and a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the SWP, and other SWP costs. The total revenue offsets are estimated to be about \$198 million in FY 2020/21 and \$200 million in FY 2021/22. Therefore, the revenue required from rates and charges is the difference between the total estimated expenditures (costs) and the revenue offsets, or \$1.64 billion in FY 2020/21 and \$1.71 billion in FY 2021/22. Given an effective date of January 1, 2021 and January 1, 2022, respectively, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2020 will generate a total of \$1.60 billion in FY 2020/21 and \$1.67 billion in FY 2021/22.

All of Metropolitan's costs fall under the broad categories of Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific organizational groups. General District Requirements consist of requirements associated with the CRA, SWP, Supply Programs, Demand Management Programs, and capital financing costs associated with the Capital Investment Plan (CIP). General District Requirements also include reserve fund transfers required by bond covenants and Metropolitan's Administrative Code.

**Schedule 1: Revenue Requirements (by budget line item), FY 2020/21**

	<b>Fiscal Year Ending 2021</b>	<b>% of Revenue Requirements (1)</b>
<b>Departmental Operations &amp; Maintenance</b>		
Office of General Manager	\$ 7,176,529	0.4%
Water Systems Operations	252,582,249	12.4%
Water Resources Management	23,334,161	1.1%
Engineering Services	41,865,104	2.1%
Bay Delta Initiatives	9,666,300	0.5%
Business Technology	85,015,114	4.2%
Real Property	19,322,687	0.9%
Human Resources	13,669,495	0.7%
Office of the Chief Financial Officer	26,759,739	1.3%
External Affairs	26,681,228	1.3%
General Counsel	15,321,969	0.8%
General Auditor	4,329,295	0.2%
Ethics Office	1,552,431	0.1%
<b>Total</b>	<b>527,276,301</b>	<b>25.8%</b>
<b>General District Requirements</b>		
State Water Contract*	640,768,118	31.4%
Colorado River Aqueduct Power Costs	52,236,836	2.6%
Supply Programs	68,682,826	3.4%
Demand Management Programs	48,531,757	2.4%
Capital Financing Program	433,690,217	21.3%
Regional Recycled Water Program planning costs	15,000,000	0.7%
Other Operating Costs	14,878,483	0.7%
Increase/(Decrease) in Required Reserves	41,300,000	2.0%
<b>Total</b>	<b>1,315,088,237</b>	<b>64.4%</b>
<b>Revenue Offsets</b>	<b>(198,395,660)</b>	<b>9.7%</b>
<b>Net Revenue Requirements</b>	<b>\$ 1,643,968,879</b>	<b>100.0%</b>

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

\* Includes Delta Conveyance planning costs

Totals may not foot due to rounding



### Schedule 2: Revenue Requirements (by budget line item), FY 2021/22

	Fiscal Year Ending 2022	% of Revenue Requirements (1)
<b>Departmental Operations &amp; Maintenance</b>		
Office of General Manager	\$ 7,464,699	0.4%
Water Systems Operations	264,998,182	12.6%
Water Resources Management	24,275,333	1.2%
Engineering Services	43,912,051	2.1%
Bay Delta Initiatives	9,299,195	0.4%
Business Technology	86,970,123	4.1%
Real Property	19,075,253	0.9%
Human Resources	14,240,056	0.7%
Office of the Chief Financial Officer	27,615,004	1.3%
External Affairs	27,638,981	1.3%
General Counsel	17,002,271	0.8%
General Auditor	4,549,453	0.2%
Ethics Office	1,608,910	0.1%
<b>Total</b>	<b>548,649,512</b>	<b>26.0%</b>
<b>General District Requirements</b>		
State Water Contract*	654,385,178	31.0%
Colorado River Aqueduct Power Costs	57,585,160	2.7%
Supply Programs	61,190,053	2.9%
Demand Management Programs	52,491,694	2.5%
Capital Financing Program	441,991,321	21.0%
Regional Recycled Water Program planning costs	15,000,000	0.7%
Other Operating Costs	14,153,432	0.7%
Increase/(Decrease) in Required Reserves	62,500,000	3.0%
<b>Total</b>	<b>1,359,296,837</b>	<b>64.5%</b>
<b>Revenue Offsets</b>	<b>(200,359,529)</b>	<b>9.5%</b>
<b>Net Revenue Requirements</b>	<b>\$ 1,707,586,820</b>	<b>100.0%</b>

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

\* Includes Delta Conveyance planning costs

Totals may not foot due to rounding

### Departmental Costs

Departmental costs consist of salary and benefits, chemicals, and power, outside services, materials and supplies, association dues, insurance expenses, leases, and property taxes budgeted by the General Manager's Department, as well as the General Counsel, General Auditor, and Ethics Officer.

The proposed FY 2020/21 O&M budget includes \$542.2 million for labor and benefits, water treatment chemicals, power, and solids handling, materials and supplies, professional services, and operating equipment purchases. This is \$45.8 million, or 9.2 percent, higher than the FY 2019/20 budget of \$496.4 million due primarily to negotiated labor, benefits, and outside services cost increases. Variable treatment costs are also higher due to higher chemical prices. The total authorized personnel complement for the FY 2020/21 budget is 1,954 authorized positions, including 47 agency and district temporary full-time equivalents (FTEs), and reflects an increase of 20 full-time positions from the FY 2019/20 budget. Total funded positions are 1,954 FTEs.



The proposed FY 2021/22 O&M budget is \$562.8 million, an increase of \$20.6 million, or 3.8 percent, compared to the FY 2020/21 budget. This increase is primarily due to negotiated labor, benefits, and outside services cost increases, and slight increase in chemical prices. The total authorized personnel complement for FY 2021/22 is decreased by 6 positions to 1,948 authorized positions. Total funded positions are 1,948 FTEs.

The Departmental Budget is described in detail in the Biennial Budget document.

## General District Revenue Requirements

General District Requirements include costs for the SWP, CRA power, Supply Programs, Demand Management Programs, and the Capital Financing costs. Each of these areas is described in the following.

### State Water Project

Metropolitan participates in the State Water Project (SWP), which is managed and operated by the California Department of Water Resources (DWR) and is an integral part of Metropolitan's conveyance system, through its State Water Contract. All costs of the SWP capital expenditures and costs of the operations, maintenance, power and replacement (OMPR) associated with water conservation (supply) and transportation (delivery) are paid by the 29 State Water Contractors. Metropolitan recovers the costs associated with the SWP through ad valorem property taxes, the Tier 1 Supply Rate, System Access Rate, the System Power Rate, and the Readiness-to-Serve Charge.

All State Water Contractors are obligated to pay all costs incurred by DWR to operate the SWP for water supply delivery, as part of their contractual participation in the project. Articles 22 through 26 of the State Water Contract provide that all costs DWR might incur to conserve and transport water to Metropolitan will be recovered from Metropolitan. Metropolitan is responsible for paying the costs of the system necessary to conserve and transport SWP water regardless of whether Metropolitan receives any water at all. Only the Transportation Variable, which recovers power costs for pumping through SWP transportation facilities to Metropolitan, varies depending on the amount of water delivered to Metropolitan. In the event Metropolitan does not pay DWR, DWR can require Metropolitan to recover its SWP costs through property taxes. DWR has no recourse to go to the State General Fund to pay SWP costs. DWR has no exposure whatsoever for any revenue shortfall, cost changes, or the cost impacts of operational limitations; these risks are solely the Contractors' risks.

Annually, the DWR reviews and redetermines the water supply and financial aspects of the SWP as required by the State Water Contract. The annual review and redetermination 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 2020 is supported by Appendix B to Bulletin 132-19). 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 conservation (supply) costs (the Delta Water Charge) and transportation (delivery) costs (the Transportation Charge). DWR reconciles actual costs for each year and either collects more funds from the Contractors if actual costs exceeded estimated costs or provides a credit/refund if actual costs were lower than estimated costs.

Budgeted State Water Contract costs include Metropolitan's planned contribution for Delta conveyance project planning activities of \$25 million per fiscal year and are \$640.8 million for FY 2020/21 and \$654.4 million for FY 2021/22. The expenditures for the SWP are described in detail in the Biennial Budget document.

## Colorado River Aqueduct

Metropolitan owns, operates, and manages the CRA. 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.

In fiscal years 2020/21 and 2021/22, it is projected Metropolitan will receive annual CRA water diversions of approximately 0.745 MAF and 0.732 MAF respectively. The budgeted power costs for the CRA are \$52.2 million in FY 2020/21 and \$57.6 million in FY 2021/22.

The CRA costs for delivery and supply are reflected in the Departmental costs and in the costs of the appropriate operational functions. The expenditures for CRA power are described in detail in the Biennial Budget document.

## Supply Programs: SWP

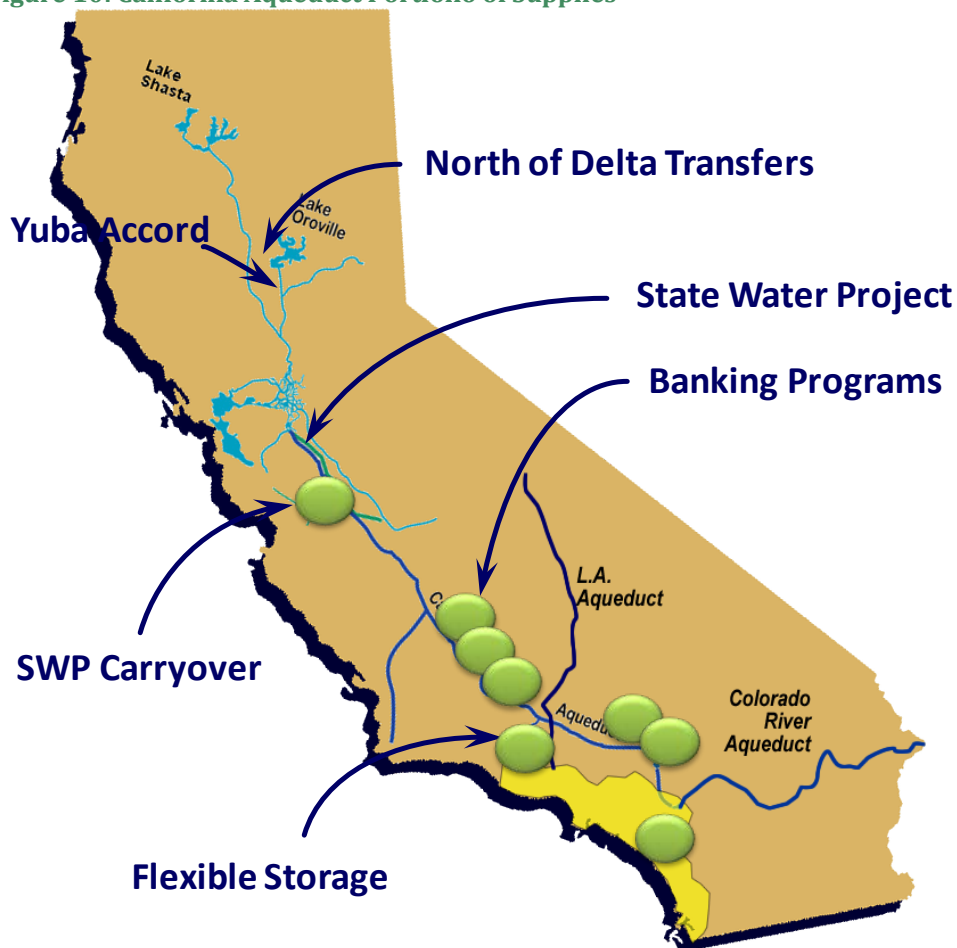
Since inception, the SWC provided Contractors the ability to use the SWP to convey non-SWP water under certain circumstances. Specifically, Article 18(c)(2) of the original SWC addresses situations where there is a shortage in the supply of water made available under the SWC and states, "[T]he District, 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 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 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, secured 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 (1996 IRP) and subsequent updates, Metropolitan has developed and actively managed a portfolio of supplies to convey through the California Aqueduct, as shown in Figure 10. The geographical locations of the projects are indicated by the green dots; Metropolitan's service area is designated by the yellow highlighted area. 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 portfolio of supplies that Metropolitan has developed to be conveyed through the SWP since adoption of the Monterey Amendments and the 1996 IRP extend from north of the Delta to Southern California.

Since the Monterey Amendments, Metropolitan has secured one-year water transfer supplies through Metropolitan-only purchases, buyer coalition-purchases, and Governor Drought Water Banks. The most recent years that Metropolitan secured these one-year transactions were 2008 through 2010, and 2015. Metropolitan opted not to pursue these transactions in 2012, 2014 or 2018. 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. There were no single-year transfer programs in 2011, 2016-2017, or 2019 because of favorable water supply conditions and lack of capacity to move transfer supplies through the Delta.

In addition to the above 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.

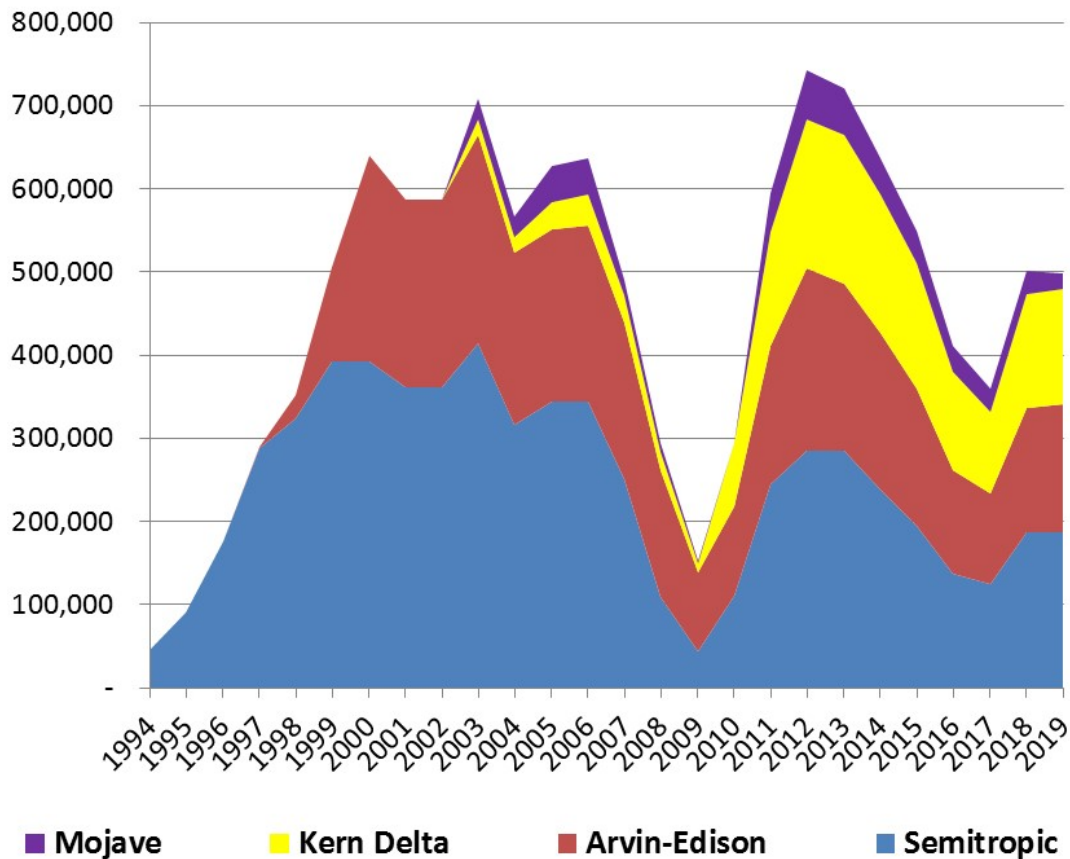
**Figure 10: California Aqueduct Portfolio of Supplies**



In addition to one-year transfers, and the Yuba Accord water, Metropolitan has developed groundwater storage agreements that allow Metropolitan to store available supplies in the Central Valley for return later. Metropolitan enters into point of delivery 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's service area. Metropolitan's storage activities are shown in Figure 11. The figure shows how the programs function to store supplies during surplus conditions and return supplies during a drought. The storage programs have demonstrated that they can provide a significant amount of water when needed.

- 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. A 2017 State Water Resources Control Board (SWRCB) regulation setting a Maximum Contaminant Level (MCL) for TCP has temporarily suspended use of this program due to the levels detected in the program groundwater wells.

- 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. Currently, the minimum annual yield to Metropolitan is 38,200 acre-feet, and the maximum annual yield is 229,700 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.
- 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.
- 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. The Mojave storage program returns water only by exchange of surface water supplies.
- Antelope Valley East Kern (AVEK) Storage Program: under the Storage Program, Metropolitan, at its discretion, could store up to 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. The water is returned by exchange of SWP supplies or direct groundwater pump-in.
- Antelope Valley-East Kern (AVEK) High Desert Water Bank Program: under this agreement, AVEK provides storage for up to 70,000 acre-feet per year of its unused SWP Table A amount to Metropolitan or other supplies for later return. The maximum storage capacity for Metropolitan supplies would be 280,000 acre-feet. The program is designed to return up to 70,000 acre-feet per year by direct pump-in to the East Branch of the California Aqueduct. Water can also be returned by exchange of SWP supplies when available.

**Figure 11: SWP Groundwater Storage Programs, acre-feet**

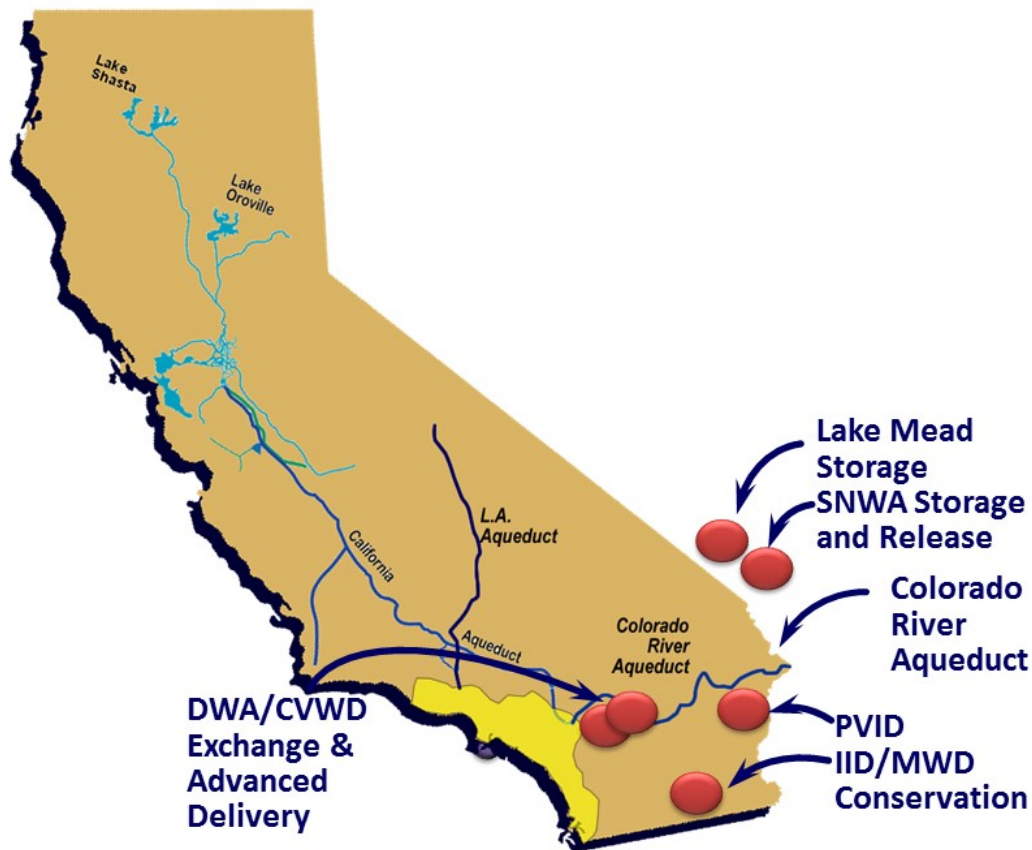
Metropolitan has developed exchanges and transfers with other Contractors to enhance supply flexibility. Some of these agencies have extensive groundwater supplies and are willing to exchange their SWP supplies.

- San Gabriel Valley Water District:** under this agreement, Metropolitan delivers treated water to a San Gabriel Valley Water District (SGVMWD) subagency in exchange for twice as much untreated SWP supplies delivered into the Main San Gabriel groundwater basin. The groundwater basin supplies water to both Metropolitan and SGVMWD subagencies. Each year Metropolitan purchases 5,000 acre-feet minus the unbalanced exchange amount. By mutual agreement Metropolitan may purchase more than the 5,000 acre-feet per year should SGVMWD have additional supplies available. 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 advance of the exchange for their SWP Contract Table A allocations. In addition to their Table A supplies, the agencies can take delivery of SWP supplies available under Article 21 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. 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. In December 2019, the exchange agreements were amended to provide more flexibility and operational certainty for the parties involved. Additionally, under the amended agreement, Coachella and Desert in wet years pay a portion of Metropolitan's water storage management costs, up to a combined total of \$4 million per year.

## Supply Programs: CRA

Since adoption of the 1996 IRP and subsequent updates, Metropolitan has developed and actively manages a portfolio of supplies to convey through the CRA. Metropolitan determines the delivery schedule of those resources throughout the year based on changes in the availability of SWP and of Colorado River water. Figure 12 shows the geographic location of the portfolio of additional CRA supplies, designated by the red dots, which Metropolitan has developed for diversion into the CRA since adoption of the 1996 IRP. These resources extend from Lake Mead to Southern California and provide supply to Metropolitan's service area, which is shown in the yellow highlighted area.

**Figure 12: 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 is then available to Metropolitan. Execution of the Quantification Settlement Agreement (QSA) and related agreements resulted in changes in the availability of water under the program. As a result of a 2014 IID-Metropolitan letter agreement, the amount of water conserved 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 the Coachella Valley Water District (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 PVID's valley service area are paid to reduce water use by not



irrigating a portion of their land. A maximum of 35 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 in 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, over 1.3 million acre-feet total of Colorado River water has been conserved. The volume of water that becomes available to Metropolitan is governed by the QSA and the Colorado River Water Delivery Agreement. Under these agreements:

- 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
- 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.

- Southern Nevada Water Authority and Metropolitan Storage and Interstate Release Agreement: Under this 2004 agreement and a related Operational Agreement, the Southern Nevada Water Authority (SNWA) may offer a portion of its Colorado River water supplies to Metropolitan when there is space available in the CRA to receive the water. SNWA may call for return of the water in a future year, in which Metropolitan would reduce its Colorado River water order to return this water to SNWA. In 2009, 2012, and 2015, Metropolitan, the Colorado River Commission of Nevada, and SNWA amended the related Operational Agreement dealing with volumes of water that may be stored or called at various times. The agreements can be terminated upon 90 days' notice following the return of the water stored by Metropolitan.
- Lower Colorado Water Supply Project: This project develops additional water supplies by pumping groundwater into the All-American Canal for delivery to IID. An equal volume of Colorado River water is then made available for other water users along the river. Under a contract among Metropolitan, the City of Needles, and the United States Bureau of Reclamation, Metropolitan receives any excess unused water developed by the project. 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 must be created through extraordinary conservation, system efficiency, or tributary conservation methods. ICS is available for delivery in a subsequent year, with Extraordinary Conservation ICS subject to a one-time deduction to benefit the river system and annual 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. The Lower Colorado Water Supply Project, and groundwater desalination. "System Efficiency ICS" can be created 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, and two projects to create ICS by conservation in Mexico:
  - Yuma Desalting Pilot Project: Metropolitan contributed funds toward the 2010-2011 pilot run of the Yuma Desalting Plant in exchange for a portion of the desalinated water produced by the project. The Yuma Desalting Plant treated brackish agricultural drainage that flows into Mexico to the Ciénega de Santa Clara at the terminus of the Colorado River but does not count as deliveries to Mexico under the Mexican Water Treaty. Metropolitan's portion of the desalinated

water was 24,397 acre-feet and this water was stored in Lake Mead. Metropolitan can take delivery of up to the entire amount in any single year.

- Drop 2 (Warren H. Brock) Reservoir: Metropolitan contributed funds toward the U.S. 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 take delivery of 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.
- 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 was \$5 million for 47,500 acre-feet of project supplies. The costs were paid between 2015 and 2017, and the conserved water was credited to Metropolitan's ICS water account no later than 2017. In December 2013, Metropolitan and IID executed an agreement under which IID paid half of Metropolitan's program costs, or \$2.5 million, in return for half of the project supplies, 23,750 acre-feet.
- In September 2017, Metropolitan executed agreements in support and continuation of a program to augment Metropolitan's Colorado River supply through international pilot projects in Mexico. Under the new set of agreements, Metropolitan's total share of costs are expected to be \$3.75 million for 27,275 acre-feet of project supplies. The costs will be paid in three parts in 2020, 2023, and 2026.
- 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 exchange for future deliveries by DWA and CVWD of an equal volume of 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 to deliver an equivalent amount of Colorado River water<sup>10</sup>.

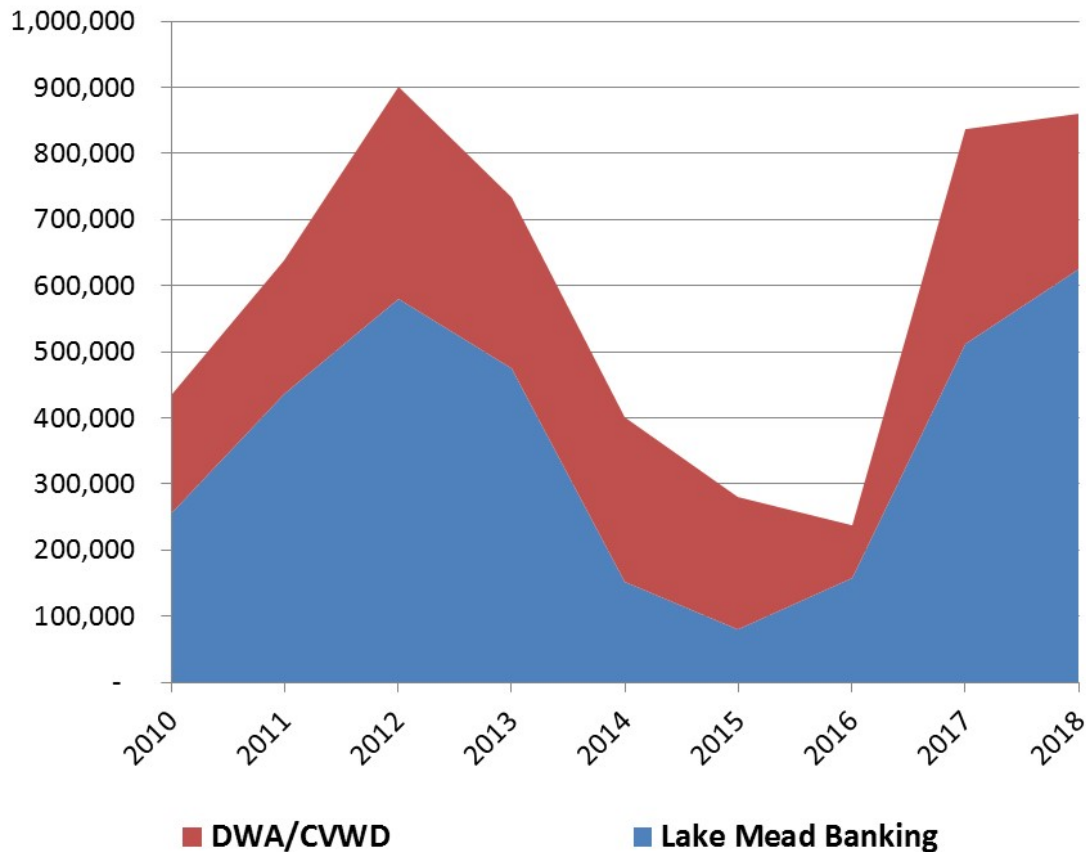
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<sup>10</sup> DWA has a SWP Table A contract right of 55,750 acre-feet per year and CVWD has a SWP Table A contract right of 138,350 acre-feet per year, for a total of 194,100 acre-feet per year. In addition to their Table A supplies, DWA and CVWD, subject to Metropolitan's written consent may by exchange take delivery of SWP supplies available under Article 21 of their SWP Contracts, the Turn-back Pool Program, and non-SWP supplies they may acquire and convey through SWP facilities. Under the Metropolitan-CVWD Delivery and Exchange Agreement for 35,000 Acre-feet, up to 35,000 acre-feet of Metropolitan's SWP Table A supply can be requested annually by CVWD for delivery by exchange.



Figure 13 shows the year-end balance in Metropolitan’s Colorado River storage programs. The combined capacity of the Lake Mead Storage program and the DWA/CVWD advance delivery program is 2,300,000 acre-feet, plus the amount of water in storage in Lake Mead as a result of the Drop 2 Reservoir and Yuma Desalting Plant system efficiency projects.

**Figure 13: Colorado River Storage Programs, acre-feet**



In addition to the supply programs developed by Metropolitan, Metropolitan entered into an exchange agreement with the San Diego County Water Authority (SDCWA). On April 29, 1998, SDCWA and IID executed an agreement (the “IID-SDCWA Transfer Agreement”) for SDCWA’s purchase from IID of Colorado River water that is conserved within IID. An amendment to the IID-SDCWA Transfer Agreement, executed as one of the QSA related agreements, set the maximum transfer amount at 205,000 acre-feet in 2021, with the transfer gradually ramping up to that amount over an 18-year period, then stabilizing at 200,000 acre-feet per year beginning in 2023.

No facilities currently exist to deliver water from IID to SDCWA. Accordingly, in 1998, SDCWA entered into an exchange agreement with Metropolitan, pursuant to which SDCWA would have made available to Metropolitan at Lake Havasu on the Colorado River the conserved IID Colorado River water acquired by SDCWA from IID. Metropolitan would have delivered to SDCWA an equal volume of water from Metropolitan’s supplies. The 1998 SDCWA-Metropolitan Exchange Agreement was conditioned upon the State Legislature’s appropriation of \$235 million to Metropolitan for lining the earthen All-American and Coachella Valley Canals to conserve water that would otherwise seep into the soil. Upon completion of the canal lining, Metropolitan had the rights to the estimated 77,700 acre-feet per year of conserved water for 110 years (Canal Lining Water).

In 2003, SDCWA and Metropolitan amended their exchange agreement, pursuant to which Metropolitan assigned the rights to the Canal Lining Water for 110 years and the \$235 million in state funding to SDCWA in exchange for SDCWA's agreement to pay for deliveries of Metropolitan water exchanged for the Canal Lining Water and IID transfer water based on the conveyance rates charged to Metropolitan's member agencies.

The budget for the Supply Programs is \$68.7 million in FY 2020/21 and \$61.2 million in FY 2021/22. The expenditures for the Supply Programs are described in detail in the Biennial Budget document.

## Demand Management Programs

Demand Management is an operational function Metropolitan undertakes to enable it to provide its full-service water and wheeling services to its member agencies. Demand Management costs are Metropolitan's expenditures for funding local water resource development programs, water conservation programs, the Future Supply Actions Program, and the Stormwater Pilot Program. These Demand Management Programs incentivize the development of local water supplies and the conservation of water to reduce the need to import water to deliver to Metropolitan's member agencies. These programs are implemented below the delivery points between Metropolitan's and its member agencies' distribution systems and, as such, do not add any water to Metropolitan's supplies. Rather, the effect of these downstream programs is to produce a local supply of water for the local agencies and to reduce demands by member agencies for water imported through Metropolitan's system.

Demand Management Programs reduce the use of and burden on Metropolitan's distribution and conveyance system, which, in turn, helps reduce and avoid the capital, operating, maintenance and 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 tunnel and pipeline, completion of San Diego Pipeline No. 6, the West Valley Interconnection, and the completion of the SWP East Branch expansion. 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 approximately \$2.9 billion in 2017 dollars. The programs also free up capacity in Metropolitan's system to convey both Metropolitan water, and water from other non-MWD sources.

In addition to reducing Metropolitan's costs for operating the distribution and conveyance system, Metropolitan also pursues conservation and local water resource development because it has uniquely been directed to do so by the state Legislature. In 1999, then Governor Davis signed 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.

AB 1668 and SB 606 build on Governor Brown's efforts to make water conservation a way of life in California and create a new foundation for long-term improvements in water conservation and drought planning. These bills establish guidelines for efficient water use and a framework for the implementation and oversight of the new standards, which must be in place by 2022. Metropolitan's Demand Management programs will also support Metropolitan's member agencies' ability to meet these guidelines and standards.

Demand Management costs also support the Strategic Plan Policy Principles approved by Metropolitan's Board on December 14, 1999. These principles represent 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.

In April 2018, the Board directed staff to undertake a process to determine the most appropriate cost allocation of demand management costs going forward. Metropolitan undertook that process, with the assistance of consultants and input from its member agencies, resulting in (1) an updated cost functionalization of demand management costs based on updated resource and system planning, and (2) rate design alternatives for recovering demand management costs. The foundation for the past allocation of demand management costs entirely to transportation transactions through the collection of the WSR relied on the 25-year capital planning forecast in the 1996 IRP. That IRP initially established a preferred resource mix that identified future transportation infrastructure projects that could be avoided or deferred if that option was selected because of demand management programs. The IRP updates since 1996 have continued to recognize the avoided and deferred cost function of demand management. However, the 1996 IRP planning period concludes at the end of 2020.

The demand management cost allocation study process concluded in December 2018 and staff presented to the Board at least four different rate-design alternatives. Staff also presented to the Board the option of using the balance of the Water Stewardship Fund to fund demand management costs for the next biennial budget. The expenditures for the Demand Management Program are \$48.5 million in FY 2020/21 and \$52.5 million in FY 2021/22 and are described in more detail in the Biennial Budget document. The Board approved the option to use the Water Stewardship Fund to fund demand management costs in the next biennial period to allow it to consider demand management funding in relation to the upcoming 2020 IRP update and to undergo a rate structure refinement process. The approximately \$126 million balance of the Water Stewardship Fund at the end of FY 2019/20 plus and funds generated from the WSR through the end of calendar year 2020 will be used to fund all demand management cost in FY 2020/21 and FY 2021/22. If demand management requires additional funding before the end of the biennium, staff will present the funding issue to the Board.

Revenue requirements for demand management will be met with the Water Stewardship Fund and no rate element or charge will be collected in 2021 or 2022 for that purpose.

### Capital Financing Costs

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.

Budgeted amounts for Capital Financing represent the expenditures for existing and future debt service, anticipated debt administration costs to support the debt portfolio, and PAYGO amounts to support the Capital Investment Plan (CIP). 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.

- **Revenue Bond Debt Service:** Includes the annual principal and interest payments for Metropolitan's outstanding and estimated future Revenue Bond debt service costs. Revenue bonds are used to finance the majority of Metropolitan's CIP. Long-term interest rates are assumed to be 4.5 percent for fixed rate bonds.
- **G.O. Bond Debt Service:** Includes Metropolitan's currently outstanding General Obligation (GO) bond interest and principal payments. In the long-term, it is assumed that no additional GO debt is issued to finance the CIP.
- **Debt administration costs:** Includes liquidity, remarketing, and broker-dealer fees.
- **PAYGO:** For FY 2020/21 and 2021/22, 60 percent of Metropolitan's capital costs are assumed to be funded from current revenues. It is projected to that \$135 million PAYGO funding will be available per year, which is revenue collected through the rates and charges for this purpose over the next two fiscal years.

Expenditures for Capital Financing are \$433.7 million in FY 2020/21 and \$442 million in FY 2021/22. The Capital Financing costs are described in more detail in the Biennial Budget document.

## Required Reserves

Metropolitan's Administrative Code and provisions of the revenue bond covenants require that reserves be held in certain funds at certain times. Therefore, as costs increase, reserves also increase to meet the Administrative Code and revenue bond covenants requirements. This line item reflects current policy requiring O&M fund and minimum requirements for the Revenue Remainder Fund. The increase in Required Reserves is \$41.3 million in FY 2020/21 and \$62.5 million in FY 2021/22.

## Functional Costs

Metropolitan undertakes several major operational functions in order to deliver full-service water to Metropolitan's member agencies. These include the supply itself, the conveyance capacity and energy used to move the supply, storage of water, distribution of supplies within Metropolitan's system, and treatment of these supplies. Metropolitan's rate structure recovers the majority of the cost of these functions through rates and charges. Wheeling services also involves various functions, including the conveyance capacity and energy used to move the wheeled water, distribution of supplies, and may involve treatment of the wheeled water, in addition to other administrative operations.

The functional categories developed for Metropolitan's cost of service process are consistent with the AWWA rate setting guidelines. A standard chart of accounts for utilities is provided in the AWWA publication "Financial Management for Water Utilities: Principles of Finance, Accounting, and Management Controls". Figure 5-2, page 46, lists Operation and Maintenance (O&M) Expense Accounts. As noted, these are Expense Accounts, which provide the means by which O&M and capital financing costs are functionalized for COS. Because all water utilities are not identical, the functional categories used in the COS reflect, as they should, Metropolitan's unique physical, financial, and institutional characteristics, as permitted under the AWWA guidelines. Metropolitan has modified these functional categories as follows:

**Pumping:** Metropolitan functionalizes its pumping costs for the SWP and the CRA to a Conveyance and Aqueduct subaccount.

**Customer Accounts, Customer Service and Sales Promotion:** These are not applicable as Metropolitan is not a retail utility.

**Storage:** Metropolitan provides significant emergency storage, dry-year supply and regulatory services, and functionalizes costs to Storage to reflect Metropolitan's unique physical and operational reliability services.

**Demand Management:** Metropolitan incurs expenditures to support its Demand Management program, as described throughout this document.

**Hydroelectric:** Metropolitan has developed recovery generation facilities throughout its distribution system and recovers the costs and revenues from this investment in its COS.

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

- The categories should correlate rates and charges elements with the costs of the functions associated with those elements; and
- Each function should include reasonable allocation bases by which costs may be allocated.

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

## Supply

This function includes costs for those SWP and CRA facilities and programs that relate to managing and developing supplies to meet the member agencies' demands.

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 State Water Contracts (Table A Allocation). The costs of the SWP supply are paid pursuant to Metropolitan's State Water Contract.

DWR's Delta Water Charge recovers the Capital and Minimum Operation, Maintenance, Power and Replacement (OMP&R) costs for the facilities that DWR determines are Conservation costs, meaning they conserve water to supply to the Contractors. Metropolitan reviews DWR's determination for purposes of functionalization. The Delta Water Charge is based on Contractors' cumulative Table A Allocations, which is approximately 46 percent for Metropolitan, regardless of whether it receives any Table A water in a year.

Under its contract 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 in California. Metropolitan also holds a fifth priority for an additional 662,000 acre-feet per year that exceeds California's 4.4-million-acre-foot normal 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 and crop rotation programs; or,
- When the U.S. Secretary of the Interior makes available:
  - Surplus water, Intentionally Created Surplus water, and/or
  - Water apportioned to, but unused by, Arizona and Nevada.

In fiscal years 2020/21 and 2021/22 it is projected that Metropolitan will receive annual CRA water diversions of approximately 0.75 MAF and 0.73 MAF respectively.

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, outside services and professional services. 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's supply related costs include investments in the Conservation Agreement with the IID, the PVID Program, and other CRA supply programs previously described. SWP programs include the Kern Delta Program, Semitropic Water Storage Program, Yuba Accord Program, Arvin-Edison Water Storage Program, Mojave Storage Program, AVEK Storage and Water Bank Programs, and others as previously described. Costs for programs within Metropolitan's service area, such as Conjunctive Use Programs, are also included.

Metropolitan finances past, current and future capital improvements associated with the supply portfolio capital assets and capitalizes investments IID/Metropolitan Conservation Program, the PVID Land Management, Crop Rotation, and Water Supply Program, the Kern Delta Storage Program, Semitropic Storage Program, and the Arvin-Edison Storage Program as Participation Rights.



## California EcoRestore

California EcoRestore represents the state's near-term effort to accelerate habitat restoration in the Delta. This effort parallels the California WaterFix and is a separate effort to improve the long-term health of the Delta. To date, California EcoRestore efforts include tidal restoration, fish passage improvements in the Yolo Bypass, tidal marsh restoration efforts, and floodplain projects. State Water Contractors and Central Valley Contractors have an obligation to pay for an existing commitment for habitat restoration. Any future costs are a public benefit and not a cost of the SWP. Any costs incurred by the SWP under the existing habitat restoration commitment under existing operating permits are likely to be recovered through the Delta Water Charge in Metropolitan's SWP bills and functionalized to Supply.

## Conveyance and Aqueduct

This function includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water to Metropolitan's internal distribution system. Variable power costs for the SWP and CRA are also considered to be Conveyance and Aqueduct costs but are separately reported under a "power" sub-function. Conveyance and Aqueduct facilities can be distinguished from Metropolitan's other facilities primarily by the fact that they do not typically include direct connections to the member agencies. For purposes of this study, the Inland Feeder Project functions as an extension of the SWP East Branch and is therefore considered a Conveyance and Aqueduct facility as well.

## Conveyance and Aqueduct: SWP<sup>11</sup>

Metropolitan is a participant (Contractor) in the SWP, which is an integral part of Metropolitan's integrated delivery system. Contractors are participants in the SWP through long-term contracts with DWR. The State Water Contractors participate in the SWP system in exchange for payments made according to their maximum annual water allocations, whether or not that water is actually made available, and the portions of the SWP system required for delivering water to each Contractor. Thus, in addition to conveying Delta water to the SWP participants, the SWP is also used to convey transfer supplies between: Contractors, Contractors and non-SWP entities, or between non-SWP entities. SWP operations are closely coordinated and integrated with CVP. San Luis Reservoir and the San Luis Canal section of the California Aqueduct are shared SWP/CVP facilities. The SWP is also connected to other water sources upstream of the Sacramento-San Joaquin Delta, and along the California Aqueduct as it passes through the Central Valley.

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. The design pumping capacity at Banks Pumping Plant is 10,670 cubic feet-per-second (cfs) but only 4,480 cfs at the Edmonston Pumping Plant, located at the base of the Tehachapi Mountains.

Since inception, the State Water Contract 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 addressed situations where there is a shortage in the supply of water made available under the contract and stated, "[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 shortage was declared by DWR and it was unclear how costs would be charged for using SWP

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<sup>11</sup> For historical and current information regarding the SWP, refer to Bulletin 132, published periodically by DWR since 1963. The most recently published Bulletin is Bulletin 132-17, dated January 2019 and titled, "Management of the California State Water Project." Appendices to the Bulletin are also updated separately. Both are available at: <https://water.ca.gov/Programs/State-Water-Project/Management/Bulletin-132>.

facilities to transport non-project water. In 1994, the Contractors and DWR negotiated the Monterey Amendments to the State Water Contract, including Article 55, which made explicit 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 is charged at the SWP average 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, secured the means for individual Contractors to increase supply reliability through water transfers and storage outside their service areas.

The impact of the Monterey Amendments on SWP operations is shown in Tables 11 and 12 below, which are based on information supplied by DWR<sup>12</sup>. In the nine calendar years ending in 2018, only 66.1 percent of the SWP deliveries to Metropolitan were Table A water delivered in the year it is paid for. Fully 33.9 percent of the deliveries were for non-Table A water. Non-SWP water comprised 9.8 percent of Metropolitan's deliveries from the SWP. For the other Contractors, 47.1 percent of the SWP deliveries were what one would consider "supply", or Table A water delivered in the year it is paid for; 52.9 percent of the deliveries are for non-Table A water. Non-SWP water transported by the other Contractors comprised 23.5 percent of their deliveries from the SWP. Non-Contractors using the SWP to wheel transfer supplies comprised 4.2 percent of all deliveries through the SWP. Fully 21.2 percent of the deliveries on the SWP were for non-SWP water.

**Table 11: State Water Project Water Management Activities, CY 2010 through 2018, Acre-Feet**

SWP Deliveries--Acre-feet											
Metropolitan				Other SWP Contractors				Non-SWC Agencies	Total Deliveries <sup>4</sup>		
(a)	(b)	(c)	(d) = (a) + (b) + (c)	(e)	(f)	(g)	(h) = (e) + (f) + (g)	(i) = (d) + (h)	(j)	(k) = (i) + (j)	
Table A <sup>1</sup>	Other SWP <sup>2</sup>	Non-SWP <sup>3</sup>	Total MWD	Table A <sup>1</sup>	Other SWP <sup>2</sup>	Non-SWP <sup>3</sup>	Total Other SWC	Total SWC	Non-SWP <sup>4</sup>		
2010	639,537	352,831	265,720	1,258,088	687,734	361,796	353,346	1,402,876	2,660,964	148,986	2,809,950
2011	857,794	596,204	145,907	1,599,905	1,220,286	596,713	179,850	1,996,849	3,596,754	61,739	3,658,493
2012	906,009	302,488	10,010	1,218,507	934,470	454,249	245,202	1,633,921	2,852,428	114,835	2,967,263
2013	613,271	145,147	113,469	871,887	471,421	392,336	372,772	1,236,529	2,108,416	131,484	2,239,900
2014	59,181	223,675	114,032	396,888	25,418	170,325	485,811	681,554	1,078,442	97,493	1,175,935
2015	380,577	37,459	146,868	564,904	259,867	175,018	376,158	811,043	1,375,947	57,810	1,433,757
2016	989,125	24,646	42,081	1,055,852	715,747	295,692	232,388	1,243,827	2,299,679	70,404	2,370,083
2017	1,084,494	453,261	37,521	1,575,276	1,142,946	722,561	291,744	2,157,251	3,732,527	83,270	3,815,797
2018	562,019	78,366	30,253	670,638	417,424	511,111	391,184	1,319,719	1,990,357	196,300	2,186,657
<b>Total</b>	<b>6,092,007</b>	<b>2,214,077</b>	<b>905,861</b>	<b>9,211,945</b>	<b>5,875,313</b>	<b>3,679,801</b>	<b>2,928,455</b>	<b>12,483,569</b>	<b>21,695,514</b>	<b>962,321</b>	<b>22,657,835</b>

<sup>1</sup> Table A delivered and not exchanged or transferred or stored

<sup>2</sup> Other SWP = SWP Exchanges, Transfers, Carryover Storage, Flexible Storage, Article 21, Pool A/B, settlement

<sup>3</sup> Non-SWP = banking, non-SWP transfers and exchanges, Dry Year Purchase Program, local water, general conveyance water, operations exchange

<sup>4</sup> Deliveries made to non State Water Contractors. Does not include FSRA, include BBID and CVC. Del="Y", SWP="N"

**Table 12: State Water Project Water Management Activities, CY 2010 through 2018, percentages**

	<b>SWP Deliveries--Percentages</b>							
	$= (a) / (d)$	$= ((b) + (c)) / (d)$	$= (c) / (d)$	$= (e) / (h)$	$= ((f) + (g)) / (h)$	$= (g) / (h)$	$= (j) / (k)$	$= ((c) + (g) + (j)) / (k)$
	MWD Table A	MWD Non- Table A	MWD Non- SWP	Contractors Table A	Other Contractors Non-Table A	Other Contractors Non-SWP	Non SWC to Total	Total non-SWP to Total
<b>2010</b>	50.8%	49.2%	21.1%	49.0%	51.0%	25.2%	5.3%	27.3%
<b>2011</b>	53.6%	46.4%	9.1%	61.1%	38.9%	9.0%	1.7%	10.6%
<b>2012</b>	74.4%	25.6%	0.8%	57.2%	42.8%	15.0%	3.9%	12.5%
<b>2013</b>	70.3%	29.7%	13.0%	38.1%	61.9%	30.1%	5.9%	27.6%
<b>2014</b>	14.9%	85.1%	28.7%	3.7%	96.3%	71.3%	8.3%	59.3%
<b>2015</b>	67.4%	32.6%	26.0%	32.0%	68.0%	46.4%	4.0%	40.5%
<b>2016</b>	93.7%	6.3%	4.0%	57.5%	42.5%	18.7%	3.0%	14.6%
<b>2017</b>	68.8%	31.2%	2.4%	53.0%	47.0%	13.5%	2.2%	10.8%
<b>2018</b>	83.8%	16.2%	4.5%	31.6%	68.4%	29.6%	9.0%	28.3%
<b>Total</b>	66.1%	33.9%	9.8%	47.1%	52.9%	23.5%	4.2%	21.2%

The SWP has transformed from being a transporter of SWP water to a transporter of other water sources as well for Metropolitan, other State Water Contractors, and non-Contractors. The reason for this is quite simple: the SWP has allocated only about 50 percent on average of the water due to State Water Contractors. The State Water Contractors have a significant investment in the costs of operating, maintaining and financing the SWP, and have developed creative programs to develop additional supplies and improved supply reliability by using the SWP as a transportation system. Specifically, during times of shortage or low SWP supply allocations, Metropolitan uses the SWP facilities to transport non-SWP water, which is water it has acquired through use of non-SWP sources, to its service area. When Metropolitan conveys non-project water, it is using the SWP transportation facilities in transactions that have nothing to do with SWP water supply. The ability to move non-SWP water through the SWP facilities, either as a result of purchases of non-SWP water or withdrawals from banking programs, enhances Metropolitan's operational flexibility and contributes to regional system reliability from which all member agencies benefit.

In addition, Metropolitan has, from time to time, used its capacity in the SWP to wheel non-Metropolitan water to its member agencies. Examples include water delivered to Santa Margarita Water District (1,665.2 acre-feet net in 1998-2000) and Irvine Ranch Water District (1,000 acre-feet in 2015), sub-agencies of the Municipal Water District of Orange County, and for the San Diego County Water Authority (23,077 acre-feet in 2008 and 15,520 acre-feet net in 2009).

The costs of the SWP conveyance facilities are paid pursuant to Metropolitan's State Water Contract. DWR's Transportation Charge recovers the costs associated with the various aqueduct reaches that deliver project water to the Contractors. The Capital and fixed OMP&R portions of the SWP Transportation Charge recover costs from the Contractors based on the accumulation of allocated costs for each aqueduct reach to each Contractor. 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 OMP&R Transportation Charges. Payment of the Transportation Charge allocates Contractors 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 approximately 63 percent of the total transportation costs, both capital and OMP&R, of the SWP.



## Delta Conveyance

In May 2019, Governor Newsom announced actions to begin the environmental review process for a single-tunnel conveyance in the Delta (which has become known as the “Delta Conveyance Project”). At this time, the environmental review process of Delta Conveyance is underway. Metropolitan will work with the administration to advance the single-tunnel project.

DWR has not provided an analysis for how it proposes to categorize the capital financing and operating costs of the Delta Conveyance Project on State Water Contractor Statement of Charges. In each of fiscal years 2020/21 and 2021/22, Metropolitan’s planned contribution for Delta Conveyance Project planning activities are budgeted at \$25 million per year, as explained above. Metropolitan has allocated these costs as transportation costs based on the function of the facility, which is to convey water from the Delta.

## Conveyance and Aqueduct: CRA

The CRA has also transformed from being source dedicated to delivering only Metropolitan’s entitlement of Colorado River water to a delivery system supporting many different supply sources. Specifically, Metropolitan uses the CRA to:

- transport water made available as a result of cooperative programs implemented through agreements with other water agencies, either in the year made available or in a subsequent year as intentionally-created surplus from Lake Mead storage to its service area;
- recharge water in a groundwater basin so that it can subsequently plan to recover it for delivery to Metropolitan’s service area; and
- exchange water with and deliver water in advance to other water agencies.

When Metropolitan conveys water made available as a result of cooperative programs implemented through agreements with other water agencies, to recharge water and subsequently recover it, or to exchange water with or deliver water in advance to other agencies, it is by definition using the CRA as a transportation facility. The ability to convey such water through the CRA facilities enhances Metropolitan’s operational flexibility and contributes to regional system reliability for the benefit of all member agencies. Metropolitan’s total calendar year CRA water management activities from 2010 through 2018 are shown in Table 13.

**Table 13: CRA Water Management Activities in Acre-Feet, CY 2010 through 2018**

	(a)	(b)	(c)	(d)	(e)	(f)	(g) = (a) / (f)	= ((f) - (a)) / (f)
	Priority 4 & 5	IID/MWD	PVID + Bard**	Other, including Storage	MWD Exchange w SDCWA	Total Net Diversions	Priority 4 & 5 to Total	Non Priority 4 and 5 to Total
<b>2010</b>	815,525	97,000	148,600	(113,571)	151,507	1,099,061	74.2%	25.8%
<b>2011</b>	485,178	99,940	122,200	(151,571)	143,243	698,990	69.4%	30.6%
<b>2012</b>	467,166	93,677	73,700	(85,285)	186,861	736,119	63.5%	36.5%
<b>2013</b>	545,087	98,307	32,750	156,315	180,256	1,012,715	53.8%	46.2%
<b>2014</b>	484,937	84,305	43,010	383,959	180,123	1,176,334	41.2%	58.8%
<b>2015</b>	616,685	101,105	94,477	187,311	179,347	1,178,925	52.3%	47.7%
<b>2016</b>	613,491	90,374	126,383	(11,503)	178,278	997,023	61.5%	38.5%
<b>2017</b>	590,021	105,000	121,689	(319,009)	179,326	677,027	87.1%	12.9%
<b>2018</b>	663,915	105,000	95,752	(183,305)	207,746	889,108	74.7%	25.3%
<b>Total</b>	2,797,893	874,708	858,561	(136,659)	1,586,687	5,981,190	46.8%	53.2%

(a) Use by holders of Indian and Miscellaneous present perfected rights and use by holders of Priorities 1, 2, and 3b above 420,000 acre-feet absent the Metropolitan-PVID Land Management, Crop Rotation, and Water Supply Program have been deducted from the Priority 4 supply of 550,000 acre-feet.

In the 9 calendar years ending 2018, approximately 47 percent of the CRA diversions to Metropolitan represent Metropolitan’s entitlements under the Seven Party Agreement system. The remaining 53 percent represents volumes of Colorado River water moved through other programs. Metropolitan periodically transports water for Tijuana, Mexico through the CRA. Recent amounts are 316 acre-feet in calendar year 2018 and 706 acre-feet in 2019, 5,152 acre-feet in calendar year 2009 and 102 acre-feet in calendar year 2012.

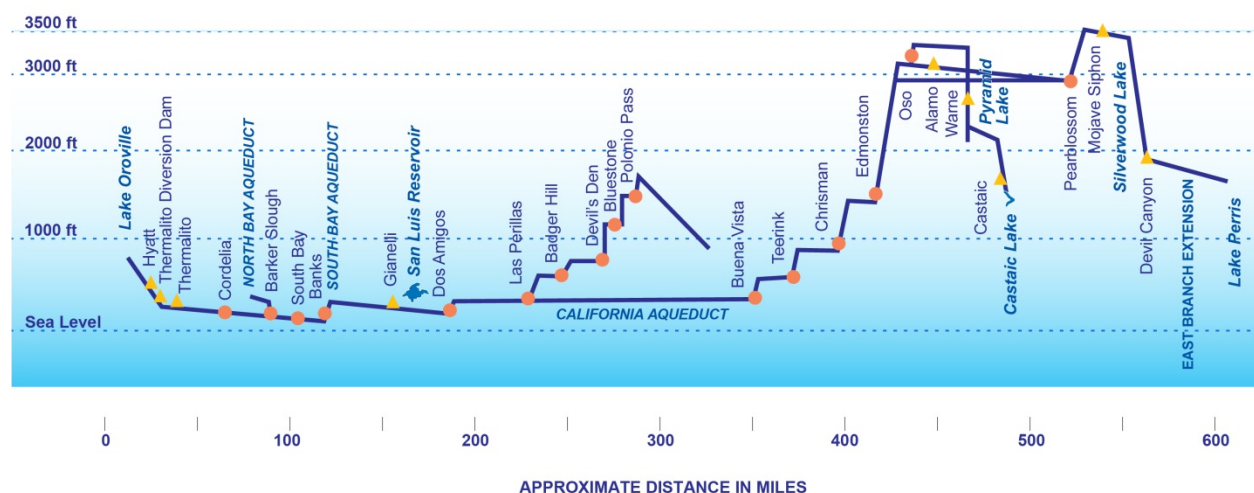
With regard to use as a transportation facility, the CRA differs from the SWP’s California Aqueduct in that the capacity of the CRA is uniform through its entire length. The CRA was designed to move a relatively uniform volume of water through its entire length, and Metropolitan relies on the entire length to move water. There are no “reaches”, or segments of the aqueduct, that are associated with deliveries to take-out points. The 4 regulating reservoirs are small, so water cannot be “batched” like the SWP, where pumps are cycled on and off to take advantage of cheaper time periods of the day to use electricity. Unlike the SWP, each CRA pump is uniformly sized at 225 cfs; none are variable speed pumps. This means the pumps are either operating at 225 cfs of capacity or are off at 0 cfs.

The costs of the CRA itself are paid by Metropolitan directly, as it operates the CRA. Metropolitan incurs capital and operations and maintenance expenditures to support the CRA activities. The 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 System 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 operational functions, such as conveyance and aqueduct.

### Conveyance and Aqueduct: SWP Power

In addition to the charges for supply (the Delta Water Charge capital and OMP&R) and Transportation (Transportation Capital and OMP&R), DWR also charges for the power needed to deliver project water throughout the system. Two charges recover these power costs: the variable OPMR portion of the Transportation Charge (Variable Charge) and the Off-Aqueduct Power Facilities (OAPF) charge. Because the State Water Contracts 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.

**Figure 14: Pumping Lift and Recovery Generation Facilities, SWP**



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 various lifts and recovery generation facilities of the SWP are shown in Figure 14; the orange circles indicate pumps to lift water, and the yellow triangles indicate recovery generation facilities.

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 only ongoing environmental remediation costs of power generation facilities not on the aqueduct, namely Reid Gardner Unit 4, and is negligible at this time.

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. The cost of power per acre-foot to Metropolitan's delivery points on the East and West Branches are shown in Table 14.

**Table 14: Cost of SWP Power for Metropolitan Terminal Delivery Points, \$ per Acre-Foot**

	CY 2015 DWR	CY 2016 DWR	CY 2017 DWR	CY 2018 DWR	CY 2019 Estimated	CY 2020 Estimated	CY 2021 Estimated
East Branch	\$241.17	\$186.21	\$160.55	\$174.90	\$160.33	\$199.67	\$207.44
West Branch	\$226.58	\$175.85	\$170.57	\$162.42	\$155.10	\$213.79	\$221.11

The SWP energy costs are impacted by two factors. First, the annual hydrology, secondly the energy policies of the state of California. The SWP has invested heavily in hydroelectric power generation facilities. The unit cost of operating the power facilities declines as the amount of available water increases. 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.

## Conveyance and Aqueduct: CRA Power

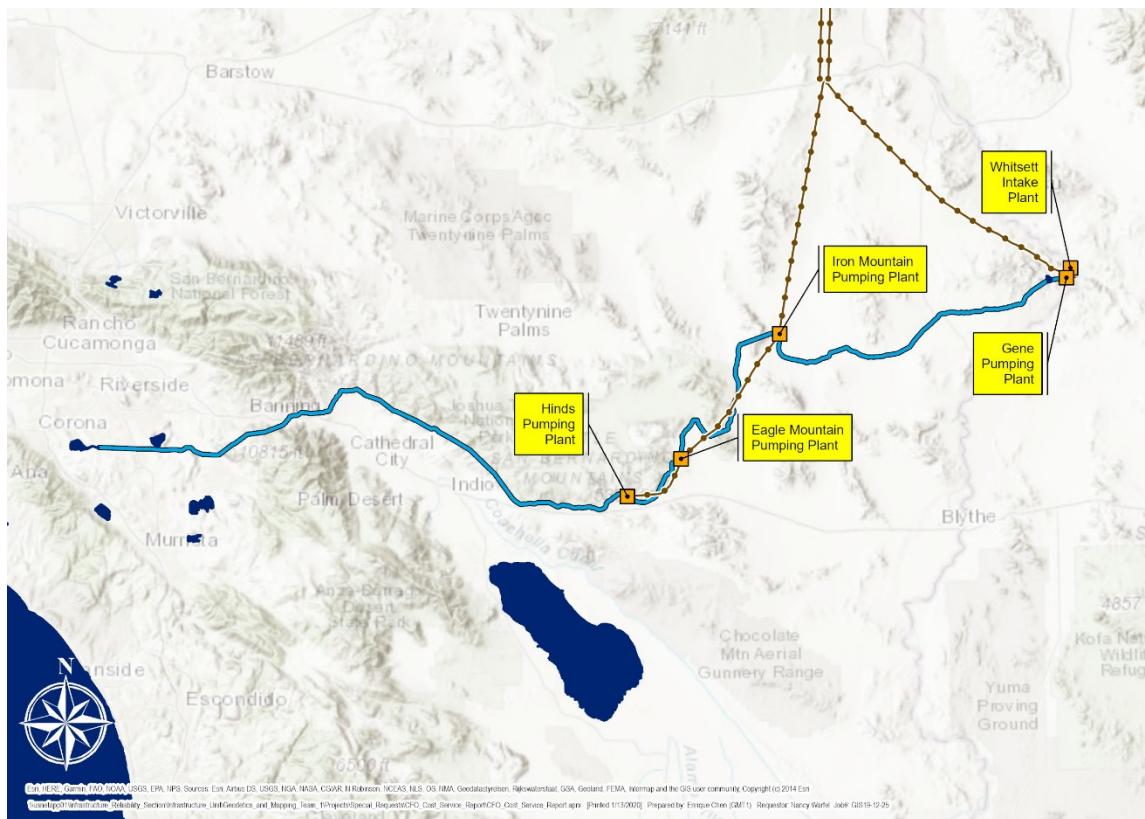
Metropolitan operates five pumping plants on the CRA, which are shown in Figure 15. Water enters the aqueduct system from Lake Havasu at the Whitsett Intake Pumping Plant (Intake). It is then pumped to its highest elevation of 1,807 feet above sea level at the Hinds Pumping Plant (Hinds), which is about 126 miles west of Intake. Five pumping plants lift the water a total of 1,617 feet to the Hinds Pumping Plant. From Hinds, the water flows 116 miles by gravity to Lake Mathews.

Metropolitan currently has three basic sources of power available to meet CRA energy requirements: Hoover Power, Parker Power, and wholesale purchases from entities in the Western United States.

Under a contract between the United States, Department of Energy, Western Area Power Administration, and Metropolitan, Metropolitan currently has a right to approximately 250 megawatts (MW) of capacity at the Hoover Dam power plant. Metropolitan has an annual firm energy entitlement of 1,291,227 megawatt-hours (MWh). The cost charged to Metropolitan for Hoover power is based on the revenue required by the U.S. Bureau of Reclamation to operate and maintain the power plant. This source of power has historically been at a lower cost than power purchased at market rates.

Metropolitan funded the total cost of construction of Parker Dam and incidental facilities, and 50 percent of the construction cost of the Parker Power plant. In consideration for this funding, Metropolitan is entitled in perpetuity to 50 percent of the capacity and energy of the four Parker generating units, which is approximately 54 MW of capacity. Parker power is also cost-based.

**Figure 15: Metropolitan CRA Pumping Plants**



Metropolitan's current basic energy 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 any party seeking to wheel non-Metropolitan water through its CRA to purchase, or arrange for Metropolitan to purchase, the power supplies required to pump that water. Any Colorado River FYs 2020/21 and 2021/22 Cost of Service Report 65 April 2020

water that is pumped through Metropolitan's CRA is diverted above Parker Dam and cannot generate energy for Metropolitan's use at the Parker Dam Power plant. 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 Power plant. In total, 2,032 kilowatt-hours (or 2.032 MWh) 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 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 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, and is reflective of Southern California market energy prices.

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 costs for purchases of power for the CRA are reflected in 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 wheeled water would occur during on-peak hours and the on-peak price index published on the CAISO OASIS Day Ahead Locational Marginal Price is indicative of the price that would be paid to pump non-Metropolitan water.

**Table 15: Cost of CRA Power Sources, \$ per Megawatt-hour (MWh)**

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Hoover <sup>1</sup>	\$15.84	\$15.36	\$17.86	\$18.46	\$18.33
Parker <sup>1</sup>	\$13.55	\$12.58	\$15.40	\$14.38	\$17.67
SP15, off-peak <sup>2</sup>	\$33.15	\$24.97	\$26.48	\$28.27	\$38.52
SP15, on-peak <sup>3</sup>	\$40.68	\$30.13	\$33.46	\$38.84	\$49.97

<sup>1</sup>Information from Annual Reports for years 2015, 2016, 2017, 2018 and 2019

<sup>2</sup>SP15, off-peak is used to determine Metropolitan's off-peak energy costs.

<sup>3</sup>SP15, on-peak is used to determine the market value of Metropolitan 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.

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 on the CAISO OASIS Day Ahead Locational Marginal Price is indicative of the price that Metropolitan could realize by selling excess energy.



**Table 16: South-of-Path 15 On-Peak Energy Prices (\$/MWh\*)**

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
January	\$ 35.70	\$ 30.14	\$ 36.22	\$ 37.09	\$ 42.56
February	\$ 31.88	\$ 24.47	\$ 28.52	\$ 36.84	\$ 72.73
March	\$ 30.73	\$ 19.61	\$ 23.97	\$ 32.39	\$ 35.98
April	\$ 29.03	\$ 18.92	\$ 26.71	\$ 27.69	\$ 24.83
May	\$ 28.11	\$ 23.06	\$ 32.08	\$ 24.12	\$ 20.25
June	\$ 37.01	\$ 33.41	\$ 38.14	\$ 31.45	\$ 24.81
July	\$ 39.27	\$ 39.03	\$ 41.49	\$ 101.04	\$ 35.24
August	\$ 39.02	\$ 38.57	\$ 54.96	\$ 85.22	\$ 36.39
September	\$ 38.00	\$ 35.55	\$ 43.18	\$ 38.32	\$ 40.35
October	\$ 35.55	\$ 35.45	\$ 47.86	\$ 41.09	\$ 35.71
November	\$ 30.22	\$ 30.67	\$ 44.82	\$ 55.50	\$ 37.44
December	\$ 29.83	\$ 36.40	\$ 44.21	\$ 57.26	\$ 37.80

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

Metropolitan has an obligation to acquire and surrender emissions allowances for fossil-fuel energy generated out-of-state and imported into California through its 230,000-volt transmission system. Alternatively, Metropolitan can purchase power in California, which already incorporates any necessary emissions allowances, but must pay to use the CAISO transmission network. Metropolitan has contracted with Arizona Electric Power Cooperative (AEPCO) to provide energy management and scheduling services on a per Megawatt-hour basis. AEPCO also provides operational services for Metropolitan's CRA transmission system, assuring compliance with federal reliability requirements. Finally, Metropolitan's CRA power system is within the Balancing Authority Area of the CAISO; Metropolitan incurs Grid Management Charges from the CAISO on a per Megawatt-hour basis and may realize a Resource Adequacy obligation depending on its pumping load and available firm resources.

## Storage

Storage costs include the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs within the Distribution System. Metropolitan's larger storage facilities are operated to provide: (1) emergency storage in the event of an earthquake or similar system outage; (2) drought storage that produces additional supplies during times of shortage; and (3) regulatory storage to balance system demands and supplies and provide for operating flexibility. To reasonably allocate the costs of storage capacity among member agencies, the storage function is categorized into sub-functions of emergency, drought, and regulatory storage.

**Table 17: Functional Assignment of Metropolitan Storage Facilities**

Storage Facilities	Functional Assignments		
	Emergency	Drought	Regulatory
Diamond Valley Lake	54%	33%	13%
Other Regulatory			100%
Lake Skinner	77%		23%
Lake Mathews	44%		56%
Semi-Tropic		100%	
Arvin-Edison		100%	
CRA Off-Stream		100%	
Groundwater Conjunctive Use		100%	

(a) DVL allocations are based on the 2019 Update of Metropolitan's Emergency Storage Objective, the 2010-2019 DVL Daily Average Available Storage, and the WSO Regulatory Storage White Paper.

(b) Lake Skinner and Lake Mathews allocation percentages are derived from the 2019 Update of Metropolitan's Emergency Storage Objective, and the WSO Regulatory Storage White Paper.

## Treatment

This function includes capital financing, operating, maintenance, and overhead costs for Metropolitan's five treatment plants and is considered separately from other costs so that the treatment function may be priced separately.

## Distribution

This function includes capital financing, operating, maintenance, and overhead costs for the Distribution System of feeders, canals, pipelines, laterals, and other appurtenant works. The Distribution System facilities are distinguished from Conveyance and Aqueduct facilities at the point of connection to the SWP, Lake Mathews (CRA), and other major turnouts along the CRA facilities. Examples include the Rialto Pipeline; the Etiwanda Pipeline; the Foothill Feeder; the Sepulveda Feeder; the Santa Monica Feeder; the Upper, Middle, and Lower Feeders; and the San Diego Pipelines No.1, No. 2, No. 3, No. 4, and No. 5.

## Demand Management

A separate demand management function has been used to clearly identify the cost of Metropolitan's programs designed to reduce the need to import water, such as conservation, incentives for local resource projects like recycling and desalination, the Future Supply Action Program, and the Stormwater Pilot Program. 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 and maintain the system.

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 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.

Metropolitan's 1996 Integrated Resource Plan included an analysis of future demand scenarios and their effect on infrastructure requirements. A comparison of capital infrastructure costs with and without Demand Management Programs showed a difference of around \$2 billion. In other words, the ability to meet demand through local Demand Management Programs resulted in an anticipated \$2 billion in capital cost savings. A sensitivity analysis further showed that a 5% increase or decrease in demand had a correlative effect on when Metropolitan would need to incur capital infrastructure costs. Since then, Metropolitan has seen the benefits materialize. Metropolitan has been able to defer the need to build additional infrastructure such as the Central Pool Augmentation Project tunnel and pipeline, completion of San Diego Pipeline No. 6, the West Valley Interconnection, and the completion of the SWP East Branch expansion. 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 approximately \$3 billion in 2019 dollars.

Since 1996, the Integrated Resources Plan has been updated three times, in 2004, 2010, and 2015, reaffirming long-term sustainability of the region's water supply through implementation of conservation and local resource development. Based on the 1996 IRP and its updates, Metropolitan determined Demand Management Programs decrease and avoid operating and capital maintenance and improvement costs, such as costs for repair of and construction of additional or expanded water conveyance, distribution, and storage facilities. Investments in demand side management programs like conservation, water recycling, and groundwater recovery help defer the need for additional 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.

In April 2018, the Board directed staff to undertake a process to determine the most appropriate cost allocation of demand management costs going forward. Metropolitan undertook that process, with the assistance of consultants and input from its member agencies, resulting in (1) an updated cost functionalization of demand management costs based on updated resource and system planning, and (2) rate design alternatives for recovering demand management costs. Based on the results of the study, staff presented to the Board at least four different rate-design alternatives. Staff also presented to the Board the option of using the balance of the Water Stewardship Fund at the end of fiscal year 2019/20 to fund demand management costs for the next biennial budget. The WSR will also continue to add to the Water Stewardship Fund through the end of calendar year 2020. The Board approved the option to use the Water Stewardship Fund to fund demand management costs in the next biennial period to allow it to consider demand management funding in relation to the upcoming 2020 IRP update and to undergo a rate structure refinement process. Given the Board's action, revenue requirements for demand management will be met with the Water Stewardship Fund and no rate element or charge will be collected in 2021 or 2022 for that purpose.

### **Demand Management: SB-60**

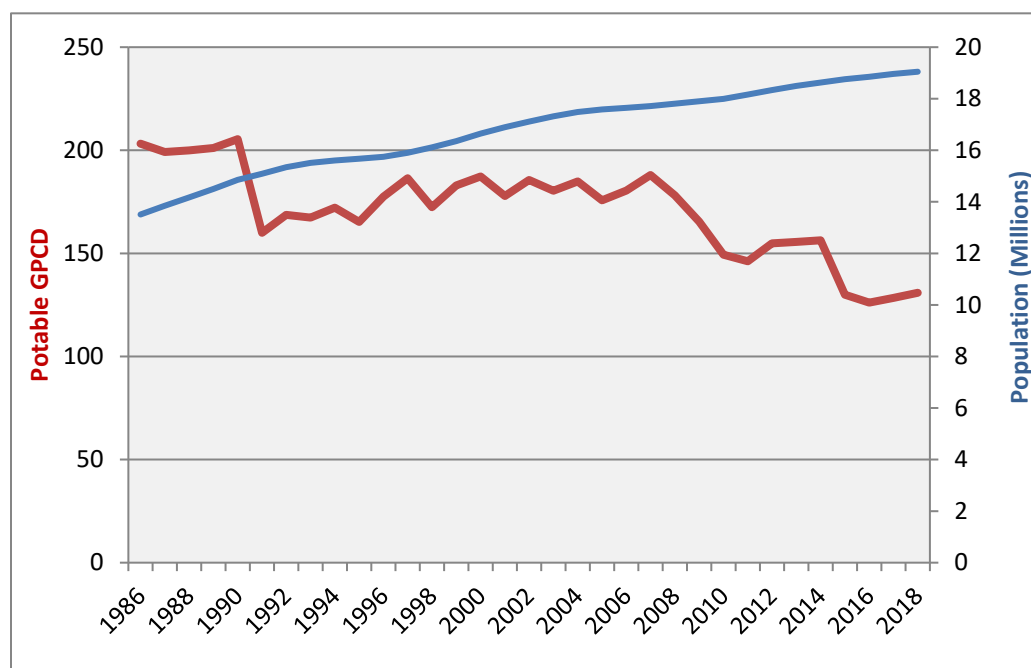
In September 1999, Governor Gray Davis signed SB 60 (Hayden) into law. SB 60 amended the Metropolitan Water District Act to direct Metropolitan to increase "sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures." SB 60 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 fiscal year 2018/19 alone, Metropolitan’s service area achieved 1.6 million acre-feet of water savings from conservation, recycled water and groundwater recovery programs. Figure 16 below compares population in millions on the right axis and gallons per capita daily (GPCD) water use is on the left axis. While the population has increased to approximately 19 million in 2018, GPCD water use has decreased to approximately 131 GPCD. These reductions 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 1982 Metropolitan has invested over \$1.4 billion and Metropolitan’s service area has achieved 6.9 million acre-feet of water savings. These water savings reduce per capita water demands, allowing Metropolitan to serve a growing population with existing supplies and without constructing additional facilities to import water.

**Figure 16: Population and Per Capita Daily Water Use**

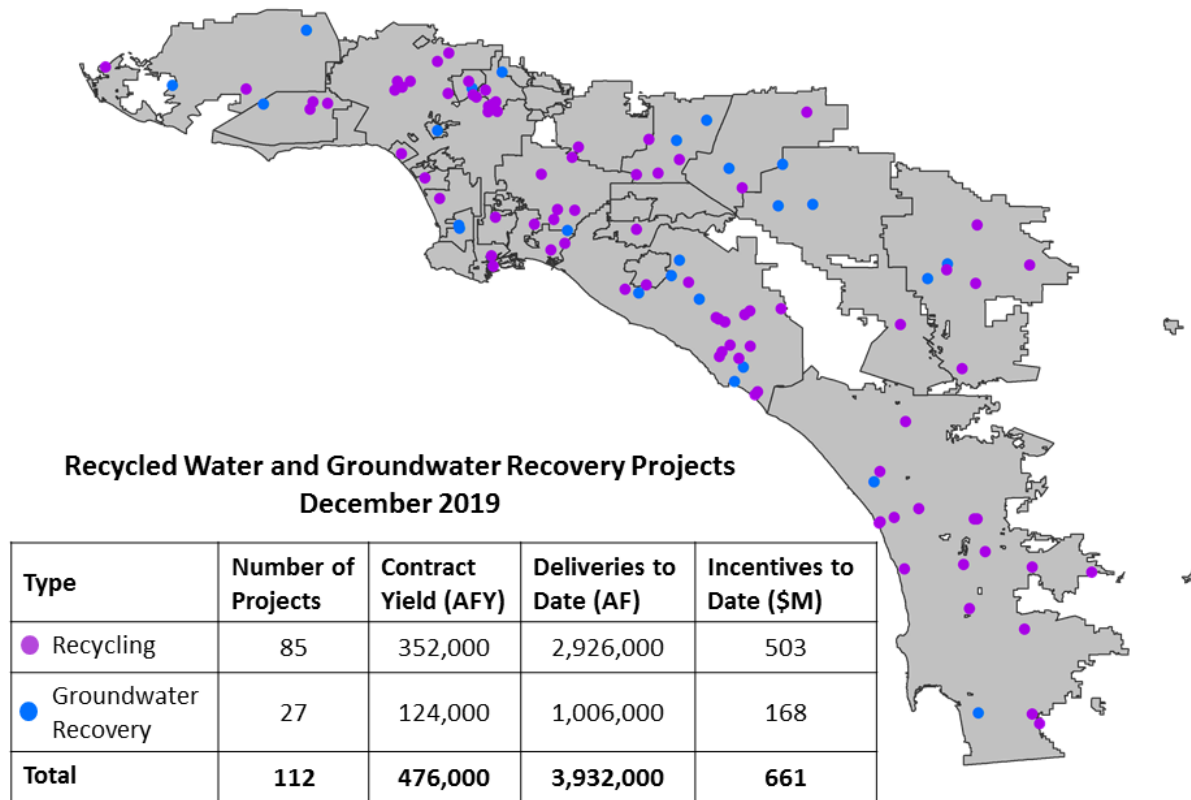


Metropolitan’s Conservation Credits Program provides incentives to residents and businesses for use of water-efficient products and qualified water-saving activities. Rebates have been provided to residential customers for turf removal and purchasing of high-efficiency clothes washers and toilets. Rebates are also provided to businesses and institutions for water-saving devices. In fiscal year 2018/19, the Conservation Credits Program achieved 1.0 million acre-feet of saved water through new and existing conservation initiatives funded with incentives and maintained through plumbing codes. Cumulatively, through fiscal year 2018/19 the Conservation Credits Program has achieved over 3.0 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 for the participants. The Local Resources Program consists of 85 recycling projects and 27 groundwater recovery projects located throughout Metropolitan’s service area, of which 112 projects are in operation, as shown in Figure 17. From the Local Resources Program’s inception in 1982 through FY 2018/19, Metropolitan has paid out about \$497 million in incentives to produce about 2.9

million acre-feet of recycled water. Metropolitan also provided approximately \$164 million to produce 991,000 acre-feet of recovered degraded groundwater for municipal use.

**Figure 17: Local Resources Program Projects**



**Demand Management: SB X7-7, AB 1668, and SB 606**

SB X7-7 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 coordinated 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.

AB 1668 and SB 606 build on Governor Brown’s efforts to make water conservation a way of life in California and create a new foundation for long-term improvements in water conservation and drought planning. These bills establish guidelines for efficient water use and a framework for the implementation and oversight of the new standards, which must be in place by 2022. The two bills strengthen the state’s water resiliency in the face of future droughts with provisions that include:

- Establishing water use objectives and long-term standards for efficient water use that apply to urban retail water suppliers; comprised of indoor residential water use, outdoor residential water use,

commercial, industrial and institutional (CII) irrigation with dedicated meters, water loss, and other unique local uses.

- Providing incentives for water suppliers to recycle water.
- Identifying small water suppliers and rural communities that may be at risk of drought and water shortage vulnerability and provide recommendations for drought planning.
- Requiring both urban and agricultural water suppliers to set annual water budgets and prepare for drought.
- Metropolitan coordinates closely with its member agencies to achieve these provisions both at a retail agency level in compliance with legislative requirements and as a region.
- 

## Administrative and General (A&G)

These costs occur in each of the Groups' departmental budgets and reflect overhead costs that cannot be directly functionalized. The COS process allocates A&G costs to the operational functions based on the labor costs of non-A&G dollars allocated to each function.

## Hydroelectric

Hydroelectric costs include the capital financing, operating, maintenance, and overhead costs incurred to operate the 16 small hydroelectric plants located throughout the water distribution system.

## Functional Assignment Bases

The functional assignment bases are used to assign costs that make up the Revenue Requirement into the various operational functions. The primary functional assignment bases used in the cost of service process are listed below.

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

Schedule 3 summarizes the total dollar amounts assigned, including the absolute value of Revenue Offsets (rather than showing Revenue Offsets as a reduction to costs), using each of the above types of assignment bases, for FY 2020/21 and FY 2021/22. It assigns both total Revenue Requirements before Revenue Offsets and Revenue Offsets by summing the items before assigning dollars to the primary functional assignment bases. To ensure the correct amount has been assigned, the Revenue Requirement is restated at the bottom portion of each fiscal year chart.

**Schedule 3: Summary of Functional Assignments by Type of Assignment Basis, FY 2020/21 and FY 2021/22**

<b>Primary Functional Assignment Bases</b>	<b>Estimated for FY 2021</b>	<b>% of Assigned Dollars</b>
Direct Assignment	\$ 1,124,752,399	55.1%
Net Book Value	475,555,321	23.3%
Pro-Rating	110,305,998	5.4%
Manager Analysis	148,744,966	7.3%
Prior-Year Results	97,718,688	4.8%
Other	83,682,826	4.1%
<b>Total Dollars Assigned</b>	<b>\$ 2,040,760,198</b>	<b>100.0%</b>
<b>Portion of Above Assignment Relating to:</b>		
Revenue Requirements before Offsets	1,842,364,538	
Revenue Offsets	198,395,660	
<b>Total Dollars Assigned</b>	<b>\$ 2,040,760,198</b>	
<b>Net Revenue Requirements</b>		
Revenue Requirements before Offsets	1,842,364,538	
Revenue Offsets	(198,395,660)	
<b>Net Revenue Requirements</b>	<b>\$ 1,643,968,879</b>	

Totals may not foot due to rounding

<b>Primary Functional Assignment Bases</b>	<b>Estimated for FY 2022</b>	<b>% of Assigned Dollars</b>
Direct Assignment	\$ 1,176,638,019	55.8%
Net Book Value	485,903,372	23.0%
Pro-Rating	112,668,465	5.3%
Manager Analysis	154,787,920	7.3%
Prior-Year Results	102,118,051	4.8%
Other	76,190,053	3.6%
<b>Total Dollars Assigned</b>	<b>\$ 2,108,305,879</b>	<b>100.0%</b>
<b>Portion of Above Assignment Relating to:</b>		
Revenue Requirements before Offsets	1,907,946,350	
Revenue Offsets	200,359,529	
<b>Total Dollars Assigned</b>	<b>\$ 2,108,305,879</b>	
<b>Net Revenue Requirements</b>		
Revenue Requirements before Offsets	1,907,946,350	
Revenue Offsets	(200,359,529)	
<b>Net Revenue Requirements</b>	<b>\$ 1,707,586,820</b>	

Totals may not foot due to rounding

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

### **(a) Direct assignment**

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

- Water Conveyance and Distribution, Desert Region Unit departmental O&M costs are directly assigned to Conveyance and Aqueduct, CRA.
- Transportation Capital and OMP&R charges for State Water Contract are directly assigned to Conveyance and Aqueduct SWP.

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

Capital financing costs, including debt service and funding replacements and refurbishments from operating revenues, comprise about 21 percent in FY 2020/21 and 21 percent in FY 2021/22 of Metropolitan's annual revenue requirements. One approach would be to assign payments on each debt issue in direct proportion to specific project expenditures made using bond proceeds and assign PAYGO expenditures in a similar fashion. But this approach would result in a high degree of volatility in relative capital cost assignments from year to year.

The approach used in this analysis is one widely used in water industry cost of service studies. Debt-related costs and PAYGO are allocated on the basis of the net book values of fixed assets plus work in progress for assets under construction within each functional category. This approach produces capital cost assignments that are consistent with the functional distribution of assets. Also, since the assignment basis is tied to fixed asset records rather than debt payment records, the resulting assignments are more reflective of the true useful lives of assets. Use of net book values as an assignment basis provides an improved matching of functional costs with asset lives. A listing of fixed asset net book values summarized by asset function is shown in Schedule 4 for FY 2020/21 and FY 2021/22.

**Schedule 4: Net Book Value and Work in Progress Assignment Base, FY 2020/21 and FY 2021/22**

<b>Functional Categories</b>	<b>NBV for FY 2021</b>	<b>% of Total NBV</b>
Source of Supply	\$ 386,148,624	4.3%
Conveyance & Aqueduct	1,978,193,570	21.8%
Storage	2,199,702,284	24.3%
Treatment	2,303,294,964	25.4%
Distribution	1,589,859,304	17.5%
Administrative & General	506,706,763	5.6%
Hydro-electric	100,616,191	1.1%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 9,064,521,700</b>	<b>100.0%</b>

Totals may not foot due to rounding

<b>Functional Categories</b>	<b>NBV for FY 2022</b>	<b>% of Total NBV</b>
Source of Supply	\$ 387,432,789	4.2%
Conveyance & Aqueduct	2,000,392,674	21.6%
Storage	2,187,231,375	23.7%
Treatment	2,309,802,164	25.0%
Distribution	1,738,525,699	18.8%
Administrative & General	527,056,539	5.7%
Hydro-electric	96,164,702	1.0%
<b>Total Fixed Assets Net Book Value</b>	<b>\$ 9,246,605,941</b>	<b>100.0%</b>

Totals may not foot due to rounding

In most instances, the cost of service process uses net book value plus work-in-progress to develop assignment bases for debt service costs and PAYGO. Examples of revenue requirements assignments using these net book value and work-in-progress assignments follow.

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

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

### **(c) Pro-rating in proportion to other assignments**

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

### **(d) Manager analyses**

The functional interrelationships of some organizational units are developed with extensive input from the organization's managers. In these cases, managers use their firsthand knowledge of the organization's internal operations to generate a functional analysis of departmental costs. For example, Fleet Services Unit costs are assigned to treatment, storage, conveyance, and distribution based on vehicle count by Section and Unit.

### **(e) Prior year results**

If available, accounting data for the prior fiscal year by appropriation are used to functionalize Departmental O&M costs for several units or sections. Many of the appropriations parallel the operational functions used in the COS. For example, Conveyance and Distribution Eastern and Western Units' costs are assigned to distribution, hydroelectric, and conveyance functions based on the prior year accounting data by appropriation.

A summary of the functional assignment results is shown in Schedules 5 through 8. Schedules 5 and 6 provide a breakdown of the revenue requirement for FY 2020/21 and FY 2021/22, respectively, into the major operational functions and sub-functions prior to the redistribution of administrative and general costs. Schedules 7 and 8 serve as a cross-reference summarizing how the budget line items are distributed among the operational functions for FY 2020/21 and FY 2021/22, respectively. The largest functional component of Metropolitan's revenue requirement is the Conveyance and Aqueduct function, which constitutes approximately 37.2 percent of the assigned revenue requirement in FY 2020/21 and 37 percent in FY 2021/22. Schedule 9 summarizes the budget line items distributed among the operational functions by sub-function for both FY 2020/21 and FY 2021/22.

## Functional Assignment of Revenue Offsets

Revenue Offsets are assigned to the operational functions based on why these revenues were generated. For example, ad valorem property tax revenues are assigned to the General Obligation bonds debt service into Treatment and Distribution based on Net Book Values. The remaining property tax revenues are assigned to SWP Conveyance and Supply, proportionate to SWP capital costs. Hydroelectric sales revenues are assigned to the Hydroelectric function. Interest income is assigned to the operational functions proportional to Revenue Requirements. Miscellaneous revenues and fees are functionalized as Administrative and General, and thus are assigned to the operational functions proportional to Labor Costs.

### Schedule 5: Revenue Requirement (by function), FY 2020/21

Functional Categories	Fiscal Year Ending 2021	% of Assigned Dollars (1)
<b>Source of Supply</b>		
CRA	\$ 44,351,994	2.7%
SWP	119,005,790	7.2%
Other Supply	38,433,129	2.3%
<b>Total</b>	<b>201,790,913</b>	<b>12.2%</b>
<b>Conveyance &amp; Aqueduct</b>		
CRA		
<i>CRA Power (net of sales)</i>	56,879,068	3.4%
<i>CRA All Other</i>	64,012,855	3.9%
SWP		
<i>SWP Power</i>	192,248,811	11.7%
<i>SWP All Other</i>	228,507,909	13.9%
Other Conveyance & Aqueduct	71,357,082	4.3%
<b>Total</b>	<b>613,005,725</b>	<b>37.2%</b>
<b>Storage</b>		
Storage Costs Other Than Power		
<i>Emergency</i>	58,128,350	3.5%
<i>Drought</i>	65,066,050	3.9%
<i>Regulatory</i>	26,553,978	1.6%
Wadsworth plant pumping/generation	(469,889)	0.0%
<b>Total</b>	<b>149,278,489</b>	<b>9.1%</b>
<b>Treatment</b>		
Jensen	48,757,540	3.0%
Weymouth	54,436,395	3.3%
Diemer	59,741,052	3.6%
Mills	29,185,128	1.8%
Skinner	48,747,860	3.0%
<b>Total</b>	<b>240,867,974</b>	<b>14.6%</b>
<b>Distribution</b>	189,044,137	11.5%
<b>Demand Management</b>	59,396,867	3.6%
<b>Hydroelectric</b>	(2,140,294)	0.1%
<b>Administrative &amp; General</b>	192,725,067	11.7%
<b>Total Functional Assignment:</b>	<b>\$ 1,643,968,879</b>	<b>100.0%</b>

(1) Given as a percentage of the absolute values of total dollars Assigned.  
Totals may not foot due to rounding



## Schedule 6: Revenue Requirement (by function), FY 2021/22

Functional Categories	Fiscal Year Ending 2022	% of Assigned Dollars (1)
<b>Source of Supply</b>		
CRA	\$ 41,916,172	2.4%
SWP	120,277,952	7.0%
Other Supply	39,082,592	2.3%
<b>Total</b>	<b>201,276,717</b>	<b>11.8%</b>
<b>Conveyance &amp; Aqueduct</b>		
CRA		
<i>CRA Power (net of sales)</i>	62,318,203	3.6%
<i>CRA All Other</i>	66,894,029	3.9%
SWP		
<i>SWP Power</i>	197,439,478	11.5%
<i>SWP All Other</i>	236,716,240	13.8%
Other Conveyance & Aqueduct	70,358,723	4.1%
<b>Total</b>	<b>633,726,673</b>	<b>37.0%</b>
<b>Storage</b>		
Storage Costs Other Than Power		
<i>Emergency</i>	57,530,759	3.4%
<i>Drought</i>	60,073,438	3.5%
<i>Regulatory</i>	27,081,617	1.6%
Wadsworth plant pumping/generation	(520,112)	0.0%
<b>Total</b>	<b>144,165,702</b>	<b>8.5%</b>
<b>Treatment</b>		
Jensen	50,537,543	3.0%
Weymouth	55,927,030	3.3%
Diemer	61,555,154	3.6%
Mills	29,862,235	1.7%
Skinner	48,997,565	2.9%
<b>Total</b>	<b>246,879,526</b>	<b>14.4%</b>
<b>Distribution</b>	200,841,793	11.7%
<b>Demand Management</b>	63,665,381	3.7%
<b>Hydroelectric</b>	(1,705,539)	0.1%
<b>Administrative &amp; General</b>	218,736,567	12.8%
<b>Total Functional Assignment:</b>	<b>\$ 1,707,586,820</b>	<b>100.0%</b>

(1) Given as a percentage of the absolute values of total dollars Assigned.  
Totals may not foot due to rounding

**Schedule 7: Operational function Revenue Requirements (by budget line item), FY 2020/21**

<b>Fiscal Year Ending 2021</b>	<b>Source of Supply</b>	<b>Conveyance &amp; Aqueduct</b>	<b>Storage</b>	<b>Treatment</b>	<b>Distribution</b>	<b>Demand Management</b>	<b>Hydro Electric</b>	<b>Administrative &amp; General</b>	<b>Total \$ Functionalized</b>
<b>Departmental Operations &amp; Maintenance</b>									
Office of General Manager	\$ 373,359	\$ 816,257	\$ 159,971	\$ 1,322,064	\$ 1,046,580	\$ 112,171	\$ 53,220	\$ 3,292,907	\$ 7,176,529
Water Systems Operations	14,023,657	45,128,387	2,225,513	104,630,313	80,817,041	-	4,175,658	1,581,680	252,582,249
Water Resources Management	15,317,031	-	-	5,484	1,113,199	6,877,026	-	21,421	23,334,161
Engineering Services	1,783,453	9,136,420	10,159,473	10,637,923	7,342,872	-	464,703	2,340,259	41,865,104
Bay Delta Initiatives	-	9,666,300	-	-	-	-	-	-	9,666,300
Business Technology	3,156,054	6,899,932	1,352,252	11,175,581	8,846,882	948,192	449,875	52,186,347	85,015,114
Real Property	1,429,879	7,240,211	1,563,205	-	1,980,575	-	-	7,108,816	19,322,687
Human Resources	960,350	2,099,568	411,474	3,400,597	2,692,002	288,524	136,892	3,680,088	13,669,495
Office of the Chief Financial Officer	-	-	-	-	-	-	-	26,759,739	26,759,739
External Affairs	-	-	-	-	-	2,903,372	-	23,777,856	26,681,228
General Counsel	-	-	-	-	-	-	-	15,321,969	15,321,969
General Auditor	-	-	-	-	-	-	-	4,329,295	4,329,295
Ethics Office	-	-	-	-	-	-	-	1,552,431	1,552,431
<b>Total Departmental O&amp;M</b>	<b>37,043,783</b>	<b>80,987,075</b>	<b>15,871,888</b>	<b>131,171,962</b>	<b>103,839,152</b>	<b>11,129,284</b>	<b>5,280,347</b>	<b>141,952,809</b>	<b>527,276,301</b>
<b>General District Requirements</b>									
State Water Contract*	149,838,392	490,929,726	-	-	-	-	-	-	640,768,118
Colorado River Aqueduct Power Costs	-	52,236,836	-	-	-	-	-	-	52,236,836
Supply Programs	37,280,363	-	31,402,463	-	-	-	-	-	68,682,826
Demand Management Programs	-	-	-	-	-	48,531,757	-	-	48,531,757
Capital Financing Program	18,166,175	93,063,160	103,483,931	110,200,684	80,205,052	-	4,733,440	23,837,775	433,690,217
Regional Recycled Water Program planning costs	5,626,290	-	-	-	9,373,710	-	-	-	15,000,000
Other Operating Costs	1,045,287	2,285,263	447,867	3,701,361	2,930,094	314,042	148,999	4,005,571	14,878,483
Increase/(Decrease) in Required Reserves	-	-	-	-	-	-	-	41,300,000	41,300,000
<b>Total General District Requirements</b>	<b>211,956,508</b>	<b>638,514,985</b>	<b>135,334,261</b>	<b>113,902,045</b>	<b>92,508,855</b>	<b>48,845,799</b>	<b>4,882,439</b>	<b>69,143,345</b>	<b>1,315,088,237</b>
<b>Revenue Offsets</b>	<b>(47,209,378)</b>	<b>(106,496,335)</b>	<b>(1,927,660)</b>	<b>(4,206,032)</b>	<b>(7,303,870)</b>	<b>(578,217)</b>	<b>(12,303,080)</b>	<b>(18,371,087)</b>	<b>(198,395,660)</b>
<b>Net Revenue Requirements</b>	<b>\$ 201,790,913</b>	<b>\$ 613,005,725</b>	<b>\$ 149,278,489</b>	<b>\$ 240,867,974</b>	<b>\$ 189,044,137</b>	<b>\$ 59,396,867</b>	<b>\$ (2,140,294)</b>	<b>\$ 192,725,067</b>	<b>\$ 1,643,968,879</b>

\* Includes Delta Conveyance planning costs

Totals may not foot due to rounding

**Schedule 8: Operational function Revenue Requirements (by budget line item), FY 2021/22**

<b>Fiscal Year Ending 2022</b>	<b>Source of Supply</b>	<b>Conveyance &amp; Aqueduct</b>	<b>Storage</b>	<b>Treatment</b>	<b>Distribution</b>	<b>Demand Management</b>	<b>Hydro Electric</b>	<b>Administrative &amp; General</b>	<b>Total \$ Functionalized</b>
<b>Departmental Operations &amp; Maintenance</b>									
Office of General Manager	\$ 390,298	\$ 841,021	\$ 163,743	\$ 1,383,271	\$ 1,098,439	\$ 115,632	\$ 55,242	\$ 3,417,054	\$ 7,464,699
Water Systems Operations	14,878,461	47,467,970	2,363,137	109,773,734	84,508,743	-	4,365,530	1,640,607	264,998,182
Water Resources Management	15,939,965	-	-	5,738	1,164,874	7,142,510	-	22,244	24,275,333
Engineering Services	1,839,915	9,499,847	10,387,143	10,969,230	8,256,243	-	456,685	2,502,987	43,912,051
Bay Delta Initiatives	-	9,299,195	-	-	-	-	-	-	9,299,195
Business Technology	3,286,693	7,082,230	1,378,878	11,648,516	9,249,945	973,734	465,195	52,884,933	86,970,123
Real Property	1,411,569	7,147,497	1,543,188	-	1,955,213	-	-	7,017,786	19,075,253
Human Resources	1,005,817	2,167,354	421,974	3,564,760	2,830,733	297,989	142,362	3,809,068	14,240,056
Office of the Chief Financial Officer	-	-	-	-	-	-	-	27,615,004	27,615,004
External Affairs	-	-	-	-	-	2,951,233	-	24,687,748	27,638,981
General Counsel	-	-	-	-	-	-	-	17,002,271	17,002,271
General Auditor	-	-	-	-	-	-	-	4,549,453	4,549,453
Ethics Office	-	-	-	-	-	-	-	1,608,910	1,608,910
<b>Total Departmental O&amp;M</b>	<b>38,752,717</b>	<b>83,505,114</b>	<b>16,258,062</b>	<b>137,345,251</b>	<b>109,064,191</b>	<b>11,481,098</b>	<b>5,485,014</b>	<b>146,758,065</b>	<b>548,649,512</b>
<b>General District Requirements</b>									
State Water Contract*	152,115,770	502,269,408	-	-	-	-	-	-	654,385,178
Colorado River Aqueduct Power Costs	-	57,585,160	-	-	-	-	-	-	57,585,160
Supply Programs	34,411,566	-	26,778,487	-	-	-	-	-	61,190,053
Demand Management Programs	-	-	-	-	-	52,491,694	-	-	52,491,694
Capital Financing Program	18,174,215	93,837,092	102,601,572	110,409,432	87,734,115	-	4,511,022	24,723,872	441,991,321
Regional Recycled Water Program planning costs	5,626,290	-	-	-	9,373,710	-	-	-	15,000,000
Other Operating Costs	999,698	2,154,169	419,407	3,543,075	2,813,513	296,176	141,496	3,785,896	14,153,432
Increase/(Decrease) in Required Reserves	-	-	-	-	-	-	-	62,500,000	62,500,000
<b>Total General District Requirements</b>	<b>211,327,540</b>	<b>655,845,829</b>	<b>129,799,465</b>	<b>113,952,507</b>	<b>99,921,339</b>	<b>52,787,870</b>	<b>4,652,518</b>	<b>91,009,769</b>	<b>1,359,296,837</b>
<b>Revenue Offsets</b>	<b>(48,803,540)</b>	<b>(105,624,270)</b>	<b>(1,891,825)</b>	<b>(4,418,232)</b>	<b>(8,143,736)</b>	<b>(603,588)</b>	<b>(11,843,071)</b>	<b>(19,031,267)</b>	<b>(200,359,529)</b>
<b>Net Revenue Requirements</b>	<b>\$ 201,276,717</b>	<b>\$ 633,726,673</b>	<b>\$ 144,165,702</b>	<b>\$ 246,879,526</b>	<b>\$ 200,841,793</b>	<b>\$ 63,665,381</b>	<b>\$ (1,705,539)</b>	<b>\$ 218,736,567</b>	<b>\$ 1,707,586,820</b>

\* Includes Delta Conveyance planning costs

Totals may not foot due to rounding

**Schedule 9: Revenue Requirement by sub-function and budget line item, FY 2020/21 and FY 2021/22**

Fiscal Year Ending 2021	Supply			Conveyance & Aqueduct					Storage				Treatment	Distribution	Demand Mgt.	Hydro	Total
	CRA	SWC	Other	CRA power	CRA other	SWC power	SWC other	Other C&A	Emergency	Drought	Regulatory	Power					
<b>Dept. Operations &amp; Maintenance</b>	8,513,167	15,143,564	13,387,052	5,647,301	48,678,309	-	19,441,577	7,219,888	7,149,389	5,071,517	3,650,982	-	131,171,962	103,839,152	11,129,284	5,280,347	385,323,491
<b>General District Requirements</b>																	
Slate Water Contract*																	
Capital	-	57,457,040	-	-	-	(13,041,702)	117,002,797	-	-	-	-	-	-	-	-	-	161,418,135
O&M	-	92,381,352	-	-	-	207,162,017	179,806,614	-	-	-	-	-	-	-	-	-	479,349,983
Colorado River Aqueduct Power	-	-	-	52,236,836	-	-	-	-	-	-	-	-	-	-	-	-	52,236,836
Supply Programs	36,030,363	-	1,250,000	-	-	-	-	-	-	31,402,463	-	-	-	-	-	-	68,682,826
Demand Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48,531,757	-	48,531,757
Capital Financing Program	-	-	18,166,175	7,547,918	14,584,113	-	6,303,017	64,628,113	51,343,090	29,082,369	23,058,472	-	110,200,684	80,205,052	-	4,733,440	409,852,442
Regional Recycling Water Project	-	-	5,626,290	-	-	-	-	-	-	-	-	-	-	9,373,710	-	-	15,000,000
Other Operating Costs	240,221	427,315	377,751	159,353	1,373,586	-	548,595	203,728	201,739	143,106	103,022	-	3,701,361	2,930,094	314,042	148,999	10,872,912
<b>Revenue Offsets</b>	(431,758)	(46,403,482)	(374,139)	(8,712,341)	(623,152)	(1,871,504)	(94,594,690)	(694,647)	(565,868)	(633,405)	(258,498)	(469,889)	(4,206,032)	(7,303,870)	(578,217)	(12,303,080)	(180,024,572)
Admin. & General	7,745,994	20,784,142	6,712,275	4,164,879	10,321,748	8,094,320	38,531,382	8,574,943	3,973,956	11,363,666	2,962,271	(19,784)	29,226,460	27,581,978	10,373,554	2,333,284	192,725,067
<b>Net Revenue Requirement</b>	<b>52,097,988</b>	<b>139,789,932</b>	<b>45,145,404</b>	<b>61,043,947</b>	<b>74,334,603</b>	<b>200,343,131</b>	<b>267,039,291</b>	<b>79,932,024</b>	<b>62,102,306</b>	<b>76,429,715</b>	<b>29,516,249</b>	<b>(489,673)</b>	<b>270,094,434</b>	<b>216,626,116</b>	<b>69,770,420</b>	<b>192,990</b>	<b>1,643,968,879</b>

\* Includes Delta Conveyance planning costs  
Totals may not foot due to rounding

Fiscal Year Ending 2022	Supply			Conveyance & Aqueduct					Storage				Treatment	Distribution	Demand Mgt.	Hydro	Total
	CRA	SWC	Other	CRA power	CRA other	SWC power	SWC other	Other C&A	Emergency	Drought	Regulatory	Power					
<b>Dept. Operations &amp; Maintenance</b>	8,921,842	15,790,459	14,040,416	5,931,513	51,157,329	-	19,101,520	7,314,752	7,285,023	5,152,457	3,820,582	-	137,345,251	109,064,191	11,481,098	5,485,014	401,891,447
<b>General District Requirements</b>																	
Slate Water Contract*																	
Capital	-	59,734,418	-	-	-	(13,053,358)	120,097,195	-	-	-	-	-	-	-	-	-	166,778,256
O&M	-	92,381,352	-	-	-	212,364,687	182,860,883	-	-	-	-	-	-	-	-	-	487,606,922
Colorado River Aqueduct Power	-	-	-	57,585,160	-	-	-	-	-	-	-	-	-	-	-	-	57,585,160
Supply Programs	33,161,566	-	1,250,000	-	-	-	-	-	-	26,778,487	-	-	-	-	-	-	61,190,053
Demand Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52,491,694	-	52,491,694
Capital Financing Program	-	-	18,174,215	8,978,669	15,051,199	-	6,284,905	63,522,318	50,603,233	28,579,112	23,419,227	-	110,409,432	87,734,115	-	4,511,022	417,267,448
Regional Recycling Water Project	-	-	5,626,290	-	-	-	-	-	-	-	-	-	-	9,373,710	-	-	15,000,000
Other Operating Costs	230,155	407,344	362,199	153,014	1,319,698	-	492,759	188,698	187,931	132,917	98,559	-	3,543,075	2,813,513	296,176	141,496	10,367,535
<b>Revenue Offsets</b>	(397,392)	(48,035,621)	(370,528)	(10,330,154)	(634,198)	(1,871,851)	(92,121,023)	(667,045)	(545,428)	(569,534)	(256,751)	(520,112)	(4,418,232)	(8,143,736)	(603,588)	(11,843,071)	(181,328,263)
Admin. & General	7,854,765	22,539,153	7,323,774	5,561,199	11,697,515	11,441,806	42,732,827	9,569,541	5,028,783	11,257,295	3,464,291	(30,141)	33,886,575	32,027,598	11,930,397	2,451,190	218,736,567
<b>Net Revenue Requirement</b>	<b>49,770,937</b>	<b>142,817,106</b>	<b>46,406,366</b>	<b>67,879,402</b>	<b>78,591,543</b>	<b>208,881,284</b>	<b>279,449,067</b>	<b>79,928,264</b>	<b>62,559,542</b>	<b>71,330,734</b>	<b>30,545,908</b>	<b>(550,253)</b>	<b>280,766,101</b>	<b>232,869,391</b>	<b>75,595,778</b>	<b>745,651</b>	<b>1,707,586,820</b>

\* Includes Delta Conveyance planning costs  
Totals may not foot due to rounding

## Allocated Costs

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

Two methods are discussed in the AWWA M1 Manual, Principles of Water Rates, Fees and Charges. These two methods are the Commodity/Demand method and the Base/Extra Capacity method.

In the simplest sense, these approaches offer alternative means of distinguishing between utility costs incurred to meet average or base demands and costs incurred to meet peak demands. The Commodity/Demand method allocates costs that vary with the amount of water produced to the commodity category with all other costs associated with water production allocated to the demand category. In the Base/Extra Capacity method, costs related to average demand conditions are allocated to the base category, and capacity costs associated with meeting above average demand conditions are allocated to the extra capacity category.

The Commodity/Demand approach was modified for its application to Metropolitan's rate structure by adding a separate cost allocation for costs related to standby. Analysis of system operating data indicated that a modified Commodity/Demand approach was most appropriate for developing Metropolitan's cost of service allocation bases.

A modified Commodity/Demand approach is the most appropriate for Metropolitan's cost of service needs because this approach is best suited for systems that are not designed to meet peak-day or peak-hour demands or provide flows for fire-fighting requirements. Metropolitan's system is designed to meet weekly demand peaks rather than daily or hourly peaks. It is also designed to provide available capacity to meet operational flexibility and reliability for emergencies, outages, and hydrologic variability.

Allocation categories used in the analysis include:

- Fixed Demand costs
- Fixed Commodity costs
- Fixed Standby costs
- Variable Commodity costs
- Hydroelectric costs

Fixed Demand costs are incurred to meet peak demands. Only the *direct* capital financing costs were included in the Fixed Demand allocation category. A portion of capital financing costs was included in the Fixed Demand allocation category because in order to meet peak demands additional physical capacity is designed into the system and, therefore, additional capital costs are incurred.

Variable Commodity costs vary with the amount of water produced, and include costs of chemicals, most power costs, and other O&M cost components that increase or decrease in relation to the volume of water supplied. Fixed Commodity costs include fixed operations and maintenance and comprise the balance of Metropolitan's O&M expenses. Fixed Commodity costs also include capital financing costs associated with meeting average demands. Fixed Commodity costs do not vary with the amount of water produced.

Fixed Standby costs relate to Metropolitan's role in ensuring system reliability during emergencies such as an earthquake, an outage of a major facility like the CRA and SWP, and hydrologic variability due to weather variances locally or in the two major supply basins Metropolitan relies on. Only the *direct* capital financing

costs were included in the Fixed Standby allocation category. The Fixed Standby costs identified include the emergency storage capacity within the system, and the available capacity within the conveyance and distribution systems.

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

Schedules 10 and 11 provide the allocation percentages used to allocate the capital financing operational function costs into Fixed Demand, Fixed Commodity and Fixed Standby allocation categories for FY 2020/21 and FY 2021/22, respectively.

All of the capital financing costs functionalized to Supply are allocated as Fixed Commodity costs. Because these particular supply costs have been incurred to provide an amount of annual reliable system yield and not to provide peak demand delivery capability or standby availability, they are reasonably treated as Fixed Commodity costs.

Costs for the Conveyance and Aqueduct (C&A) function are allocated into Fixed Commodity, Fixed Demand and Fixed Standby categories. Because the capital costs for C&A were incurred to meet all three allocation categories, an analysis of C&A capacity usage was used. C&A capacity is the sum of the CRA actual capacity of 1.3 million acre-feet plus the SWP amount attributable to Metropolitan of 1.9 million acre-feet under a 100% allocation, for a total Conveyance Capacity of approximately 3.2 million acre-feet. For FY 2020/21, 49 percent of the available conveyance capacity varies with the quantity of water produced and is allocated to Fixed Commodity. A system peak factor<sup>13</sup> of 1.36 was applied to the annual usage to determine that 18 percent of available capacity is used to meet peak monthly deliveries to the member agencies and is allocated to Fixed Demand. The remaining portion of C&A, about 33 percent, is allocated to Fixed Standby. The same allocation percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct sub-functions. The allocation shares reflect the system average use of conveyance capacity and not the usage of individual facilities. All of the Conveyance and Aqueduct energy costs for pumping water to Southern California are allocated as Variable Commodity costs and, therefore, are not shown in Schedule 6 because they carry through the allocation step. For FY 2021/22, 49 percent of the available conveyance capacity varies with the quantity of water produced and is allocated to Fixed Commodity. A system peak factor of 1.36 was applied to the annual usage to determine that 18 percent of available capacity is used to meet peak monthly deliveries to the member agencies and is allocated to Fixed Demand. The remaining portion of C&A, about 33 percent, is allocated to Fixed Standby.

Storage function costs for emergency, drought and regulatory storage are also distributed to the allocation categories based on the purpose they serve. Emergency storage costs are allocated as 100 percent Fixed Standby. Emergency storage is a prime example of a cost Metropolitan incurs to ensure the reliability of deliveries to the member agencies. In effect, through the emergency storage capacity in the system, Metropolitan is "standing by" with available capacity and water supply to provide service in the event of a catastrophe such as a major earthquake that disrupts regional conveyance capacity for an extended period of time. Drought carryover storage serves to provide reliable supplies by carrying over surplus supplies from periods of above normal precipitation and snow pack to drought periods when supplies decrease. Drought storage creates supply and is one component of the portfolio of resources that result in a reliable amount of

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<sup>13</sup> Peak monthly deliveries to the member agencies average about 41 percent more than the average monthly deliveries.

annual system supplies. As a result, drought storage is allocated as a Fixed Commodity cost, in the same manner as Metropolitan's supply costs. Regulatory storage within the Metropolitan system provides operational flexibility in meeting peak demands and flow requirements, essentially increasing the physical distribution capacity. Therefore, regulatory storage is allocated in the same manner as Distribution costs.

Distribution function costs were allocated as Fixed Commodity by using projected sales data for the test year. For FY 2020/21, 40 percent of the system distribution capacity is associated with the quantity of water delivered and is allocated to Fixed Commodity. Distribution function costs were allocated to Fixed Demand by using three years of recorded non-coincident peak demands. The difference between the three-year average non-coincident peak demand and the fixed commodity flows divided by the system capacity, or 37 percent of the distribution capacity, was used to meet non-coincident peak day demands, and is allocated to Fixed Demand. Although the Metropolitan Distribution System has a great deal of operational flexibility, the total amount of distribution capacity was limited to the historical non-coincident<sup>14</sup> peak (maximum) day flow of all the member agencies; based on the last 20 years that maximum flow was 5,510 cfs in 2004. The remaining 23 percent of distribution capacity is associated with Standby and is allocated to Fixed Standby. For FY 2021/22, 40 percent of the system distribution capacity is associated with the quantity of water delivered, and is allocated to Fixed Commodity, 27 percent was used to meet non-coincident peak (maximum) day demands and is allocated to Fixed Demand, and the remaining 23 percent of distribution capacity is associated with Standby, and is allocated to Fixed Standby.

Treatment function costs were allocated to Fixed Commodity by using projected treated deliveries to the member agencies for the test year. The Treatment Fixed Demand calculation uses the system non-coincident peak factor of 2.0 applied to the test year usage; the remaining capacity is associated with Fixed Standby. Total treated water capacity of 3,652 cfs, which is the total design capacity of all the treatment plants, was used in the calculation. General and Administrative costs have been assigned to the allocation categories by operational function based on the ratio of allocated non-A&G function costs to total non-A&G function costs.

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<sup>14</sup> The term "non-coincident" means that the peak day for each agency may or may not coincide with the peak day for the system. A non-coincident approach is used in the rate design to capture the different operating characteristics of the member agencies. The sum of the member agency peak day demands is used as a proxy for peak week. For Metropolitan, "peak" and "maximum" flows, measured in cfs, are synonymous.

**Schedule 10: Capital Financing Allocation Percentages, FY 2020/21**

Fiscal year ending 2021 Function	Allocation Percentages			Total % Allocated	Comments
	Fixed Commodity	Fixed Demand	Fixed Standby		
<b>Source of Supply</b>					
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs allocated as fixed commodity
State Water Project	100%	0%	0%	100%	Supply costs allocated as fixed commodity
<b>Conveyance &amp; Aqueduct</b>					
Colorado River Aqueduct	49%	18%	33%	100%	Demand percentage represents amount of system conveyance capacity used to meet maximum demands. Commodity percentage represents amount of capacity that is a function of the amount of water delivered. Standby percentage is the remaining conveyance capacity. SWP, CRA, and Other are treated the same due to the use of a uniform system-wide System Access Rate.
State Water Project	49%	18%	33%	100%	
Other	49%	18%	33%	100%	
<b>Storage</b>					
Emergency	0%	0%	100%	100%	Allocated as Standby (recovered by RTS)
Drought	100%	0%	0%	100%	Allocated as fixed commodity (recovered by Supply Rates)
Regulatory	40%	37%	23%	100%	Allocated the same way as distribution.
<b>Treatment</b>	30%	29%	40%	100%	Demand percentage represents amount of system treatment capacity used to meet maximum demands. Commodity percentage represents amount of capacity that is a function of the amount of treated water delivered. Standby percentage is the remaining treatment capacity. The same allocations is applied to all five treatment plants due to the use of a uniform system-wide Treatment Surcharge.
<b>Distribution</b>	40%	37%	23%	100%	Demand percentage represents amount of system distribution capacity used to meet maximum demands. Commodity percentage represents amount of capacity that is a function of the amount of water delivered. Standby percentage is the remaining distribution capacity. The same allocations is applied to all distribution facilities due to the use of a uniform system-wide System Access Rate.

Totals may not foot due to rounding



**Schedule 11: Capital Financing Allocation Percentages, FY 2021/22**

Fiscal year ending 2022	Allocation Percentages			Total % Allocated	Comments
	Fixed Commodity	Fixed Demand	Fixed Standby		
<b>Source of Supply</b>					
Colorado River Aqueduct	100%	0%	0%	100%	Supply costs allocated as fixed commodity
State Water Project	100%	0%	0%	100%	Supply costs allocated as fixed commodity
<b>Conveyance &amp; Aqueduct</b>					
Colorado River Aqueduct	49%	18%	33%	100%	Demand percentage represents amount of system conveyance capacity used to meet maximum demands. Commodity percentage represents amount of capacity that is a function of the amount of water delivered. Standby percentage is the remaining conveyance capacity. SWP, CRA, and Other are treated the same due to the use of a uniform system-wide System Access Rate.
State Water Project	49%	18%	33%	100%	
Other	49%	18%	33%	100%	
<b>Storage</b>					
Emergency	0%	0%	100%	100%	Allocated as Standby (recovered by RTS)
Drought	100%	0%	0%	100%	Allocated as fixed commodity (recovered by Supply Rates)
Regulatory	40%	37%	23%	100%	Allocated the same way as distribution.
<b>Treatment</b>	30%	29%	40%	100%	Demand percentage represents amount of system treatment capacity used to meet maximum demands. Commodity percentage represents amount of capacity that is a function of the amount of treated water delivered. Standby percentage is the remaining treatment capacity. The same allocations is applied to all five treatment plants due to the use of a uniform system-wide Treatment Surcharge.
<b>Distribution</b>	40%	37%	23%	100%	Demand percentage represents amount of system distribution capacity used to meet maximum demands. Commodity percentage represents amount of capacity that is a function of the amount of water delivered. Standby percentage is the remaining distribution capacity. The same allocations is applied to all distribution facilities due to the use of a uniform system-wide System Access Rate.

Totals may not foot due to rounding

### **FY 2020/21 Operational Function Revenue Requirements (by allocation category)**

A summary of cost allocation results for FY 2020/21 is shown in Schedules 12 and 13. The allocation of the functionalized costs results in about 6 percent, or \$90 million of the total revenue requirements, being allocated to the Fixed Demand allocation category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan's property tax revenue is allocated to Conveyance & Aqueduct (C&A) Fixed Demand costs and is used to pay for the general obligation bond debt service allocated to the C&A costs, and other SWP costs. This revenue offsets the amount that needs to be recovered through rates.

About 68 percent of the revenue requirement (\$1,122 million) is allocated as Fixed Commodity. These fixed capital and operating costs are incurred by Metropolitan to meet annual average service needs and are typically recovered by a combination of fixed charges and volumetric rates. Fixed capital costs allocated to the Fixed Standby category total about \$156 million and account for about 10 percent of the revenue requirements. Standby costs are commonly recovered by a fixed charge allocated on a reasonable representation of a customer's need for standby availability. The Variable Commodity costs for power on the conveyance and aqueduct systems, and power, chemicals and solids handling at the treatment plants change with the amount of water delivered to the member agencies. These costs are allocated as Variable Commodity costs, total about \$276 million, and account for about 17 percent of the total revenue requirement. Because of the variable nature of these costs, it is appropriate to recover them through volumetric rates.

With regard to Metropolitan's planned contribution for Delta Conveyance Project planning costs, consistent with the treatment of SWP Conveyance & Aqueduct capital costs, 49 percent of costs are allocated to Fixed Commodity, which is recovered through the System Access Rate, and 51 percent of costs are allocated to Fixed Demand and Fixed Standby, which is recovered through the Readiness-to-Serve Charge.

### **FY 2021/22 Operational Function Revenue Requirement (by allocation category)**

A summary of cost allocation results for FY 2021/22 is shown in Schedule 14 and 15. The allocation of the functionalized costs results in about 6 percent, or \$95 million of the total revenue requirements, being allocated to the Fixed Demand allocation category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan's property tax revenue is allocated to C&A Fixed Demand costs and is used to pay for the general obligation bond debt service allocated to the C&A costs, and other SWP costs. This revenue offsets the amount that needs to be recovered through rates.

About 68 percent of the revenue requirement (\$1,159 million) is allocated as Fixed Commodity. These fixed capital and operating costs are incurred by Metropolitan to meet annual average service needs and are typically recovered by a combination of fixed charges and volumetric rates. Fixed capital costs allocated to the Fixed Standby category total about \$161 million and account for about 10 percent of the revenue requirements. Standby costs are commonly recovered by a fixed charge allocated on a reasonable representation of a customer's need for standby. The Variable Commodity costs for power on the conveyance and aqueduct systems, and power, chemicals and solids handling at the treatment plants

change with the amount of water delivered to the member agencies. These costs are allocated as Variable Commodity costs, total about \$291 million, and account for about 17 percent of the total revenue requirement. Because of the variable nature of these costs, it is appropriate to recover them through volumetric rates.

In FY 2021/22, consistent with the treatment of SWP Conveyance & Aqueduct capital costs, 49 percent of Metropolitan's planned contribution of Delta Conveyance Project planning costs are allocated to Fixed Commodity, which is recovered through the System Access Rate, and 51 percent of costs are allocated to Fixed Demand and Fixed Standby, which is recovered through the Readiness-to-Serve Charge.

**Schedule 12: Revenue Requirements by sub-function and allocation category, FY 2020/21**

Fiscal Year Ending 2021	Supply			Conveyance & Aqueduct					Storage				Treatment	Distribution	Demand Mgt.	Hydro	Total
	CRA	SWC	Other	CRA power	CRA other	SWC power	SWC other	Other C&A	Emergency	Drought	Regulatory	Power					
<b>Fixed Demand</b>																	
<b>engineering factors</b>	-	-	-	0.0%	17.8%	0.0%	17.8%	17.8%	0.0%	0.0%	37.2%	0.0%	29.3%	37.2%	-	-	-
SWC Capital	-	-	-	-	-	-	20,773,287	-	-	-	-	-	-	-	-	-	20,773,287
Capital Financing	-	-	-	-	2,589,339	-	1,119,070	11,474,412	-	-	8,583,360	-	32,342,730	29,855,787	-	-	85,964,699
Regional Recycling Water Project	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,489,300
A&G less Offsets	-	-	-	-	21,383	-	(17,702,004)	(120,494)	-	-	457,168	-	992,268	(4,020,563)	-	-	(20,372,242)
<b>Total fixed demand</b>	-	-	-	-	2,610,723	-	4,190,353	11,353,918	-	-	9,040,528	-	33,334,998	29,324,524	-	-	89,855,044
<b>Fixed Commodity</b>																	
<b>engineering factors</b>	100%	100%	100%	100%	49.3%	0%	49.3%	49.3%	0%	100%	40.1%	0%	30.3%	40.1%	-	-	-
Capital Financing	-	-	18,166,175	7,547,918	7,192,609	-	3,108,529	31,873,367	-	29,082,369	9,248,267	-	33,343,021	32,168,554	-	-	171,730,809
Regional Recycling Water Project	-	-	5,626,290	-	-	-	-	-	-	-	-	-	-	-	-	-	9,385,887
SWC Capital	-	57,457,040	-	-	-	-	57,703,574	-	-	-	-	-	-	-	-	-	115,160,614
SWC O&M	-	92,381,352	-	-	-	-	179,806,614	-	-	-	-	-	-	-	-	-	272,187,966
Dept. O&M	8,513,167	15,143,564	13,387,052	5,647,301	48,678,309	-	19,441,577	7,219,888	7,149,389	5,071,517	3,650,982	-	99,532,600	103,839,152	11,129,284	-	348,403,783
Supply Programs	36,030,363	-	1,250,000	-	-	-	-	-	-	31,402,463	-	-	-	-	-	-	68,682,826
Demand Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48,531,757	48,531,757
Other Operating Costs	240,221	427,315	377,716	159,353	1,373,586	-	548,595	203,728	201,739	143,106	103,022	-	3,701,361	2,930,094	314,042	-	10,723,913
A&G less Offsets	7,314,236	(25,619,339)	6,338,136	2,332,352	9,636,646	-	(5,532,798)	6,863,146	1,046,889	10,730,261	1,967,179	-	25,231,990	26,743,644	9,795,337	-	76,847,678
<b>Total fixed commodity</b>	52,097,988	139,789,932	45,145,404	15,686,924	66,881,151	-	255,076,091	46,160,129	8,398,017	76,429,715	14,969,450	-	161,808,971	169,441,042	69,770,420	-	1,121,655,234
<b>Fixed Standby</b>																	
<b>engineering factors</b>	-	-	-	0%	33%	0%	32.9%	32.9%	100%	0%	22.7%	0%	40.4%	22.7%	-	-	-
SWC Capital	-	-	-	-	-	-	38,525,936	-	-	-	-	-	-	-	-	-	38,525,936
Capital Financing	-	-	-	-	4,802,164	-	2,075,417	21,280,333	51,343,090	-	5,226,845	-	44,514,933	18,180,711	-	-	147,423,494
Regional Recycling Water Project	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,124,813
A&G less Offsets	-	-	-	-	40,566	-	(32,828,506)	1,137,644	2,361,199	-	279,426	-	(567,506)	(2,444,973)	-	-	(32,022,151)
<b>Total fixed standby</b>	-	-	-	-	4,842,730	-	7,772,847	22,417,977	53,704,289	-	5,506,272	-	43,947,427	17,860,550	-	-	156,052,091
<b>Variable Commodity</b>																	
SWC Power	-	-	-	-	-	194,120,315	-	-	-	-	-	-	-	-	-	-	194,120,315
CRA Power	-	-	-	52,236,836	-	-	-	-	-	-	-	-	-	-	-	-	52,236,836
Variable Treatment	-	-	-	-	-	-	-	-	-	-	-	-	31,639,362	-	-	-	31,639,362
A&G less Offsets	-	-	-	(6,879,814)	-	6,222,816	-	-	-	-	-	(489,673)	(636,323)	-	-	-	(1,782,994)
<b>Total variable commodity</b>	-	-	-	45,357,022	-	200,343,131	-	-	-	-	-	(489,673)	31,003,039	-	-	-	276,213,520
<b>Hydroelectric</b>																	
A&G less Offsets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,162,786	10,162,786
<b>Total hydroelectric</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(9,969,795)	(9,969,795)
<b>Total Costs</b>	<b>52,097,988</b>	<b>139,789,932</b>	<b>45,145,404</b>	<b>61,043,947</b>	<b>74,334,603</b>	<b>200,343,131</b>	<b>267,039,291</b>	<b>79,932,024</b>	<b>62,102,306</b>	<b>76,429,715</b>	<b>29,516,249</b>	<b>(489,673)</b>	<b>270,094,434</b>	<b>216,626,116</b>	<b>69,770,420</b>	<b>192,990</b>	<b>1,643,968,879</b>

Totals may not foot due to rounding

**Schedule 13: Operational function Revenue Requirements (by allocation category), FY 2020/21**

Fiscal year ending 2021 Functional categories (by sub-Function)	Fixed Demand	Fixed Commodity	Fixed Standby	Variable Commodity	Hydroelectric	Total allocated
<b>Source of Supply</b>						
CRA	\$ -	\$ 52,097,988	\$ -	\$ -	\$ -	\$ 52,097,988
SWP	-	139,789,932	-	-	-	139,789,932
Other Supply	-	45,145,404	-	-	-	45,145,404
<b>Subtotal: Source of Supply</b>	-	237,033,324	-	-	-	<b>237,033,324</b>
<b>Conveyance &amp; Aqueduct</b>						
CRA						
CRA Power	-	15,686,924	-	45,357,022	-	61,043,947
CRA All Other	2,610,723	66,881,151	4,842,730	-	-	74,334,603
SWP						
SWP Power	-	-	-	200,343,131	-	200,343,131
SWP All Other	4,190,353	255,076,091	7,772,847	-	-	267,039,291
Other Conveyance & Aqueduct	11,353,918	46,160,129	22,417,977	-	-	79,932,024
<b>Subtotal: Conveyance &amp; Aqueduct</b>	18,154,994	383,804,295	35,033,554	245,700,154	-	<b>682,692,997</b>
<b>Storage</b>						
Storage Costs Other Than Power						
Emergency	-	8,398,017	53,704,289	-	-	62,102,306
Drought	-	76,429,715	-	-	-	76,429,715
Regulatory	9,040,528	14,969,450	5,506,272	-	-	29,516,249
Storage Power	-	-	-	(489,673)	-	(489,673)
<b>Subtotal: Storage</b>	9,040,528	99,797,182	59,210,561	(489,673)	-	<b>167,558,597</b>
<b>Treatment</b>	33,334,998	161,808,971	43,947,427	31,003,039	-	<b>270,094,434</b>
<b>Distribution</b>	29,324,524	169,441,042	17,860,550	-	-	<b>216,626,116</b>
<b>Demand Management</b>	-	69,770,420	-	-	-	<b>69,770,420</b>
<b>Hydroelectric</b>	-	-	-	-	192,990	<b>192,990</b>
<b>Total Costs Allocated</b>	<b>\$ 89,855,044</b>	<b>\$ 1,121,655,234</b>	<b>\$ 156,052,091</b>	<b>\$ 276,213,520</b>	<b>\$ 192,990</b>	<b>\$ 1,643,968,879</b>

Totals may not foot due to rounding

**Schedule 14: Revenue Requirements by sub-function and allocation category, FY 2021/22**

Fiscal Year Ending 2022	Supply			Conveyance & Aqueduct					Storage				Treatment	Distribution	Demand Mgt.	Hydro	Total
	CRA	SWC	Other	CRA power	CRA other	SWC power	SWC other	Other C&A	Emergency	Drought	Regulatory	Power					
<b>Fixed Demand</b>																	
<b>engineering factors</b>	-	-	-	0.0%	17.8%	0.0%	17.8%	17.8%	0.0%	0.0%	37.2%	0.0%	29.3%	37.2%	-	-	-
SWC Capital	-	-	-	-	-	-	21,322,682	-	-	-	-	-	-	-	-	-	21,322,682
Capital Financing	-	-	-	-	2,672,268	-	1,115,855	11,278,084	-	-	8,717,648	-	32,403,995	32,658,430	-	-	88,846,281
Regional Recycling Water Project	-	-	-	-	-	-	-	-	-	-	-	-	-	3,489,300	-	-	3,489,300
A&G less Offsets	-	-	-	-	72,601	-	(17,112,123)	100,693	-	-	630,746	-	1,601,744	(3,593,690)	-	-	(18,300,030)
Total fixed demand	-	-	-	-	2,744,869	-	5,326,414	11,378,777	-	-	9,348,395	-	34,005,739	32,554,040	-	-	95,358,233
<b>Fixed Commodity</b>																	
<b>engineering factors</b>	100%	100%	100%	100%	49.3%	0%	49.3%	49.3%	0%	100%	40.1%	0%	30.3%	40.1%	-	-	-
Capital Financing	-	-	18,174,215	8,978,669	7,422,968	-	3,099,597	31,328,010	-	28,579,112	9,392,958	-	33,406,181	35,188,303	-	-	175,570,012
Regional Recycling Water Project	-	-	5,626,290	-	-	-	-	-	-	-	-	-	-	3,759,597	-	-	9,385,887
SWC Capital	-	59,734,418	-	-	-	-	-	59,229,673	-	-	-	-	-	-	-	-	118,964,092
SWC O&M	-	92,381,352	-	-	-	-	-	182,860,883	-	-	-	-	-	-	-	-	275,242,235
Dept. O&M	8,921,842	15,790,459	14,040,416	5,931,513	51,157,329	-	19,101,520	7,314,752	7,285,023	5,152,457	3,820,582	-	104,574,674	109,064,191	11,481,098	-	363,635,856
Supply Programs	33,161,566	-	1,250,000	-	-	-	-	-	-	26,778,487	-	-	-	-	-	-	61,190,053
Demand Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52,491,694
Other Operating Costs	230,155	407,344	362,199	153,014	1,319,698	-	492,759	188,698	187,931	132,917	98,559	-	3,543,075	2,813,513	296,176	-	10,226,039
A&G less Offsets	7,457,373	(25,496,468)	6,953,246	2,822,726	10,853,407	-	(545,268)	7,276,714	1,177,226	10,687,761	2,189,720	-	28,186,759	29,655,555	11,326,809	-	92,545,562
Total fixed commodity	49,770,937	142,817,106	46,406,366	17,885,923	70,753,402	-	264,239,165	46,108,173	8,650,180	71,330,734	15,501,819	-	169,710,689	180,481,159	75,595,778	-	1,159,251,430
<b>Fixed Standby</b>																	
<b>engineering factors</b>	-	-	-	0%	33%	0%	32.9%	32.9%	100%	0%	22.7%	0%	40.4%	22.7%	-	-	-
SWC Capital	-	-	-	-	-	-	39,544,839	-	-	-	-	-	-	-	-	-	39,544,839
Capital Financing	-	-	-	-	4,955,963	-	2,069,454	20,916,224	50,603,233	-	5,308,621	-	44,599,256	19,887,383	-	-	148,340,133
Regional Recycling Water Project	-	-	-	-	-	-	-	-	-	-	-	-	-	2,124,813	-	-	2,124,813
A&G less Offsets	-	-	-	-	137,309	-	(31,730,805)	1,525,089	3,306,129	-	387,074	-	20,848	(2,178,003)	-	-	(28,532,360)
Total fixed standby	-	-	-	-	5,093,272	-	9,883,488	22,441,313	53,909,362	-	5,695,694	-	44,620,104	19,834,192	-	-	161,477,426
<b>Variable Commodity</b>																	
SWC Power	-	-	-	-	-	-	199,311,329	-	-	-	-	-	-	-	-	-	199,311,329
CRA Power	-	-	-	57,585,160	-	-	-	-	-	-	-	-	-	-	-	-	57,585,160
Variable Treatment	-	-	-	-	-	-	-	-	-	-	-	-	32,770,577	-	-	-	32,770,577
A&G less Offsets	-	-	-	(7,591,681)	-	-	9,569,955	-	-	-	-	(550,253)	(341,007)	-	-	-	1,087,013
Total variable commodity	-	-	-	49,993,479	-	-	208,881,284	-	-	-	-	(550,253)	32,429,570	-	-	-	290,754,079
<b>Hydroelectric</b>																	
A&G less Offsets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,137,532
Total hydroelectric	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(9,391,881)
Total hydroelectric	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	745,651
<b>Total Costs</b>	<b>49,770,937</b>	<b>142,817,106</b>	<b>46,406,366</b>	<b>67,879,402</b>	<b>78,591,543</b>	<b>208,881,284</b>	<b>279,449,067</b>	<b>79,928,264</b>	<b>62,559,542</b>	<b>71,330,734</b>	<b>30,545,908</b>	<b>(550,253)</b>	<b>280,766,101</b>	<b>232,869,391</b>	<b>75,595,778</b>	<b>745,651</b>	<b>1,707,586,820</b>

Totals may not foot due to rounding

### Schedule 15: Operational function Revenue Requirements (by allocation category), FY 2021/22

Fiscal year ending 2022 Functional categories (by sub-Function)	Fixed Demand	Fixed Commodity	Fixed Standby	Variable Commodity	Hydroelectric	Total allocated
<b>Source of Supply</b>						
CRA	\$ -	\$ 49,770,937	\$ -	\$ -	\$ -	\$ 49,770,937
SWP	-	142,817,106	-	-	-	142,817,106
Other Supply	-	46,406,366	-	-	-	46,406,366
<b>Subtotal: Source of Supply</b>	-	238,994,408	-	-	-	<b>238,994,408</b>
<b>Conveyance &amp; Aqueduct</b>						
CRA						
CRA Power	-	17,885,923	-	49,993,479	-	67,879,402
CRA All Other	2,744,869	70,753,402	5,093,272	-	-	78,591,543
SWP						
SWP Power	-	-	-	208,881,284	-	208,881,284
SWP All Other	5,326,414	264,239,165	9,883,488	-	-	279,449,067
Other Conveyance & Aqueduct	11,378,777	46,108,173	22,441,313	-	-	79,928,264
<b>Subtotal: Conveyance &amp; Aqueduct</b>	19,450,060	398,986,664	37,418,073	258,874,763	-	<b>714,729,561</b>
<b>Storage</b>						
Storage Costs Other Than Power						
Emergency	-	8,650,180	53,909,362	-	-	62,559,542
Drought	-	71,330,734	-	-	-	71,330,734
Regulatory	9,348,395	15,501,819	5,695,694	-	-	30,545,908
Storage Power	-	-	-	(550,253)	-	(550,253)
<b>Subtotal: Storage</b>	9,348,395	95,482,732	59,605,056	(550,253)	-	<b>163,885,930</b>
<b>Treatment</b>	34,005,739	169,710,689	44,620,104	32,429,570	-	<b>280,766,101</b>
<b>Distribution</b>	32,554,040	180,481,159	19,834,192	-	-	<b>232,869,391</b>
<b>Demand Management</b>	-	75,595,778	-	-	-	<b>75,595,778</b>
<b>Hydroelectric</b>	-	-	-	-	745,651	<b>745,651</b>
<b>Total Costs Allocated</b>	<b>\$ 95,358,233</b>	<b>\$ 1,159,251,430</b>	<b>\$ 161,477,426</b>	<b>\$ 290,754,079</b>	<b>\$ 745,651</b>	<b>\$ 1,707,586,820</b>

Totals may not foot due to rounding

## Distribution of Costs: Rates and Charges

### Use of System-Wide (Postage Stamp) Rates

Metropolitan's rate structure consists of unbundled rate elements designed to provide transparency regarding the cost of specific functions to member agencies (system access, untreated water supplies, water treatment, etc.). The rates for each of these unbundled rate elements are uniform across Metropolitan's entire regional service area; they do not vary by member agency and they do not vary by geographic zone or distance.

In the utility industry, system-wide rates that are the same for all customers are referred to as "postage stamp" rates. Under a postage stamp rate design approach, every customer pays the same average rate for a service regardless of whether the cost caused by, or the benefit derived by, a customer for a given transaction varies from the average. The postage stamp rate design approach stands in contrast to alternative rate design approaches such as distance sensitive pricing schemes that attempt to develop rates applicable to specific geographic zones.

Metropolitan's postage stamp rate design is appropriate given Metropolitan's integrated regional system that benefits all member agencies. Metropolitan's system is not a point-to-point service, but an interconnected regional system. In order to balance the local concerns within the region, Metropolitan has long maintained postage stamp rates. In fact, Metropolitan has used uniform postage stamp rates since it started delivering water in 1942. Under the postage stamp approach, an agency develops an average rate for a service, as opposed to a point-to-point rate based on each customer's specific use, and all customers receiving that service pay the average rate. This allows the agency to establish non-discriminatory rates that match the cost of providing the service to a customer class. A postage stamp approach is especially appropriate for an interconnected regional system because it allows the agency to develop reliable alternatives to point-to-point service. Metropolitan's uniform, postage stamp rate structure has allowed it to develop an interconnected regional conveyance and distribution system with the ability to deliver supplies from the SWP, the Colorado River, and its storage portfolio throughout its vast and diverse service area. Metropolitan's conveyance and distribution system can deliver water from both the SWP and Colorado River to almost every member agency. This flexibility benefits all member agencies. Uniform, postage stamp rates provide a region-wide funding mechanism to recover the costs of Metropolitan's integrated system, help ensure economies of scale, and result in lower costs for all of Metropolitan's member agencies. Given Metropolitan's integrated system, it is not logical to do otherwise.

Metropolitan's system draws on diverse supply sources, transports water across a large part of the State, distributes water in six counties, and serves an area home to 19 million residents. The 2007 Integrated Area Study (IAS), emphasized regional system flexibility as a key component of overall reliability.<sup>15</sup> Metropolitan must maintain operational flexibility—the ability to respond to short-term changes in regional water supply, water quality, treatment requirements, and member agency demands. And it must maintain delivery flexibility—the ability to maintain partial to full water supply deliveries during planned and unplanned facility outages. Metropolitan is also required by state statute to have the objective, to the extent determined to be reasonable and practical, to deliver a blend of water constituting at least 50 percent of SWP water. (MWD Act, Sec. 136.) Each of Metropolitan's integrated conveyance, distribution and storage assets contributes to regional system reliability. It is fair and reasonable, therefore, to expect member agencies to share the cost of

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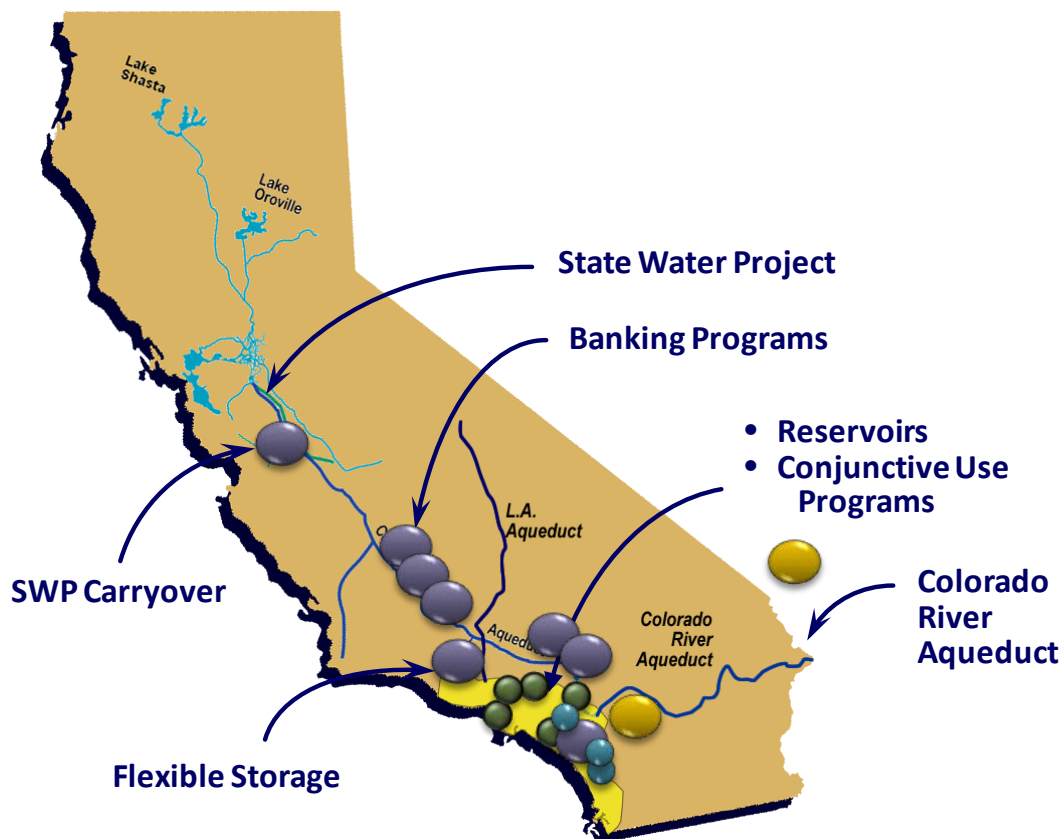
<sup>15</sup> 2007 Integrated Area Study, Report No. 1317, pg. 2-10.



developing and maintaining these assets because all member agencies benefit from regional system reliability. And all member agencies are voluntary members of the cooperative formed to benefit from pooling of resources to enhance regional benefits to their service areas.

Operational flexibility has been achieved by creating an interconnected regional delivery network integrating the SWP and the CRA conveyance systems with the Distribution System. This integrated network allows Metropolitan to incorporate supply from the SWP and the Colorado River with a diverse portfolio of geographically dispersed storage programs, including the Central Valley groundwater storage programs, carryover storage in San Luis Reservoir, flexible storage capacity in Castaic Lake and Lake Perris, Lake Mead storage, the DWCV Advanced Delivery account, in-basin surface storage in DVL and Lake Mathews, and in-basin groundwater Conjunctive Use Programs. This integrated, regional network allows Metropolitan to move supplies throughout the system in response to service demands, supply availability and operational needs, and is shown in Figure 18.

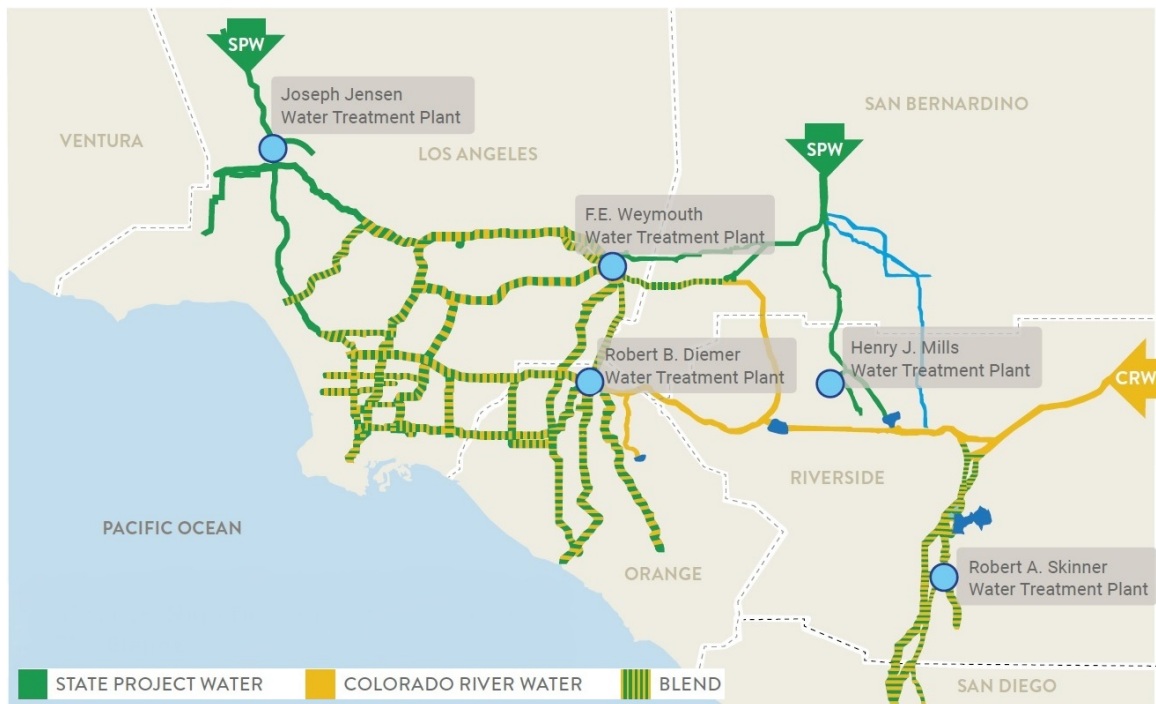
**Figure 18: Metropolitan Facilities, Supplies and Storage Portfolio**



System flexibility and integration is easily demonstrated. In a year with a high SWP allocation, SWP supplies can be moved from the West Branch down into the Central Pool as far as western Orange County; on the East Branch, moving SWP supplies results in high SWP blends for eastern areas all the way into south San Diego County, with relatively little Colorado River water delivered to the Skinner area. In a year with a low SWP allocation, Colorado River water will dominate; this impact is mitigated by blending Colorado River water with SWP supplies stored in DVL. Under normal operations these CRA supplies can be pushed as far west as the Santa Monica Feeder.

The system flexibility can be seen through the operations of the system during calendar year 2018. As water conditions shifted, so did Metropolitan's operations to ensure continued water supply reliability. At the beginning of 2018, operations were transitioning from maximizing deliveries into storage accounts to capture supplies from the extraordinary surplus of 2017.

**Figure 19: Operating Flexibility and Regional System Reliability: High Deliveries of SWP Supplies (~75% SWP Supplies)**



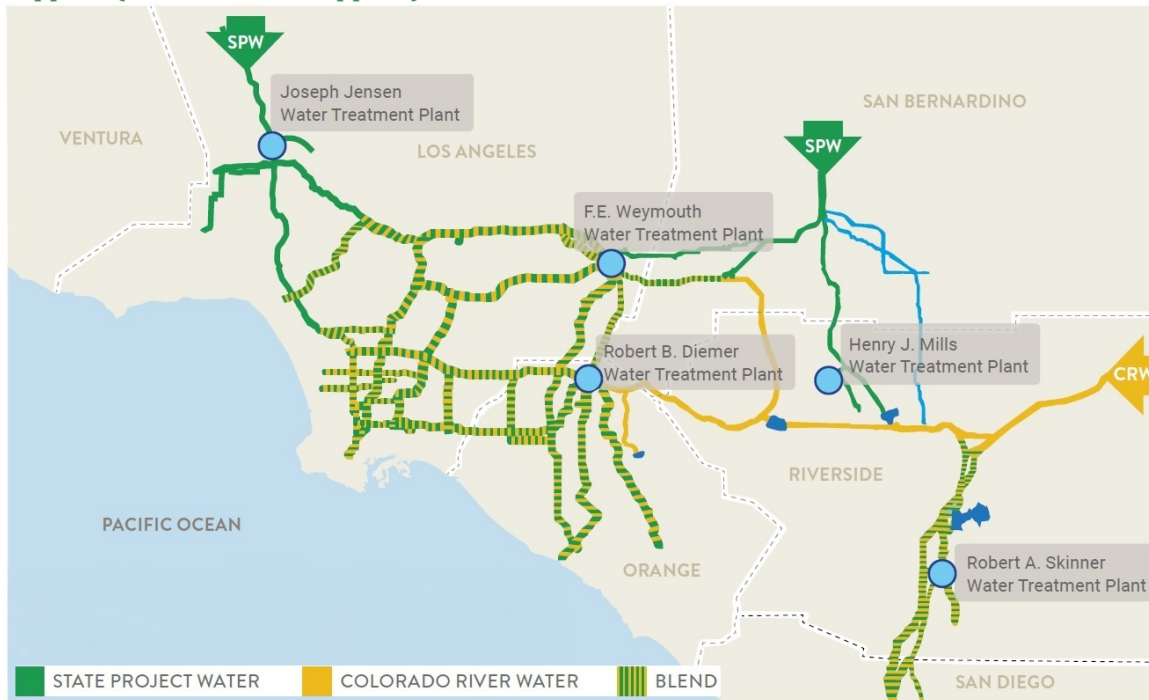
As calendar year 2018 progressed, Metropolitan began minimizing deliveries of SWP supplies to prepare for potential drought actions as conditions turned dry early in the year.

**Figure 20: Operating Flexibility and Regional System Reliability: Minimized Deliveries of SWP Supplies (~0% SWP Supplies)**



As the water outlook stabilized, Metropolitan moderately increased the blend of SWP supplies, with about 25 to 35 percent of supplies coming from the SWP.

**Figure 21: Operating Flexibility and Regional System Reliability: Minimized Deliveries of SWP Supplies (~25-35% SWP Supplies)**



The integrated conveyance and distribution network that Metropolitan has developed to serve the member agencies enables water supplies from multiple sources to be delivered throughout its service area to provide regional reliability. In 2014, the SWP allocation was a historically low 5 percent. Metropolitan re-operated its system to move CRA water all the way west to deliver to the areas south, west and east of the Jensen treatment plant, which are normally served with SWP water.

Metropolitan's operational flexibility developed over time to where Metropolitan now has substantial operational flexibility to accommodate short-term changes in water supply, treatment, and demands. This is the result of having multiple water supplies and the ability to blend the supplies, robust treatment processes, and large storage capacities in multiple treated and untreated water reservoirs.

Delivery flexibility helps mitigate the impacts of regional facility outages. Metropolitan's delivery flexibility also developed over time. The 2007 IAS reported that 260 of 344 service connections, or 76 percent, had full back-up capability for single failures within Metropolitan's Distribution System. In the event of a treatment plant outage, 299 of 344 service connections, or 87 percent, had full back-up capability<sup>16</sup>.

The same flexibility principles inform development and operation of Metropolitan's storage functionality. Metropolitan's ability to shift among resources in its storage portfolio in order to enhance the regional reliability of Metropolitan's imported water service in the face of so many changing conditions is the result of its integrated, flexible operating system, consisting of its right to use the SWP conveyance pursuant to its participation therein, the CRA, and the Distribution System. Metropolitan is able to accomplish system reliability and operational flexibility while accommodating outages, managing to water quality goals, minimizing the risk of invasive species infestation and maintaining emergency storage reserves.

Metropolitan's integrated, flexible system directly benefits all agencies as to all services, including wheeling and exchange services. Wheeling and exchange transactions benefit from a robust and flexible system, including Metropolitan's right to use SWP facilities. Metropolitan's integrated, flexible system makes deliveries of wheeled and exchanged water possible as Metropolitan delivers this water from whatever source or sources and by whatever delivery path is determined by Metropolitan. Given the operating flexibility of Metropolitan's system, Metropolitan allocates costs in a way that allows it to develop and maintain such a flexible system. And every member agency is served by this system flexibility.

The vast majority of utilities operate under an implicit regulatory compact, which provides the exclusive service area in exchange for the obligation to serve. Metropolitan's system is a wholesale system and provides only "supplemental" wholesale supplies, meaning that Metropolitan is not the exclusive water source for its member agencies. Metropolitan is a wholesaler that has no exclusive right to serve in its service area. To the degree a member agency has local resources, develops local resources, implements conservation, or otherwise reduces demands, that member agency does not require Metropolitan's services. Moreover, member agencies are free to acquire supplies from other sources. Indeed, Metropolitan's Board has adopted the concept of "direct access", or customer choice for supplier, to accommodate a water transfer market.<sup>17</sup> Unbundled, postage stamp rates ensure that agencies that use Metropolitan's system to move non-Metropolitan water pay a fair and reasonable

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<sup>16</sup> 2007 Integrated Area Study, Report No. 1317, pp. 2-10 and 2-11.

<sup>17</sup>The Metropolitan Board adopted Strategic Plan Policy Principles on December 14, 1999, consisting of seven principles, presented on page 5.

share of the relevant system costs, including the cost of facilities, power and conservation programs that help ensure capacity.

Metropolitan maintains an unbundled rate structure based on types of functions creating the costs, which provides transparency. Member agencies pay rates based on the services they use (full-service treated, full-service untreated, or wheeling), and agencies that use the same service pay the same rate. Agencies that purchase full-service water pay for supply, whereas agencies that do not purchase full-service water pay no supply costs. Agencies that take treated full-service water cover treatment costs, whereas agencies that take untreated full-service water pay no treatment costs. An agency that wheels a third party's water through Metropolitan's system pays wheeling costs, but no supply costs. In fact, Metropolitan provides incentives for conservation and local resource development so member agencies do not have to take full-service or wheeling services from Metropolitan. Agencies that use a combination of services pay costs based *only* on the specific services they use.

This is an important distinction in the context of not having an exclusive service area. A water agency with an exclusive service area has more certainty in its revenues because it has no competition for its services. Metropolitan does have competition for its services. Therefore, Metropolitan has developed its unbundled rate structure in a fair and reasonable manner to ensure that system users pay for the services they use and the benefits they enjoy. Fair and reasonable rates that reflect applicable costs avoid negatively impacting the rates and charges paid by member agencies who do not acquire their own supplies to move through Metropolitan's interconnected delivery network. This is particularly true with regard to member agencies exercising choice of supplier. Compared to other water systems, Metropolitan's system is used to move significant amounts of non-Metropolitan supplies.

### One Customer Class

Metropolitan, a wholesaler, provides two types of services: full-service water service (treated or untreated) and wheeling service. Metropolitan has one class of customers: its member agencies. The level of rate unbundling in Metropolitan's rate structure provides transparency to show that charges recover only for functions involved in the applicable service, and that no cross-subsidy of costs exists. Metropolitan's COS process and resulting unbundled rate structure ensures that its wholesale customers pay for only those services they elect to receive.

Metropolitan's volumetric rates recover operating costs as well as the portion of the conveyance and distribution system capital costs that are associated with meeting average water demands using system-wide rates that are the same for all customers, or "postage stamp" rates, as explained previously. Under a postage stamp rate design approach, every customer pays the same average rate for a service regardless of whether the cost caused by, or the benefit derived by, a customer for a given transaction varies from the average.

The Readiness-to-Serve (RTS) Charge recovers system capital costs for emergency storage capacity and ensures there is adequate capacity in the conveyance and distribution systems to reliably deliver supplies during emergencies, major facility outages, hydrologic variability, and variances in local resources. The Capacity Charge recovers distribution system capital costs necessary to meet peak member agency needs on Metropolitan's distribution system during the summer.

Member agencies have unique usage characteristics that are captured in the Metropolitan rates and charges relating to treatment, peak use on the Metropolitan system, the need for emergency and available capacity, or average use. For this reason, it is not necessary to group member agencies into

traditional customer classes as would be done in a typical retail rate setting process. The end result of the Metropolitan process is the determination of the cost of each service available to a member agency and to the extent a member agency uses that service, an amount, a rate or charge, is paid by the member agency that is reflective of the cost of that service.

### **Distributed Costs to Services**

Schedules 16 and 17 provide a cross-reference between the allocated function costs and their distribution to the rate design elements for FY 2020/21 and FY 2021/22, respectively. The specifics of each rate design element are discussed in detail in the following section.

**Schedule 16: Allocated Operational function Revenue Requirements (Distributed to rate design element): FY 2020/21**

Fiscal year ending 2021	Rate Design Elements							Total Costs
	Supply Rates	System Access Rate	Water Stewardship Rate	System Power Rate	Capacity Charge	Readiness-to-Serve Charge	Treatment Surcharge	
<b>Supply</b>								
Fixed Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fixed Commodity	237,033,324	-	-	-	-	-	-	237,033,324
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Supply</b>	<b>237,033,324</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>237,033,324</b>
<b>Conveyance and Aqueduct</b>								
Fixed Demand	-	-	-	-	-	18,154,994	-	18,154,994
Fixed Commodity	-	383,804,295	-	-	-	-	-	383,804,295
Fixed Standby	-	-	-	-	-	35,033,554	-	35,033,554
Variable Commodity	-	-	-	245,700,154	-	-	-	245,700,154
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Conveyance and Aqueduct</b>	<b>-</b>	<b>383,804,295</b>	<b>-</b>	<b>245,700,154</b>	<b>-</b>	<b>53,188,548</b>	<b>-</b>	<b>682,692,997</b>
<b>Storage</b>								
Fixed Demand	-	-	-	-	9,040,528	-	-	9,040,528
Fixed Commodity	76,429,715	23,367,467	-	-	-	-	-	99,797,182
Fixed Standby	-	-	-	-	-	59,210,561	-	59,210,561
Variable Commodity	(489,673)	-	-	-	-	-	-	(489,673)
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Storage</b>	<b>75,940,042</b>	<b>23,367,467</b>	<b>-</b>	<b>-</b>	<b>9,040,528</b>	<b>59,210,561</b>	<b>-</b>	<b>167,558,597</b>
<b>Treatment</b>								
Fixed Demand	-	-	-	-	-	-	33,334,998	33,334,998
Fixed Commodity	-	-	-	-	-	-	161,808,971	161,808,971
Fixed Standby	-	-	-	-	-	-	43,947,427	43,947,427
Variable Commodity	-	-	-	-	-	-	31,003,039	31,003,039
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Treatment</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>270,094,434</b>	<b>270,094,434</b>
<b>Distribution</b>								
Fixed Demand	-	-	-	-	29,324,524	-	-	29,324,524
Fixed Commodity	-	169,441,042	-	-	-	-	-	169,441,042
Fixed Standby	-	-	-	-	-	17,860,550	-	17,860,550
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	192,990	-	-	-	-	-	192,990
<b>Subtotal: Distribution</b>	<b>-</b>	<b>169,634,032</b>	<b>-</b>	<b>-</b>	<b>29,324,524</b>	<b>17,860,550</b>	<b>-</b>	<b>216,819,106</b>
<b>Demand Management</b>								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	69,770,420	-	-	-	-	69,770,420
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Demand Management</b>	<b>-</b>	<b>-</b>	<b>69,770,420</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>69,770,420</b>
<b>Total</b>								
Fixed Demand	-	-	-	-	38,365,052	18,154,994	33,334,998	89,855,044
Fixed Commodity	313,463,040	576,612,804	69,770,420	-	-	-	161,808,971	1,121,655,234
Fixed Standby	-	-	-	-	-	112,104,664	43,947,427	156,052,091
Variable Commodity	(489,673)	-	-	245,700,154	-	-	31,003,039	276,213,520
Hydroelectric	-	192,990	-	-	-	-	-	192,990
<b>Total</b>	<b>\$ 312,973,366</b>	<b>\$ 576,805,794</b>	<b>\$ 69,770,420</b>	<b>\$ 245,700,154</b>	<b>\$ 38,365,052</b>	<b>\$ 130,259,658</b>	<b>\$ 270,094,434</b>	<b>\$ 1,643,968,876</b>

Totals may not foot due to rounding

**Schedule 17: Allocated Operational function Revenue Requirements (Distributed to rate design element): FY 2021/22**

Fiscal year ending 2022	Rate Design Elements							Total Costs
	Supply Rates	System Access Rate	Water Stewardship Rate	System Power Rate	Capacity Charge	Readiness-to-Serve Charge	Treatment Surcharge	
<b>Supply</b>								
Fixed Demand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fixed Commodity	238,994,408	-	-	-	-	-	-	238,994,408
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Supply</b>	238,994,408	-	-	-	-	-	-	238,994,408
<b>Conveyance and Aqueduct</b>								
Fixed Demand	-	-	-	-	-	19,450,060	-	19,450,060
Fixed Commodity	-	398,986,664	-	-	-	-	-	398,986,664
Fixed Standby	-	-	-	-	-	37,418,073	-	37,418,073
Variable Commodity	-	-	-	258,874,763	-	-	-	258,874,763
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Conveyance and Aqueduct</b>	-	398,986,664	-	258,874,763	-	56,868,134	-	714,729,561
<b>Storage</b>								
Fixed Demand	-	-	-	-	9,348,395	-	-	9,348,395
Fixed Commodity	71,330,734	24,151,999	-	-	-	-	-	95,482,732
Fixed Standby	-	-	-	-	-	59,605,056	-	59,605,056
Variable Commodity	(550,253)	-	-	-	-	-	-	(550,253)
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Storage</b>	70,780,480	24,151,999	-	-	9,348,395	59,605,056	-	163,885,930
<b>Treatment</b>								
Fixed Demand	-	-	-	-	-	-	34,005,739	34,005,739
Fixed Commodity	-	-	-	-	-	-	169,710,689	169,710,689
Fixed Standby	-	-	-	-	-	-	44,620,104	44,620,104
Variable Commodity	-	-	-	-	-	-	32,429,570	32,429,570
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Treatment</b>	-	-	-	-	-	-	280,766,101	280,766,101
<b>Distribution</b>								
Fixed Demand	-	-	-	-	32,554,040	-	-	32,554,040
Fixed Commodity	-	180,481,159	-	-	-	-	-	180,481,159
Fixed Standby	-	-	-	-	-	19,834,192	-	19,834,192
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	745,651	-	-	-	-	-	745,651
<b>Subtotal: Distribution</b>	-	181,226,810	-	-	32,554,040	19,834,192	-	233,615,042
<b>Demand Management</b>								
Fixed Demand	-	-	-	-	-	-	-	-
Fixed Commodity	-	-	75,595,778	-	-	-	-	75,595,778
Fixed Standby	-	-	-	-	-	-	-	-
Variable Commodity	-	-	-	-	-	-	-	-
Hydroelectric	-	-	-	-	-	-	-	-
<b>Subtotal: Demand Management</b>	-	-	75,595,778	-	-	-	-	75,595,778
<b>Total</b>								
Fixed Demand	-	-	-	-	41,902,434	19,450,060	34,005,739	95,358,233
Fixed Commodity	310,325,142	603,619,822	75,595,778	-	-	-	169,710,689	1,159,251,430
Fixed Standby	-	-	-	-	-	116,857,322	44,620,104	161,477,426
Variable Commodity	(550,253)	-	-	258,874,763	-	-	32,429,570	290,754,079
Hydroelectric	-	745,651	-	-	-	-	-	745,651
<b>Total</b>	<b>\$ 309,774,889</b>	<b>\$ 604,365,473</b>	<b>\$ 75,595,778</b>	<b>\$ 258,874,763</b>	<b>\$ 41,902,434</b>	<b>\$ 136,307,382</b>	<b>\$ 280,766,101</b>	<b>\$ 1,707,586,820</b>

Totals may not foot due to rounding



## Proof of Revenue

### FY 2020/21

Schedule 18 shows the Proof of Revenue for FY 2020/21. Based on expected sales of 1.6 MAF, the expected revenues would be about \$7.6 million lower than the total revenue requirement, if the rates and charges were in effect the entire test year period. The cost of service allocation assuming a full twelve months of revenue is used to allocate costs among the various rate elements but should not be interpreted as over- or under-collection during a given fiscal year. However, because the recommended rates do not take effect until January 1, 2021, the expected revenues for FY 2020/21 will be about \$48.7 million lower than the total revenue requirement in FY 2020/21. The total revenue requirement includes a \$7.5 million decrease in the required reserves for the Revenue Remainder Fund. Deposits to the Treatment Surcharge Stabilization Fund are \$0 million in FY 2020/21. Withdrawals from the Water Stewardship Fund are \$22.6 million in FY 2020/21. Accounting for these adjustments, the draw from reserves is about \$33.7 million in FY 2020/21.

### FY 2021/22

Schedule 19 shows the Proof of Revenue for FY 2021/22. Based on expected sales of 1.6 MAF the expected revenues would be about \$8.7 million higher than the total revenue requirement, if the rates and charges were in effect the entire test year period. The cost of service allocation assuming a full twelve months of revenue is used to allocate costs among the various rate elements but should not be interpreted as over- or under-collection during a given fiscal year. However, because the recommended rates do not take effect until January 1, 2022, the expected revenues for FY 2021/22 will be about \$34.2 million lower than the total revenue requirement in FY 2021/22. The total revenue requirement includes a \$14.5 million increase in the required reserves for the Revenue Remainder Fund. Deposits to the Treatment Surcharge Stabilization Fund are \$6.7 million in FY 2021/22. Withdrawals from the Water Stewardship Fund are \$75.6 million in FY 2021/22. Accounting for these adjustments, the deposit to reserves is about \$49.1 million in FY 2021/22. Schedule 20 summarizes the rates and charges that would be effective on January 1, 2021 and January 1, 2022 using the assumptions and methodology of this report. Member agency impacts will vary depending upon an agency's RTS allocation, capacity charge and relative proportions of treated and untreated Tier 1 and Tier 2 purchases.

**Schedule 18: FY 2020/21 Proof of Revenue (\$ millions)****Proof of Revenue FY2021 if Rates Effective for Full Test Year**

Rate Elements	Revenue Requirements	% Over (Under) Collected		Revenues if Rates Effective July 1st	Billing Determinant	Unit Rate
	\$M	\$M	%	\$M	MAF	\$/AF
Supply	313.0	12.6	4%	325.6	1.32	246
System Access Rate	576.8	21.6	4%	598.4	1.60	374
Water Stewardship Rate	69.8	(69.8)	-100%	-	1.60	-
System Power Rate	245.7	10.3	4%	256.0	1.60	160
Treatment Surcharge	270.1	10.7	4%	280.8	0.80	351
Readiness-to-serve Charge	130.3	5.7	4%	136.0		
Capacity Charge	38.4	1.2	3%	39.6		
<b>Total</b>	<b>1,644.0</b>	<b>(7.6)</b>	<b>0%</b>	<b>1,636.4</b>		

Totals may not foot due to rounding

**Proof of Revenue FY2021 if Rates Effective January 1st**

Rate Elements	Revenue Requirements	% Over (Under) Collected		Revenues if Rates Effective Jan 1st
	\$M	\$M	%	\$M
Supply	313.0	(15.0)	-5%	298.0
System Access Rate	576.8	(2.5)	0%	574.3
Water Stewardship Rate	69.8	(22.6)	-32%	47.2
System Power Rate	245.7	(10.4)	-4%	235.3
Treatment Surcharge	270.1	(1.3)	0%	268.8
Readiness-to-serve Charge	130.3	5.7	4%	136.0
Capacity Charge	38.4	(2.8)	-7%	35.6
<b>Total</b>	<b>1,644.0</b>	<b>(48.7)</b>	<b>-3%</b>	<b>1,595.2</b>

Totals may not foot due to rounding

**Schedule 19: FY 2021/22 Proof of Revenue (\$ millions)****Proof of Revenue FY2022 if Rates Effective for Full Test Year**

Rate Elements	Revenue Requirements	% Over (Under) Collected		Revenues if Rates Effective July 1st	Billing Determinant	Unit Rate
	\$M	\$M	%	\$M	MAF	\$/AF
Supply	309.8	15.9	5%	325.7	1.32	247
System Access Rate	604.4	30.8	5%	635.2	1.60	397
Water Stewardship Rate	75.6	(75.6)	-100%	-	1.60	-
System Power Rate	258.9	13.1	5%	272.0	1.60	170
Treatment Surcharge	280.8	14.4	5%	295.2	0.80	369
Readiness-to-serve Charge	136.3	7.7	6%	144.0		
Capacity Charge	41.9	2.3	6%	44.2		
<b>Total</b>	<b>1,707.6</b>	<b>8.7</b>	<b>1%</b>	<b>1,716.3</b>		

Totals may not foot due to rounding

**Proof of Revenue FY2022 if Rates Effective January 1st**

Rate Elements	Revenue Requirements	% Over (Under) Collected		Revenues if Rates Effective Jan 1st
	\$M	\$M	%	\$M
Supply	309.8	15.2	5%	325.0
System Access Rate	604.4	11.2	2%	615.5
Water Stewardship Rate	75.6	(75.6)	-100%	-
System Power Rate	258.9	4.6	2%	263.4
Treatment Surcharge	280.8	6.7	2%	287.5
Readiness-to-serve Charge	136.3	3.7	3%	140.0
Capacity Charge	41.9	0.0	0%	41.9
<b>Total</b>	<b>1,707.6</b>	<b>(34.2)</b>	<b>-2%</b>	<b>1,673.4</b>

Totals may not foot due to rounding

**Schedule 20: Rates and Charges Summary**

<b>Effective January 1st</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Tier 1 Supply Rate (\$/AF)	\$208	\$246	\$247
Tier 2 Supply Rate (\$/AF)	\$295	\$285	\$285
System Access Rate (\$/AF)	\$346	\$374	\$397
Water Stewardship Rate (\$/AF)	\$65	-	-
System Power Rate (\$/AF)	\$136	\$160	\$170
Full Service Untreated Volumetric Cost (\$/AF)			
Tier 1	\$755	\$780	\$814
Tier 2	\$842	\$819	\$852
Treatment Surcharge (\$/AF)	\$323	\$351	\$369
Full Service Treated Volumetric Cost (\$/AF)			
Tier 1	\$1,078	\$1,131	\$1,183
Tier 2	\$1,165	\$1,170	\$1,221
Readiness-to-Serve Charge (\$M)	\$136	\$136	\$144
Capacity Charge (\$/cfs)	\$8,800	\$11,200	\$12,500

**System Access Rate (SAR)**

The SAR is a volumetric<sup>18</sup> system-wide rate charged on each acre-foot of water that is conveyed through Metropolitan's interconnected regional delivery network, including Metropolitan's right to use SWP facilities for conveyance of SWP and non-SWP water. All system users (member agency or third party) pay the SAR to use Metropolitan's interconnected regional delivery network. The SAR would increase to \$374 per acre-foot in 2021 primarily due to increasing O&M costs and lower projected water transactions, and increase again to \$397 per acre-foot in 2022, primarily due to increasing O&M costs. The SAR recovers the cost of providing conveyance and distribution capacity to meet average annual demands, and a portion of Regulatory/Emergency Storage.

The SAR recovers, among other costs, the capital, operating, maintenance, and overhead costs associated with the interconnected regional delivery network necessary to deliver water to meet member agencies' average annual demands, which include the costs of conveyance facilities (facilities outside of Metropolitan's service area) and distribution facilities (facilities within Metropolitan's Distribution System), and portions of Regulatory/Emergency Storage facilities.

Metropolitan's delivery network costs are treated the same whether they were incurred for the SWP or the CRA. The fact that, unlike the CRA, Metropolitan does not hold legal title to the SWP facilities and does not operate the SWP facilities is immaterial for purposes of cost functionalization for the COS and rate determination process.

Metropolitan, like the other State Water Contractors, is obligated to pay all operating expenses and capital costs incurred by the SWP to provide the contractual supply and transportation services. The expenses include all unexpected expenses resulting from operational issues and changes in regulations. DWR charges Metropolitan based on estimated expenses and has the right to charge Metropolitan for any expenses beyond

<sup>18</sup> A volumetric rate is a charge applied to the actual amount of water delivered.

the estimates. The State Water Contractors carry all of the financial risk and must pay any costs without any regard for Metropolitan's own cash flows. By allocating costs, DWR does not bear any of these risks; the risks fall to the State Water Contractors. Metropolitan was even responsible for paying for the SWP costs during the extended original construction period, years before Metropolitan received any SWP water. This is also not something typical of a supply contract and hence supportive of Metropolitan's cost functionalization process.

Metropolitan is also responsible for managing its SWP supply and transportation resources. Metropolitan determines what water to store and deliver in any year from its resource portfolio. On October 1 prior to the beginning of the Calendar Year, Metropolitan must provide its initial water order, plus any variations requested by DWR. The planning for this water order begins as early as the preceding July. A considerable amount of strategy goes in to determining which resource Metropolitan will dispatch when and deliver where to maximize resources. Examples of issues that Metropolitan must consider when managing SWP resources include:

- the level of the Table A allocation, and the amount of Table A supply available to Metropolitan, Desert Water Agency (DWA) and Coachella Valley Water District CVWD;
- shaping deliveries to the order to accommodate Article 21 (surplus water), turnback pool water (Table A allocation not needed by a Contractor) or Article 56 (b) water (water rescheduled due to system outages) if available;
- the amount of Carryover water in San Luis Reservoir, and the timing and location of need;
- the maximum input and withdrawal capacities of the Central Valley Storage programs, depending on whether Metropolitan is storing or withdrawing from these programs, and considering the level of water stored;
- the availability or need to refill Flexible Storage in Castaic and Perris Reservoirs;
- the availability of water transfer supplies; and,
- the supply conditions on the Colorado River.

Metropolitan, not DWR, is responsible for determining how, when or where to deliver any of the supply sources Metropolitan has that can be conveyed on the SWP. As a result of the execution of Monterey Amendments, the SWP can convey SWP water and non-SWP water and can be used by non-State Water Contractors; it is, therefore, appropriate to consider the SWP as part of Metropolitan's interconnected regional delivery network. The volume of water delivered under arrangements, other than the contracts for delivery of water with the DWR, is also not determinative of the cost treatment; the ability to move *any* volume is what is relevant to the functionalization of Metropolitan's costs.

Like the SWP costs, Metropolitan fully pays the operating and capital costs of the CRA maintenance, operations and supply portfolio and the risks fall on Metropolitan.

Metropolitan uses the CRA for the conveyance of its multiple CRA resources. It is responsible for determining what water to store and deliver in any year from its resource portfolio. Prior to the beginning of the calendar year, Metropolitan must provide its Plan for the Creation of Extraordinary Conservation ICS to the Bureau of Reclamation in June and its best estimate of monthly diversion requirements in September. The amount of Extraordinary Conservation ICS which Metropolitan plans to create is deducted from the total supply available for diversion. In October or November, Reclamation staff conducts a consultation with Metropolitan prior to Reclamation's Regional Director making an annual determination of Metropolitan's estimated water requirements for the ensuing calendar year to the end that deliveries of Colorado River water to Metropolitan will not exceed those reasonably required for beneficial use. Reclamation provides Metropolitan with a notice of the Regional Director's determination regarding Metropolitan's proposed diversion and beneficial use of Colorado River water for the calendar year. A considerable amount of strategy

is employed to determine which resources Metropolitan will dispatch and deliver to maximize use of the resources. Examples of issues that Metropolitan must consider when managing CRA resources include:

- the magnitude of the SWP Table A allocation, and the amount of Table A supply available to Metropolitan, DWA and CVWD;
- the amount of SWP surplus, turnback pool, and carryover water;
- the amount of ICS water that can be accessed;
- the amount of water in the DWA/CVWD advance delivery account; and,
- the Colorado River supply conditions and the projection of the likelihood of Lake Mead shortage, normal, and surplus conditions in future years.

Metropolitan is responsible for determining how, when and where to deliver any of the supply sources Metropolitan has that can be transported by the CRA. Metropolitan also uses the CRA to convey non-Metropolitan water to non-member agencies: the temporary emergency wheeling of Mexican Treaty Waters of the Colorado River for Tijuana. Given that the CRA can deliver water as a result of the execution of agreements apart from Metropolitan's 1930 contract for delivery of water, 1931 supplementary contract for delivery of water, 1946 contract merging the rights of the City of San Diego and Metropolitan, and 1987 contract for delivery of surplus flows from the Colorado River with the U.S. Department of the Interior, and that it is capable of delivering water to other water agencies, it is appropriate to consider the CRA as part of Metropolitan's interconnected regional delivery network. The volume of water delivered under arrangements, other than the contracts for delivery of water with the U.S. Department of the Interior, is also not determinative of the cost treatment; the ability to move *any* volume is what is relevant to the functionalization of Metropolitan's costs.

Metropolitan's Conveyance and Aqueduct and Distribution System form a single integrated system for all imported water, which is available to Metropolitan for the conveyance of SWP and CRA water, as well as water supply obtained from supply programs and other water transfers. Metropolitan's rights and ownership of the facilities create regional system flexibility to maintain operating flexibility and delivery flexibility and meet Metropolitan's mission as a public steward of water resources. Metropolitan's member agencies and all residents of Metropolitan's service area benefit from the integration of the SWP and CRA as Metropolitan's Conveyance and Aqueduct facilities, as it allows Metropolitan to meet varying regional demands, accommodate outages, manage water quality goals, maintain emergency storage reserves, and minimize the risk of invasive species infestation.

The treatment of Metropolitan's Conveyance and Aqueduct facilities as one integrated system for purposes of rate-setting is not uncommon or novel. The Federal Energy Regulatory Commission (FERC), for example, recognizes the practice of rolling the costs of transmission facilities into a single rate when the facilities are part of an integrated system. The practice is recognized regardless of legal ownership of (or allocations in) a particular facility.

## Benefits

The SAR benefits include: (1) support of a regional approach; (2) accommodates a water transfer market that does not unfairly advantage one user over another; (3) provides a clear linkage between costs and benefits; and (4) establishes a simple approach to recovering the costs of conveyance and distribution functions.

The SAR supports a regional approach through the uniform, postage stamp rate element. This region-wide funding mechanism helps ensure economies of scale and low costs for all of Metropolitan's member agencies.

The SAR is a cost-based rate. By providing a non-discriminatory rate element to all parties that wish to use available system capacity to move water anywhere in the Metropolitan service area, the uniform SAR creates the opportunity for a fair and efficient water transfer market to develop. In keeping with the spirit of a

regional provider approach, the SAR is uniform throughout the service area. Member agencies that receive full-service water from Metropolitan will pay the exact same cost for access to the system as a customer that obtains supply from another supply source.

Metropolitan charges member agencies receiving full-service water from Metropolitan the same costs for system access as it charges a party receiving wheeling service. Charging all users, the same price for access to essential facilities is a basic principle of regulatory economics. The SAR provides a clear linkage between costs and benefits. The cost of service process clearly identifies the costs that are recovered by the SAR. The operational function revenue requirements for conveyance and aqueduct, distribution, and storage are identified and then allocated into commodity (average use), demand (peak use), and standby (emergency and available capacity) related costs.

Only commodity-related costs are allocated to the SAR. The SAR is an easily understood approach. The SAR is a uniform, volumetric per acre-foot rate and is straightforward for both Metropolitan and the member agencies to implement and administer.

## System Power Rate (SPR)

The SPR is a volumetric, system-wide rate charged on each acre-foot of Metropolitan supplies moving through the Metropolitan system. SPR would increase to \$160 per acre-foot in 2021, primarily due to higher State Water Contract power costs. The SPR would then increase to \$170 per acre-foot in 2022, due to higher State Water Contract power costs and higher CRA supplemental power costs. The SPR is a volumetric rate element that recovers the costs of pumping water to Southern California. The SPR recovers the cost of power for both the SWP and CRA.

### Benefits

The primary benefit of the SPR is that it clearly identifies Metropolitan's average cost of power.

## Treatment Surcharge

The Treatment Surcharge is a system-wide volumetric rate charged on water treated by Metropolitan. The Treatment Surcharge recovers the cost of providing treated water service, including commodity, demand and standby-related costs as determined in the COS for all five treatment plants. The Treatment Surcharge would increase to \$351 per acre-foot in 2021, primarily due to lower treated water sales, and higher O&M costs for treatment. The Treatment Surcharge would then increase to \$369 per acre-foot in FY 2022, due to higher O&M costs.

### Benefits

There are several primary benefits provided by the Treatment Surcharge. First, only treated water users pay for the costs of treatment. Second, by averaging the costs of providing treated water service over the entire system the regional economies of scale are preserved.

## Capacity Charge

The Capacity Charge would increase to \$11,200 per cubic-foot-second of capacity during calendar year 2021, as more capital costs are allocated to meet peak day system use, reflecting recent member agency non-coincident peaks. The Capacity Charge would increase to \$12,500 per cubic-foot-second of capacity during calendar year 2022, reflecting the increases to capital financing costs. The Capacity Charge is charged on the

peak (maximum) summer day demand, measured in cfs, placed on the distribution system between May 1 and September 30 for a three-calendar year period, calculated for each member agency. The calculation is non-coincident, meaning the peak day will differ for each member agency. The sum of the member agency non-coincident peak day demands is a proxy for peak week demands, which are the design criteria for the Metropolitan Distribution system. The three-year period ending December 31, 2019 is used to charge the Capacity Charge effective January 1, 2021 through December 31, 2021. Demands measured for the purposes of billing the Capacity Charge include all firm demands including wheeling service and exchange.

The Capacity Charge is intended to pay for the cost of providing peak day capacity on Metropolitan's Distribution System, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods particularly October through April. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total Capacity Charge. The estimated Capacity Charge to be paid by each member agency in calendar year 2021 is included in Schedule 21.

### **Benefits**

The Capacity Charge provides several benefits including: (1) increasing the overall efficiency of water use; (2) improving the fair allocation of costs among member agencies based upon the demand imposed by each agency; and (3) providing a source of fixed revenue.

The Capacity Charge will improve the overall efficiency of water use by encouraging local agencies to invest in cost effective local storage and resources to avoid using the Metropolitan system to meet peak (maximum) day demands. In addition, significant regional savings can be realized through the deferral of expensive capacity expansion.



**Schedule 21: Capacity Charge (by member agency)**

<b>Calendar Year 2021 Capacity Charge</b>					
	Peak Day Demand (cfs) (May 1 through September 30)				Rate (\$/cfs): \$11,200
	Calendar Year				
Member Agency	2017	2018	2019	3-Year Peak	Calendar Year 2021 Capacity Charge
Anaheim	33.0	37.2	37.1	37.2	\$416,640
Beverly Hills	25.7	27.8	23.5	27.8	\$311,360
Burbank	14.0	17.1	17.3	17.3	\$193,760
Calleguas	186.5	184.7	168.9	186.5	\$2,088,800
Central Basin	36.7	39.2	48.6	48.6	\$544,320
Compton	0.1	6.9	2.9	6.9	\$77,280
Eastern	216.6	225.1	223.3	225.1	\$2,521,120
Foothill	18.6	19.9	16.0	19.9	\$222,880
Fullerton	13.0	13.3	13.1	13.3	\$148,960
Glendale	41.4	33.5	32.2	41.4	\$463,680
Inland Empire	140.5	147.8	118.7	147.8	\$1,655,360
Las Virgenes	44.6	45.9	39.4	45.9	\$514,080
Long Beach	55.2	80.4	51.8	80.4	\$900,480
Los Angeles	250.4	284.6	283.2	284.6	\$3,187,520
MWDOC	418.6	442.3	263.2	442.3	\$4,953,760
Pasadena	39.9	43.0	40.0	43.0	\$481,600
San Diego CWA	749.7	855.5	672.0	855.5	\$9,581,600
San Fernando	0.0	0.0	0.0	0.0	\$0
San Marino	7.5	4.5	2.3	7.5	\$84,000
Santa Ana	19.9	19.3	19.4	19.9	\$222,880
Santa Monica	16.6	16.7	20.7	20.7	\$231,840
Three Valleys	126.4	142.9	128.1	142.9	\$1,600,480
Torrance	34.0	32.6	27.8	34.0	\$380,800
Upper San Gabriel	12.1	23.3	29.1	29.1	\$325,920
West Basin	201.7	202.4	211.8	211.8	\$2,372,160
Western MWD	175.2	194.7	170.5	194.7	\$2,180,640
<b>Total</b>	<b>2,877.9</b>	<b>3,140.6</b>	<b>2,660.9</b>	<b>3,184.1</b>	<b>\$35,661,920</b>
Totals may not foot due to rounding					

The Capacity Charge also improves the equitable distribution of costs among the member agencies. Agencies that have relatively high peak demand to average demand ratios will bear a greater share of the costs of providing peak (maximum) day distribution capacity. The Capacity Charge also increases the portion of Metropolitan's fixed costs that are recovered by fixed charges.

## Readiness-to-Serve Charge

The RTS recovers the costs providing emergency storage capacity and available capacity to meet outages and hydrologic variability. The RTS will remain unchanged at \$136 million in calendar year 2021. The RTS increases to \$144 million in calendar year 2022, reflecting increases in capital financing costs.

The RTS is allocated to the member agencies based on each agency's share of a ten-year rolling average of all firm demands, including water transfers and exchanges that use Metropolitan system capacity.<sup>19</sup> A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency's potential long-term need for available capacity under different hydrologic conditions. Member agencies that so choose may have a portion of their total RTS obligation offset by Standby Charge collections collected by Metropolitan on behalf of the member agency. The estimated RTS for each member agency for calendar year 2021 is shown in Schedule 22.

### Benefits

The RTS provides two major benefits. These include: (1) a better matching of costs and benefits; and (2) a SAR that recovers only those costs associated with providing average annual service.

The proposed RTS matches costs and benefits in two ways. First, the RTS will recover the amount of emergency storage and available capacity costs needed to maintain reliable deliveries during outages and service interruptions and during periods of hydrologic variability, as identified in the COS, that is not paid for by ad valorem property tax revenues. Second, the proposed RTS allocates the emergency storage and available capacity costs among the member agencies in a manner that better represents each agency's potential need for standby availability. The RTS uses a ten-year rolling average of demands. A long-term rolling average like the ten-year measure is a simple and reasonable representation of an agency's potential need for available capacity under a range of 91 conditions.

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<sup>19</sup> The SDCWA exchange water transactions are excluded from the calculation of the ten-year rolling average per the terms of the parties' exchange agreement.

## Schedule 22: Readiness-to-Serve Charge (by member agency)

<b>Calendar Year 2021 RTS Charge</b>			
<b>Member Agency</b>	<b>Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2009/10 - FY2018/19</b>	<b>RTS Share</b>	<b>12 months @ \$136 million per year (1/21-12/21)</b>
Anaheim	17,327.0	1.17%	\$ 1,597,019
Beverly Hills	10,447.3	0.71%	962,921
Burbank	12,323.6	0.84%	1,135,859
Calleguas MWD	97,187.9	6.59%	8,957,749
Central Basin MWD	42,103.2	2.85%	3,880,626
Compton	779.3	0.05%	71,828
Eastern MWD	94,362.5	6.40%	8,697,333
Foothill MWD	8,395.4	0.57%	773,799
Fullerton	8,125.5	0.55%	748,922
Glendale	16,548.0	1.12%	1,525,219
Inland Empire Utilities Agency	56,560.7	3.83%	5,213,165
Las Virgenes MWD	20,448.6	1.39%	1,884,735
Long Beach	30,374.2	2.06%	2,799,571
Los Angeles	269,779.5	18.28%	24,865,410
Municipal Water District of Orange County	207,817.5	14.08%	19,154,411
Pasadena	18,839.6	1.28%	1,736,434
San Diego County Water Authority	258,318.0	17.51%	23,809,011
San Fernando	35.6	0.00%	3,281
San Marino	837.7	0.06%	77,210
Santa Ana	10,780.4	0.73%	993,623
Santa Monica	5,511.2	0.37%	507,964
Three Valleys MWD	62,229.1	4.22%	5,735,618
Torrance	15,990.2	1.08%	1,473,807
Upper San Gabriel Valley MWD	26,406.0	1.79%	2,433,825
West Basin MWD	115,327.9	7.82%	10,629,702
Western MWD	68,688.3	4.66%	6,330,958
<b>MWD Total</b>	<b>1,475,544.2</b>	<b>100.00%</b>	<b>\$ 136,000,000</b>

Totals may not foot due to rounding

## Purchase Order

Purchase Orders were developed to establish a financial commitment from the member agency to Metropolitan in exchange for the ability to purchase more water at the lower Tier 1 Supply Rate. In November 2014, the Metropolitan Board approved new Purchase Orders effective January 1, 2015 through December 31, 2024. Twenty-one of the twenty-six-member agencies have Purchase Orders, which commit the member agencies to purchase a minimum amount of supply from Metropolitan (the Purchase Order Commitment) over a ten-year period.

There is no annual minimum or maximum purchase commitment required by the Purchase Order. A member agency has the full ten-year term to fulfill the Purchase Order Commitment. In exchange for this commitment, the member agency can purchase an amount of firm water supply equal to 90 percent of its cumulative Base Period Demand over the full ten years at the lower Tier 1 Supply Rate. An agency that determined that a Purchase Order is not in its best interest may purchase up to 60 percent of its Revised Base Firm Demand annually at the lower Tier 1 Supply Rate. The terms and conditions of the Purchase Order are uniform for all member agencies.

The Base Period Demand was established for each member agency. Member agencies chose a base amount of (1) the member agency's Revised Base Firm Demand which is the highest fiscal year purchases during the 13-year period of fiscal year 1990 through fiscal year 2002, or (2) the highest year purchases in the most recent 12-year period of fiscal year 2003 through fiscal year 2014.

At the end of the Purchase Order Term, if the member agency has not purchased enough firm supply to meet its Purchase Order Commitment, it will be billed for the remaining balance of the Purchase Order Commitment at the average of the Tier 1 Supply Rate in effect during the Term. This payment may be prorated with interest evenly over the next 12 invoices.

If a member agency fulfills its Purchase Order Commitment prior to the end of the Purchase Order Term, (e.g. purchased ten times 60 percent of the Initial Base Period Demand) then the member agency has met its obligation under the Purchase Order. The member agency may continue to purchase up to 90 percent of its cumulative Base Period Demand over the Term at the Tier 1 Supply Rate for the duration of the Purchase Order Term.

Although the maximum amount of water that can be purchased at the Tier 1 Supply Rate may increase over time if the agency's Base Period Demand increases, the Purchase Order Commitment is fixed for the entire Purchase Order Term and does not increase.

## Tier 1 Supply Rate

The Tier 1 Supply Rate is a volumetric rate charged on Metropolitan water transactions that are within a member agency's Tier 1 maximum. The Tier 1 Supply Rate would increase to \$246 per acre-foot in 2021 due to increasing Supply Program costs. The Tier 1 Supply Rate would increase slightly to \$247 per acre-foot in 2022. The Tier 1 Supply Rate supports a regional approach through the uniform, postage stamp rate element. The Tier 1 Supply Rate is calculated as the amount of the total supply revenue requirement that is not recovered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water transactions.

## Tier 2 Supply Rate

The Tier 2 Supply Rate is a volumetric rate that reflects Metropolitan's cost of purchasing water transfers north of the Delta. The Tier 2 Supply Rate is charged on Metropolitan water transactions that exceed a member agency's Tier 1 maximum. The Tier 2 Supply Rate also encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and

conservation. The Tier 2 Supply Rate would decrease to \$285 per acre-foot in 2021 and 2022. At an expected average sales level of 1.6 MAF in FY 2020/21 and 1.6 MAF in FY 2021/22, it is estimated that no supply will be sold at the Tier 2 Supply Rate in either fiscal year.

## Benefits

The use of the Tier 2 Supply Rate provides several benefits including, efficient resource management and clear price signals to accommodate a water transfer market. By pricing supplies that exceed 90 percent of a member agency's Base demand at a price reflecting Metropolitan's supply cost, a price incentive exists to encourage efficient regional resource management. Member agencies will be encouraged to invest in cost-effective conservation measures and local resources like water recycling. Metropolitan has historically set its water rates with the primary objective of recovering cost. The Tier 2 Supply Rate is a pricing tool designed specifically for the purpose of creating a greater incentive for member agencies to make economic resource management decisions, while recognizing additional costs associated with securing more supply resources.

The Tier 2 Supply Rate will reflect Metropolitan's cost of acquiring transfers from north of the Delta. In so doing, Metropolitan will be competing in the water transfer market along with other providers of imported water supplies. If other providers of imported supply can develop additional supply at a lower cost than Metropolitan's Tier 2 Supply Rate, the water transfer market will expand to meet the region's increasing demands.

## Transactions

Staff estimates of water transactions used for developing the rate recommendation were based on current member agency demands and information and an expectation that demands will trend to levels expected under normal weather conditions. Table 23 summarizes projected water transactions by service type for FY 2020/21 and FY 2021/22.

### Schedule 23: FY Transactions, by Type

Fiscal Year Ending	2021	2022
<b>Transactions and Exchange by Treatment Type</b>		
Treated Firm Transactions	800	800
Untreated Firm Transactions	524	519
Untreated Exchange	276	281
<b>Total Transactions and Exchange</b>	<b>1,600</b>	<b>1,600</b>
<b>Firm Transactions by Type</b>		
Tier 1	1,324	1,319
Tier 2	-	-
<b>Total Firm Transactions</b>	<b>1,324</b>	<b>1,319</b>

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## **APPENDIX: COS TABLES**

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4/14/2020 Board Meeting

	1	2	3	4	5	8	1
	Labor And Labor Additive	Outside Services	Utilities	Chemicals	Other O&M	O&M Capitalization (pro-rated)	Projected Total To Be Functionalized
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	5,050,505	300,000	-	-	200,050	(236,211)	5,314,344
Office of General Manager	1,375,059	55,000	-	-	514,896	(82,770)	1,862,185
Bay Delta Initiatives	5,217,217	3,315,108	-	-	1,560,821	(429,649)	9,666,300
External Affairs	3,724,502	1,877,000	5,250	-	962,639	(271,057)	6,098,334
External Affairs	4,691,050	290,700	-	-	400,940	(229,067)	5,153,622
External Affairs	6,962,543	847,400	-	-	2,440,285	(427,700)	9,822,528
External Affairs	3,616,041	1,027,500	-	-	1,421,209	(256,007)	5,806,743
Human Resources	11,066,218	1,461,450	-	-	1,749,405	(607,579)	13,669,495
Water Systems Operations	5,374,972	120,000	1,500,000	-	216,845	(306,308)	6,904,909
Water Systems Operations	900,164	-	-	-	25,780	(36,406)	886,559
Water Systems Operations	400,092	175,000	-	-	590,225	(49,592)	1,115,726
Water Systems Operations	1,489,424	303,500	6,500	-	73,205	(79,692)	1,792,937
Water Systems Operations	6,906,293	127,350	42,800	-	844,745	(337,181)	7,586,007
Water Systems Operations	24,799,200	546,000	161,100	-	5,146,438	(1,304,466)	29,348,273
Water Systems Operations	7,665,732	84,200	64,280	-	1,516,442	(397,929)	8,952,725
Water Systems Operations	3,301,217	170,000	-	-	585,250	(171,819)	3,685,647
Water Systems Operations	2,487,834	-	-	-	146,796	(112,120)	2,522,510
Water Systems Operations	10,831,327	386,000	2,114,633	3,664,670	992,240	(841,150)	17,147,719
Water Systems Operations	10,621,171	231,400	2,701,352	6,912,640	639,540	(652,230)	20,253,820
Water Systems Operations	10,171,615	237,313	805,428	2,029,639	745,195	(604,897)	13,384,495
Water Systems Operations	9,764,448	141,470	1,815,488	3,434,058	953,824	(711,989)	15,397,299
Water Systems Operations	11,596,462	112,600	1,739,519	6,421,734	670,240	(608,433)	19,372,122
Water Systems Operations	22,086,296	1,370,699	431,000	-	3,637,575	(1,171,385)	26,354,176
Water Systems Operations	14,356,806	2,657,400	1,972,400	-	2,030,345	(890,147)	20,026,804
Water Systems Operations	11,634,492	1,531,000	1,072,064	-	1,798,490	(662,434)	15,353,612
Water Systems Operations	6,693,460	177,500	197,000	-	543,200	(320,115)	7,202,045
Water Systems Operations	11,798,417	1,089,000	1,400,250	-	1,382,226	(666,852)	15,003,041
Water Systems Operations	7,075,269	516,600	57,600	-	4,199,736	(504,300)	11,345,905
Water Systems Operations	7,233,901	219,000	50,000	-	802,867	(353,462)	7,852,306
Water Systems Operations	392,415	18,000	-	-	63,362	(20,162)	453,615
Water Systems Operations	-	-	-	-	-	-	-
Office of the Chief Financial Officer	12,231,980	2,084,900	-	-	13,632,271	(1,189,411)	26,759,739
Business Technology	281,782	450,000	-	-	2,000	(31,227)	702,555
Engineering Services	37,535,290	3,445,700	75,000	-	2,669,925	(1,860,811)	41,865,104
Business Technology	18,337,990	17,375,800	1,364,500	-	4,062,200	(1,750,785)	39,399,705
Business Technology	29,939,589	4,840,127	-	-	12,139,860	(1,996,721)	44,922,854
Water Resources Management	4,310,800	549,000	-	-	228,287	(216,530)	4,871,557
Water Resources Management	9,950,533	1,454,500	-	-	5,157,475	(704,838)	15,857,670
Water Resources Management	2,609,852	2,000	-	-	108,865	(115,784)	2,604,934
Ethics Office	1,460,433	102,000	-	-	59,000	(69,002)	1,552,431
Real Property	8,741,785	3,408,700	109,000	-	7,922,052	(658,851)	19,322,687
General Counsel	12,070,997	3,433,000	-	-	499,000	(681,028)	15,321,969
General Auditor	3,906,223	500,000	-	-	113,500	(192,428)	4,329,295
<b>Total Departmental O&amp;M</b>	<b>379,597,405</b>	<b>56,536,917</b>	<b>17,685,166</b>	<b>22,462,940</b>	<b>83,430,136</b>	<b>(23,436,264)</b>	<b>527,276,301</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M	-	-	-	-	-	-	92,381,352
Supply - Capital	-	-	-	-	-	-	57,457,040
Power - O&M & Off-Aq Capital	-	-	-	-	-	-	207,182,017
Power - Capital (less Off-Aq)	-	-	-	-	-	-	(13,041,702)
Transmission - Capital - Commodity, Demand, & Standby	-	-	-	-	-	-	92,002,797
Transmission - O&M - Commodity only	-	-	-	-	-	-	19,806,614
Delta Conveyance	-	-	-	-	-	-	25,000,000
<b>Total State Water Contract</b>	-	-	-	-	-	-	<b>640,768,118</b>
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>	-	-	-	-	-	-	<b>52,236,836</b>
<b>Demand Management</b>	-	-	-	-	-	-	<b>68,682,826</b>
Local Resources Program	-	-	-	-	-	-	19,259,257
Future Supply Actions & Stormwater Pilot	-	-	-	-	-	-	4,272,500
Conservation Program	-	-	-	-	-	-	25,000,000
<b>Total Demand Management Costs</b>	-	-	-	-	-	-	<b>48,531,757</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment	-	-	-	-	-	-	285,750,240
G.O. Bond Debt Service	-	-	-	-	-	-	7,254,175
Debt Administration	-	-	-	-	-	-	5,685,801
Bond Deleasance	-	-	-	-	-	-	135,000,000
PAYGO	-	-	-	-	-	-	433,690,217
<b>Total Capital Financing Costs</b>	-	-	-	-	-	-	<b>1,500,000</b>
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>	-	-	-	-	-	-	<b>7,878,483</b>
Operating Equipment	-	-	-	-	-	-	7,000,000
Succession Planning Labor Pool	-	-	-	-	-	-	-
OPEB/PERS Pre-Funding	-	-	-	-	-	-	-
<b>Total Other Operating Costs</b>	-	-	-	-	-	-	<b>14,878,483</b>
<b>Increase/(Decrease) in Required Reserves</b>							
	-	-	-	-	-	-	<b>41,300,000</b>
<b>Total General District Requirements</b>	-	-	-	-	-	-	<b>1,315,088,237</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>							
	-	-	-	-	-	-	<b>1,842,364,538</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service	-	-	-	-	-	-	7,554,898
Property Taxes - MWD GO Debt Service	-	-	-	-	-	-	7,254,175
Interest on Investments	-	-	-	-	-	-	17,762,144
Hydro-Power Revenue	-	-	-	-	-	-	12,205,101
CRA Power Revenue	-	-	-	-	-	-	8,079,978
Wadsworth Pumping Plant (DVL) Power Revenue	-	-	-	-	-	-	4,693,889
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	-	-	-	-	-	-	16,335,920
Misc. allocated to supply (PVID Lease)	-	-	-	-	-	-	3,595,498
Property Taxes - above GO Debt Service	-	-	-	-	-	-	125,138,058
Revenue Reserve used for Revenue Bonds - I&P	-	-	-	-	-	-	-
Annexation	-	-	-	-	-	-	-
<b>Total Revenue Offsets</b>	-	-	-	-	-	-	<b>198,395,660</b>
<b>NET REVENUE REQUIREMENTS:</b>	-	-	-	-	-	-	<b>1,643,968,879</b>

Table with columns for Functional Assignment Percentages (Fn1-Fn21) and Departmental O&M. Rows include items like Office of General Manager, Board of Directors, and various departmental services. Includes sub-sections for GENERAL DISTRICT REQUIREMENTS, State Water Contract, and Regional Recycled Water Program.





Departmental O&M	Group	Item	Conveyance & Aqueduct														Storage					Treatment					Total \$ Functionalized
			Source of Supply		CRA		SWP		Other Conv. & Aqueduct	Storage Costs Other Than Power		Power	Jensen	Weymouth	Diemer	Mills	Skinner	Distribution	Demand Management	Hydro-Electric	Administrative & General						
			CRA	SWP	CRA Power	CRA All Other	SWP Power	SWP All Other		Emergency	Drought											Regulator					
	Office of General Manager		81,543	145,052	128,228	54,093	466,264	-	186,221	69,156	68,480	48,577	34,971	-	-	-	-	251,694	279,691	288,679	200,250	236,113	994,621	106,602			
	Office of General Manager	Board of Directors	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	External Affairs	Legislative Services	-	-	-	-	-	-	5,217,217	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	External Affairs	Media Communications Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	External Affairs	Conservation & Community Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Human Resources		178,670	317,826	280,961	118,523	1,021,637	-	408,030	151,527	150,408	106,439	76,625	-	-	-	551,490	612,835	632,527	438,771	517,350	2,179,326	233,576				
	Water Systems Operations	Office of the Manager	115,611	115,611	115,611	103,393	917,898	-	48,496	-	17,781	17,781	17,781	-	-	-	405,822	425,858	400,319	388,547	377,885	1,776,904	388,340				
	Water Systems Operations	Office of the Manager, Conveyance & Aqueduct	-	-	-	-	459,877	-	28,323	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Office of the Manager, Treatment & Distribution	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Office of the Manager, Operations & Maintenance	32,036	32,036	32,036	28,651	254,353	-	13,438	-	4,927	4,927	4,927	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Operations Support Services	-	-	-	-	1,098,419	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	24,799,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	System Operations Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Power Operations and Planning	-	-	-	3,264,903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Operations Planning & Programs Unit	829,278	829,278	829,278	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Treatment Jensen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Treatment Diemer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Treatment Mills	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,257,419	-	8,865,580	-	-			
	Water Systems Operations	Treatment Skinner	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Water Quality Section	3,047,908	3,047,908	3,047,908	-	-	-	-	-	596,330	596,330	596,330	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	C&D, Eastern Unit	-	-	-	-	1,134,188	-	1,249,042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	C&D, Western Unit	-	-	-	-	13,361	-	349,036	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	343,630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	1,978,594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	955,296	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	OSS, Power Support Unit	-	-	-	202,549	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Office of the Manager, Operations & Maintenance	8,440	8,440	8,440	7,549	67,014	-	3,541	-	1,298	1,298	1,298	-	-	-	-	-	-	-	-	-	-	-			
	Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Office of the Chief Financial Officer		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Business Technology	Office of the Manager	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Engineering Services		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Business Technology	Administrative Services	-	-	10,159,473	-	-	-	10,637,923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Business Technology	Information Technology	483,391	859,876	1,352,252	-	-	-	11,175,581	-	8,846,882	8,846,882	948,192	449,875	12,094,087	39,389,705	39,389,705	71,936,879	1,492,054	1,658,022	1,711,298	1,187,092	1,399,687	5,896,153	631,939		
	Water Resources Management	Resource Planning & Development	-	-	-	-	4,872	-	988,926	-	107,174	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Water Resources Management	Resource Implementation	1,232,871	4,347,388	-	-	-	-	6,032,128	-	19,029	11,601,416	21,969,961	-	-	-	-	-	-	-	-	-	-	-			
	Water Resources Management	Office of the Group Manager	247,368	872,277	-	-	612	-	124,273	-	2,391	2,014,645	174,888,194	123	123	123	123	123	123	123	123	123	123	123			
	Ethics Office		-	-	-	-	-	-	-	-	1,552,431	1,552,431	3,104,862	-	-	-	-	-	-	-	-	-	-	-			
	Real Property		269,247	377,645	1,563,205	-	-	-	1,980,575	-	7,108,816	11,299,489	-	-	-	-	-	-	-	-	-	-	-	-			
	General Counsel		-	-	-	-	-	-	-	-	15,321,969	15,321,969	-	-	-	-	-	-	-	-	-	-	-	-			
	General Auditor		-	-	-	-	-	-	-	-	4,329,295	4,329,295	-	-	-	-	-	-	-	-	-	-	-	-			
	<b>Total Departmental O&amp;M</b>		<b>6,526,363</b>	<b>10,953,336</b>	<b>17,517,392</b>	<b>3,779,660</b>	<b>33,510,331</b>	<b>21,816,987</b>	<b>26,786,872</b>	<b>8,045,901</b>	<b>1,753,442</b>	<b>83,635,891</b>	<b>155,199,776</b>	<b>363,001,590</b>	<b>18,409,600</b>	<b>19,604,114</b>	<b>19,181,720</b>	<b>16,084,127</b>	<b>17,439,269</b>	<b>79,539,512</b>	<b>7,410,425</b>	<b>4,366,886</b>	<b>85,015,331</b>	<b>370,597,495</b>			



	Functionalization	Allocation Percentages					Total	
		Fixed			Variable Commodity	Other		Hydroelectric
		Demand	Commodity	Standby				
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager		85,803	-	85,803	-	-	85,803	
Office of General Manager	Board of Directors	-	-	-	-	-	-	
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-	
External Affairs	Legislative Services	-	-	-	-	-	-	
External Affairs	Media Communications Services	-	-	-	-	-	-	
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-	
External Affairs	Conservation & Community Services	-	-	-	-	-	-	
Human Resources		220,702	-	220,702	-	-	220,702	
Water Systems Operations	Office of the Manager	148,518	-	148,518	-	-	148,518	
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations Support Services	38,564	-	38,564	-	-	38,564	
Water Systems Operations	Operations Support Services	-	-	-	-	-	-	
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-	
Water Systems Operations	System Operations Unit	-	-	-	-	-	-	
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-	
Water Systems Operations	Operations Planning & Programs Unit	840,837	-	840,837	-	-	840,837	
Water Systems Operations	Treatment Jansen	-	-	-	-	-	-	
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-	
Water Systems Operations	Treatment Mills	-	-	-	-	-	-	
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-	
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-	
Water Systems Operations	Water Quality Section	3,636,876	-	3,636,876	-	-	3,636,876	
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-	
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-	
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-	
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-	
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-	
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations & Planning Sect	9,757	-	9,757	-	-	9,757	
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-	
Office of the Chief Financial Office		-	-	-	-	-	-	
Business Technology	Office of Manager	-	-	-	-	-	-	
Engineering Services		-	-	-	-	-	-	
Business Technology	Administrative Services	-	-	-	-	-	-	
Business Technology	Information Technology	725,304	-	725,304	-	-	725,304	
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-	
Water Resources Management	Resource Implementation	1,964,765	-	1,964,765	-	-	1,964,765	
Water Resources Management	Office of the Group Manager	246,902	-	246,902	-	-	246,902	
Ethics Office		-	-	-	-	-	-	
Real Property		595,139	-	595,139	-	-	595,139	
General Counsel		-	-	-	-	-	-	
General Auditor		-	-	-	-	-	-	
<b>Total Departmental O&amp;M</b>		<b>8,513,167</b>		<b>8,513,167</b>			<b>8,513,167</b>	
<b>GENERAL DISTRICT REQUIREMENTS</b>								
<b>State Water Contract</b>								
Supply - O&M		-	-	-	-	-	-	
Supply - Capital		-	-	-	-	-	-	
Power - O&M & Off-Aq Capital		-	-	-	-	-	-	
Power - Capital (less Off-Aq)		-	-	-	-	-	-	
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-	
Transmission - O&M - Commodity only		-	-	-	-	-	-	
Delta Conveyance		-	-	-	-	-	-	
<b>Total State Water Contract</b>								
<b>Colorado River Aqueduct Power Costs</b>								
Supply Programs		36,030,363	-	36,030,363	-	-	36,030,363	
<b>Demand Management</b>								
Local Resources Program		-	-	-	-	-	-	
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-	
Conservation Program		-	-	-	-	-	-	
<b>Total Demand Management Costs</b>								
<b>Capital Financing</b>								
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	-	-	-	-	-	
G.O. Bond Debt Service		-	-	-	-	-	-	
Debt Administration		-	-	-	-	-	-	
Bond Defeasance		-	-	-	-	-	-	
PAYGO		-	-	-	-	-	-	
<b>Total Capital Financing Costs</b>								
<b>Regional Recycled Water Program planning costs</b>								
<b>Other Operating Costs</b>								
Operating Equipment		127,202	-	127,202	-	-	127,202	
Succession Planning Labor Pool		113,019	-	113,019	-	-	113,019	
OPEB/PERS Pre-Funding		-	-	-	-	-	-	
<b>Total Other Operating Costs</b>		<b>240,221</b>		<b>240,221</b>			<b>240,221</b>	
<b>Increase/(Decrease) in Required Reserves</b>								
<b>Total General District Requirements</b>		<b>36,270,585</b>		<b>36,270,585</b>			<b>36,270,585</b>	
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>44,783,752</b>		<b>44,783,752</b>			<b>44,783,752</b>	
<b>Revenue Offsets</b>								
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-	
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-	
Interest on Investments		431,758	-	431,758	-	-	431,758	
Hydro-Power Revenue		-	-	-	-	-	-	
CRA Power Revenue		-	-	-	-	-	-	
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-	
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-	
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-	
Property Taxes - above GO Debt Service		-	-	-	-	-	-	
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-	
Annexation		-	-	-	-	-	-	
<b>Total Revenue Offsets</b>		<b>431,758</b>		<b>431,758</b>			<b>431,758</b>	
<b>NET REVENUE REQUIREMENTS:</b>		<b>44,351,994</b>		<b>44,351,994</b>			<b>44,351,994</b>	

	Functionalization	Allocation Percentages					Total	
		Fixed			Variable Commodity	Other		Hydroelectric
		Demand	Commodity	Standby				
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager		81,543	-	81,543	-	-	-	81,543
Office of General Manager	Board of Directors	-	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-	-
Human Resources		178,670	-	178,670	-	-	-	178,670
Water Systems Operations	Office of the Manager	115,611	-	115,611	-	-	-	115,611
Water Systems Operations	Office of the Manager, Conveyance & Distribution Sec	-	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	32,036	-	32,036	-	-	-	32,036
Water Systems Operations	Operations Support Services	-	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	829,278	-	829,278	-	-	-	829,278
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,047,908	-	3,047,908	-	-	-	3,047,908
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	8,440	-	8,440	-	-	-	8,440
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-	-
Business Technology	Information Technology	483,391	-	483,391	-	-	-	483,391
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-	-
Water Resources Management	Resource Implementation	1,232,871	-	1,232,871	-	-	-	1,232,871
Water Resources Management	Office of the Group Manager	247,368	-	247,368	-	-	-	247,368
Ethics Office		-	-	-	-	-	-	-
Real Property		269,247	-	269,247	-	-	-	269,247
General Counsel		-	-	-	-	-	-	-
General Auditor		-	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>6,526,363</b>	<b>-</b>	<b>6,526,363</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6,526,363</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	152,630	-	152,630	-	-	152,630
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		392,593	-	392,593	-	-	392,593
Water Systems Operations	Office of the Manager	148,518	-	148,518	-	-	148,518
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	38,564	-	38,564	-	-	38,564
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	840,837	-	840,837	-	-	840,837
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,636,876	-	3,636,876	-	-	3,636,876
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	9,757	-	9,757	-	-	9,757
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,290,200	-	1,290,200	-	-	1,290,200
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	6,928,216	-	6,928,216	-	-	6,928,216
Water Resources Managemen	Office of the Group Manager	870,633	-	870,633	-	-	870,633
Ethics Office		-	-	-	-	-	-
Real Property		834,740	-	834,740	-	-	834,740
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>15,143,564</b>	-	<b>15,143,564</b>	-	-	<b>15,143,564</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		92,381,352	-	92,381,352	-	-	92,381,352
Supply - Capital		57,457,040	-	57,457,040	-	-	57,457,040
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		<b>149,838,392</b>	-	<b>149,838,392</b>	-	-	<b>149,838,392</b>
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>							
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	-	-	-	-	-
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		-	-	-	-	-	-
Bond Defeasance		-	-	-	-	-	-
PAYGO		-	-	-	-	-	-
<b>Total Capital Financing Costs</b>							
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		226,273	-	226,273	-	-	226,273
Succession Planning Labor Pool		201,043	-	201,043	-	-	201,043
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>427,315</b>	-	<b>427,315</b>	-	-	<b>427,315</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>150,265,707</b>	-	<b>150,265,707</b>	-	-	<b>150,265,707</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>165,409,271</b>	-	<b>165,409,271</b>	-	-	<b>165,409,271</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		1,594,702	-	1,594,702	-	-	1,594,702
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		3,595,498	-	3,595,498	-	-	3,595,498
Property Taxes - above GO Debt Service		41,213,282	-	41,213,282	-	-	41,213,282
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>46,403,482</b>	-	<b>46,403,482</b>	-	-	<b>46,403,482</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>119,005,790</b>	-	<b>119,005,790</b>	-	-	<b>119,005,790</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	145,052	-	145,052	-	-	145,052
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		317,826	-	317,826	-	-	317,826
Water Systems Operations	Office of the Manager	115,611	-	115,611	-	-	115,611
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	32,036	-	32,036	-	-	32,036
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	829,278	-	829,278	-	-	829,278
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,047,908	-	3,047,908	-	-	3,047,908
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	8,440	-	8,440	-	-	8,440
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	859,876	-	859,876	-	-	859,876
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	4,347,388	-	4,347,388	-	-	4,347,388
Water Resources Management	Office of the Group Manager	872,277	-	872,277	-	-	872,277
Ethics Office		-	-	-	-	-	-
Real Property		377,645	-	377,645	-	-	377,645
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>10,953,336</b>	<b>-</b>	<b>10,953,336</b>	<b>-</b>	<b>-</b>	<b>10,953,336</b>





	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	134,926	-	134,926	-	-	134,926
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		347,056	-	347,056	-	-	347,056
Water Systems Operations	Office of the Manager	148,518	-	148,518	-	-	148,518
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	38,564	-	38,564	-	-	38,564
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	840,837	-	840,837	-	-	840,837
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,636,876	-	3,636,876	-	-	3,636,876
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	9,757	-	9,757	-	-	9,757
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		1,783,453	-	1,783,453	-	-	1,783,453
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,140,549	-	1,140,549	-	-	1,140,549
Water Resources Managemen	Resource Planning & Development	3,770,585	-	3,770,585	-	-	3,770,585
Water Resources Managemen	Resource Implementation	943,531	-	943,531	-	-	943,531
Water Resources Managemen	Office of the Group Manager	592,398	-	592,398	-	-	592,398
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		13,387,052	-	13,387,052	-	-	13,387,052
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		1,250,000	-	1,250,000	-	-	1,250,000
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		12,172,960	-	12,172,960	-	-	12,172,960
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		242,215	-	242,215	-	-	242,215
Bond Defeasance		-	-	-	-	-	-
PAYGO		5,751,000	-	5,751,000	-	-	5,751,000
<b>Total Capital Financing Costs</b>		18,166,175	-	18,166,175	-	-	18,166,175
<b>Regional Recycled Water Program planning costs</b>		5,626,290	-	5,626,290	-	-	5,626,290
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		200,027	-	200,027	-	-	200,027
Succession Planning Labor Pool		177,723	-	177,723	-	-	177,723
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		377,751	-	377,751	-	-	377,751
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		25,420,216	-	25,420,216	-	-	25,420,216
<b>REQUIREMENTS BEFORE OFFSETS:</b>		38,807,268	-	38,807,268	-	-	38,807,268
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		374,139	-	374,139	-	-	374,139
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		374,139	-	374,139	-	-	374,139
<b>NET REVENUE REQUIREMENTS:</b>		38,433,129	-	38,433,129	-	-	38,433,129

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	128,228	-	128,228	-	-	128,228
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		280,961	-	280,961	-	-	280,961
Water Systems Operations	Office of the Manager	115,611	-	115,611	-	-	115,611
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	32,036	-	32,036	-	-	32,036
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	829,278	-	829,278	-	-	829,278
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,047,908	-	3,047,908	-	-	3,047,908
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	8,440	-	8,440	-	-	8,440
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		1,599,003	-	1,599,003	-	-	1,599,003
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	760,138	-	760,138	-	-	760,138
Water Resources Management	Resource Planning & Development	3,336,559	-	3,336,559	-	-	3,336,559
Water Resources Management	Resource Implementation	592,057	-	592,057	-	-	592,057
Water Resources Management	Office of the Group Manager	593,517	-	593,517	-	-	593,517
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>11,323,736</b>	<b>-</b>	<b>11,323,736</b>	<b>-</b>	<b>-</b>	<b>11,323,736</b>

	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		56,918	0.0%	100.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources		146,405	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	132,823	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	34,489	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	3,823,125	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	222,665	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	8,726	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Office of the Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Engineering Services		741,012	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	481,138	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		<b>5,647,301</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Colorado River Aqueduct Power Costs</b>		<b>52,236,836</b>	<b>0.0%</b>	<b>0.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>100.0%</b>
<b>Supply Programs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>							
Local Resources Program		-	0.0%	0.0%	0.0%	0.0%	0.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		5,057,779	0.0%	100.0%	0.0%	0.0%	100.0%
G.O. Bond Debt Service		-	0.0%	100.0%	0.0%	0.0%	100.0%
Debt Administration		100,639	0.0%	100.0%	0.0%	0.0%	100.0%
Bond Defeasance		-	0.0%	100.0%	0.0%	0.0%	100.0%
PAYGO		2,389,500	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Capital Financing Costs</b>		<b>7,547,918</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Regional Recycled Water Program planning costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>							
Operating Equipment		84,381	0.0%	100.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		74,972	0.0%	100.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		<b>159,353</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Increase/(Decrease) in Required Reserves</b>							
		-	0.0%	12.9%	0.0%	87.1%	100.0%
<b>Total General District Requirements</b>		<b>59,944,108</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>							
		<b>65,591,409</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	100.0%	0.0%	0.0%	0.0%	100.0%
Property Taxes - MWD GO Debt Service		-	100.0%	0.0%	0.0%	0.0%	100.0%
Interest on Investments		632,363	0.0%	0.0%	0.0%	100.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		8,079,978	0.0%	0.0%	0.0%	100.0%	100.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - above GO Debt Service		-	0.0%	100.0%	0.0%	0.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	0.0%	100.0%	0.0%	0.0%	100.0%
Annexation		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Revenue Offsets</b>		<b>8,712,341</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	56,918	-	56,918	-	-	56,918
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		146,405	-	146,405	-	-	146,405
Water Systems Operations	Office of the Manager	132,823	-	132,823	-	-	132,823
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	34,489	-	34,489	-	-	34,489
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	3,823,125	-	3,823,125	-	-	3,823,125
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	222,665	-	222,665	-	-	222,665
Water Systems Operations	Office of the Manager, Operations & Planning Secti	8,726	-	8,726	-	-	8,726
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		741,012	-	741,012	-	-	741,012
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	481,138	-	481,138	-	-	481,138
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		5,647,301	-	5,647,301	-	-	5,647,301
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		52,236,836	-	-	52,236,836	-	52,236,836
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		5,057,779	-	5,057,779	-	-	5,057,779
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		100,639	-	100,639	-	-	100,639
Bond Defeasance		-	-	-	-	-	-
PAYGO		2,389,500	-	2,389,500	-	-	2,389,500
<b>Total Capital Financing Costs</b>		7,547,918	-	7,547,918	-	-	7,547,918
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		84,381	-	84,381	-	-	84,381
Succession Planning Labor Pool		74,972	-	74,972	-	-	74,972
OPEBI/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		159,353	-	159,353	-	-	159,353
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		59,944,108	-	7,707,271	52,236,836	-	59,944,108
<b>REQUIREMENTS BEFORE OFFSETS:</b>		65,591,409	-	13,354,573	52,236,836	-	65,591,409
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		632,363	-	-	632,363	-	632,363
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		8,079,978	-	-	8,079,978	-	8,079,978
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		8,712,341	-	-	8,712,341	-	8,712,341
<b>NET REVENUE REQUIREMENTS:</b>		56,879,068	-	13,354,573	43,524,495	-	56,879,068

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	54,093	-	54,093	-	-	54,093
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		118,523	-	118,523	-	-	118,523
Water Systems Operations	Office of the Manager	103,393	-	103,393	-	-	103,393
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	28,651	-	28,651	-	-	28,651
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	3,264,903	-	3,264,903	-	-	3,264,903
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	202,549	-	202,549	-	-	202,549
Water Systems Operations	Office of the Manager, Operations & Planning Section	7,549	-	7,549	-	-	7,549
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		664,375	-	664,375	-	-	664,375
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	320,663	-	320,663	-	-	320,663
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>4,764,698</b>	<b>-</b>	<b>4,764,698</b>	<b>-</b>	<b>-</b>	<b>4,764,698</b>

	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	490,622	0.0%	100.0%	0.0%	0.0%	100.0%
Office of General Manager	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources		1,261,972	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	1,179,169	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	452,916	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	306,184	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	1,206,175	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	29,348,273	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	1,582,118	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	18,424	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	374,722	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	2,516,010	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	1,531,697	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	77,465	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Office of Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Engineering Services		1,431,787	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	4,147,292	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	100.0%
Real Property		2,753,483	0.0%	100.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		<b>48,678,309</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Colorado River Aqueduct Power Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Supply Programs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Demand Management</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
Local Resources Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Capital Financing</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		9,772,658	17.8%	49.3%	32.9%	0.0%	100.0%
G.O. Bond Debt Service		-	17.8%	49.3%	32.9%	0.0%	100.0%
Debt Administration		194,454	17.8%	49.3%	32.9%	0.0%	100.0%
Bond Defeasance		-	17.8%	49.3%	32.9%	0.0%	100.0%
PAYGO		4,617,000	17.8%	49.3%	32.9%	0.0%	100.0%
<b>Total Capital Financing Costs</b>		<b>14,584,113</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Regional Recycled Water Program planning costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Other Operating Costs</b>							
Operating Equipment		727,344	0.0%	100.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		646,242	0.0%	100.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		<b>1,373,586</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Increase/(Decrease) in Required Reserves</b>		<b>-</b>	<b>16.2%</b>	<b>53.7%</b>	<b>30.1%</b>	<b>0.0%</b>	<b>100.0%</b>
<b>Total General District Requirements</b>		<b>15,957,699</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>64,636,008</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - MWD GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Interest on Investments		623,152	17.8%	49.3%	32.9%	0.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	4.0%	88.6%	7.4%	0.0%	100.0%
Property Taxes - above GO Debt Service		-	17.8%	49.3%	32.9%	0.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	50.0%	50.0%	0.0%	0.0%	100.0%
Annexation		-	17.8%	49.3%	32.9%	0.0%	100.0%
<b>Total Revenue Offsets</b>		<b>623,152</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	490,622	-	490,622	-	-	490,622
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	-
Bay Delta Initiatives	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		1,261,972	-	1,261,972	-	-	1,261,972
Water Systems Operations	Office of the Manager	1,179,169	-	1,179,169	-	-	1,179,169
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	452,916	-	452,916	-	-	452,916
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	306,184	-	306,184	-	-	306,184
Water Systems Operations	Operations Support Services	1,206,175	-	1,206,175	-	-	1,206,175
Water Systems Operations	Desert Region / C&D CRA	29,348,273	-	29,348,273	-	-	29,348,273
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	1,582,118	-	1,582,118	-	-	1,582,118
Water Systems Operations	C&D, Western Unit	18,424	-	18,424	-	-	18,424
Water Systems Operations	OSS, Manufacturing Services Unit	374,722	-	374,722	-	-	374,722
Water Systems Operations	Environmental Health & Safety Section	2,516,010	-	2,516,010	-	-	2,516,010
Water Systems Operations	OSS, Fleet Services Unit	1,531,697	-	1,531,697	-	-	1,531,697
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	77,465	-	77,465	-	-	77,465
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		1,431,787	-	1,431,787	-	-	1,431,787
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	4,147,292	-	4,147,292	-	-	4,147,292
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		2,753,483	-	2,753,483	-	-	2,753,483
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>48,678,309</b>		<b>48,678,309</b>			<b>48,678,309</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>							
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>							
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		9,772,658	1,735,089	4,819,691	3,217,879	-	9,772,658
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		194,454	34,524	95,901	64,029	-	194,454
Bond Defeasance		-	-	-	-	-	-
PAYGO		4,617,000	819,726	2,277,017	1,520,256	-	4,617,000
<b>Total Capital Financing Costs</b>		<b>14,584,113</b>	<b>2,589,339</b>	<b>7,192,609</b>	<b>4,802,164</b>		<b>14,584,113</b>
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		727,344	-	727,344	-	-	727,344
Succession Planning Labor Pool		646,242	-	646,242	-	-	646,242
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>1,373,586</b>		<b>1,373,586</b>			<b>1,373,586</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>15,957,699</b>	<b>2,589,339</b>	<b>8,566,196</b>	<b>4,802,164</b>		<b>15,957,699</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>64,636,008</b>	<b>2,589,339</b>	<b>57,244,505</b>	<b>4,802,164</b>		<b>64,636,008</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		623,152	110,638	307,327	205,188	-	623,152
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>623,152</b>	<b>110,638</b>	<b>307,327</b>	<b>205,188</b>		<b>623,152</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>64,012,855</b>	<b>2,478,702</b>	<b>56,937,177</b>	<b>4,596,976</b>		<b>64,012,855</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	466,264	-	466,264	-	-	466,264
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources	Human Resources	1,021,637	-	1,021,637	-	-	1,021,637
Water Systems Operations	Office of the Manager	917,898	-	917,898	-	-	917,898
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	459,877	-	459,877	-	-	459,877
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	254,353	-	254,353	-	-	254,353
Water Systems Operations	Operations Support Services	1,098,419	-	1,098,419	-	-	1,098,419
Water Systems Operations	Desert Region / C&D CRA	24,799,200	-	24,799,200	-	-	24,799,200
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	1,134,188	-	1,134,188	-	-	1,134,188
Water Systems Operations	C&D, Western Unit	13,961	-	13,961	-	-	13,961
Water Systems Operations	OSS, Manufacturing Services Unit	343,630	-	343,630	-	-	343,630
Water Systems Operations	Environmental Health & Safety Section	1,978,594	-	1,978,594	-	-	1,978,594
Water Systems Operations	OSS, Fleet Services Unit	955,296	-	955,296	-	-	955,296
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	67,014	-	67,014	-	-	67,014
Office of the Chief Financial Officer	Office of the Chief Financial Officer	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	1,283,707	-	1,283,707	-	-	1,283,707
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	2,764,032	-	2,764,032	-	-	2,764,032
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	1,245,704	-	1,245,704	-	-	1,245,704
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>38,803,775</b>	<b>-</b>	<b>38,803,775</b>	<b>-</b>	<b>-</b>	<b>38,803,775</b>

	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<i>Group</i>	<i>Item</i>	-	-	-	-	-	-
Office of General Manager	Office of General Manager	-	0.0%	100.0%	0.0%	0.0%	0.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources		-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Office of Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Engineering Services		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	100.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	100.0%	0.0%
Power - O&M & Off-Aq Capital	207,162,017	-	0.0%	0.0%	0.0%	100.0%	0.0%
Power - Capital (less Off-Aq)	(13,041,702)	-	0.0%	0.0%	0.0%	100.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	100.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	100.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	100.0%	0.0%
<b>Total State Water Contract</b>	194,120,315	-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Colorado River Aqueduct Power Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>							
Local Resources Program		-	0.0%	0.0%	0.0%	0.0%	0.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	0.0%	0.0%	0.0%	0.0%	0.0%
G.O. Bond Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Debt Administration		-	0.0%	0.0%	0.0%	0.0%	0.0%
Bond Defeasance		-	0.0%	0.0%	0.0%	0.0%	0.0%
PAYGO		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total Capital Financing Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Regional Recycled Water Program planning costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>							
Operating Equipment		-	0.0%	100.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		-	0.0%	100.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Increase/(Decrease) in Required Reserves</b>							
		-	0.0%	0.0%	0.0%	100.0%	0.0%
<b>Total General District Requirements</b>	194,120,315	-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - MWD GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Interest on Investments	1,871,504	-	0.0%	0.0%	0.0%	100.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	100.0%	100.0%
Property Taxes - above GO Debt Service		-	0.0%	0.0%	0.0%	100.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	0.0%	0.0%	0.0%	0.0%	0.0%
Annexation		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total Revenue Offsets</b>	1,871,504	-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>NET REVENUE REQUIREMENTS:</b>	-	-	0.0%	0.0%	0.0%	0.0%	0.0%

	Functionalization	Allocation Percentages					Total
		Demand	Fixed Commodity		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	-	-	-	-	-	-
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	-
Bay Delta Initiatives	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		-	-	-	-	-	-
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Sect	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	-	-	-	-	-	-
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		-	-	-	-	-	-
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital	207,162,017	-	-	-	207,162,017	-	207,162,017
Power - Capital (less Off-Aq)	(13,041,702)	-	-	-	(13,041,702)	-	(13,041,702)
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>	194,120,315	-	-	-	194,120,315	-	194,120,315
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	-	-	-	-	-
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		-	-	-	-	-	-
Bond Defeasance		-	-	-	-	-	-
PAYGO		-	-	-	-	-	-
<b>Total Capital Financing Costs</b>		-	-	-	-	-	-
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		-	-	-	-	-	-
Succession Planning Labor Pool		-	-	-	-	-	-
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		-	-	-	-	-	-
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>	194,120,315	-	-	-	194,120,315	-	194,120,315
<b>REQUIREMENTS BEFORE OFFSETS:</b>	194,120,315	-	-	-	194,120,315	-	194,120,315
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments	1,871,504	-	-	-	1,871,504	-	1,871,504
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>	1,871,504	-	-	-	1,871,504	-	1,871,504
<b>NET REVENUE REQUIREMENTS:</b>	192,248,811	-	-	-	192,248,811	-	192,248,811

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	-	-	-	-	-	-
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		-	-	-	-	-	-
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	-	-	-	-	-	-
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		-	-	-	-	-	-

	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		195,949	0.0%	100.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	9,666,300	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources		504,018	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	62,300	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	27,895	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	16,177	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	1,742,332	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	460,608	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	4,093	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Office of the Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Engineering Services		618,795	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	1,656,382	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	100.0%
Real Property		4,486,728	0.0%	100.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		<b>19,441,577</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		92,002,797	17.8%	49.3%	32.9%	0.0%	100.0%
Transmission - O&M - Commodity only		179,806,614	0.0%	100.0%	0.0%	0.0%	100.0%
Delta Conveyance		25,000,000	17.8%	49.3%	32.9%	0.0%	100.0%
<b>Total State Water Contract</b>		<b>296,809,411</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Colorado River Aqueduct Power Costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>							
Local Resources Program		-	0.0%	0.0%	0.0%	0.0%	0.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		4,223,584	0.0%	100.0%	0.0%	0.0%	100.0%
G.O. Bond Debt Service		-	0.0%	100.0%	0.0%	0.0%	100.0%
Debt Administration		84,040	0.0%	100.0%	0.0%	0.0%	100.0%
Bond Defeasance		-	0.0%	100.0%	0.0%	0.0%	100.0%
PAYGO		1,995,392	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Capital Financing Costs</b>		<b>6,303,017</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Regional Recycled Water Program planning costs</b>							
		-	17.8%	49.3%	32.9%	0.0%	100.0%
<b>Other Operating Costs</b>							
Operating Equipment		290,493	0.0%	100.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		258,102	0.0%	100.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		<b>548,595</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Increase/(Decrease) in Required Reserves</b>							
		-	6.8%	80.5%	12.7%	0.0%	100.0%
<b>Total General District Requirements</b>							
		303,661,022	0.0%	0.0%	0.0%	0.0%	0.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>							
		323,102,599	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		7,554,898	17.8%	49.3%	32.9%	0.0%	100.0%
Property Taxes - MWD GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Interest on Investments		3,115,016	17.8%	49.3%	32.9%	0.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	6.4%	81.6%	11.9%	0.0%	100.0%
Property Taxes - above GO Debt Service		83,924,776	17.8%	49.3%	32.9%	0.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	0.0%	0.0%	0.0%	0.0%	0.0%
Annexation		-	17.8%	49.3%	32.9%	0.0%	100.0%
<b>Total Revenue Offsets</b>		<b>94,594,690</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		195,949	-	195,949	-	-	195,949
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	9,666,300	-	9,666,300	-	-	9,666,300
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		504,018	-	504,018	-	-	504,018
Water Systems Operations	Office of the Manager	62,300	-	62,300	-	-	62,300
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	27,895	-	27,895	-	-	27,895
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	16,177	-	16,177	-	-	16,177
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	1,742,332	-	1,742,332	-	-	1,742,332
Water Systems Operations	C&D, Western Unit	460,608	-	460,608	-	-	460,608
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	4,093	-	4,093	-	-	4,093
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		618,795	-	618,795	-	-	618,795
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,656,382	-	1,656,382	-	-	1,656,382
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		4,486,728	-	4,486,728	-	-	4,486,728
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>19,441,577</b>		<b>19,441,577</b>			<b>19,441,577</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		92,002,797	16,334,656	45,374,046	30,294,095	-	92,002,797
Transmission - O&M - Commodity only		179,806,614	-	179,806,614	-	-	179,806,614
Delta Conveyance		25,000,000	4,438,630	12,329,529	8,231,841	-	25,000,000
<b>Total State Water Contract</b>		<b>296,809,411</b>	<b>20,773,287</b>	<b>237,510,188</b>	<b>38,525,936</b>		<b>296,809,411</b>
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>							
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		4,223,584	-	4,223,584	-	-	4,223,584
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		84,040	-	84,040	-	-	84,040
Bond Defeasance		-	-	-	-	-	-
PAYGO		1,995,392	-	1,995,392	-	-	1,995,392
<b>Total Capital Financing Costs</b>		<b>6,303,017</b>		<b>6,303,017</b>			<b>6,303,017</b>
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		290,493	-	290,493	-	-	290,493
Succession Planning Labor Pool		258,102	-	258,102	-	-	258,102
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>548,595</b>		<b>548,595</b>			<b>548,595</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>303,661,022</b>	<b>20,773,287</b>	<b>244,361,800</b>	<b>38,525,936</b>		<b>303,661,022</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>323,102,599</b>	<b>20,773,287</b>	<b>263,803,377</b>	<b>38,525,936</b>		<b>323,102,599</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		7,554,898	1,341,336	3,725,933	2,487,629	-	7,554,898
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		3,115,016	553,056	1,536,267	1,025,693	-	3,115,016
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		83,924,776	14,900,442	41,390,118	27,634,216	-	83,924,776
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>94,594,690</b>	<b>16,794,835</b>	<b>46,652,318</b>	<b>31,147,537</b>		<b>94,594,690</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>228,507,909</b>	<b>3,978,452</b>	<b>217,151,058</b>	<b>7,378,399</b>		<b>228,507,909</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	186,221	-	186,221	-	-	186,221
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	5,217,217	-	5,217,217	-	-	5,217,217
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		408,030	-	408,030	-	-	408,030
Water Systems Operations	Office of the Manager	48,496	-	48,496	-	-	48,496
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	28,323	-	28,323	-	-	28,323
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	13,438	-	13,438	-	-	13,438
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	1,249,042	-	1,249,042	-	-	1,249,042
Water Systems Operations	C&D, Western Unit	349,035	-	349,035	-	-	349,035
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	3,541	-	3,541	-	-	3,541
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		554,797	-	554,797	-	-	554,797
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,103,924	-	1,103,924	-	-	1,103,924
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		2,029,843	-	2,029,843	-	-	2,029,843
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>11,191,907</b>	<b>-</b>	<b>11,191,907</b>	<b>-</b>	<b>-</b>	<b>11,191,907</b>





	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		72,768	-	72,768	-	-	72,768
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		187,174	-	187,174	-	-	187,174
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		6,344,826	-	6,344,826	-	-	6,344,826
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	615,120	-	615,120	-	-	615,120
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>7,219,888</b>	-	<b>7,219,888</b>	-	-	<b>7,219,888</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>							
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>							
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		43,306,609	7,688,881	21,358,003	14,259,724	-	43,306,609
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		861,706	152,992	424,977	283,737	-	861,706
Bond Defeasance		-	-	-	-	-	-
PAYGO		20,459,798	3,632,539	10,090,387	6,736,872	-	20,459,798
<b>Total Capital Financing Costs</b>		<b>64,628,113</b>	<b>11,474,412</b>	<b>31,873,367</b>	<b>21,280,333</b>		<b>64,628,113</b>
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		107,878	-	107,878	-	-	107,878
Succession Planning Labor Pool		95,850	-	95,850	-	-	95,850
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>203,728</b>		<b>203,728</b>			<b>203,728</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>64,831,841</b>	<b>11,474,412</b>	<b>32,077,095</b>	<b>21,280,333</b>		<b>64,831,841</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>72,051,729</b>	<b>11,474,412</b>	<b>39,296,983</b>	<b>21,280,333</b>		<b>72,051,729</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		694,647	694,647	-	-	-	694,647
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>694,647</b>	<b>694,647</b>				<b>694,647</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>71,357,082</b>	<b>10,779,765</b>	<b>39,296,983</b>	<b>21,280,333</b>		<b>71,357,082</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	69,156	-	69,156	-	-	69,156
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources	Human Resources	151,527	-	151,527	-	-	151,527
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer	Office of the Chief Financial Officer	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	5,688,626	-	5,688,626	-	-	5,688,626
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	409,957	-	409,957	-	-	409,957
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	-	-	-	-	-	-
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>6,319,265</b>	<b>-</b>	<b>6,319,265</b>	<b>-</b>	<b>-</b>	<b>6,319,265</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed Commodity		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		72,058	-	72,058	-	-	72,058
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		185,346	-	185,346	-	-	185,346
Water Systems Operations	Office of the Manager	22,843	-	22,843	-	-	22,843
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	5,931	-	5,931	-	-	5,931
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	711,563	-	711,563	-	-	711,563
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Sect	1,501	-	1,501	-	-	1,501
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		5,040,577	-	5,040,577	-	-	5,040,577
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	609,113	-	609,113	-	-	609,113
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		500,458	-	500,458	-	-	500,458
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>7,149,389</b>	-	<b>7,149,389</b>	-	-	<b>7,149,389</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>							
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>							
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		34,404,457	-	34,404,457	-	-	34,404,457
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		684,573	-	684,573	-	-	684,573
Bond Defeasance		-	-	-	-	-	-
PAYGO		16,254,060	-	16,254,060	-	-	16,254,060
<b>Total Capital Financing Costs</b>		<b>51,343,090</b>	-	<b>51,343,090</b>	-	-	<b>51,343,090</b>
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		106,825	-	106,825	-	-	106,825
Succession Planning Labor Pool		94,914	-	94,914	-	-	94,914
OPEBI/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>201,739</b>	-	<b>201,739</b>	-	-	<b>201,739</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>51,544,829</b>	-	<b>51,544,829</b>	-	-	<b>51,544,829</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>58,694,218</b>	-	<b>7,149,389</b>	<b>51,544,829</b>	-	<b>58,694,218</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		565,868	-	565,868	-	-	565,868
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>565,868</b>	-	<b>565,868</b>	-	-	<b>565,868</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>58,128,350</b>	-	<b>7,149,389</b>	<b>50,978,961</b>	-	<b>58,128,350</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	68,480	-	68,480	-	-	68,480
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources	Human Resources	150,048	-	150,048	-	-	150,048
Water Systems Operations	Office of the Manager	17,781	-	17,781	-	-	17,781
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	4,927	-	4,927	-	-	4,927
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	596,330	-	596,330	-	-	596,330
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	1,298	-	1,298	-	-	1,298
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer	Office of the Chief Financial Officer	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	4,519,266	-	4,519,266	-	-	4,519,266
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	405,954	-	405,954	-	-	405,954
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	226,412	-	226,412	-	-	226,412
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>5,990,497</b>	<b>-</b>	<b>5,990,497</b>	<b>-</b>	<b>-</b>	<b>5,990,497</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed Commodity		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	51,115	-	51,115	-	-	51,115
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		131,478	-	131,478	-	-	131,478
Water Systems Operations	Office of the Manager	22,843	-	22,843	-	-	22,843
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	5,931	-	5,931	-	-	5,931
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	711,563	-	711,563	-	-	711,563
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	1,501	-	1,501	-	-	1,501
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,855,144	-	2,855,144	-	-	2,855,144
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	432,083	-	432,083	-	-	432,083
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		859,860	-	859,860	-	-	859,860
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>5,071,517</b>	-	<b>5,071,517</b>	-	-	<b>5,071,517</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		<b>31,402,463</b>	-	<b>31,402,463</b>	-	-	<b>31,402,463</b>
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		19,487,785	-	19,487,785	-	-	19,487,785
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		387,764	-	387,764	-	-	387,764
Bond Defeasance		-	-	-	-	-	-
PAYGO		9,206,820	-	9,206,820	-	-	9,206,820
<b>Total Capital Financing Costs</b>		<b>29,082,369</b>	-	<b>29,082,369</b>	-	-	<b>29,082,369</b>
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		75,778	-	75,778	-	-	75,778
Succession Planning Labor Pool		67,328	-	67,328	-	-	67,328
OPEBI/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>143,106</b>	-	<b>143,106</b>	-	-	<b>143,106</b>
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		<b>60,627,938</b>	-	<b>60,627,938</b>	-	-	<b>60,627,938</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>65,699,455</b>	-	<b>65,699,455</b>	-	-	<b>65,699,455</b>
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		633,405	-	633,405	-	-	633,405
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>633,405</b>	-	<b>633,405</b>	-	-	<b>633,405</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>65,066,050</b>	-	<b>65,066,050</b>	-	-	<b>65,066,050</b>

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	48,577	-	48,577	-	-	48,577
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources	Human Resources	106,439	-	106,439	-	-	106,439
Water Systems Operations	Office of the Manager	17,781	-	17,781	-	-	17,781
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	4,927	-	4,927	-	-	4,927
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	596,330	-	596,330	-	-	596,330
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	1,298	-	1,298	-	-	1,298
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer	Office of the Chief Financial Officer	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	2,559,857	-	2,559,857	-	-	2,559,857
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	287,969	-	287,969	-	-	287,969
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	389,009	-	389,009	-	-	389,009
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>4,012,188</b>	<b>-</b>	<b>4,012,188</b>	<b>-</b>	<b>-</b>	<b>4,012,188</b>



	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		36,798	0.0%	100.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources		94,651	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	22,843	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	5,931	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	711,563	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	1,501	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Office of Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Engineering Services		2,263,752	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	311,056	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	100.0%
Real Property		202,888	0.0%	100.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		<b>3,650,982</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Colorado River Aqueduct Power Costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>							
Local Resources Program		-	0.0%	0.0%	0.0%	0.0%	0.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	0.0%	0.0%	0.0%	0.0%	0.0%
G.O. Bond Debt Service		15,451,236	37.2%	40.1%	22.7%	0.0%	100.0%
Debt Administration		-	37.2%	40.1%	22.7%	0.0%	100.0%
Bond Defeasance		307,446	37.2%	40.1%	22.7%	0.0%	100.0%
PAYGO		-	37.2%	40.1%	22.7%	0.0%	100.0%
<b>Total Capital Financing Costs</b>		<b>7,299,790</b>	<b>37.2%</b>	<b>40.1%</b>	<b>22.7%</b>	<b>0.0%</b>	<b>100.0%</b>
		23,058,472	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Regional Recycled Water Program planning costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>							
Operating Equipment		54,552	0.0%	100.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		48,470	0.0%	100.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		<b>103,022</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Increase/(Decrease) in Required Reserves</b>							
		-	37.1%	40.4%	22.6%	0.0%	100.0%
<b>Total General District Requirements</b>							
		23,161,494	0.0%	0.0%	0.0%	0.0%	0.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>							
		26,812,476	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	100.0%	0.0%	0.0%	0.0%	100.0%
Property Taxes - MWD GO Debt Service		-	100.0%	0.0%	0.0%	0.0%	100.0%
Interest on Investments		258,498	0.0%	100.0%	0.0%	0.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	32.0%	48.5%	19.5%	0.0%	100.0%
Property Taxes - above GO Debt Service		-	37.2%	40.1%	22.7%	0.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	37.2%	40.1%	22.7%	0.0%	100.0%
Annexation		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total Revenue Offsets</b>		<b>258,498</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed Commodity		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	36,798	-	36,798	-	-	36,798
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		94,651	-	94,651	-	-	94,651
Water Systems Operations	Office of the Manager	22,843	-	22,843	-	-	22,843
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	5,931	-	5,931	-	-	5,931
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	711,563	-	711,563	-	-	711,563
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	1,501	-	1,501	-	-	1,501
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Of		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,263,752	-	2,263,752	-	-	2,263,752
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	311,056	-	311,056	-	-	311,056
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		202,888	-	202,888	-	-	202,888
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>3,650,982</b>	-	<b>3,650,982</b>	-	-	<b>3,650,982</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		15,451,236	5,751,618	6,197,165	3,502,453	-	15,451,236
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		307,446	114,445	123,310	69,691	-	307,446
Bond Defeasance		-	-	-	-	-	-
PAYGO		7,299,790	2,717,297	2,927,792	1,654,701	-	7,299,790
<b>Total Capital Financing Costs</b>		<b>23,058,472</b>	<b>8,583,360</b>	<b>9,248,267</b>	<b>5,226,845</b>	-	<b>23,058,472</b>
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		54,552	-	54,552	-	-	54,552
Succession Planning Labor Pool		48,470	-	48,470	-	-	48,470
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>103,022</b>	-	<b>103,022</b>	-	-	<b>103,022</b>
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		<b>23,161,494</b>	<b>8,583,360</b>	<b>9,351,289</b>	<b>5,226,845</b>	-	<b>23,161,494</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>26,812,476</b>	<b>8,583,360</b>	<b>13,002,271</b>	<b>5,226,845</b>	-	<b>26,812,476</b>
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		258,498	-	258,498	-	-	258,498
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>258,498</b>	-	<b>258,498</b>	-	-	<b>258,498</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>26,553,978</b>	<b>8,583,360</b>	<b>12,743,773</b>	<b>5,226,845</b>	-	<b>26,553,978</b>

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	34,971	-	34,971	-	-	34,971
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources	Human Resources	76,625	-	76,625	-	-	76,625
Water Systems Operations	Office of the Manager	17,781	-	17,781	-	-	17,781
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	4,927	-	4,927	-	-	4,927
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	596,330	-	596,330	-	-	596,330
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	1,298	-	1,298	-	-	1,298
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer	Office of the Chief Financial Officer	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	2,029,628	-	2,029,628	-	-	2,029,628
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	207,309	-	207,309	-	-	207,309
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	91,789	-	91,789	-	-	91,789
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>3,060,658</b>	<b>-</b>	<b>3,060,658</b>	<b>-</b>	<b>-</b>	<b>3,060,658</b>

	Functionalization	Allocation Percentages					% Total	
		Fixed			Variable Commodity	Hydroelectric		
		Demand	Commodity	Standby				
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Human Resources		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Office of the Manager	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Engineering Services		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>GENERAL DISTRICT REQUIREMENTS</b>								
<b>State Water Contract</b>								
Supply - O&M		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Supply - Capital		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Power - O&M & Off-Aq Capital		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Power - Capital (less Off-Aq)		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Colorado River Aqueduct Power Costs</b>		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
<b>Supply Programs</b>								
		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>								
Local Resources Program		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Capital Financing</b>								
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
G.O. Bond Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Debt Administration		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bond Defeasance		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PAYGO		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total Capital Financing Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Regional Recycled Water Program planning costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>								
Operating Equipment		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Increase/(Decrease) in Required Reserves</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total General District Requirements</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>								
		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Revenue Offsets</b>								
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - MWD GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Interest on Investments		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	469,889	-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Property Taxes - above GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue Reserve used for Revenue Bonds - I&P		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Annexation		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total Revenue Offsets</b>	469,889	-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>NET REVENUE REQUIREMENTS:</b>	-	-	(469,889)	0.0%	0.0%	0.0%	0.0%	0.0%

	Functionalization	Allocation Percentages					Total
		Demand	Fixed Commodity		Variable Commodity	Hydroelectric	
			Standby				
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	-	-	-	-	-	-
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	-
Bay Delta Initiatives	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		-	-	-	-	-	-
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Of		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	-	-	-	-	-	-
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		-	-	-	-	-	-
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	-	-	-	-	-
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		-	-	-	-	-	-
Bond Defeasance		-	-	-	-	-	-
PAYGO		-	-	-	-	-	-
<b>Total Capital Financing Costs</b>		-	-	-	-	-	-
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		-	-	-	-	-	-
Succession Planning Labor Pool		-	-	-	-	-	-
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		-	-	-	-	-	-
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>							
<b>REQUIREMENTS BEFORE OFFSETS:</b>							
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		-	-	-	-	-	-
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	469,889	-	-	-	469,889	-	469,889
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>	469,889	-	-	-	469,889	-	469,889
<b>NET REVENUE REQUIREMENTS:</b>	(469,889)	-	-	-	(469,889)	-	(469,889)

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	-	-	-	-	-	
Office of General Manager	Board of Directors	-	-	-	-	-	
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	
External Affairs	Legislative Services	-	-	-	-	-	
External Affairs	Media Communications Services	-	-	-	-	-	
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	
External Affairs	Conservation & Community Services	-	-	-	-	-	
Human Resources		-	-	-	-	-	
Water Systems Operations	Office of the Manager	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	
Water Systems Operations	Operations Support Services	-	-	-	-	-	
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	
Water Systems Operations	System Operations Unit	-	-	-	-	-	
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	
Water Systems Operations	Treatment Jensen	-	-	-	-	-	
Water Systems Operations	Treatment Diemer	-	-	-	-	-	
Water Systems Operations	Treatment Mills	-	-	-	-	-	
Water Systems Operations	Treatment Skinner	-	-	-	-	-	
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	
Water Systems Operations	Water Quality Section	-	-	-	-	-	
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	-	-	-	-	
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	
Office of the Chief Financial Officer		-	-	-	-	-	
Business Technology	Office of Manager	-	-	-	-	-	
Engineering Services		-	-	-	-	-	
Business Technology	Administrative Services	-	-	-	-	-	
Business Technology	Information Technology	-	-	-	-	-	
Water Resources Management	Resource Planning & Development	-	-	-	-	-	
Water Resources Management	Resource Implementation	-	-	-	-	-	
Water Resources Management	Office of the Group Manager	-	-	-	-	-	
Ethics Office		-	-	-	-	-	
Real Property		-	-	-	-	-	
General Counsel		-	-	-	-	-	
General Auditor		-	-	-	-	-	
<b>Total Departmental O&amp;M</b>		-	-	-	-	-	



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		264,843	-	264,843	-	-	264,843
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		681,226	-	681,226	-	-	681,226
Water Systems Operations	Office of the Manager	521,336	-	521,336	-	-	521,336
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	198,794	-	198,794	-	-	198,794
Water Systems Operations	Office of the Manager, Operations Support Services	135,371	-	135,371	-	-	135,371
Water Systems Operations	Operations Support Services	83,446	-	83,446	-	-	83,446
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	14,945,952	-	9,319,854	5,626,099	-	14,945,952
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,661,772	-	2,661,772	-	-	2,661,772
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	97,112	-	97,112	-	-	97,112
Water Systems Operations	Environmental Health & Safety Section	1,492,803	-	1,492,803	-	-	1,492,803
Water Systems Operations	OSS, Fleet Services Unit	503,758	-	503,758	-	-	503,758
Water Systems Operations	OSS, Power Support Unit	235,388	-	235,388	-	-	235,388
Water Systems Operations	Office of the Manager, Operations & Planning Secti	34,249	-	34,249	-	-	34,249
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,181,172	-	2,181,172	-	-	2,181,172
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	2,238,752	-	2,238,752	-	-	2,238,752
Water Resources Managemen	Resource Planning & Development	974	-	974	-	-	974
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	122	-	122	-	-	122
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		26,277,070	-	20,650,971	5,626,099	-	26,277,070
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		14,887,588	4,369,349	4,504,483	6,013,755	-	14,887,588
G.O. Bond Debt Service		377,943	110,922	114,353	152,668	-	377,943
Debt Administration		296,230	86,940	89,629	119,661	-	296,230
Bond Defeasance		-	-	-	-	-	-
PAYGO		7,033,500	2,064,258	2,128,101	2,841,142	-	7,033,500
<b>Total Capital Financing Costs</b>		22,595,260	6,631,469	6,836,566	9,127,226	-	22,595,260
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		392,628	-	392,628	-	-	392,628
Succession Planning Labor Pool		348,848	-	348,848	-	-	348,848
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		741,476	-	741,476	-	-	741,476
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		23,336,737	6,631,469	7,578,042	9,127,226	-	23,336,737
<b>REQUIREMENTS BEFORE OFFSETS:</b>		49,613,807	6,631,469	28,229,014	9,127,226	5,626,099	49,613,807
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		377,943	-	-	377,943	-	377,943
Interest on Investments		478,324	140,383	144,725	193,216	-	478,324
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		856,267	140,383	144,725	571,159	-	856,267
<b>NET REVENUE REQUIREMENTS:</b>		48,757,540	6,491,086	28,084,289	8,556,067	5,626,099	48,757,540



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	251,694	-	251,694	-	-	251,694
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		551,490	-	551,490	-	-	551,490
Water Systems Operations	Office of the Manager	405,822	-	405,822	-	-	405,822
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	71,286	-	71,286	-	-	71,286
Water Systems Operations	Office of the Manager, Operations Support Services	112,455	-	112,455	-	-	112,455
Water Systems Operations	Operations Support Services	75,991	-	75,991	-	-	75,991
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	9,440,584	-	9,440,584	-	-	9,440,584
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,230,715	-	2,230,715	-	-	2,230,715
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	89,055	-	89,055	-	-	89,055
Water Systems Operations	Environmental Health & Safety Section	1,173,942	-	1,173,942	-	-	1,173,942
Water Systems Operations	OSS, Fleet Services Unit	314,186	-	314,186	-	-	314,186
Water Systems Operations	OSS, Power Support Unit	214,123	-	214,123	-	-	214,123
Water Systems Operations	Office of the Manager, Operations & Planning Section	29,628	-	29,628	-	-	29,628
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		1,955,589	-	1,955,589	-	-	1,955,589
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,492,054	-	1,492,054	-	-	1,492,054
Water Resources Management	Resource Planning & Development	862	-	862	-	-	862
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	123	-	123	-	-	123
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>18,409,600</b>	<b>-</b>	<b>18,409,600</b>	<b>-</b>	<b>-</b>	<b>18,409,600</b>

	Functionalization	Allocation Percentages					% Total	
		Fixed			Variable Commodity	Hydroelectric		
		Demand	Commodity	Standby				
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager		294,303	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Human Resources		757,002	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	547,074	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	212,837	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	142,054	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	83,446	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	62.4%	0.0%	37.6%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	51.4%	0.0%	48.6%	0.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	74.4%	0.0%	25.6%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	61.5%	0.0%	38.5%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	17,198,518	0.0%	57.0%	0.0%	43.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	2,661,772	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	97,112	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	1,492,803	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	503,758	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	235,388	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	35,940	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Office of Manager	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Engineering Services		2,449,109	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	2,487,779	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	974	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	122	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		29,199,991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>GENERAL DISTRICT REQUIREMENTS</b>								
<b>State Water Contract</b>								
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Colorado River Aqueduct Power Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Local Resources Program		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Capital Financing</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		16,716,389	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
G.O. Bond Debt Service		424,369	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
Debt Administration		332,619	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
Bond Defeasance		-	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
PAYGO		7,897,500	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
<b>Total Capital Financing Costs</b>		25,370,878	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Regional Recycled Water Program planning costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>								
Operating Equipment		436,302	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		387,652	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		823,954	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Increase/(Decrease) in Required Reserves</b>		-	28.4%	32.5%	39.1%	0.0%	0.0%	100.0%
<b>Total General District Requirements</b>		26,194,832	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>		55,394,822	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Revenue Offsets</b>								
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - MWD GO Debt Service		424,369	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Interest on Investments		534,059	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - above GO Debt Service		-	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
Annexation		-	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
<b>Total Revenue Offsets</b>		958,428	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>NET REVENUE REQUIREMENTS:</b>		-	54,436,395	0.0%	0.0%	0.0%	0.0%	0.0%

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	294,303	-	294,303	-	-	294,303
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		757,002	-	757,002	-	-	757,002
Water Systems Operations	Office of the Manager	547,074	-	547,074	-	-	547,074
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	212,837	-	212,837	-	-	212,837
Water Systems Operations	Office of the Manager, Operations Support Services	142,054	-	142,054	-	-	142,054
Water Systems Operations	Operations Support Services	83,446	-	83,446	-	-	83,446
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	17,198,518	-	9,803,947	-	7,394,571	17,198,518
Water Systems Operations	Water Quality Section	2,661,772	-	2,661,772	-	-	2,661,772
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	97,112	-	97,112	-	-	97,112
Water Systems Operations	Environmental Health & Safety Section	1,492,803	-	1,492,803	-	-	1,492,803
Water Systems Operations	OSS, Fleet Services Unit	503,758	-	503,758	-	-	503,758
Water Systems Operations	OSS, Power Support Unit	235,388	-	235,388	-	-	235,388
Water Systems Operations	Office of the Manager, Operations & Planning Secti	35,940	-	35,940	-	-	35,940
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,449,109	-	2,449,109	-	-	2,449,109
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	2,487,779	-	2,487,779	-	-	2,487,779
Water Resources Managemen	Resource Planning & Development	974	-	974	-	-	974
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	122	-	122	-	-	122
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		29,199,991	-	21,805,419	-	7,394,571	29,199,991
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		16,716,389	4,906,083	5,057,817	6,752,489	-	16,716,389
G.O. Bond Debt Service		424,369	124,548	128,400	171,422	-	424,369
Debt Administration		332,619	97,620	100,639	134,360	-	332,619
Bond Defeasance		-	-	-	-	-	-
PAYGO		7,897,500	2,317,832	2,389,518	3,190,150	-	7,897,500
<b>Total Capital Financing Costs</b>		25,370,878	7,446,083	7,676,374	10,248,420	-	25,370,878
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		436,302	-	436,302	-	-	436,302
Succession Planning Labor Pool		387,652	-	387,652	-	-	387,652
OPEBI/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		823,954	-	823,954	-	-	823,954
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		26,194,832	7,446,083	8,500,329	10,248,420	-	26,194,832
<b>REQUIREMENTS BEFORE OFFSETS:</b>		55,394,822	7,446,083	30,305,748	10,248,420	7,394,571	55,394,822
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		424,369	-	-	424,369	-	424,369
Interest on Investments		534,059	156,741	161,588	215,730	-	534,059
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		958,428	156,741	161,588	640,099	-	958,428
<b>NET REVENUE REQUIREMENTS:</b>		54,436,395	7,289,343	30,144,160	9,608,321	7,394,571	54,436,395

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	279,691	-	279,691	-	-	279,691
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		612,835	-	612,835	-	-	612,835
Water Systems Operations	Office of the Manager	425,858	-	425,858	-	-	425,858
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	76,322	-	76,322	-	-	76,322
Water Systems Operations	Office of the Manager, Operations Support Services	118,007	-	118,007	-	-	118,007
Water Systems Operations	Operations Support Services	75,991	-	75,991	-	-	75,991
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	10,107,476	-	10,107,476	-	-	10,107,476
Water Systems Operations	Water Quality Section	2,230,715	-	2,230,715	-	-	2,230,715
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	89,055	-	89,055	-	-	89,055
Water Systems Operations	Environmental Health & Safety Section	1,173,942	-	1,173,942	-	-	1,173,942
Water Systems Operations	OSS, Fleet Services Unit	314,186	-	314,186	-	-	314,186
Water Systems Operations	OSS, Power Support Unit	214,123	-	214,123	-	-	214,123
Water Systems Operations	Office of the Manager, Operations & Planning Section	31,091	-	31,091	-	-	31,091
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,195,814	-	2,195,814	-	-	2,195,814
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,658,022	-	1,658,022	-	-	1,658,022
Water Resources Managemen	Resource Planning & Development	862	-	862	-	-	862
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	123	-	123	-	-	123
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>19,604,114</b>	<b>-</b>	<b>19,604,114</b>	<b>-</b>	<b>-</b>	<b>19,604,114</b>

	Functionalization	Allocation Percentages					% Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		303,759	0.0%	100.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources		781,326	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	514,266	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	194,937	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	133,535	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	83,446	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	62.4%	0.0%	37.6%	100.0%
Water Systems Operations	Treatment Diemer	17,653,230	0.0%	51.4%	0.0%	48.6%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	74.4%	0.0%	25.6%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	61.5%	0.0%	38.5%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	57.0%	0.0%	43.0%	100.0%
Water Systems Operations	Water Quality Section	2,661,772	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	97,112	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	1,492,803	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	503,758	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	235,388	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	33,784	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Office of Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Engineering Services		2,880,319	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	2,567,717	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	974	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	122	0.0%	100.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		<b>30,138,249</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Colorado River Aqueduct Power Costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>							
Local Resources Program		-	0.0%	0.0%	0.0%	0.0%	0.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	0.0%	0.0%	0.0%	0.0%	0.0%
G.O. Bond Debt Service		19,659,617	29.3%	30.3%	40.4%	0.0%	100.0%
Debt Administration		499,087	29.3%	30.3%	40.4%	0.0%	100.0%
Bond Defeasance		391,183	29.3%	30.3%	40.4%	0.0%	100.0%
PAYGO		-	29.3%	30.3%	40.4%	0.0%	100.0%
<b>Total Capital Financing Costs</b>		<b>9,288,000</b>	<b>29.3%</b>	<b>30.3%</b>	<b>40.4%</b>	<b>0.0%</b>	<b>100.0%</b>
		29,837,887	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Regional Recycled Water Program planning costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>							
Operating Equipment		450,321	0.0%	100.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		400,109	0.0%	100.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		<b>850,430</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Increase/(Decrease) in Required Reserves</b>							
		-	28.5%	32.2%	39.3%	0.0%	100.0%
<b>Total General District Requirements</b>							
		30,688,317	0.0%	0.0%	0.0%	0.0%	0.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>							
		60,826,566	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - MWD GO Debt Service		499,087	0.0%	0.0%	100.0%	0.0%	100.0%
Interest on Investments		586,426	29.3%	30.3%	40.4%	0.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - above GO Debt Service		-	29.3%	30.3%	40.4%	0.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	29.3%	30.3%	40.4%	0.0%	100.0%
Annexation		-	29.3%	30.3%	40.4%	0.0%	100.0%
<b>Total Revenue Offsets</b>		<b>1,085,513</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		303,759	-	303,759	-	-	303,759
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		781,326	-	781,326	-	-	781,326
Water Systems Operations	Office of the Manager	514,266	-	514,266	-	-	514,266
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	194,937	-	194,937	-	-	194,937
Water Systems Operations	Office of the Manager, Operations Support Services	133,535	-	133,535	-	-	133,535
Water Systems Operations	Operations Support Services	83,446	-	83,446	-	-	83,446
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	17,653,230	-	9,077,134	8,576,096	-	17,653,230
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,661,772	-	2,661,772	-	-	2,661,772
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	97,112	-	97,112	-	-	97,112
Water Systems Operations	Environmental Health & Safety Section	1,492,803	-	1,492,803	-	-	1,492,803
Water Systems Operations	OSS, Fleet Services Unit	503,758	-	503,758	-	-	503,758
Water Systems Operations	OSS, Power Support Unit	235,388	-	235,388	-	-	235,388
Water Systems Operations	Office of the Manager, Operations & Planning Secti	33,784	-	33,784	-	-	33,784
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,880,319	-	2,880,319	-	-	2,880,319
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	2,567,717	-	2,567,717	-	-	2,567,717
Water Resources Managemen	Resource Planning & Development	974	-	974	-	-	974
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	122	-	122	-	-	122
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		30,138,249	-	21,562,153	8,576,096	-	30,138,249
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		19,659,617	5,769,889	5,948,339	7,941,389	-	19,659,617
G.O. Bond Debt Service		499,087	146,477	151,007	201,603	-	499,087
Debt Administration		391,183	114,808	118,359	158,016	-	391,183
Bond Defeasance		-	-	-	-	-	-
PAYGO		9,288,000	2,725,929	2,810,236	3,751,834	-	9,288,000
<b>Total Capital Financing Costs</b>		29,837,887	8,757,103	9,027,941	12,052,843	-	29,837,887
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		450,321	-	450,321	-	-	450,321
Succession Planning Labor Pool		400,109	-	400,109	-	-	400,109
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		850,430	-	850,430	-	-	850,430
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		30,688,317	8,757,103	9,878,371	12,052,843	-	30,688,317
<b>REQUIREMENTS BEFORE OFFSETS:</b>		60,826,566	8,757,103	31,440,524	12,052,843	8,576,096	60,826,566
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		499,087	-	-	499,087	-	499,087
Interest on Investments		586,426	172,110	177,433	236,883	-	586,426
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		1,085,513	172,110	177,433	735,971	-	1,085,513
<b>NET REVENUE REQUIREMENTS:</b>		59,741,052	8,584,993	31,263,091	11,316,872	8,576,096	59,741,052

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		288,679	-	288,679	-	-	288,679
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		632,527	-	632,527	-	-	632,527
Water Systems Operations	Office of the Manager	400,319	-	400,319	-	-	400,319
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	69,903	-	69,903	-	-	69,903
Water Systems Operations	Office of the Manager, Operations Support Services	110,930	-	110,930	-	-	110,930
Water Systems Operations	Operations Support Services	75,991	-	75,991	-	-	75,991
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	9,257,413	-	9,257,413	-	-	9,257,413
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,230,715	-	2,230,715	-	-	2,230,715
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	89,055	-	89,055	-	-	89,055
Water Systems Operations	Environmental Health & Safety Section	1,173,942	-	1,173,942	-	-	1,173,942
Water Systems Operations	OSS, Fleet Services Unit	314,186	-	314,186	-	-	314,186
Water Systems Operations	OSS, Power Support Unit	214,123	-	214,123	-	-	214,123
Water Systems Operations	Office of the Manager, Operations & Planning Section	29,226	-	29,226	-	-	29,226
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,582,428	-	2,582,428	-	-	2,582,428
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,711,298	-	1,711,298	-	-	1,711,298
Water Resources Managemen	Resource Planning & Development	862	-	862	-	-	862
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	123	-	123	-	-	123
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>19,181,720</b>	<b>-</b>	<b>19,181,720</b>	<b>-</b>	<b>-</b>	<b>19,181,720</b>

	Functionalization	Allocation Percentages					% Total	
		Fixed			Variable Commodity	Hydroelectric		
		Demand	Commodity	Standby				
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager		210,711	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Human Resources		541,990	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	499,143	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	186,686	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	129,608	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	83,446	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	62.4%	0.0%	37.6%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	51.4%	0.0%	48.6%	0.0%	100.0%
Water Systems Operations	Treatment Mills	11,665,926	0.0%	74.4%	0.0%	25.6%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	61.5%	0.0%	38.5%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	57.0%	0.0%	43.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	2,661,772	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	97,112	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	1,492,803	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	503,758	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	235,388	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	32,791	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Office of the Manager	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Engineering Services		782,877	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	1,781,172	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	974	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	122	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		20,906,280	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>GENERAL DISTRICT REQUIREMENTS</b>								
<b>State Water Contract</b>								
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Colorado River Aqueduct Power Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Local Resources Program		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Capital Financing</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		5,343,529	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
G.O. Bond Debt Service		135,653	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
Debt Administration		106,324	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
Bond Defeasance		-	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
PAYGO		2,524,500	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
<b>Total Capital Financing Costs</b>		8,110,007	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Regional Recycled Water Program planning costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>								
Operating Equipment		312,378	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		277,547	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		589,925	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Increase/(Decrease) in Required Reserves</b>		-	27.4%	35.0%	37.7%	0.0%	0.0%	100.0%
<b>Total General District Requirements</b>		8,699,933	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>		29,606,213	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Revenue Offsets</b>								
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - MWD GO Debt Service		135,653	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Interest on Investments		285,432	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - above GO Debt Service		-	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
Annexation		-	29.3%	30.3%	40.4%	0.0%	0.0%	100.0%
<b>Total Revenue Offsets</b>		421,085	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>NET REVENUE REQUIREMENTS:</b>		-	29,185,128	0.0%	0.0%	0.0%	0.0%	0.0%



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	210,711	-	210,711	-	-	210,711
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		541,990	-	541,990	-	-	541,990
Water Systems Operations	Office of the Manager	499,143	-	499,143	-	-	499,143
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	186,686	-	186,686	-	-	186,686
Water Systems Operations	Office of the Manager, Operations Support Services	129,608	-	129,608	-	-	129,608
Water Systems Operations	Operations Support Services	83,446	-	83,446	-	-	83,446
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	11,665,926	-	8,680,133	2,985,792	-	11,665,926
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,661,772	-	2,661,772	-	-	2,661,772
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	97,112	-	97,112	-	-	97,112
Water Systems Operations	Environmental Health & Safety Section	1,492,803	-	1,492,803	-	-	1,492,803
Water Systems Operations	OSS, Fleet Services Unit	503,758	-	503,758	-	-	503,758
Water Systems Operations	OSS, Power Support Unit	235,388	-	235,388	-	-	235,388
Water Systems Operations	Office of the Manager, Operations & Planning Secti	32,791	-	32,791	-	-	32,791
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		782,877	-	782,877	-	-	782,877
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,781,172	-	1,781,172	-	-	1,781,172
Water Resources Managemen	Resource Planning & Development	974	-	974	-	-	974
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	122	-	122	-	-	122
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		20,906,280	-	17,920,488	2,985,792	-	20,906,280
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		5,343,529	1,568,269	1,616,772	2,158,488	-	5,343,529
G.O. Bond Debt Service		135,653	39,813	41,044	54,796	-	135,653
Debt Administration		106,324	31,205	32,170	42,949	-	106,324
Bond Defeasance		-	-	-	-	-	-
PAYGO		2,524,500	740,914	763,829	1,019,757	-	2,524,500
<b>Total Capital Financing Costs</b>		8,110,007	2,380,201	2,453,815	3,275,991	-	8,110,007
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		312,378	-	312,378	-	-	312,378
Succession Planning Labor Pool		277,547	-	277,547	-	-	277,547
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		589,925	-	589,925	-	-	589,925
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		8,699,933	2,380,201	3,043,741	3,275,991	-	8,699,933
<b>REQUIREMENTS BEFORE OFFSETS:</b>		29,606,213	2,380,201	20,964,229	3,275,991	2,985,792	29,606,213
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		135,653	-	-	135,653	-	135,653
Interest on Investments		285,432	83,771	86,362	115,299	-	285,432
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		421,085	83,771	86,362	250,952	-	421,085
<b>NET REVENUE REQUIREMENTS:</b>		29,185,128	2,296,430	20,877,867	3,025,039	2,985,792	29,185,128

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	200,250	-	200,250	-	-	200,250
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		438,771	-	438,771	-	-	438,771
Water Systems Operations	Office of the Manager	388,547	-	388,547	-	-	388,547
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	66,944	-	66,944	-	-	66,944
Water Systems Operations	Office of the Manager, Operations Support Services	107,668	-	107,668	-	-	107,668
Water Systems Operations	Operations Support Services	75,991	-	75,991	-	-	75,991
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	8,865,580	-	8,865,580	-	-	8,865,580
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,230,715	-	2,230,715	-	-	2,230,715
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	89,055	-	89,055	-	-	89,055
Water Systems Operations	Environmental Health & Safety Section	1,173,942	-	1,173,942	-	-	1,173,942
Water Systems Operations	OSS, Fleet Services Unit	314,186	-	314,186	-	-	314,186
Water Systems Operations	OSS, Power Support Unit	214,123	-	214,123	-	-	214,123
Water Systems Operations	Office of the Manager, Operations & Planning Section	28,367	-	28,367	-	-	28,367
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		701,910	-	701,910	-	-	701,910
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,187,092	-	1,187,092	-	-	1,187,092
Water Resources Management	Resource Planning & Development	862	-	862	-	-	862
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	123	-	123	-	-	123
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>16,084,127</b>	<b>-</b>	<b>16,084,127</b>	<b>-</b>	<b>-</b>	<b>16,084,127</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		248,448	-	248,448	-	-	248,448
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		639,054	-	639,054	-	-	639,054
Water Systems Operations	Office of the Manager	485,446	-	485,446	-	-	485,446
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	179,213	-	179,213	-	-	179,213
Water Systems Operations	Office of the Manager, Operations Support Services	126,052	-	126,052	-	-	126,052
Water Systems Operations	Operations Support Services	83,446	-	83,446	-	-	83,446
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	13,420,285	-	8,252,398	5,167,888	-	13,420,285
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,661,772	-	2,661,772	-	-	2,661,772
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	97,112	-	97,112	-	-	97,112
Water Systems Operations	Environmental Health & Safety Section	1,492,803	-	1,492,803	-	-	1,492,803
Water Systems Operations	OSS, Fleet Services Unit	503,758	-	503,758	-	-	503,758
Water Systems Operations	OSS, Power Support Unit	235,388	-	235,388	-	-	235,388
Water Systems Operations	Office of the Manager, Operations & Planning Secti	31,891	-	31,891	-	-	31,891
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,344,446	-	2,344,446	-	-	2,344,446
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	2,100,161	-	2,100,161	-	-	2,100,161
Water Resources Managemen	Resource Planning & Development	974	-	974	-	-	974
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	122	-	122	-	-	122
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		24,650,372	-	19,482,484	5,167,888	-	24,650,372
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		16,002,013	4,696,421	4,841,671	6,463,921	-	16,002,013
G.O. Bond Debt Service		406,234	119,225	122,913	164,096	-	406,234
Debt Administration		318,405	93,448	96,339	128,618	-	318,405
Bond Defeasance		-	-	-	-	-	-
PAYGO		7,560,000	2,218,780	2,287,402	3,053,819	-	7,560,000
<b>Total Capital Financing Costs</b>		24,286,652	7,127,874	7,348,324	9,810,454	-	24,286,652
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		368,322	-	368,322	-	-	368,322
Succession Planning Labor Pool		327,253	-	327,253	-	-	327,253
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		695,575	-	695,575	-	-	695,575
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		24,982,227	7,127,874	8,043,899	9,810,454	-	24,982,227
<b>REQUIREMENTS BEFORE OFFSETS:</b>		49,632,599	7,127,874	27,526,383	9,810,454	5,167,888	49,632,599
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		406,234	-	-	406,234	-	406,234
Interest on Investments		478,505	140,436	144,780	193,289	-	478,505
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		884,739	140,436	144,780	599,523	-	884,739
<b>NET REVENUE REQUIREMENTS:</b>		48,747,860	6,987,438	27,381,604	9,210,930	5,167,888	48,747,860

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	236,113	-	236,113	-	-	236,113
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		517,350	-	517,350	-	-	517,350
Water Systems Operations	Office of the Manager	377,885	-	377,885	-	-	377,885
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	64,265	-	64,265	-	-	64,265
Water Systems Operations	Office of the Manager, Operations Support Services	104,713	-	104,713	-	-	104,713
Water Systems Operations	Operations Support Services	75,991	-	75,991	-	-	75,991
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	8,510,693	-	8,510,693	-	-	8,510,693
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,230,715	-	2,230,715	-	-	2,230,715
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	89,055	-	89,055	-	-	89,055
Water Systems Operations	Environmental Health & Safety Section	1,173,942	-	1,173,942	-	-	1,173,942
Water Systems Operations	OSS, Fleet Services Unit	314,186	-	314,186	-	-	314,186
Water Systems Operations	OSS, Power Support Unit	214,123	-	214,123	-	-	214,123
Water Systems Operations	Office of the Manager, Operations & Planning Section	27,589	-	27,589	-	-	27,589
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,101,976	-	2,101,976	-	-	2,101,976
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,399,687	-	1,399,687	-	-	1,399,687
Water Resources Managemen	Resource Planning & Development	862	-	862	-	-	862
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	123	-	123	-	-	123
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>17,439,269</b>	<b>-</b>	<b>17,439,269</b>	<b>-</b>	<b>-</b>	<b>17,439,269</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	1,046,580	-	1,046,580	-	-	1,046,580
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		2,692,002	-	2,692,002	-	-	2,692,002
Water Systems Operations	Office of the Manager	2,282,684	-	2,282,684	-	-	2,282,684
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	382,462	-	382,462	-	-	382,462
Water Systems Operations	Office of the Manager, Treatment Section	143,259	-	143,259	-	-	143,259
Water Systems Operations	Office of the Manager, Operations Support Services	592,724	-	592,724	-	-	592,724
Water Systems Operations	Operations Support Services	5,863,983	-	5,863,983	-	-	5,863,983
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	8,952,725	-	8,952,725	-	-	8,952,725
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	2,201,767	-	2,201,767	-	-	2,201,767
Water Systems Operations	Treatment Diemer	2,600,591	-	2,600,591	-	-	2,600,591
Water Systems Operations	Treatment Mills	1,718,569	-	1,718,569	-	-	1,718,569
Water Systems Operations	Treatment Skinner	1,977,013	-	1,977,013	-	-	1,977,013
Water Systems Operations	Treatment Weymouth	2,533,605	-	2,533,605	-	-	2,533,605
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	15,901,282	-	15,901,282	-	-	15,901,282
Water Systems Operations	C&D, Western Unit	13,871,988	-	13,871,988	-	-	13,871,988
Water Systems Operations	OSS, Manufacturing Services Unit	6,201,537	-	6,201,537	-	-	6,201,537
Water Systems Operations	Environmental Health & Safety Section	4,923,998	-	4,923,998	-	-	4,923,998
Water Systems Operations	OSS, Fleet Services Unit	6,001,984	-	6,001,984	-	-	6,001,984
Water Systems Operations	OSS, Power Support Unit	4,516,910	-	4,516,910	-	-	4,516,910
Water Systems Operations	Office of the Manager, Operations & Planning Secti	149,960	-	149,960	-	-	149,960
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		7,342,872	-	7,342,872	-	-	7,342,872
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	8,846,882	-	8,846,882	-	-	8,846,882
Water Resources Managemen	Resource Planning & Development	988,926	-	988,926	-	-	988,926
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	124,273	-	124,273	-	-	124,273
Ethics Office		-	-	-	-	-	-
Real Property		1,980,575	-	1,980,575	-	-	1,980,575
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		103,839,152	-	103,839,152	-	-	103,839,152
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		50,118,770	18,656,372	20,101,581	11,360,816	-	50,118,770
G.O. Bond Debt Service		5,410,889	2,014,167	2,170,193	1,226,529	-	5,410,889
Debt Administration		997,253	371,221	399,977	226,055	-	997,253
Bond Defeasance		-	-	-	-	-	-
PAYGO		23,678,139	8,814,027	9,496,802	5,367,310	-	23,678,139
<b>Total Capital Financing Costs</b>		80,205,052	29,855,787	32,168,554	18,180,711	-	80,205,052
<b>Regional Recycled Water Program planning costs</b>		9,373,710	-	9,373,710	-	-	9,373,710
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		1,551,549	-	1,551,549	-	-	1,551,549
Succession Planning Labor Pool		1,378,545	-	1,378,545	-	-	1,378,545
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		2,930,094	-	2,930,094	-	-	2,930,094
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		92,508,855	29,855,787	44,472,358	18,180,711	-	92,508,855
<b>REQUIREMENTS BEFORE OFFSETS:</b>		196,348,008	29,855,787	148,311,510	18,180,711	-	196,348,008
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		5,410,889	2,014,167	2,170,193	1,226,529	-	5,410,889
Interest on Investments		1,892,981	-	1,892,981	-	-	1,892,981
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		7,303,870	2,014,167	4,063,175	1,226,529	-	7,303,870
<b>NET REVENUE REQUIREMENTS:</b>		189,044,137	27,841,620	144,248,336	16,954,182	-	189,044,137

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	994,621	-	994,621	-	-	994,621
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		2,179,326	-	2,179,326	-	-	2,179,326
Water Systems Operations	Office of the Manager	1,776,904	-	1,776,904	-	-	1,776,904
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	388,340	-	388,340	-	-	388,340
Water Systems Operations	Office of the Manager, Treatment Section	51,372	-	51,372	-	-	51,372
Water Systems Operations	Office of the Manager, Operations Support Services	492,387	-	492,387	-	-	492,387
Water Systems Operations	Operations Support Services	5,340,110	-	5,340,110	-	-	5,340,110
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	7,685,732	-	7,685,732	-	-	7,685,732
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	1,390,742	-	1,390,742	-	-	1,390,742
Water Systems Operations	Treatment Diemer	1,363,758	-	1,363,758	-	-	1,363,758
Water Systems Operations	Treatment Mills	1,306,035	-	1,306,035	-	-	1,306,035
Water Systems Operations	Treatment Skinner	1,253,755	-	1,253,755	-	-	1,253,755
Water Systems Operations	Treatment Weymouth	1,488,986	-	1,488,986	-	-	1,488,986
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	11,399,304	-	11,399,304	-	-	11,399,304
Water Systems Operations	C&D, Western Unit	10,511,763	-	10,511,763	-	-	10,511,763
Water Systems Operations	OSS, Manufacturing Services Unit	5,686,969	-	5,686,969	-	-	5,686,969
Water Systems Operations	Environmental Health & Safety Section	3,872,240	-	3,872,240	-	-	3,872,240
Water Systems Operations	OSS, Fleet Services Unit	3,743,346	-	3,743,346	-	-	3,743,346
Water Systems Operations	OSS, Power Support Unit	4,108,856	-	4,108,856	-	-	4,108,856
Water Systems Operations	Office of the Manager, Operations & Planning Section	129,728	-	129,728	-	-	129,728
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		6,583,451	-	6,583,451	-	-	6,583,451
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	5,896,153	-	5,896,153	-	-	5,896,153
Water Resources Management	Resource Planning & Development	875,092	-	875,092	-	-	875,092
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	124,508	-	124,508	-	-	124,508
Ethics Office		-	-	-	-	-	-
Real Property		896,033	-	896,033	-	-	896,033
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>79,539,512</b>	<b>-</b>	<b>79,539,512</b>	<b>-</b>	<b>-</b>	<b>79,539,512</b>



	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		53,220	0.0%	0.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	0.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	0.0%	0.0%	0.0%	100.0%
Human Resources		136,892	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	128,477	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	20,848	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	33,360	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	83,446	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	42,522	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	801,072	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	818,348	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	124,739	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	94,519	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	2,019,886	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	8,440	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	0.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Office of the Manager	-	0.0%	0.0%	0.0%	0.0%	100.0%
Engineering Services		464,703	0.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	449,875	0.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	-	0.0%	0.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	0.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	0.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	0.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		<b>5,280,347</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Colorado River Aqueduct Power Costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>							
Local Resources Program		-	0.0%	0.0%	0.0%	0.0%	0.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	0.0%	0.0%	100.0%	100.0%
Conservation Program		-	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total Demand Management Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	0.0%	0.0%	0.0%	0.0%	0.0%
G.O. Bond Debt Service		3,171,828	0.0%	0.0%	0.0%	100.0%	100.0%
Debt Administration		-	0.0%	0.0%	0.0%	100.0%	100.0%
Bond Defeasance		63,112	0.0%	0.0%	0.0%	100.0%	100.0%
PAYGO		-	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total Capital Financing Costs</b>		<b>1,498,500</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Regional Recycled Water Program planning costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>							
Operating Equipment		78,898	0.0%	0.0%	0.0%	100.0%	100.0%
Succession Planning Labor Pool		70,101	0.0%	0.0%	0.0%	100.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total Other Operating Costs</b>		<b>148,999</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Increase/(Decrease) in Required Reserves</b>							
		-	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total General District Requirements</b>		<b>4,882,439</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>							
		<b>10,162,786</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	100.0%	100.0%
Property Taxes - MWD GO Debt Service		-	0.0%	0.0%	0.0%	100.0%	100.0%
Interest on Investments		97,979	0.0%	0.0%	0.0%	100.0%	100.0%
Hydro-Power Revenue		12,205,101	0.0%	0.0%	0.0%	100.0%	100.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	100.0%	100.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	100.0%	100.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	100.0%	100.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	100.0%	100.0%
Property Taxes - above GO Debt Service		-	0.0%	0.0%	0.0%	100.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	0.0%	0.0%	0.0%	100.0%	100.0%
Annexation		-	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total Revenue Offsets</b>		<b>12,303,080</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
		<b>(2,140,294)</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		53,220	-	-	-	53,220	53,220
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		136,892	-	-	-	136,892	136,892
Water Systems Operations	Office of the Manager	128,477	-	-	-	128,477	128,477
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	20,848	-	-	-	20,848	20,848
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	33,360	-	-	-	33,360	33,360
Water Systems Operations	Operations Support Services	83,446	-	-	-	83,446	83,446
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	42,522	-	-	-	42,522	42,522
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	801,072	-	-	-	801,072	801,072
Water Systems Operations	C&D, Western Unit	818,348	-	-	-	818,348	818,348
Water Systems Operations	OSS, Manufacturing Services Unit	124,739	-	-	-	124,739	124,739
Water Systems Operations	Environmental Health & Safety Section	94,519	-	-	-	94,519	94,519
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	2,019,886	-	-	-	2,019,886	2,019,886
Water Systems Operations	Office of the Manager, Operations & Planning Sect	8,440	-	-	-	8,440	8,440
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		464,703	-	-	-	464,703	464,703
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	449,875	-	-	-	449,875	449,875
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>5,280,347</b>	-	-	-	<b>5,280,347</b>	<b>5,280,347</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		3,171,828	-	-	-	3,171,828	3,171,828
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		63,112	-	-	-	63,112	63,112
Bond Defeasance		-	-	-	-	-	-
PAYGO		1,498,500	-	-	-	1,498,500	1,498,500
<b>Total Capital Financing Costs</b>		<b>4,733,440</b>	-	-	-	<b>4,733,440</b>	<b>4,733,440</b>
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		78,898	-	-	-	78,898	78,898
Succession Planning Labor Pool		70,101	-	-	-	70,101	70,101
OPEB\PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>148,999</b>	-	-	-	<b>148,999</b>	<b>148,999</b>
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		<b>4,882,439</b>	-	-	-	<b>4,882,439</b>	<b>4,882,439</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>10,162,786</b>	-	-	-	<b>10,162,786</b>	<b>10,162,786</b>
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		97,979	-	-	-	97,979	97,979
Hydro-Power Revenue		12,205,101	-	-	-	12,205,101	12,205,101
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>12,303,080</b>	-	-	-	<b>12,303,080</b>	<b>12,303,080</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>(2,140,294)</b>	-	-	-	<b>(2,140,294)</b>	<b>(2,140,294)</b>

	Functionalization	Allocation Percentages					Total	
		Fixed			Variable Commodity	Other		Hydroelectric
		Demand	Commodity	Standby				
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager		50,578	-	-	-	-	50,578	50,578
Office of General Manager	Board of Directors	-	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-	-
Human Resources		110,821	-	-	-	-	110,821	110,821
Water Systems Operations	Office of the Manager	100,010	-	-	-	-	100,010	100,010
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	21,169	-	-	-	-	21,169	21,169
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	27,713	-	-	-	-	27,713	27,713
Water Systems Operations	Operations Support Services	75,991	-	-	-	-	75,991	75,991
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	36,313	-	-	-	-	36,313	36,313
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	574,272	-	-	-	-	574,272	574,272
Water Systems Operations	C&D, Western Unit	620,118	-	-	-	-	620,118	620,118
Water Systems Operations	OSS, Manufacturing Services Unit	114,389	-	-	-	-	114,389	114,389
Water Systems Operations	Environmental Health & Safety Section	74,330	-	-	-	-	74,330	74,330
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	1,837,411	-	-	-	-	1,837,411	1,837,411
Water Systems Operations	Office of the Manager, Operations & Planning Section	7,302	-	-	-	-	7,302	7,302
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-	-
Engineering Services		416,642	-	-	-	-	416,642	416,642
Business Technology	Administrative Services	-	-	-	-	-	-	-
Business Technology	Information Technology	299,827	-	-	-	-	299,827	299,827
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-	-
Real Property		-	-	-	-	-	-	-
General Counsel		-	-	-	-	-	-	-
General Auditor		-	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>4,366,886</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4,366,886</b>	<b>4,366,886</b>



	Functionalization	Allocation Percentages					Total	
		Demand	Fixed		Variable Commodity	Other		Hydroelectric
			Commodity	Standby				
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager		112,171	-	112,171	-	-	112,171	
Office of General Manager	Board of Directors	-	-	-	-	-	-	
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-	
External Affairs	Legislative Services	-	-	-	-	-	-	
External Affairs	Media Communications Services	-	-	-	-	-	-	
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-	
External Affairs	Conservation & Community Services	2,903,372	-	2,903,372	-	-	2,903,372	
Human Resources		288,524	-	288,524	-	-	288,524	
Water Systems Operations	Office of the Manager	-	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-	
Water Systems Operations	Operations Support Services	-	-	-	-	-	-	
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-	
Water Systems Operations	System Operations Unit	-	-	-	-	-	-	
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-	
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-	
Water Systems Operations	Treatment Jansen	-	-	-	-	-	-	
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-	
Water Systems Operations	Treatment Mills	-	-	-	-	-	-	
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-	
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-	
Water Systems Operations	Water Quality Section	-	-	-	-	-	-	
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-	
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-	
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-	
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-	
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-	
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations & Planning Sect	-	-	-	-	-	-	
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-	
Office of the Chief Financial O		-	-	-	-	-	-	
Business Technology	Office of Manager	-	-	-	-	-	-	
Engineering Services		-	-	-	-	-	-	
Business Technology	Administrative Services	-	-	-	-	-	-	
Business Technology	Information Technology	948,192	-	948,192	-	-	948,192	
Water Resources Management	Resource Planning & Development	107,174	-	107,174	-	-	107,174	
Water Resources Management	Resource Implementation	6,002,128	-	6,002,128	-	-	6,002,128	
Water Resources Management	Office of the Group Manager	767,724	-	767,724	-	-	767,724	
Ethics Office		-	-	-	-	-	-	
Real Property		-	-	-	-	-	-	
General Counsel		-	-	-	-	-	-	
General Auditor		-	-	-	-	-	-	
<b>Total Departmental O&amp;M</b>		<b>11,129,284</b>	-	<b>11,129,284</b>	-	-	<b>11,129,284</b>	
<b>GENERAL DISTRICT REQUIREMENTS</b>								
<b>State Water Contract</b>								
Supply - O&M		-	-	-	-	-	-	
Supply - Capital		-	-	-	-	-	-	
Power - O&M & Off-Aq Capital		-	-	-	-	-	-	
Power - Capital (less Off-Aq)		-	-	-	-	-	-	
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-	
Transmission - O&M - Commodity only		-	-	-	-	-	-	
Delta Conveyance		-	-	-	-	-	-	
<b>Total State Water Contract</b>								
<b>Colorado River Aqueduct Power Costs</b>								
<b>Supply Programs</b>								
<b>Demand Management</b>								
Local Resources Program		19,259,257	-	19,259,257	-	-	19,259,257	
Future Supply Actions & Stormwater Pilot		4,272,500	-	4,272,500	-	-	4,272,500	
Conservation Program		25,000,000	-	25,000,000	-	-	25,000,000	
<b>Total Demand Management Costs</b>		<b>48,531,757</b>	-	<b>48,531,757</b>	-	-	<b>48,531,757</b>	
<b>Capital Financing</b>								
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	-	-	-	-	-	
G.O. Bond Debt Service		-	-	-	-	-	-	
Debt Administration		-	-	-	-	-	-	
Bond Defeasance		-	-	-	-	-	-	
PAYGO		-	-	-	-	-	-	
<b>Total Capital Financing Costs</b>								
<b>Regional Recycled Water Program planning costs</b>								
<b>Other Operating Costs</b>								
Operating Equipment		166,292	-	166,292	-	-	166,292	
Succession Planning Labor Pool		147,750	-	147,750	-	-	147,750	
OPEB/PERS Pre-Funding		-	-	-	-	-	-	
<b>Total Other Operating Costs</b>		<b>314,042</b>	-	<b>314,042</b>	-	-	<b>314,042</b>	
<b>Increase/(Decrease) in Required Reserves</b>								
<b>Total General District Requirements</b>		<b>48,845,799</b>	-	<b>48,845,799</b>	-	-	<b>48,845,799</b>	
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>59,975,084</b>	-	<b>59,975,084</b>	-	-	<b>59,975,084</b>	
<b>Revenue Offsets</b>								
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-	
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-	
Interest on Investments		578,217	-	578,217	-	-	578,217	
Hydro-Power Revenue		-	-	-	-	-	-	
CRA Power Revenue		-	-	-	-	-	-	
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-	
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-	
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-	
Property Taxes - above GO Debt Service		-	-	-	-	-	-	
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-	
Annexation		-	-	-	-	-	-	
<b>Total Revenue Offsets</b>		<b>578,217</b>	-	<b>578,217</b>	-	-	<b>578,217</b>	
<b>NET REVENUE REQUIREMENTS:</b>		<b>59,396,867</b>	-	<b>59,396,867</b>	-	-	<b>59,396,867</b>	

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		106,602	-	106,602	-	-	106,602
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	1,808,021	-	1,808,021	-	-	1,808,021
Human Resources		233,576	-	233,576	-	-	233,576
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	631,939	-	631,939	-	-	631,939
Water Resources Management	Resource Planning & Development	94,838	-	94,838	-	-	94,838
Water Resources Management	Resource Implementation	3,766,277	-	3,766,277	-	-	3,766,277
Water Resources Management	Office of the Group Manager	769,174	-	769,174	-	-	769,174
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>7,410,425</b>	<b>-</b>	<b>7,410,425</b>	<b>-</b>	<b>-</b>	<b>7,410,425</b>



Departmental O&M	Functionalization	Allocation Percentages						Total
		Demand	Fixed		Variable	Other	Hydroelectric	
			Commodity	Standby				
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager	Office of General Manager	-	1,813,243	-	-	25,193	1,838,436	
Office of General Manager	Board of Directors	-	-	-	-	-	-	
Bay Delta Initiatives	Bay Delta Initiatives	-	2,598,755	-	-	-	2,598,755	
External Affairs	Legislative Services	-	-	-	-	-	-	
External Affairs	Media Communications Services	-	-	-	-	-	-	
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-	
External Affairs	Conservation & Community Services	-	900,596	-	-	-	900,596	
Human Resources	Human Resources	-	3,973,016	-	-	55,201	4,028,218	
Water Systems Operations	Office of the Manager	-	2,612,743	-	-	49,816	2,662,559	
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	436,615	-	-	10,544	447,159	
Water Systems Operations	Office of the Manager, Treatment Section	-	199,290	-	-	-	199,290	
Water Systems Operations	Office of the Manager, Operations Support Services	-	724,000	-	-	13,804	737,805	
Water Systems Operations	Operations Support Services	-	3,396,365	-	-	37,852	3,434,217	
Water Systems Operations	Desert Region / C&D CRA	-	12,352,763	-	-	-	12,352,763	
Water Systems Operations	System Operations Unit	-	3,828,350	-	-	-	3,828,350	
Water Systems Operations	Power Operations and Planning	-	1,626,285	-	-	18,088	1,644,374	
Water Systems Operations	Operations Planning & Programs Unit	-	1,239,218	-	-	-	1,239,218	
Water Systems Operations	Treatment Jensen	-	5,395,207	-	-	-	5,395,207	
Water Systems Operations	Treatment Diemer	-	5,290,526	-	-	-	5,290,526	
Water Systems Operations	Treatment Mills	-	5,066,597	-	-	-	5,066,597	
Water Systems Operations	Treatment Skinner	-	4,863,783	-	-	-	4,863,783	
Water Systems Operations	Treatment Weymouth	-	5,776,329	-	-	-	5,776,329	
Water Systems Operations	Water Quality Section	-	11,001,430	-	-	-	11,001,430	
Water Systems Operations	C&D, Eastern Unit	-	6,865,237	-	-	286,052	7,151,288	
Water Systems Operations	C&D, Western Unit	-	5,416,841	-	-	-	5,416,841	
Water Systems Operations	OSS, Manufacturing Services Unit	-	3,225,705	-	-	56,979	3,282,684	
Water Systems Operations	Environmental Health & Safety Section	-	5,838,138	-	-	37,025	5,875,162	
Water Systems Operations	OSS, Fleet Services Unit	-	3,122,946	-	-	-	3,122,946	
Water Systems Operations	OSS, Power Support Unit	-	2,680,847	-	-	915,235	3,596,082	
Water Systems Operations	Office of the Manager, Operations & Planning Secti	-	190,751	-	-	3,637	194,388	
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-	
Office of the Chief Financial O	Office of the Chief Financial O	-	-	-	-	-	-	
Business Technology	Office of Manager	-	-	-	-	-	-	
Engineering Services	Engineering Services	-	17,444,072	-	-	207,534	17,651,606	
Business Technology	Administrative Services	-	-	-	-	-	-	
Business Technology	Information Technology	-	10,748,972	-	-	149,347	10,898,319	
Water Resources Managemen	Resource Planning & Development	-	2,147,259	-	-	-	2,147,259	
Water Resources Managemen	Resource Implementation	-	4,950,526	-	-	-	4,950,526	
Water Resources Managemen	Office of the Group Manager	-	1,298,804	-	-	-	1,298,804	
Ethics Office	Ethics Office	-	-	-	-	-	-	
Real Property	Real Property	-	2,752,405	-	-	-	2,752,405	
General Counsel	General Counsel	-	-	-	-	-	-	
General Auditor	General Auditor	-	-	-	-	-	-	
<b>Total Departmental O&amp;M</b>		-	139,777,614	-	-	2,175,196	141,952,809	
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-	
<b>State Water Contract</b>		-	-	-	-	-	-	
Supply - O&M	Supply - O&M	-	5,073,569	-	-	-	5,073,569	
Supply - Capital	Supply - Capital	-	3,155,532	-	-	-	3,155,532	
Power - O&M & Off-Aq Capital	Power - O&M & Off-Aq Capital	-	-	-	11,377,305	-	11,377,305	
Power - Capital (less Off-Aq)	Power - Capital (less Off-Aq)	-	-	-	-	-	-	
Transmission - Capital - Commodity, Demand, & Standby	Transmission - Capital - Commodity, Demand, & Standby	897,097	2,491,935	1,663,747	-	-	5,052,779	
Transmission - O&M - Commodity only	Transmission - O&M - Commodity only	-	9,874,951	-	-	-	9,874,951	
Delta Conveyance	Delta Conveyance	243,769	677,136	452,091	-	-	1,372,996	
<b>Total State Water Contract</b>		1,140,866	21,273,123	2,115,838	11,377,305	-	35,907,132	
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	2,868,839	-	2,868,839	
<b>Supply Programs</b>		-	3,772,050	-	-	-	3,772,050	
<b>Demand Management</b>		-	-	-	-	-	-	
Local Resources Program	Local Resources Program	-	1,057,715	-	-	-	1,057,715	
Future Supply Actions & Stormwater Pilot	Future Supply Actions & Stormwater Pilot	-	234,645	-	-	-	234,645	
Conservation Program	Conservation Program	-	1,372,996	-	-	-	1,372,996	
<b>Total Demand Management Costs</b>		-	2,665,356	-	-	-	2,665,356	
<b>Capital Financing</b>		-	-	-	-	-	-	
Revenue Bond Debt Service net of BABs Interest Subsidy Payment	Revenue Bond Debt Service net of BABs Interest Subsidy Payment	3,028,388	6,337,071	5,276,444	-	174,196	14,816,099	
G.O. Bond Debt Service	G.O. Bond Debt Service	140,329	149,816	108,253	-	-	398,398	
Debt Administration	Debt Administration	60,258	126,094	104,990	-	3,466	294,808	
Bond Defeasance	Bond Defeasance	-	-	-	-	-	-	
PAYGO	PAYGO	1,430,733	2,993,889	2,492,806	-	82,297	6,999,726	
<b>Total Capital Financing Costs</b>		4,659,709	9,606,870	7,982,493	-	259,960	22,509,032	
<b>Regional Recycled Water Program planning costs</b>		-	823,798	-	-	-	823,798	
<b>Other Operating Costs</b>		-	-	-	-	-	-	
Operating Equipment	Operating Equipment	-	305,998	5,867	-	4,333	316,198	
Succession Planning Labor Pool	Succession Planning Labor Pool	-	271,878	5,213	-	3,850	280,941	
OPEB/PERS Pre-Funding	OPEB/PERS Pre-Funding	-	-	-	-	-	-	
<b>Total Other Operating Costs</b>		-	577,876	11,079	-	8,183	597,139	
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-	
<b>Total General District Requirements</b>		-	5,800,574	38,719,073	10,109,411	14,246,144	69,143,345	
<b>REQUIREMENTS BEFORE OFFSETS:</b>		211,096,155	5,800,574	178,496,687	10,109,411	14,246,144	211,096,155	
<b>Revenue Offsets</b>		-	-	-	-	-	-	
Property Taxes - MWD Portion of SWP GO Debt Service	Property Taxes - MWD Portion of SWP GO Debt Service	-	-	-	-	-	-	
Property Taxes - MWD GO Debt Service	Property Taxes - MWD GO Debt Service	-	-	-	-	-	-	
Interest on Investments	Interest on Investments	2,035,167	139,221	1,299,193	242,638	341,924	2,035,167	
Hydro-Power Revenue	Hydro-Power Revenue	-	-	-	-	-	-	
CRA Power Revenue	CRA Power Revenue	-	-	-	-	-	-	
Wadsworth Pumping Plant (DVL) Power Revenue	Wadsworth Pumping Plant (DVL) Power Revenue	-	-	-	-	-	-	
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	16,335,920	1,117,498	10,428,388	1,947,609	2,744,563	16,335,920	
Misc. allocated to supply (PVID Lease)	Misc. allocated to supply (PVID Lease)	-	-	-	-	-	-	
Property Taxes - above GO Debt Service	Property Taxes - above GO Debt Service	-	-	-	-	-	-	
Revenue Reserve used for Revenue Bonds - I&P	Revenue Reserve used for Revenue Bonds - I&P	-	-	-	-	-	-	
Annexation	Annexation	-	-	-	-	-	-	
<b>Total Revenue Offsets</b>		18,371,087	1,256,719	11,727,581	2,190,246	3,086,487	18,371,087	
<b>NET REVENUE REQUIREMENTS:</b>		192,725,067	4,543,855	166,769,105	7,919,165	11,159,657	192,725,067	



	Total Costs to Be Allocated	A&G Cost Redistribution	Adjusted Costs	Allocation Categories					Total	
				Demand	Fixed Commodity	Standby	Variable Commodity	Hydroelectric		
<b>Departmental O&amp;M</b>										
<b>Group</b>	<b>Item</b>									
	Office of General Manager	1,430,723	4,291,335	5,722,057	-	5,643,644	-	78,413	5,722,057	
	Office of General Manager Board of Directors	1,862,185	(1,862,185)	-	-	-	-	-	-	
	Bay Delta Initiatives	-	12,265,055	12,265,055	-	12,265,055	-	-	12,265,055	
	External Affairs Legislative Services	6,098,334	(6,098,334)	-	-	-	-	-	-	
	External Affairs Media Communications Services	5,153,622	(5,153,622)	-	-	-	-	-	-	
	External Affairs Manager, External Affairs/Special Projects	9,622,528	(9,622,528)	-	-	-	-	-	-	
	External Affairs Conservation & Community Services	2,903,372	900,596	3,803,967	-	3,803,967	-	-	3,803,967	
	Human Resources	3,680,088	10,337,536	14,017,624	-	13,825,531	-	192,093	14,017,624	
	Water Systems Operations Office of the Manager	38,107	9,491,255	9,529,361	-	9,351,068	-	178,293	9,529,361	
	Water Systems Operations Office of the Manager, Conveyance & Distribution Section	2,437	1,328,844	1,331,281	-	1,299,888	-	31,393	1,331,281	
	Water Systems Operations Office of the Manager, Treatment Section	-	1,315,016	1,315,016	-	1,315,016	-	-	1,315,016	
	Water Systems Operations Office of the Manager, Operations Support Services	9,895	2,510,952	2,520,846	-	2,473,682	-	47,165	2,520,846	
	Water Systems Operations Operations Support Services	15,172	10,989,879	11,005,051	-	10,893,753	-	121,298	11,005,051	
	Water Systems Operations Desert Region / C&D CRA	-	41,701,036	41,701,036	-	41,701,036	-	-	41,701,036	
	Water Systems Operations System Operations Unit	-	12,781,076	12,781,076	-	12,781,076	-	-	12,781,076	
	Water Systems Operations Power Operations and Planning	-	5,510,021	5,510,021	-	5,449,411	-	60,610	5,510,021	
	Water Systems Operations Operations Planning & Programs Unit	-	3,761,728	3,761,728	-	3,761,728	-	-	3,761,728	
	Water Systems Operations Treatment Jensen	-	22,542,926	22,542,926	-	16,916,828	-	5,626,099	22,542,926	
	Water Systems Operations Treatment Diemer	-	25,544,346	25,544,346	-	16,968,251	-	8,576,096	25,544,346	
	Water Systems Operations Treatment Mills	-	18,451,092	18,451,092	-	15,465,300	-	2,985,792	18,451,092	
	Water Systems Operations Treatment Skinner	-	20,261,081	20,261,081	-	15,093,193	-	5,167,888	20,261,081	
	Water Systems Operations Treatment Weymouth	-	25,508,452	25,508,452	-	18,113,880	-	7,394,571	25,508,452	
	Water Systems Operations Water Quality Section	-	37,355,606	37,355,606	-	37,355,606	-	-	37,355,606	
	Water Systems Operations C&D, Eastern Unit	-	27,178,092	27,178,092	-	26,090,969	-	1,087,124	27,178,092	
	Water Systems Operations C&D, Western Unit	184,243	20,710,854	20,895,098	-	19,767,862	-	1,127,236	20,895,098	
	Water Systems Operations OSS, Manufacturing Services Unit	15,484	10,463,760	10,469,245	-	10,287,527	-	181,718	10,469,245	
	Water Systems Operations Environmental Health & Safety Section	4,501	20,869,201	20,873,702	-	20,742,158	-	131,544	20,873,702	
	Water Systems Operations OSS, Fleet Services Unit	1,293,433	11,881,984	13,175,418	-	13,175,418	-	-	13,175,418	
	Water Systems Operations OSS, Power Support Unit	15,905	11,516,578	11,532,483	-	8,597,362	-	2,935,121	11,532,483	
	Water Systems Operations Office of the Manager, Operations & Planning Section	2,503	642,995	645,499	-	633,421	-	12,077	645,499	
	Water Systems Operations Security Team & Security Management	-	-	-	-	-	-	-	-	
	Office of the Chief Financial Officer	26,759,739	(26,759,739)	-	-	-	-	-	-	
	Business Technology Office of the Manager	702,555	(702,555)	-	-	-	-	-	-	
	Engineering Services	2,340,259	54,836,191	57,176,451	-	56,504,214	-	672,237	57,176,451	
	Business Technology Administrative Services	39,389,705	(39,389,705)	-	-	-	-	-	-	
	Business Technology Information Technology	12,094,087	31,633,000	43,727,086	-	43,127,865	-	599,222	43,727,086	
	Water Resources Management Resource Planning & Development	-	7,018,816	7,018,816	-	7,018,816	-	-	7,018,816	
	Water Resources Management Resource Implementation	19,029	20,770,137	20,789,166	-	20,789,166	-	-	20,789,166	
	Water Resources Management Office of the Group Manager	2,391	3,898,955	3,901,346	-	3,901,346	-	-	3,901,346	
	Ethics Office	1,552,431	(1,552,431)	-	-	-	-	-	-	
	Real Property	7,108,816	7,857,459	14,966,275	-	14,966,275	-	-	14,966,275	
	General Counsel	15,321,969	(15,321,969)	-	-	-	-	-	-	
	General Auditor	4,329,295	(4,329,295)	-	-	-	-	-	-	
	<b>Total Departmental O&amp;M</b>	<b>141,952,809</b>	<b>385,323,491</b>	<b>527,276,301</b>		<b>490,070,313</b>		<b>29,750,445</b>	<b>7,455,542</b>	<b>527,276,301</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>										
<b>State Water Contract</b>										
	Supply - O&M	92,381,352	5,073,569	97,454,921	-	97,454,921	-	-	97,454,921	
	Supply - Capital	57,457,040	3,155,532	60,612,572	-	60,612,572	-	-	60,612,572	
	Power - O&M & Off-Aq Capital	207,162,017	11,377,305	218,539,322	-	-	218,539,322	-	218,539,322	
	Power - Capital (less Off-Aq)	(13,041,702)	-	(13,041,702)	-	-	(13,041,702)	-	(13,041,702)	
	Transmission - Capital - Commodity, Demand, & Standby	92,002,797	5,052,779	97,055,576	17,231,753	47,865,981	31,957,842	-	97,055,576	
	Transmission - O&M - Commodity only	179,806,614	9,874,951	189,681,565	-	189,681,565	-	-	189,681,565	
	Delta Conveyance	25,000,000	1,372,996	26,372,996	4,682,399	13,006,665	8,683,932	-	26,372,996	
	<b>Total State Water Contract</b>	<b>640,768,118</b>	<b>35,907,132</b>	<b>676,675,250</b>	<b>21,914,152</b>	<b>408,621,703</b>	<b>40,641,774</b>	<b>205,497,621</b>	<b>676,675,250</b>	
	<b>Colorado River Aqueduct Power Costs</b>	<b>52,236,836</b>	<b>2,868,839</b>	<b>55,105,675</b>				<b>55,105,675</b>	<b>55,105,675</b>	
	<b>Supply Programs</b>	<b>68,682,826</b>	<b>3,772,050</b>	<b>72,454,876</b>		<b>72,454,876</b>			<b>72,454,876</b>	
	<b>Demand Management</b>									
	Local Resources Program	19,259,257	1,057,715	20,316,973	-	20,316,973	-	-	20,316,973	
	Future Supply Actions & Stormwater Pilot	4,272,500	234,645	4,507,145	-	4,507,145	-	-	4,507,145	
	Conservation Program	25,000,000	1,372,996	26,372,996	-	26,372,996	-	-	26,372,996	
	<b>Total Demand Management Costs</b>	<b>48,531,757</b>	<b>2,665,356</b>	<b>51,197,114</b>		<b>51,197,114</b>			<b>51,197,114</b>	
	<b>Capital Financing</b>									
	Revenue Bond Debt Service net of BABs Interest Subsidy Payment	285,750,240	(1,157,339)	284,592,901	58,170,359	121,724,702	101,351,817	3,346,024	284,592,901	
	G.O. Bond Debt Service	7,254,175	398,398	7,652,573	2,695,480	2,877,726	2,079,367	-	7,652,573	
	Debt Administration	5,685,801	(23,029)	5,662,773	1,157,462	2,422,054	2,016,678	-	5,662,773	
	Bond Defeasance	135,000,000	-	135,000,000	-	-	-	-	135,000,000	
	PAYGO	135,000,000	(546,774)	134,453,226	27,482,036	57,507,685	47,882,708	-	150,797	
	<b>Total Capital Financing Costs</b>	<b>433,690,217</b>	<b>(1,328,743)</b>	<b>432,361,473</b>	<b>89,505,337</b>	<b>184,532,167</b>	<b>153,330,570</b>	<b>4,993,400</b>	<b>432,361,473</b>	
	<b>Regional Recycled Water Program planning costs</b>	<b>15,000,000</b>	<b>823,798</b>	<b>15,823,798</b>		<b>15,823,798</b>			<b>15,823,798</b>	
	<b>Other Operating Costs</b>									
	Operating Equipment	7,878,483	(1,804,839)	6,073,643	-	5,877,720	112,692	-	83,231	
	Succession Planning Labor Pool	7,000,000	(1,603,593)	5,396,407	-	5,222,331	100,126	-	73,951	
	OPEB/PERS Pre-Funding	-	-	-	-	-	-	-	-	
	<b>Total Other Operating Costs</b>	<b>14,878,483</b>	<b>(3,408,432)</b>	<b>11,470,051</b>		<b>11,100,051</b>	<b>212,818</b>		<b>11,470,051</b>	
	<b>Increase/(Decrease) in Required Reserves</b>	<b>41,300,000</b>	<b>(41,300,000)</b>							
	<b>Total General District Requirements</b>	<b>1,315,088,237</b>		<b>1,315,088,237</b>	<b>111,419,489</b>	<b>743,729,708</b>	<b>194,185,162</b>	<b>260,603,296</b>	<b>5,150,582</b>	<b>1,315,088,237</b>
	<b>REQUIREMENTS BEFORE OFFSETS:</b>	<b>1,457,041,047</b>	<b>385,323,491</b>	<b>1,842,364,538</b>	<b>111,419,489</b>	<b>1,233,800,021</b>	<b>194,185,162</b>	<b>290,353,741</b>	<b>12,606,124</b>	<b>1,842,364,538</b>
	<b>Revenue Offsets</b>									
	Property Taxes - MWD Portion of SWP GO Debt Service	7,554,898	0	7,554,898	1,341,336	3,725,933	2,487,629	-	7,554,898	
	Property Taxes - MWD GO Debt Service	7,254,175	(0)	7,254,175	2,014,167	2,170,193	3,069,815	-	7,254,175	
	Interest on Investments	17,782,144	(0)	17,782,144	2,191,002	9,621,375	2,993,804	-	17,782,144	
	Hydro-Power Revenue	12,205,101	-	12,205,101	-	-	-	2,845,792	110,171	
	CRA Power Revenue	8,079,978	-	8,079,978	-	-	-	8,079,978	-	
	Wadsworth Pumping Plant (DVL) Power Revenue	469,889	-	469,889	-	-	-	469,889	-	
	Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	16,335,920	-	16,335,920	1,117,498	10,428,388	1,947,609	2,744,563	97,862	
	Misc. allocated to supply (PVID Lease)	3,595,498	-	3,595,498	-	-	-	-	3,595,498	
	Property Taxes - above GO Debt Service	125,138,058	-	125,138,058	14,900,442	82,603,399	27,634,216	-	125,138,058	
	Revenue Reserve used for Revenue Bonds - I&P	-	-	-	-	-	-	-	-	
	Annexation	-	-	-	-	-	-	-	-	
	<b>Total Revenue Offsets</b>	<b>198,395,660</b>	<b>(0)</b>	<b>198,395,660</b>	<b>21,564,446</b>	<b>112,144,787</b>	<b>38,133,071</b>	<b>14,140,222</b>	<b>12,413,134</b>	<b>198,395,660</b>
	<b>NET REVENUE REQUIREMENTS:</b>	<b>1,643,968,879</b>	<b>385,323,491</b>	<b>1,643,968,879</b>	<b>89,855,044</b>	<b>1,121,655,234</b>	<b>156,052,091</b>	<b>276,213,520</b>	<b>192,990</b>	<b>1,643,968,879</b>

	Total to Be Allocated Excluding A&G and Negative Values	Line Item Costs by Allocation Category (w/o A&G)					Total Allocations
		Fixed			Variable Commodity	Hydro- Electric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
	Office of General Manager	3,690,813	-	3,640,235	-	50,578	3,690,813
	Office of General Manager Board of Directors	-	-	-	-	-	-
	Bay Delta Initiatives	5,217,217	-	5,217,217	-	-	5,217,217
	External Affairs Legislative Services	-	-	-	-	-	-
	External Affairs Media Communications Services	-	-	-	-	-	-
	External Affairs Manager, External Affairs/Special Pro	-	-	-	-	-	-
	External Affairs Conservation & Community Services	1,808,021	-	1,808,021	-	-	1,808,021
	Human Resources	8,086,982	-	7,976,160	-	110,821	8,086,982
	Water Systems Operations Office of the Manager	5,345,309	-	5,245,299	-	100,010	5,345,309
	Water Systems Operations Office of the Manager, Conveyance &	897,710	-	876,541	-	21,169	897,710
	Water Systems Operations Office of the Manager, Treatment Ser	400,092	-	400,092	-	-	400,092
	Water Systems Operations Office of the Manager, Operations Su	1,481,204	-	1,453,491	-	27,713	1,481,204
	Water Systems Operations Operations Support Services	6,894,476	-	6,818,485	-	75,991	6,894,476
	Water Systems Operations Desert Region / C&D CRA	24,799,200	-	24,799,200	-	-	24,799,200
	Water Systems Operations System Operations Unit	7,685,732	-	7,685,732	-	-	7,685,732
	Water Systems Operations Power Operations and Planning	3,301,217	-	3,264,903	-	36,313	3,301,217
	Water Systems Operations Operations Planning & Programs Unit	2,487,834	-	2,487,834	-	-	2,487,834
	Water Systems Operations Treatment Jensen	10,831,327	-	10,831,327	-	-	10,831,327
	Water Systems Operations Treatment Diemer	10,621,171	-	10,621,171	-	-	10,621,171
	Water Systems Operations Treatment Mills	10,171,615	-	10,171,615	-	-	10,171,615
	Water Systems Operations Treatment Skinner	9,764,448	-	9,764,448	-	-	9,764,448
	Water Systems Operations Treatment Weymouth	11,596,462	-	11,596,462	-	-	11,596,462
	Water Systems Operations Water Quality Section	22,086,286	-	22,086,286	-	-	22,086,286
	Water Systems Operations C&D, Eastern Unit	14,356,806	-	13,782,534	-	574,272	14,356,806
	Water Systems Operations C&D, Western Unit	11,494,878	-	10,874,759	-	620,118	11,494,878
	Water Systems Operations OSS, Manufacturing Services Unit	6,590,261	-	6,475,871	-	114,389	6,590,261
	Water Systems Operations Environmental Health & Safety Sectio	11,794,877	-	11,720,547	-	74,330	11,794,877
	Water Systems Operations OSS, Fleet Services Unit	6,269,574	-	6,269,574	-	-	6,269,574
	Water Systems Operations OSS, Power Support Unit	7,219,433	-	5,382,022	-	1,837,411	7,219,433
	Water Systems Operations Office of the Manager, Operations &	390,249	-	382,948	-	7,302	390,249
	Water Systems Operations Security Team & Security Managemen	-	-	-	-	-	-
	Office of the Chief Financial C	-	-	-	-	-	-
	Business Technology Office of Manager	-	-	-	-	-	-
	Engineering Services	35,437,067	-	35,020,426	-	416,642	35,437,067
	Business Technology Administrative Services	-	-	-	-	-	-
	Business Technology Information Technology	21,879,282	-	21,579,455	-	299,827	21,879,282
	Water Resources Managem Resource Planning & Development	4,310,800	-	4,310,800	-	-	4,310,800
	Water Resources Managem Resource Implementation	9,938,592	-	9,938,592	-	-	9,938,592
	Water Resources Managem Office of the Group Manager	2,607,457	-	2,607,457	-	-	2,607,457
	Ethics Office	-	-	-	-	-	-
	Real Property	5,525,682	-	5,525,682	-	-	5,525,682
	General Counsel	-	-	-	-	-	-
	General Auditor	-	-	-	-	-	-
	<b>Total Departmental O&amp;M</b>	<b>284,982,075</b>	<b>-</b>	<b>280,615,188</b>	<b>-</b>	<b>4,366,886</b>	<b>284,982,075</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
	Supply - O&M	92,381,352	-	92,381,352	-	-	92,381,352
	Supply - Capital	57,457,040	-	57,457,040	-	-	57,457,040
	Power - O&M & Off-Aq Capital	207,162,017	-	-	-	207,162,017	207,162,017
	Power - Capital (less Off-Aq)	-	-	-	-	-	-
	Transmission - Capital - Commodity, Demand, & Standby	92,002,797	16,334,656	45,374,046	30,294,095	-	92,002,797
	Transmission - O&M - Commodity only	179,806,614	-	179,806,614	-	-	179,806,614
	Delta Conveyance	25,000,000	4,438,630	12,329,529	8,231,841	-	25,000,000
	<b>Total State Water Contract</b>	<b>653,809,820</b>	<b>20,773,287</b>	<b>387,348,580</b>	<b>38,525,936</b>	<b>207,162,017</b>	<b>653,809,820</b>
	<b>Colorado River Aqueduct Power Costs</b>	<b>52,236,836</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>52,236,836</b>	<b>52,236,836</b>
	<b>Supply Programs</b>	<b>68,682,826</b>	<b>-</b>	<b>68,682,826</b>	<b>-</b>	<b>-</b>	<b>68,682,826</b>
	<b>Demand Management</b>						
	Local Resources Program	19,259,257	-	19,259,257	-	-	19,259,257
	Future Supply Actions & Stormwater Pilot	4,272,500	-	4,272,500	-	-	4,272,500
	Conservation Program	25,000,000	-	25,000,000	-	-	25,000,000
	<b>Total Demand Management Costs</b>	<b>48,531,757</b>	<b>-</b>	<b>48,531,757</b>	<b>-</b>	<b>-</b>	<b>48,531,757</b>
	<b>Capital Financing</b>						
	Revenue Bond Debt Service net of BABs Interest Subsidy Payment	269,776,802	55,141,970	115,387,631	96,075,373	3,171,828	269,776,802
	G.O. Bond Debt Service	7,254,175	2,555,152	2,727,910	1,971,114	-	7,254,175
	Debt Administration	5,367,965	1,097,204	2,295,960	1,911,689	63,112	5,367,965
	Bond Defeasance	-	-	-	-	-	-
	PAYGO	127,453,500	26,051,303	54,513,796	45,389,902	1,498,500	127,453,500
	<b>Total Capital Financing Costs</b>	<b>409,852,442</b>	<b>84,845,628</b>	<b>174,925,297</b>	<b>145,348,077</b>	<b>4,733,440</b>	<b>409,852,442</b>
	<b>Regional Recycled Water Program planning costs</b>	<b>15,000,000</b>	<b>-</b>	<b>15,000,000</b>	<b>-</b>	<b>-</b>	<b>15,000,000</b>
	<b>Other Operating Costs</b>						
	Operating Equipment	5,757,445	-	5,571,722	106,825	78,898	5,757,445
	Succession Planning Labor Pool	5,115,467	-	4,950,453	94,914	70,101	5,115,467
	OPEBIPERS Pre-Funding	-	-	-	-	-	-
	<b>Total Other Operating Costs</b>	<b>10,872,912</b>	<b>-</b>	<b>10,522,175</b>	<b>201,739</b>	<b>148,999</b>	<b>10,872,912</b>
	<b>Increase/(Decrease) in Required Reserves</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total General District Requirements</b>	<b>1,258,986,594</b>	<b>105,618,915</b>	<b>705,010,635</b>	<b>184,075,751</b>	<b>259,398,853</b>	<b>1,258,986,594</b>
	<b>REQUIREMENTS BEFORE OFFSETS:</b>	<b>1,543,968,668</b>	<b>105,618,915</b>	<b>985,625,824</b>	<b>184,075,751</b>	<b>259,398,853</b>	<b>1,543,968,668</b>
	<b>Revenue Offsets</b>						
	Property Taxes - MWD Portion of SWP GO Debt Service	7,554,898	1,341,336	3,725,933	2,487,629	-	7,554,898
	Property Taxes - MWD GO Debt Service	7,254,175	2,014,167	2,170,193	3,069,815	-	7,254,175
	Interest on Investments	15,726,976	2,051,782	8,322,182	2,751,166	2,503,868	15,726,976
	Hydro-Power Revenue	12,205,101	-	-	-	-	12,205,101
	CRA Power Revenue	8,079,978	-	-	-	8,079,978	8,079,978
	Wadsworth Pumping Plant (DVL) Power Revenue	469,889	-	-	-	469,889	469,889
	Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	-	-	-	-	-	-
	Misc. allocated to supply (PVID Lease)	3,595,498	-	3,595,498	-	-	3,595,498
	Property Taxes - above GO Debt Service	125,138,058	14,900,442	82,603,399	27,634,216	-	125,138,058
	Revenue Reserve used for Revenue Bonds - I&P	-	-	-	-	-	-
	Annexation	-	-	-	-	-	-
	<b>Total Revenue Offsets</b>	<b>180,024,572</b>	<b>20,307,727</b>	<b>100,417,206</b>	<b>35,942,825</b>	<b>11,053,735</b>	<b>180,024,572</b>
	<b>NET REVENUE REQUIREMENTS:</b>	<b>\$ 1,363,944,096</b>	<b>\$ 85,311,188</b>	<b>\$ 885,208,618</b>	<b>\$ 148,132,926</b>	<b>\$ 248,345,119</b>	<b>\$ (3,053,755)</b>

		A&G Line Item Allocators by Allocation Category						Total
		Fixed			Variable	Demand	Hydro-Electric	
		Demand	Commodity	Standby	Commodity	Management		
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager		0.00%	1.28%	0.00%	0.00%	0.00%	0.02%	1.30%
Office of General Manager	Board of Directors	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bay Delta Initiatives	Bay Delta Initiatives	0.00%	1.83%	0.00%	0.00%	0.00%	0.00%	1.83%
External Affairs	Legislative Services	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
External Affairs	Media Communications Services	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
External Affairs	Manager, External Affairs/Special Projects	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
External Affairs	Conservation & Community Services	0.00%	0.63%	0.00%	0.00%	0.00%	0.00%	0.63%
Human Resources		0.00%	2.80%	0.00%	0.00%	0.00%	0.04%	2.84%
Water Systems Operations	Office of the Manager	0.00%	1.84%	0.00%	0.00%	0.00%	0.04%	1.88%
Water Systems Operations	Office of the Manager, Conveyance & Dist	0.00%	0.31%	0.00%	0.00%	0.00%	0.01%	0.32%
Water Systems Operations	Office of the Manager, Treatment Section	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.14%
Water Systems Operations	Office of the Manager, Operations Support	0.00%	0.51%	0.00%	0.00%	0.00%	0.01%	0.52%
Water Systems Operations	Operations Support Services	0.00%	2.39%	0.00%	0.00%	0.00%	0.03%	2.42%
Water Systems Operations	Desert Region / C&D CRA	0.00%	8.70%	0.00%	0.00%	0.00%	0.00%	8.70%
Water Systems Operations	System Operations Unit	0.00%	2.70%	0.00%	0.00%	0.00%	0.00%	2.70%
Water Systems Operations	Power Operations and Planning	0.00%	1.15%	0.00%	0.00%	0.00%	0.01%	1.16%
Water Systems Operations	Operations Planning & Programs Unit	0.00%	0.87%	0.00%	0.00%	0.00%	0.00%	0.87%
Water Systems Operations	Treatment Jensen	0.00%	3.80%	0.00%	0.00%	0.00%	0.00%	3.80%
Water Systems Operations	Treatment Diemer	0.00%	3.73%	0.00%	0.00%	0.00%	0.00%	3.73%
Water Systems Operations	Treatment Mills	0.00%	3.57%	0.00%	0.00%	0.00%	0.00%	3.57%
Water Systems Operations	Treatment Skinner	0.00%	3.43%	0.00%	0.00%	0.00%	0.00%	3.43%
Water Systems Operations	Treatment Weymouth	0.00%	4.07%	0.00%	0.00%	0.00%	0.00%	4.07%
Water Systems Operations	Water Quality Section	0.00%	7.75%	0.00%	0.00%	0.00%	0.00%	7.75%
Water Systems Operations	C&D, Eastern Unit	0.00%	4.84%	0.00%	0.00%	0.00%	0.20%	5.04%
Water Systems Operations	C&D, Western Unit	0.00%	3.82%	0.00%	0.00%	0.00%	0.22%	4.03%
Water Systems Operations	OSS, Manufacturing Services Unit	0.00%	2.27%	0.00%	0.00%	0.00%	0.04%	2.31%
Water Systems Operations	Environmental Health & Safety Section	0.00%	4.11%	0.00%	0.00%	0.00%	0.03%	4.14%
Water Systems Operations	OSS, Fleet Services Unit	0.00%	2.20%	0.00%	0.00%	0.00%	0.00%	2.20%
Water Systems Operations	OSS, Power Support Unit	0.00%	1.89%	0.00%	0.00%	0.00%	0.64%	2.53%
Water Systems Operations	Office of the Manager, Operations & Plan	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.14%
Water Systems Operations	Security Team & Security Management	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Office of the Chief Financial Officer		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Business Technology	Office of Manager	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Engineering Services		0.00%	12.29%	0.00%	0.00%	0.00%	0.15%	12.43%
Business Technology	Administrative Services	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Business Technology	Information Technology	0.00%	7.57%	0.00%	0.00%	0.00%	0.11%	7.68%
Water Resources Management	Resource Planning & Development	0.00%	1.51%	0.00%	0.00%	0.00%	0.00%	1.51%
Water Resources Management	Resource Implementation	0.00%	3.49%	0.00%	0.00%	0.00%	0.00%	3.49%
Water Resources Management	Office of the Group Manager	0.00%	0.91%	0.00%	0.00%	0.00%	0.00%	0.91%
Ethics Office		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Real Property		0.00%	1.94%	0.00%	0.00%	0.00%	0.00%	1.94%
General Counsel		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Auditor		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total Departmental O&amp;M</b>		<b>0.00%</b>	<b>98.47%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>1.53%</b>	<b>100.00%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>								
<b>State Water Contract</b>								
Supply - O&M		0.00%	7.34%	0.00%	0.00%	0.00%	0.00%	7.34%
Supply - Capital		0.00%	4.56%	0.00%	0.00%	0.00%	0.00%	4.56%
Power - O&M & Off-Aq Capital		0.00%	0.00%	0.00%	16.45%	0.00%	0.00%	16.45%
Power - Capital (less Off-Aq)		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Transmission - Capital - Commodity, Demand, & Standby		1.30%	3.60%	2.41%	0.00%	0.00%	0.00%	7.31%
Transmission - O&M - Commodity only		0.00%	14.28%	0.00%	0.00%	0.00%	0.00%	14.28%
Delta Conveyance		0.35%	0.98%	0.65%	0.00%	0.00%	0.00%	1.99%
<b>Total State Water Contract</b>		<b>1.65%</b>	<b>30.77%</b>	<b>3.06%</b>	<b>16.45%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>51.93%</b>
<b>Colorado River Aqueduct Power Costs</b>		<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>4.15%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>4.15%</b>
<b>Supply Programs</b>		<b>0.00%</b>	<b>5.46%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>5.46%</b>
<b>Demand Management</b>								
Local Resources Program		0.00%	1.53%	0.00%	0.00%	0.00%	0.00%	1.53%
Future Supply Actions & Stormwater Pilot		0.00%	0.34%	0.00%	0.00%	0.00%	0.00%	0.34%
Conservation Program		0.00%	1.99%	0.00%	0.00%	0.00%	0.00%	1.99%
<b>Total Demand Management Costs</b>		<b>0.00%</b>	<b>3.85%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>3.85%</b>
<b>Capital Financing</b>								
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		4.38%	9.17%	7.63%	0.00%	0.00%	0.25%	21.43%
G.O. Bond Debt Service		0.20%	0.22%	0.16%	0.00%	0.00%	0.00%	0.58%
Debt Administration		0.09%	0.18%	0.15%	0.00%	0.00%	0.01%	0.43%
Bond Defeasance		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
PAYGO		2.07%	4.33%	3.61%	0.00%	0.00%	0.12%	10.12%
<b>Total Capital Financing Costs</b>		<b>6.74%</b>	<b>13.89%</b>	<b>11.54%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.38%</b>	<b>32.55%</b>
<b>Regional Recycled Water Program planning costs</b>		<b>0.00%</b>	<b>1.19%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>1.19%</b>
<b>Other Operating Costs</b>		<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
Operating Equipment		0.00%	0.44%	0.01%	0.00%	0.00%	0.01%	0.46%
Succession Planning Labor Pool		0.00%	0.39%	0.01%	0.00%	0.00%	0.01%	0.41%
OPEB/PERS Pre-Funding		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total Other Operating Costs</b>		<b>0.00%</b>	<b>0.84%</b>	<b>0.02%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.01%</b>	<b>0.86%</b>
<b>Increase/(Decrease) in Required Reserves</b>		<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
<b>Total General District Requirements</b>		<b>8.39%</b>	<b>56.00%</b>	<b>14.62%</b>	<b>20.60%</b>	<b>0.00%</b>	<b>0.39%</b>	<b>100.00%</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>6.84%</b>	<b>63.84%</b>	<b>11.92%</b>	<b>16.80%</b>	<b>0.00%</b>	<b>0.60%</b>	<b>100.00%</b>

Functionalization of A&G Costs  
 Summary of Allocation Results before Inclusion of Administrative and General Costs  
 Fiscal Year Ending 2021

Functional Categories	Functional Costs Allocated for FY 2021	Allocation Categories (Costs Exclude Administrative and General)					Total Allocated Excluding A&G
		Fixed			Variable Commodity	Hydro-Electric	
		Demand	Commodity	Standby			
<b>Source of Supply</b>							
CRA	\$ 44,351,993.73	\$ -	\$ 44,351,994	\$ -	\$ -	\$ -	\$ 44,351,994
SWP	119,005,790	-	119,005,790	-	-	-	119,005,790
Other Supply	38,433,129	-	38,433,129	-	-	-	38,433,129
<b>Subtotal: Source of Supply</b>	<b>201,790,913</b>	<b>-</b>	<b>201,790,913</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>201,790,913</b>
<b>Conveyance &amp; Aqueduct</b>							
CRA							
CRA Power	56,879,068	-	13,354,573	-	43,524,495	-	56,879,068
CRA All Other	64,012,855	2,478,702	56,937,177	4,596,976	-	-	64,012,855
SWP	-	-	-	-	-	-	-
SWP Power	192,248,811	-	-	-	192,248,811	-	192,248,811
SWP All Other	228,507,909	3,978,452	217,151,058	7,378,399	-	-	228,507,909
Other Conveyance & Aqueduct	71,357,082	10,779,765	39,296,983	21,280,333	-	-	71,357,082
<b>Subtotal: Conveyance &amp; Aqueduct</b>	<b>613,005,725</b>	<b>17,236,919</b>	<b>326,739,792</b>	<b>33,255,708</b>	<b>235,773,306</b>	<b>-</b>	<b>613,005,725</b>
<b>Storage</b>							
Storage Costs Other Than Power							
Emergency	58,128,350	-	7,149,389	50,978,961	-	-	58,128,350
Drought	65,066,050	-	65,066,050	-	-	-	65,066,050
Regulatory	26,553,978	8,583,360	12,743,773	5,226,845	-	-	26,553,978
Storage Power	(469,889)	-	-	-	(469,889)	-	(469,889)
<b>Subtotal: Storage</b>	<b>149,278,489</b>	<b>8,583,360</b>	<b>84,959,212</b>	<b>56,205,806</b>	<b>(469,889)</b>	<b>-</b>	<b>149,278,489</b>
<b>Treatment</b>							
Jensen	48,757,540	6,491,086	28,084,289	8,556,067	5,626,099	-	48,757,540
Weymouth	54,436,395	7,289,343	30,144,160	9,608,321	7,394,571	-	54,436,395
Diemer	59,741,052	8,584,993	31,263,091	11,316,872	8,576,096	-	59,741,052
Mills	29,185,128	2,296,430	20,877,867	3,025,039	2,985,792	-	29,185,128
Skinner	48,747,860	6,987,438	27,381,604	9,210,930	5,167,888	-	48,747,860
<b>Subtotal: Treatment</b>	<b>240,867,974</b>	<b>31,649,289</b>	<b>137,751,010</b>	<b>41,717,230</b>	<b>29,750,445</b>	<b>-</b>	<b>240,867,974</b>
<b>Distribution</b>	<b>189,044,137</b>	<b>27,841,620</b>	<b>144,248,336</b>	<b>16,954,182</b>	<b>-</b>	<b>-</b>	<b>189,044,137</b>
<b>Demand Management</b>	<b>59,396,867</b>	<b>-</b>	<b>59,396,867</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>59,396,867</b>
<b>Hydro-Electric</b>	<b>(2,140,294)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(2,140,294)</b>	<b>(2,140,294)</b>
<b>Total Costs Allocated</b>	<b>\$ 1,451,243,811</b>	<b>\$ 85,311,188</b>	<b>\$ 954,886,129</b>	<b>\$ 148,132,926</b>	<b>\$ 265,053,862</b>	<b>\$ (2,140,294)</b>	<b>\$ 1,451,243,811</b>
<b>A&amp;G Costs to be Functionalized</b>		<b>\$ 4,543,855</b>	<b>\$ 166,769,105</b>	<b>\$ 7,919,164,901</b>	<b>\$ 11,159,657</b>	<b>\$ 2,333,284</b>	<b>\$ 192,725,067</b>

Percentages Used for Functionalization of A&G Costs

Allocation Categories				
Demand	Fixed		Variable Commodity	Hydro-Electric
	Commodity	Standby		
0.0%	4.6%	0.0%	0.0%	0.0%
0.0%	12.5%	0.0%	0.0%	0.0%
0.0%	4.0%	0.0%	0.0%	0.0%
0.0%	21.1%	0.0%	0.0%	0.0%
0.0%	1.4%	0.0%	16.4%	0.0%
2.9%	6.0%	3.1%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	72.5%	0.0%
4.7%	22.7%	5.0%	0.0%	0.0%
12.6%	4.1%	14.4%	0.0%	0.0%
20.2%	34.2%	22.4%	89.0%	0.0%
0.0%	0.7%	34.4%	0.0%	0.0%
0.0%	6.8%	0.0%	0.0%	0.0%
10.1%	1.3%	3.5%	0.0%	0.0%
0.0%	0.0%	0.0%	-0.2%	0.0%
10.1%	8.9%	37.9%	-0.2%	0.0%
7.6%	2.9%	5.8%	2.1%	0.0%
8.5%	3.2%	6.5%	2.8%	0.0%
10.1%	3.3%	7.6%	3.2%	0.0%
2.7%	2.2%	2.0%	1.1%	0.0%
8.2%	2.9%	6.2%	1.9%	0.0%
37.1%	14.4%	28.2%	11.2%	0.0%
32.6%	15.1%	11.4%	0.0%	0.0%
0.0%	6.2%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	100.0%
<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Administrative and General Costs Redistributed Among Functional Categories

Administrative and General Costs by Allocation Categories						Total A&G Costs Allocated	Functional Categories
Fixed			Variable		Hydro-Electric		
Demand	Commodity	Standby	Commodity				
\$ -	\$ 7,745,994	\$ -	\$ -	\$ -	\$ -	\$ 7,745,994	<b>Source of Supply</b>
-	20,784,142	-	-	-	-	20,784,142	CRA
-	6,712,275	-	-	-	-	6,712,275	SWP
-	35,242,412	-	-	-	-	35,242,412	Other Supply
-	-	-	-	-	-	-	Subtotal: Source of Supply
-	2,332,352	-	1,832,527	-	-	4,164,879	<b>Conveyance &amp; Aqueduct</b>
132,021	9,943,973	245,754	-	-	-	10,321,748	CRA
-	-	-	-	-	-	-	SWP
-	-	-	8,094,320	-	-	8,094,320	Other Conveyance & Aqueduct
211,901	37,925,033	394,448	-	-	-	38,531,382	
574,153	6,863,146	1,137,644	-	-	-	8,574,943	
918,075	57,064,503	1,777,845	9,926,848	-	-	69,687,271	Subtotal: Conveyance & Aqueduct
-	1,248,628	2,725,328	-	-	-	3,973,956	<b>Storage</b>
-	11,363,666	-	-	-	-	11,363,666	Storage Costs Other Than Power
457,168	2,225,677	279,426	-	-	-	2,962,271	
-	-	-	(19,784)	-	-	(19,784)	Storage Power
457,168	14,837,970	3,004,754	(19,784)	-	-	18,280,108	Subtotal: Storage
345,729	4,904,869	457,406	236,878	-	-	5,944,882	<b>Treatment</b>
388,246	5,264,622	513,659	311,336	-	-	6,477,864	Jensen
457,255	5,460,041	604,998	361,082	-	-	6,883,377	Weymouth
122,313	3,646,281	161,718	125,712	-	-	4,056,024	Diemer
372,166	4,782,147	492,415	217,585	-	-	5,864,313	Mills
1,685,709	24,057,960	2,230,197	1,252,594	-	-	29,226,460	Skinner
1,482,904	25,192,706	906,368	-	-	-	27,581,978	Subtotal: Treatment
-	10,373,554	-	-	-	-	10,373,554	<b>Distribution</b>
-	-	-	-	-	2,333,284	2,333,284	<b>Demand Management</b>
\$ 4,543,855	\$ 166,769,105	\$ 7,919,165	\$ 11,159,657	\$ 2,333,284	\$ -	\$ 192,725,067	<b>Hydro-Electric</b>
							Total Costs Allocated

**Summary of Functionalization Percentages**  
Fiscal Year Ending 2021

	Source of Supply	Conveyance & Aqueduct	Storage	Water Quality	Treatment	Distribution	Demand Management	Hydro-Electric	Administrative & General	Total Allocated
Departmental Operations & Maintenance										
Office of General Manager	5%	11%	2%	0%	18%	15%	2%	1%	46%	100%
Water Systems Operations	6%	18%	1%	0%	41%	32%	0%	2%	1%	100%
Water Resources Management	66%	0%	0%	0%	0%	5%	29%	0%	0%	100%
Engineering Services	4%	22%	24%	0%	25%	18%	0%	1%	6%	100%
Bay Delta Initiatives	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%
Business Technology	4%	8%	2%	0%	13%	10%	1%	1%	61%	100%
Real Property	7%	37%	8%	0%	0%	10%	0%	0%	37%	100%
Human Resources	7%	15%	3%	0%	25%	20%	2%	1%	27%	100%
Office of the Chief Financial Officer	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
External Affairs	0%	0%	0%	0%	0%	0%	11%	0%	89%	100%
General Counsel	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
General Auditor	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
Ethics Office	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
Total Departmental O&M	7%	15%	3%	0%	25%	20%	2%	1%	27%	100%
General District Requirements										
State Water Contract*	23%	77%	0%	0%	0%	0%	0%	0%	0%	100%
Colorado River Aqueduct Power Costs	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%
Supply Programs	54%	0%	46%	0%	0%	0%	0%	0%	0%	100%
Demand Management	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%
Capital Financing	4%	21%	24%	0%	25%	18%	0%	1%	5%	100%
Regional Recycled Water Program planning costs	38%	0%	0%	0%	0%	62%	0%	0%	0%	100%
Other Operating Costs	7%	15%	3%	0%	25%	20%	2%	1%	27%	100%
Increase/(Decrease) in Required Reserves	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
Total General District Requirements	16%	49%	10%	0%	9%	7%	4%	0%	5%	100%
Revenue Offsets	24%	54%	1%	0%	2%	4%	0%	6%	9%	100%
<b>Net Revenue Requirements</b>	<b>12%</b>	<b>37%</b>	<b>9%</b>	<b>0%</b>	<b>15%</b>	<b>11%</b>	<b>4%</b>	<b>0%</b>	<b>12%</b>	<b>100%</b>

\* Includes Delta Conveyance planning costs

**Cost Allocation Summary (by budget line item)**  
Fiscal Year Ending 2021

	Allocation Categories					Total Allocated	
	Fixed			Variable	Other		Hydro-Electric
	Demand	Commodity	Standby	Commodity			
Departmental Operations & Maintenance							
Office of General Manager	\$ -	\$ 5,643,644	\$ -	\$ -	\$ -	\$ 78,413	\$ 5,722,057
Water Systems Operations	-	308,224,433	-	29,750,445	-	5,913,578	343,888,456
Water Resources Management	-	31,709,328	-	-	-	-	31,709,328
Engineering Services	-	56,504,214	-	-	-	672,237	57,176,451
Bay Delta Initiatives	-	12,265,055	-	-	-	-	12,265,055
Business Technology	-	43,127,865	-	-	-	599,222	43,727,086
Real Property	-	14,966,275	-	-	-	-	14,966,275
Human Resources	-	13,825,531	-	-	-	192,093	14,017,624
Office of the Chief Financial Officer	-	-	-	-	-	-	-
External Affairs	-	3,803,967	-	-	-	-	3,803,967
General Counsel	-	-	-	-	-	-	-
General Auditor	-	-	-	-	-	-	-
Ethics Office	-	-	-	-	-	-	-
Total Departmental O&M <i>(including Administrative and General)</i>	-	490,070,313	-	29,750,445	-	7,455,542	527,276,301
General District Requirements							
State Water Contract*	21,914,152	408,621,703	40,641,774	205,497,621	-	-	676,675,250
Colorado River Aqueduct Power Costs	-	-	-	55,105,675	-	-	55,105,675
Supply Programs	-	72,454,876	-	-	-	-	72,454,876
Demand Management	-	51,197,114	-	-	-	-	51,197,114
Capital Financing	89,505,337	184,532,167	153,330,570	-	-	4,993,400	432,361,473
Regional Recycled Water Program planning costs	-	15,823,798	-	-	-	-	15,823,798
Other Operating Costs	-	11,100,051	212,818	-	-	157,182	11,470,051
Increase/(Decrease) in Required Reserves	-	-	-	-	-	-	-
Total General District Requirements <i>(including Administrative and General)</i>	111,419,489	743,729,708	194,185,162	260,603,296	-	5,150,582	1,315,088,237
Revenue Offsets	(21,564,446)	(112,144,787)	(38,133,071)	(14,140,222)	-	(12,413,134)	(198,395,660)
<b>Net Revenue Requirements</b>	<b>\$ 89,855,043.57</b>	<b>\$ 1,121,655,234.45</b>	<b>\$ 156,052,090.79</b>	<b>\$ 276,213,519.57</b>	<b>\$ -</b>	<b>\$ 192,990.27</b>	<b>\$ 1,643,968,878.65</b>

\* Includes Delta Conveyance planning costs

Fiscal Year Ending 2021	Supply			Conveyance & Aqueduct					Storage				Treatment	Distribution	Demand Mgt.	Hydro	Total
	CRA	SWC	Other	CRA power	CRA other	SWC power	SWC other	Other C&A	Emergency	Drought	Regulatory	Power					
<b>Dept. Operations &amp; Maintenance</b>	8,513,167	15,143,564	13,387,052	5,647,301	48,678,309	-	19,441,577	7,219,888	7,149,389	5,071,517	3,650,982	-	131,171,962	103,839,152	11,129,284	5,280,347	385,323,491
<b>General District Requirements</b>																	
State Water Contract*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161,418,135
Capital	-	57,457,040	-	-	-	(13,041,702)	117,002,797	-	-	-	-	-	-	-	-	-	479,349,983
O&M	-	92,381,352	-	-	-	207,162,017	179,806,614	-	-	-	-	-	-	-	-	-	52,236,836
Colorado River Aqueduct Power	-	-	-	52,236,836	-	-	-	-	-	-	-	-	-	-	-	-	68,682,826
Supply Programs	36,030,363	-	1,250,000	-	-	-	-	-	-	31,402,463	-	-	-	-	-	-	48,531,757
Demand Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	409,852,442
Capital Financing Program	-	-	18,166,175	7,547,918	14,584,113	-	6,303,017	64,628,113	51,343,090	29,082,369	23,058,472	-	110,200,684	80,205,052	-	4,733,440	15,000,000
Regional Recycling Water Project	-	-	5,626,290	-	-	-	-	-	-	-	-	-	-	-	-	-	10,872,912
Other Operating Costs	240,221	427,315	377,751	159,353	1,373,586	-	548,595	203,728	201,739	143,106	103,022	-	3,701,361	2,930,094	314,042	148,999	-
<b>Revenue Offsets</b>	(431,758)	(46,403,482)	(374,139)	(8,712,341)	(623,152)	(1,871,504)	(94,594,690)	(694,647)	(565,868)	(633,405)	(258,498)	(469,889)	(4,206,032)	(7,303,870)	(578,217)	(12,303,080)	(180,024,572)
Admin. & General	7,745,994	20,784,142	6,712,275	4,164,879	10,321,748	8,094,320	38,531,382	8,574,943	3,973,956	11,363,666	2,962,271	(19,784)	29,226,460	27,581,978	10,373,554	2,333,284	192,725,067
<b>Net Revenue Requirement</b>	<b>52,097,988</b>	<b>139,789,932</b>	<b>45,145,404</b>	<b>61,043,947</b>	<b>74,334,603</b>	<b>200,343,131</b>	<b>267,039,291</b>	<b>79,932,024</b>	<b>62,102,306</b>	<b>76,429,715</b>	<b>29,516,249</b>	<b>(489,673)</b>	<b>270,094,434</b>	<b>216,626,116</b>	<b>69,770,420</b>	<b>192,990</b>	<b>1,643,968,879</b>

\* Includes Delta Conveyance planning costs

Fiscal Year Ending 2021	Supply			Conveyance & Aqueduct					Storage				Treatment	Distribution	Demand Mgt.	Hydro	Total
	CRA	SWC	Other	CRA power	CRA other	SWC power	SWC other	Other C&A	Emergency	Drought	Regulatory	Power					
<b>Fixed Demand engineering factors</b>	-	-	-	0.0%	17.8%	0.0%	17.8%	17.8%	0.0%	0.0%	37.2%	0.0%	29.3%	37.2%	-	-	-
SWC Capital	-	-	-	-	-	-	20,773,287	-	-	-	-	-	-	-	-	-	20,773,287
Capital Financing	-	-	-	-	2,589,339	-	1,119,070	11,474,412	-	-	8,583,360	-	32,342,730	29,855,787	-	-	85,964,699
Regional Recycling Water Project	-	-	-	-	-	-	-	-	-	-	-	-	-	3,489,300	-	-	3,489,300
A&G less Offsets	-	-	-	-	21,383	-	(17,702,004)	(120,494)	-	-	457,168	-	992,268	(4,020,563)	-	-	(20,372,242)
Total fixed demand	-	-	-	-	2,610,723	-	4,190,353	11,353,918	-	-	9,040,528	-	33,334,998	29,324,524	-	-	89,855,044
<b>Fixed Commodity engineering factors</b>	100%	100%	100%	100%	49.3%	0%	49.3%	49.3%	0%	100%	40.1%	0%	30.3%	40.1%	-	-	-
Capital Financing	-	-	18,166,175	7,547,918	7,192,609	-	3,108,529	31,873,367	-	-	9,248,267	-	33,343,021	32,168,554	-	-	171,730,809
Regional Recycled Water Program	-	-	5,626,290	-	-	-	-	-	-	-	-	-	-	3,759,597	-	-	9,385,887
SWC Capital	-	57,457,040	-	-	-	-	57,703,574	-	-	-	-	-	-	-	-	-	115,160,614
SWC O&M	-	92,381,352	-	-	-	-	179,806,614	-	-	-	-	-	-	-	-	-	272,187,966
Dept. O&M	8,513,167	15,143,564	13,387,052	5,647,301	48,678,309	-	19,441,577	7,219,888	7,149,389	5,071,517	3,650,982	-	99,532,600	103,839,152	11,129,284	348,403,783	
Supply Programs	36,030,363	-	1,250,000	-	-	-	-	-	-	31,402,463	-	-	-	-	-	-	68,682,826
Demand Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48,531,757
Other Operating Costs	240,221	427,315	377,751	159,353	1,373,586	-	548,595	203,728	201,739	143,106	103,022	-	3,701,361	2,930,094	314,042	10,723,913	
A&G less Offsets	7,314,236	(25,619,339)	6,338,136	2,332,352	9,636,646	-	(5,532,798)	6,863,146	1,046,889	10,730,261	1,967,179	-	25,231,990	26,743,644	9,795,337	76,847,678	
Total fixed commodity	52,097,988	139,789,932	45,145,404	15,686,924	66,881,151	-	255,076,091	46,160,129	8,398,017	76,429,715	14,969,450	-	161,808,971	169,441,042	69,770,420	1,121,655,234	
<b>Fixed Standby engineering factors</b>	-	-	-	0%	33%	0%	32.9%	32.9%	100%	0%	22.7%	0%	40.4%	22.7%	-	-	-
SWC Capital	-	-	-	-	-	-	38,525,936	-	-	-	-	-	-	-	-	-	38,525,936
Capital Financing	-	-	-	-	4,802,164	-	2,075,417	21,280,333	51,343,090	-	5,226,845	-	44,514,933	18,180,711	-	-	147,423,494
Regional Recycled Water Program	-	-	-	-	-	-	-	-	-	-	-	-	-	2,124,813	-	-	2,124,813
A&G less Offsets	-	-	-	-	40,566	-	(32,828,506)	1,137,644	2,361,199	-	279,426	-	(567,506)	(2,444,973)	-	-	(32,022,151)
Total fixed standby	-	-	-	-	4,842,730	-	7,772,847	22,417,977	53,704,289	-	5,506,272	-	43,947,427	17,860,550	-	-	156,052,091
<b>Variable Commodity</b>	-	-	-	-	-	-	194,120,315	-	-	-	-	-	-	-	-	-	194,120,315
SWC Power	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52,236,836
CRA Power	-	-	-	52,236,836	-	-	-	-	-	-	-	-	-	-	-	-	31,639,362
Variable Treatment	-	-	-	-	-	-	-	-	-	-	-	-	31,639,362	-	-	-	(1,782,994)
A&G less Offsets	-	-	-	(6,879,814)	-	-	6,222,816	-	-	-	-	-	(489,673)	(636,323)	-	-	-
Total variable commodity	-	-	-	45,357,022	-	-	200,343,131	-	-	-	-	-	(489,673)	31,003,039	-	-	276,213,520
<b>Hydroelectric</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,162,786	10,162,786
A&G less Offsets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(9,969,795)	(9,969,795)
Total hydroelectric	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192,990	192,990
<b>Total Costs</b>	<b>52,097,988</b>	<b>139,789,932</b>	<b>45,145,404</b>	<b>61,043,947</b>	<b>74,334,603</b>	<b>200,343,131</b>	<b>267,039,291</b>	<b>79,932,024</b>	<b>62,102,306</b>	<b>76,429,715</b>	<b>29,516,249</b>	<b>(489,673)</b>	<b>270,094,434</b>	<b>216,626,116</b>	<b>69,770,420</b>	<b>192,990</b>	<b>1,643,968,879</b>



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	Labor And Labor Additive	Outside Services	Utilities	Chemicals	Other O&M	O&M Capitalization (prorated)	Projected Total To Be Functionalized
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	5,269,432	300,000	-	-	200,050	(243,765)
Office of General Manager	Board of Directors	1,440,896	55,000	-	-	528,823	(85,538)
Bay Delta Initiatives	Bay Delta Initiatives	5,542,239	2,893,916	-	-	1,263,271	(410,231)
External Affairs	Legislative Services	3,937,337	1,877,000	5,250	-	971,174	(275,465)
External Affairs	Media Communications Services	4,982,458	270,400	-	-	396,840	(238,704)
External Affairs	Manager, External Affairs/Special Projects	7,366,731	648,350	-	-	2,439,875	(441,730)
External Affairs	Conservation & Community Services	1,814,052	927,500	-	-	1,421,299	(260,385)
Human Resources		11,629,362	1,482,950	-	-	1,755,940	(628,198)
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	5,666,863	120,000	1,500,000	-	219,045	(317,131)
Water Systems Operations	Office of the Manager, Treatment Section	938,497	-	-	-	25,780	(40,741)
Water Systems Operations	Office of the Manager, Operations Support Services	419,249	175,000	-	-	590,225	(50,045)
Water Systems Operations	Operations Support Services	1,575,498	308,600	6,500	-	73,140	(82,970)
Water Systems Operations	Desert Region / C&D CRA	2,274,514	127,350	42,800	-	839,220	(350,001)
Water Systems Operations	System Operations Unit	26,277,162	546,000	161,100	-	5,450,375	(1,370,389)
Water Systems Operations	Power Operations and Planning	8,038,489	84,200	64,280	-	1,538,442	(410,906)
Water Systems Operations	Operations Planning & Programs Unit	3,459,025	80,000	-	-	583,750	(173,557)
Water Systems Operations	Treatment Jensen	2,637,938	-	-	-	147,688	(117,695)
Water Systems Operations	Treatment Diemer	11,529,507	386,000	2,190,238	3,795,694	972,240	(849,618)
Water Systems Operations	Treatment Mills	11,246,000	232,600	2,797,835	7,159,790	628,140	(903,721)
Water Systems Operations	Treatment Skinner	10,770,179	237,313	834,226	2,102,412	737,695	(629,164)
Water Systems Operations	Treatment Weymouth	10,341,534	141,470	1,880,397	3,556,837	964,824	(734,789)
Water Systems Operations	Water Quality Section	12,296,655	112,600	1,801,713	6,651,333	639,640	(954,662)
Water Systems Operations	C&D, Eastern Unit	23,015,031	2,098,500	461,000	-	3,682,075	(1,236,115)
Water Systems Operations	C&D, Western Unit	15,172,321	2,657,400	2,029,600	-	2,244,730	(929,689)
Water Systems Operations	OSS, Manufacturing Services Unit	12,301,759	1,531,000	1,072,064	-	1,788,490	(705,729)
Water Systems Operations	Environmental Health & Safety Section	6,974,239	177,500	212,000	-	543,765	(334,096)
Water Systems Operations	OSS, Fleet Services Unit	12,487,676	1,117,000	1,400,250	-	1,409,146	(693,508)
Water Systems Operations	OSS, Power Support Unit	7,495,515	516,600	59,300	-	4,199,741	(518,466)
Water Systems Operations	Security Team & Security Management	7,694,670	219,000	50,000	-	800,862	(366,506)
Water Systems Operations	Office of the Chief Financial Officer	411,191	18,000	-	-	63,362	(20,811)
Business Technology	Office of the Manager	12,901,565	2,061,100	-	-	13,870,566	(1,218,227)
Engineering Services	Administrative Services	303,236	750,000	-	-	2,000	(44,585)
Business Technology	Information Technology	39,784,205	3,221,200	75,000	-	2,768,812	(1,937,166)
Business Technology	Resource Planning & Development	13,305,476	16,719,200	1,432,000	-	16,719,200	(1,739,329)
Water Resources Management	Office of the Group Manager	31,548,315	4,838,126	-	-	12,200,330	(2,052,745)
Water Resources Management	Resource Implementation	4,555,053	554,000	-	-	216,162	(224,995)
Water Resources Management	Office of the Group Manager	10,561,100	1,458,500	-	-	5,183,010	(726,824)
Ethics Office		2,707,517	2,000	-	-	108,890	(119,080)
Real Property		1,518,887	102,000	-	-	59,000	(70,977)
General Counsel		8,990,103	2,723,800	116,800	-	8,086,048	(841,489)
General Auditor		12,775,321	4,478,000	-	-	499,000	(750,050)
Total Departmental O&M		4,159,651	500,000	90,500	-	90,500	(200,698)
		<b>391,026,448</b>	<b>56,439,175</b>	<b>18,192,454</b>	<b>23,266,067</b>	<b>83,928,866</b>	<b>(24,203,498)</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M							92,381,352
Supply - Capital							59,734,418
Power - O&M & Off-Aq Capital							212,364,687
Power - Capital (less Off-Aq)							(13,053,358)
Transmission - Capital - Commodity, Demand, & Standby							35,097,195
Transmission - O&M - Commodity only							162,890,983
Delta Conveyance							25,000,000
Total State Water Contract							<b>654,285,178</b>
<b>Colorado River Aqueduct Power Costs</b>							<b>57,585,160</b>
<b>Supply Programs</b>							<b>61,190,053</b>
<b>Demand Management</b>							
Local Resources Program							20,346,694
Future Supply Actions & Stormwater Pilot							7,145,000
Conservation Program							25,000,000
Total Demand Management Costs							<b>52,491,694</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment							292,668,300
G.O. Bond Debt Service							8,239,175
Debt Administration							6,083,846
Bond Deeds/Lease							135,000,000
PAYGO							441,991,321
Total Capital Financing Costs							<b>15,000,000</b>
<b>Regional Recycled Water Program planning costs</b>							<b>15,000,000</b>
<b>Other Operating Costs</b>							
Operating Equipment							7,153,432
Succession Planning Labor Pool							7,000,000
OP&B/P&S Pre-Funding							-
Total Other Operating Costs							<b>14,153,432</b>
<b>Increase/(Decrease) in Required Reserves</b>							<b>62,500,000</b>
<b>Total General District Requirements</b>							<b>1,359,296,837</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>							<b>1,907,946,350</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service							3,007,666
Property Taxes - MWD GO Debt Service							8,239,175
Interest on Investments							17,918,655
Hydro-Power Revenue							11,747,864
CRA Power Revenue							9,647,870
Wadsworth Pumping Plant (DVL) Power Revenue							520,112
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)							16,798,248
Misc. allocated to supply (PVID Lease)							3,667,408
Property Taxes - above GO Debt Service							128,812,532
Revenue Reserve used for Revenue Bonds - I&P							-
Annexation							-
Total Revenue Offsets							<b>200,359,529</b>
<b>NET REVENUE REQUIREMENTS:</b>							<b>1,707,586,820</b>





Departmental O&M Group	Item	Source of Supply		Conveyance & Aqueduct						Storage				Treatment						Total \$ Functionalized			
		CRA	SWP	Other Suooh	CRA		SWP		Other Conv. & Aqueduct	Storage Costs Other Than Power		Power	Jensen	Weymouth	Diemer	Mills	Skinner	Distribution	Demand Management		Hydro- Electric	Administrative & General	
					CRA Power	CRA All Other	SWP Power	SWP All Other		Emergency	Drought												Regulatory
Office of General Manager		85,689	151,657	134,849	56,968	491,334	-	183,458	70,254	69,968	49,486	36,694	-	-	-	265,301	293,502	302,844	210,377	247,091	1,047,493	110,269	
Office of General Manager	Board of Directors	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
External Affairs	Legislative Services	-	-	-	-	-	-	5,542,239	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
External Affairs	Media Communications Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
External Affairs	Conservation & Community Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Human Resources		189,110	334,700	297,605	125,726	1,084,348	-	404,882	155,046	154,416	109,213	80,982	-	-	585,505	647,743	668,361	464,290	545,317	2,311,762	243,357		
Water Systems Operations	Office of the Manager	120,775	120,775	120,775	108,223	970,758	-	51,180	-	18,506	18,506	18,506	-	-	429,540	449,654	422,126	409,683	398,473	1,872,775	-		
Water Systems Operations	Office of the Manager, Conveyance & Aqueduct	-	-	-	-	479,985	-	29,491	-	-	-	-	-	-	-	-	-	-	-	-	404,399		
Water Systems Operations	Office of the Manager, Treatment & Distribution	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Water Systems Operations	Office of the Manager, Operations & Maintenance	33,578	33,578	33,578	30,088	269,890	-	14,229	-	5,145	5,145	5,145	-	-	74,985	79,987	73,141	70,046	67,258	53,832	-		
Water Systems Operations	Operations Support Services	-	-	-	-	1,156,548	-	-	-	-	-	-	-	-	119,421	125,013	117,359	113,900	110,783	620,668	-		
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	26,277,162	-	-	-	-	-	-	-	-	80,020	80,020	80,020	80,020	80,020	5,623,200	-		
Water Systems Operations	System Operations Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,038,489		
Water Systems Operations	Power Operations and Planning	-	-	-	3,420,975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Water Systems Operations	Operations Planning & Programs Unit	879,313	879,313	879,313	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,480,389		
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,443,386		
Water Systems Operations	Treatment Mills	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,382,891		
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,327,853		
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,579,147		
Water Systems Operations	Water Quality Section	3,176,074	3,176,074	3,176,074	-	-	-	-	-	621,406	621,406	621,406	-	-	2,324,518	2,324,518	2,324,518	2,324,518	2,324,518	3,965,127	-		
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	1,198,813	-	1,319,992	-	-	-	-	-	-	-	-	-	-	-	-	12,046,823		
Water Systems Operations	C&D, Western Unit	-	-	-	-	14,762	-	369,053	-	-	-	-	-	-	-	-	-	-	-	-	11,114,639		
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	362,870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,006,378		
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	2,094,183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,098,455		
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	1,011,894	-	-	-	-	-	-	-	-	94,041	94,041	94,041	94,041	94,041	94,041	3,965,127		
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	332,801	332,801	332,801	332,801	332,801	3,965,127	-		
Water Systems Operations	Office of the Manager, Operations & Maintenance	8,764	8,764	8,764	212,931	7,853	70,439	3,714	-	1,343	1,343	1,343	-	-	225,098	225,098	225,098	225,098	225,098	4,319,452	-		
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-	-	-	-	-	-	-	-	31,168	32,627	30,630	29,727	28,913	135,890	-		
Office of the Chief Financial Officer		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Business Technology	Office of Manager	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Engineering Services		-	-	10,387,143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	303,236		
Business Technology	Administrative Services	-	-	-	-	-	-	10,969,230	-	-	-	-	-	-	-	-	-	-	-	-	303,236		
Business Technology	Information Technology	512,989	907,922	1,378,878	-	-	-	8,256,243	-	456,685	2,502,987	32,572,289	-	-	2,080,714	2,303,505	2,733,175	704,180	2,116,520	7,480,135	2,267,700		
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-	-	-	39,427,446	39,427,446	78,854,893	-	-	78,854,893	2,080,714	2,303,505	2,733,175	704,180	2,116,520	39,784,205		
Water Resources Management	Resource Implementation	1,308,520	4,614,146	-	-	-	-	1,035,345	-	465,195	37,584,014	74,655,038	1,588,267	1,757,096	1,813,025	1,259,454	1,479,252	6,270,986	660,142	315,378	19,305,476		
Water Resources Management	Office of the Group Manager	256,164	903,292	-	-	-	-	638	-	129,530	129,530	2,086,318	178,863,752	128	128	128	128	128	128	128	31,546,315		
Ethics Office		-	-	-	-	-	-	-	-	-	-	-	-	-	19,771	12,178,521	23,048,521	-	-	-	10,561,100		
Real Property		-	-	-	-	-	-	-	-	-	-	-	-	-	2,473	2,086,318	178,863,752	128	128	128	2,481		
General Counsel		276,896	388,372	1,543,188	-	-	-	1,855,213	-	-	1,608,910	1,608,910	3,217,820	-	-	-	-	-	-	-	1,518,887		
General Auditor		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,990,103		
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,775,321		
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,159,651		
<b>Total Departmental O&amp;M</b>		<b>6,847,871</b>	<b>11,518,592</b>	<b>17,960,167</b>	<b>3,962,765</b>	<b>35,482,886</b>	<b>22,623,485</b>	<b>28,544,514</b>	<b>8,341,544</b>	<b>1,792,664</b>	<b>86,393,684</b>	<b>161,118,054</b>	<b>377,738,354</b>	<b>19,524,059</b>	<b>20,708,676</b>	<b>20,262,715</b>	<b>16,948,985</b>	<b>18,307,330</b>	<b>84,499,854</b>	<b>7,815,011</b>	<b>4,573,953</b>	<b>90,243,910</b>	<b>391,026,448</b>

	Functionalization	Allocation Percentages					% Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	89,856	0.0%	100.0%	0.0%	0.0%	100.0%
Office of General Manager	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources		231,564	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	153,211	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	40,084	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	889,310	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	3,866,828	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	10,054	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Office of Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Engineering Services		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	756,679	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	2,041,350	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	255,389	0.0%	100.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	100.0%
Real Property		587,518	0.0%	100.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		<b>8,921,842</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Colorado River Aqueduct Power Costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>							
		33,161,566	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Demand Management</b>							
Local Resources Program		-	0.0%	0.0%	0.0%	0.0%	0.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	0.0%	0.0%	0.0%	0.0%	0.0%
G.O. Bond Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Debt Administration		-	0.0%	0.0%	0.0%	0.0%	0.0%
Bond Defeasance		-	0.0%	0.0%	0.0%	0.0%	0.0%
PAYGO		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total Capital Financing Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Regional Recycled Water Program planning costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>							
Operating Equipment		116,325	0.0%	100.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		113,830	0.0%	100.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		<b>230,155</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Increase/(Decrease) in Required Reserves</b>							
		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total General District Requirements</b>							
		33,391,722	0.0%	0.0%	0.0%	0.0%	0.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>							
		42,313,564	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - MWD GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Interest on Investments		397,392	0.0%	100.0%	0.0%	0.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&C (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - above GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue Reserve used for Revenue Bonds - I&P		-	0.0%	0.0%	0.0%	0.0%	0.0%
Annexation		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total Revenue Offsets</b>		<b>397,392</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>NET REVENUE REQUIREMENTS:</b>							
		41,916,172	0.0%	0.0%	0.0%	0.0%	0.0%

	Functionalization	Allocation Percentages				Total
		Demand	Fixed		Variable Commodity	
			Commodity	Standby		
<b>Departmental O&amp;M</b>						
<i>Group</i>	<i>Item</i>					
Office of General Manager	Board of Directors	89,856	-	89,856	-	89,856
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-
Bay Delta Initiatives	Legislative Services	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-
Human Resources		231,564	-	231,564	-	231,564
Water Systems Operations	Office of the Manager	153,211	-	153,211	-	153,211
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	40,084	-	40,084	-	40,084
Water Systems Operations	Operations Support Services	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	889,310	-	889,310	-	889,310
Water Systems Operations	Treatment Jansen	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,866,828	-	3,866,828	-	3,866,828
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Sect	10,054	-	10,054	-	10,054
Water Systems Operations	Security Team & Security Management	-	-	-	-	-
Office of the Chief Financial Office		-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-
Engineering Services		-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-
Business Technology	Information Technology	756,679	-	756,679	-	756,679
Water Resources Management	Resource Planning & Development	-	-	-	-	-
Water Resources Management	Resource Implementation	2,041,350	-	2,041,350	-	2,041,350
Water Resources Management	Office of the Group Manager	255,389	-	255,389	-	255,389
Ethics Office		-	-	-	-	-
Real Property		587,518	-	587,518	-	587,518
General Counsel		-	-	-	-	-
General Auditor		-	-	-	-	-
<b>Total Departmental O&amp;M</b>		8,921,842	-	8,921,842	-	8,921,842
<b>GENERAL DISTRICT REQUIREMENTS</b>						
<b>State Water Contract</b>						
Supply - O&M		-	-	-	-	-
Supply - Capital		-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-
Delta Conveyance		-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>						
<b>Supply Programs</b>		33,161,566	-	33,161,566	-	33,161,566
<b>Demand Management</b>						
Local Resources Program		-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-
Conservation Program		-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-
<b>Capital Financing</b>						
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	-	-	-	-
G.O. Bond Debt Service		-	-	-	-	-
Debt Administration		-	-	-	-	-
Bond Defeasance		-	-	-	-	-
PAYGO		-	-	-	-	-
<b>Total Capital Financing Costs</b>		-	-	-	-	-
<b>Regional Recycled Water Program planning costs</b>						
<b>Other Operating Costs</b>						
Operating Equipment		116,325	-	116,325	-	116,325
Succession Planning Labor Pool		113,830	-	113,830	-	113,830
OPEB/PERS Pre-Funding		-	-	-	-	-
<b>Total Other Operating Costs</b>		230,155	-	230,155	-	230,155
<b>Increase/(Decrease) in Required Reserves</b>						
<b>Total General District Requirements</b>		33,391,722	-	33,391,722	-	33,391,722
<b>REQUIREMENTS BEFORE OFFSETS:</b>		42,313,564	-	42,313,564	-	42,313,564
<b>Revenue Offsets</b>						
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-
Interest on Investments		397,392	-	397,392	-	397,392
Hydro-Power Revenue		-	-	-	-	-
CRA Power Revenue		-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-
Misc. allocated to A&G (CWVD, Lease, Late Fees, etc.)		-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-
Annexation		-	-	-	-	-
<b>Total Revenue Offsets</b>		397,392	-	397,392	-	397,392
<b>NET REVENUE REQUIREMENTS:</b>		41,916,172	-	41,916,172	-	41,916,172

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		85,689	-	85,689	-	-	85,689
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		189,110	-	189,110	-	-	189,110
Water Systems Operations	Office of the Manager	120,775	-	120,775	-	-	120,775
Water Systems Operations	Office of the Manager, Conveyance & Distribution Sec	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	33,578	-	33,578	-	-	33,578
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	879,313	-	879,313	-	-	879,313
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,176,074	-	3,176,074	-	-	3,176,074
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	8,764	-	8,764	-	-	8,764
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	512,989	-	512,989	-	-	512,989
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	1,308,520	-	1,308,520	-	-	1,308,520
Water Resources Management	Office of the Group Manager	256,164	-	256,164	-	-	256,164
Ethics Office		-	-	-	-	-	-
Real Property		276,895	-	276,895	-	-	276,895
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>6,847,871</b>	-	<b>6,847,871</b>	-	-	<b>6,847,871</b>





	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	159,033	-	159,033	-	-	159,033
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	-
Bay Delta Initiatives	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		409,837	-	409,837	-	-	409,837
Water Systems Operations	Office of the Manager	153,211	-	153,211	-	-	153,211
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	40,084	-	40,084	-	-	40,084
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	889,310	-	889,310	-	-	889,310
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,866,828	-	3,866,828	-	-	3,866,828
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	10,054	-	10,054	-	-	10,054
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,339,219	-	1,339,219	-	-	1,339,219
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	7,198,271	-	7,198,271	-	-	7,198,271
Water Resources Managemen	Office of the Group Manager	900,560	-	900,560	-	-	900,560
Ethics Office		-	-	-	-	-	-
Real Property		824,051	-	824,051	-	-	824,051
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>15,790,459</b>	-	<b>15,790,459</b>	-	-	<b>15,790,459</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		92,381,352	-	92,381,352	-	-	92,381,352
Supply - Capital		59,734,418	-	59,734,418	-	-	59,734,418
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		<b>152,115,770</b>	-	<b>152,115,770</b>	-	-	<b>152,115,770</b>
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	-	-	-	-	-
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		-	-	-	-	-	-
Bond Defeasance		-	-	-	-	-	-
PAYGO		-	-	-	-	-	-
<b>Total Capital Financing Costs</b>		-	-	-	-	-	-
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		205,880	-	205,880	-	-	205,880
Succession Planning Labor Pool		201,464	-	201,464	-	-	201,464
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>407,344</b>	-	<b>407,344</b>	-	-	<b>407,344</b>
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		<b>152,523,115</b>	-	<b>152,523,115</b>	-	-	<b>152,523,115</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>168,313,573</b>	-	<b>168,313,573</b>	-	-	<b>168,313,573</b>
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		1,580,733	-	1,580,733	-	-	1,580,733
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		3,667,408	-	3,667,408	-	-	3,667,408
Property Taxes - above GO Debt Service		42,787,481	-	42,787,481	-	-	42,787,481
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>48,035,621</b>	-	<b>48,035,621</b>	-	-	<b>48,035,621</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>120,277,952</b>	-	<b>120,277,952</b>	-	-	<b>120,277,952</b>

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	151,657	-	151,657	-	-	151,657
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		334,700	-	334,700	-	-	334,700
Water Systems Operations	Office of the Manager	120,775	-	120,775	-	-	120,775
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	33,578	-	33,578	-	-	33,578
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	879,313	-	879,313	-	-	879,313
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,176,074	-	3,176,074	-	-	3,176,074
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	8,764	-	8,764	-	-	8,764
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	907,922	-	907,922	-	-	907,922
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	4,614,145	-	4,614,145	-	-	4,614,145
Water Resources Management	Office of the Group Manager	903,292	-	903,292	-	-	903,292
Ethics Office		-	-	-	-	-	-
Real Property		388,372	-	388,372	-	-	388,372
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>11,518,592</b>	<b>-</b>	<b>11,518,592</b>	<b>-</b>	<b>-</b>	<b>11,518,592</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	141,408	-	141,408	-	-	141,408
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		364,415	-	364,415	-	-	364,415
Water Systems Operations	Office of the Manager	153,211	-	153,211	-	-	153,211
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	40,084	-	40,084	-	-	40,084
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	889,310	-	889,310	-	-	889,310
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,866,828	-	3,866,828	-	-	3,866,828
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	10,054	-	10,054	-	-	10,054
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		1,839,915	-	1,839,915	-	-	1,839,915
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,190,795	-	1,190,795	-	-	1,190,795
Water Resources Managemen	Resource Planning & Development	3,947,571	-	3,947,571	-	-	3,947,571
Water Resources Managemen	Resource Implementation	980,309	-	980,309	-	-	980,309
Water Resources Managemen	Office of the Group Manager	616,516	-	616,516	-	-	616,516
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>14,040,416</b>	-	<b>14,040,416</b>	-	-	<b>14,040,416</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		<b>1,250,000</b>	-	<b>1,250,000</b>	-	-	<b>1,250,000</b>
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		12,262,802	-	12,262,802	-	-	12,262,802
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		254,913	-	254,913	-	-	254,913
Bond Defeasance		-	-	-	-	-	-
PAYGO		5,656,500	-	5,656,500	-	-	5,656,500
<b>Total Capital Financing Costs</b>		<b>18,174,215</b>	-	<b>18,174,215</b>	-	-	<b>18,174,215</b>
<b>Regional Recycled Water Program planning costs</b>		<b>5,626,290</b>	-	<b>5,626,290</b>	-	-	<b>5,626,290</b>
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		183,063	-	183,063	-	-	183,063
Succession Planning Labor Pool		179,136	-	179,136	-	-	179,136
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>362,199</b>	-	<b>362,199</b>	-	-	<b>362,199</b>
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		<b>25,412,703</b>	-	<b>25,412,703</b>	-	-	<b>25,412,703</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>39,453,120</b>	-	<b>39,453,120</b>	-	-	<b>39,453,120</b>
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		370,528	-	370,528	-	-	370,528
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>370,528</b>	-	<b>370,528</b>	-	-	<b>370,528</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>39,082,592</b>	-	<b>39,082,592</b>	-	-	<b>39,082,592</b>

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	134,849	-	134,849	-	-	134,849
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		297,605	-	297,605	-	-	297,605
Water Systems Operations	Office of the Manager	120,775	-	120,775	-	-	120,775
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	33,578	-	33,578	-	-	33,578
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	879,313	-	879,313	-	-	879,313
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	3,176,074	-	3,176,074	-	-	3,176,074
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	8,764	-	8,764	-	-	8,764
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		1,666,958	-	1,666,958	-	-	1,666,958
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	807,298	-	807,298	-	-	807,298
Water Resources Managemen	Resource Planning & Development	3,525,611	-	3,525,611	-	-	3,525,611
Water Resources Managemen	Resource Implementation	628,385	-	628,385	-	-	628,385
Water Resources Managemen	Office of the Group Manager	618,387	-	618,387	-	-	618,387
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>11,897,597</b>	<b>-</b>	<b>11,897,597</b>	<b>-</b>	<b>-</b>	<b>11,897,597</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed Commodity	Standby	Variable Commodity	Hydroelectric	
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		59,739	-	59,739	-	-	59,739
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		153,951	-	153,951	-	-	153,951
Water Systems Operations	Office of the Manager	137,288	-	137,288	-	-	137,288
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	35,918	-	35,918	-	-	35,918
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	3,890,941	-	3,890,941	-	-	3,890,941
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	232,625	-	232,625	-	-	232,625
Water Systems Operations	Office of the Manager, Operations & Planning Secti	9,009	-	9,009	-	-	9,009
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Of		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		908,979	-	908,979	-	-	908,979
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	503,063	-	503,063	-	-	503,063
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		5,931,513	-	5,931,513	-	-	5,931,513
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		57,585,160	-	-	57,585,160	-	57,585,160
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		6,058,234	-	6,058,234	-	-	6,058,234
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		125,936	-	125,936	-	-	125,936
Bond Defeasance		-	-	-	-	-	-
PAYGO		2,794,500	-	2,794,500	-	-	2,794,500
<b>Total Capital Financing Costs</b>		8,978,669	-	8,978,669	-	-	8,978,669
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		77,337	-	77,337	-	-	77,337
Succession Planning Labor Pool		75,678	-	75,678	-	-	75,678
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		153,014	-	153,014	-	-	153,014
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		66,716,844	-	9,131,684	-	57,585,160	66,716,844
<b>REQUIREMENTS BEFORE OFFSETS:</b>		72,648,357	-	15,063,197	-	57,585,160	72,648,357
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		682,284	-	-	682,284	-	682,284
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		9,647,870	-	-	9,647,870	-	9,647,870
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		10,330,154	-	-	10,330,154	-	10,330,154
<b>NET REVENUE REQUIREMENTS:</b>		62,318,203	-	15,063,197	-	47,255,006	62,318,203

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	56,968	-	56,968	-	-	56,968
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		125,726	-	125,726	-	-	125,726
Water Systems Operations	Office of the Manager	108,223	-	108,223	-	-	108,223
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	30,088	-	30,088	-	-	30,088
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	3,420,975	-	3,420,975	-	-	3,420,975
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	212,931	-	212,931	-	-	212,931
Water Systems Operations	Office of the Manager, Operations & Planning Section	7,853	-	7,853	-	-	7,853
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		823,533	-	823,533	-	-	823,533
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	341,051	-	341,051	-	-	341,051
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>5,127,348</b>	<b>-</b>	<b>5,127,348</b>	<b>-</b>	<b>-</b>	<b>5,127,348</b>





	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	515,230	-	515,230	-	-	515,230
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		1,327,775	-	1,327,775	-	-	1,327,775
Water Systems Operations	Office of the Manager	1,231,468	-	1,231,468	-	-	1,231,468
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	472,333	-	472,333	-	-	472,333
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	322,184	-	322,184	-	-	322,184
Water Systems Operations	Operations Support Services	1,261,488	-	1,261,488	-	-	1,261,488
Water Systems Operations	Desert Region / C&D CRA	31,064,247	-	31,064,247	-	-	31,064,247
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	1,664,875	-	1,664,875	-	-	1,664,875
Water Systems Operations	C&D, Western Unit	19,197	-	19,197	-	-	19,197
Water Systems Operations	OSS, Manufacturing Services Unit	394,044	-	394,044	-	-	394,044
Water Systems Operations	Environmental Health & Safety Section	2,636,339	-	2,636,339	-	-	2,636,339
Water Systems Operations	OSS, Fleet Services Unit	1,586,613	-	1,586,613	-	-	1,586,613
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	80,811	-	80,811	-	-	80,811
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		1,523,748	-	1,523,748	-	-	1,523,748
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	4,338,752	-	4,338,752	-	-	4,338,752
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		2,718,224	-	2,718,224	-	-	2,718,224
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>51,157,329</b>	<b>-</b>	<b>51,157,329</b>	<b>-</b>	<b>-</b>	<b>51,157,329</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		10,155,590	1,803,076	5,008,546	3,343,968	-	10,155,590
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		211,109	37,481	104,115	69,513	-	211,109
Bond Defeasance		-	-	-	-	-	-
PAYGO		4,684,500	831,711	2,310,307	1,542,482	-	4,684,500
<b>Total Capital Financing Costs</b>		<b>15,051,199</b>	<b>2,672,268</b>	<b>7,422,968</b>	<b>4,955,963</b>	<b>-</b>	<b>15,051,199</b>
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		667,002	-	667,002	-	-	667,002
Succession Planning Labor Pool		652,696	-	652,696	-	-	652,696
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>1,319,698</b>	<b>-</b>	<b>1,319,698</b>	<b>-</b>	<b>-</b>	<b>1,319,698</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>16,370,898</b>	<b>2,672,268</b>	<b>8,742,666</b>	<b>4,955,963</b>	<b>-</b>	<b>16,370,898</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>67,528,226</b>	<b>2,672,268</b>	<b>59,899,995</b>	<b>4,955,963</b>	<b>-</b>	<b>67,528,226</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		634,198	112,599	312,774	208,825	-	634,198
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>634,198</b>	<b>112,599</b>	<b>312,774</b>	<b>208,825</b>	<b>-</b>	<b>634,198</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>66,894,029</b>	<b>2,559,670</b>	<b>59,587,220</b>	<b>4,747,139</b>	<b>-</b>	<b>66,894,029</b>

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		491,334	-	491,334	-	-	491,334
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		1,084,348	-	1,084,348	-	-	1,084,348
Water Systems Operations	Office of the Manager	970,758	-	970,758	-	-	970,758
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	479,985	-	479,985	-	-	479,985
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	269,890	-	269,890	-	-	269,890
Water Systems Operations	Operations Support Services	1,156,648	-	1,156,648	-	-	1,156,648
Water Systems Operations	Desert Region / C&D CRA	26,277,162	-	26,277,162	-	-	26,277,162
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	1,198,613	-	1,198,613	-	-	1,198,613
Water Systems Operations	C&D, Western Unit	14,762	-	14,762	-	-	14,762
Water Systems Operations	OSS, Manufacturing Services Unit	362,870	-	362,870	-	-	362,870
Water Systems Operations	Environmental Health & Safety Section	2,094,183	-	2,094,183	-	-	2,094,183
Water Systems Operations	OSS, Fleet Services Unit	1,011,894	-	1,011,894	-	-	1,011,894
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	70,439	-	70,439	-	-	70,439
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		1,380,512	-	1,380,512	-	-	1,380,512
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	2,941,450	-	2,941,450	-	-	2,941,450
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		1,281,090	-	1,281,090	-	-	1,281,090
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>41,085,937</b>	<b>-</b>	<b>41,085,937</b>	<b>-</b>	<b>-</b>	<b>41,085,937</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	-	-	-	-	-	
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	
Bay Delta Initiatives	Legislative Services	-	-	-	-	-	
External Affairs	Media Communications Services	-	-	-	-	-	
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	
External Affairs	Conservation & Community Services	-	-	-	-	-	
Human Resources		-	-	-	-	-	
Water Systems Operations	Office of the Manager	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	
Water Systems Operations	Operations Support Services	-	-	-	-	-	
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	
Water Systems Operations	System Operations Unit	-	-	-	-	-	
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	
Water Systems Operations	Treatment Jensen	-	-	-	-	-	
Water Systems Operations	Treatment Diemer	-	-	-	-	-	
Water Systems Operations	Treatment Mills	-	-	-	-	-	
Water Systems Operations	Treatment Skinner	-	-	-	-	-	
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	
Water Systems Operations	Water Quality Section	-	-	-	-	-	
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations & Planning Sect	-	-	-	-	-	
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	
Office of the Chief Financial O		-	-	-	-	-	
Business Technology	Office of Manager	-	-	-	-	-	
Engineering Services		-	-	-	-	-	
Business Technology	Administrative Services	-	-	-	-	-	
Business Technology	Information Technology	-	-	-	-	-	
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	
Water Resources Managemen	Resource Implementation	-	-	-	-	-	
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	
Ethics Office		-	-	-	-	-	
Real Property		-	-	-	-	-	
General Counsel		-	-	-	-	-	
General Auditor		-	-	-	-	-	
<b>Total Departmental O&amp;M</b>		-	-	-	-	-	
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	
Supply - Capital		-	-	-	-	-	
Power - O&M & Off-Aq Capital	212,364,687	-	-	212,364,687	-	212,364,687	
Power - Capital (less Off-Aq)	(13,053,358)	-	-	(13,053,358)	-	(13,053,358)	
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	
Transmission - O&M - Commodity only		-	-	-	-	-	
Delta Conveyance		-	-	-	-	-	
<b>Total State Water Contract</b>	199,311,329	-	-	199,311,329	-	199,311,329	
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	
Conservation Program		-	-	-	-	-	
<b>Total Demand Management Costs</b>		-	-	-	-	-	
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	-	-	-	-	
G.O. Bond Debt Service		-	-	-	-	-	
Debt Administration		-	-	-	-	-	
Bond Defeasance		-	-	-	-	-	
PAYGO		-	-	-	-	-	
<b>Total Capital Financing Costs</b>		-	-	-	-	-	
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		-	-	-	-	-	
Succession Planning Labor Pool		-	-	-	-	-	
OPEB/PERS Pre-Funding		-	-	-	-	-	
<b>Total Other Operating Costs</b>		-	-	-	-	-	
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>	199,311,329	-	-	199,311,329	-	199,311,329	
<b>REQUIREMENTS BEFORE OFFSETS:</b>	199,311,329	-	-	199,311,329	-	199,311,329	
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	
Property Taxes - MWD GO Debt Service		-	-	-	-	-	
Interest on Investments	1,871,851	-	-	1,871,851	-	1,871,851	
Hydro-Power Revenue		-	-	-	-	-	
CRA Power Revenue		-	-	-	-	-	
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	
Property Taxes - above GO Debt Service		-	-	-	-	-	
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	
Annexation		-	-	-	-	-	
<b>Total Revenue Offsets</b>	1,871,851	-	-	1,871,851	-	1,871,851	
<b>NET REVENUE REQUIREMENTS:</b>	197,439,478	-	-	197,439,478	-	197,439,478	

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	-	-	-	-	-	
Office of General Manager	Board of Directors	-	-	-	-	-	
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	
External Affairs	Legislative Services	-	-	-	-	-	
External Affairs	Media Communications Services	-	-	-	-	-	
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	
External Affairs	Conservation & Community Services	-	-	-	-	-	
Human Resources		-	-	-	-	-	
Water Systems Operations	Office of the Manager	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	
Water Systems Operations	Operations Support Services	-	-	-	-	-	
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	
Water Systems Operations	System Operations Unit	-	-	-	-	-	
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	
Water Systems Operations	Treatment Jensen	-	-	-	-	-	
Water Systems Operations	Treatment Diemer	-	-	-	-	-	
Water Systems Operations	Treatment Mills	-	-	-	-	-	
Water Systems Operations	Treatment Skinner	-	-	-	-	-	
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	
Water Systems Operations	Water Quality Section	-	-	-	-	-	
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	-	-	-	-	
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	
Office of the Chief Financial Officer		-	-	-	-	-	
Business Technology	Office of Manager	-	-	-	-	-	
Engineering Services		-	-	-	-	-	
Business Technology	Administrative Services	-	-	-	-	-	
Business Technology	Information Technology	-	-	-	-	-	
Water Resources Management	Resource Planning & Development	-	-	-	-	-	
Water Resources Management	Resource Implementation	-	-	-	-	-	
Water Resources Management	Office of the Group Manager	-	-	-	-	-	
Ethics Office		-	-	-	-	-	
Real Property		-	-	-	-	-	
General Counsel		-	-	-	-	-	
General Auditor		-	-	-	-	-	
<b>Total Departmental O&amp;M</b>		-	-	-	-	-	



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	192,381	-	192,381	-	-	192,381
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	9,299,195	-	9,299,195	-	-	9,299,195
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources	Human Resources	495,775	-	495,775	-	-	495,775
Water Systems Operations	Office of the Manager	64,926	-	64,926	-	-	64,926
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	29,021	-	29,021	-	-	29,021
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	16,986	-	16,986	-	-	16,986
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	1,833,470	-	1,833,470	-	-	1,833,470
Water Systems Operations	C&D, Western Unit	479,928	-	479,928	-	-	479,928
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	4,261	-	4,261	-	-	4,261
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Of	Office of the Chief Financial Of	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	636,269	-	636,269	-	-	636,269
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,620,037	-	1,620,037	-	-	1,620,037
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	4,429,274	-	4,429,274	-	-	4,429,274
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>19,101,520</b>	-	<b>19,101,520</b>	-	-	<b>19,101,520</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M	Supply - O&M	-	-	-	-	-	-
Supply - Capital	Supply - Capital	-	-	-	-	-	-
Power - O&M & Off-Aq Capital	Power - O&M & Off-Aq Capital	-	-	-	-	-	-
Power - Capital (less Off-Aq)	Power - Capital (less Off-Aq)	-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby	Transmission - Capital - Commodity, Demand, & Standby	95,097,195	16,884,052	46,900,144	31,312,999	-	95,097,195
Transmission - O&M - Commodity only	Transmission - O&M - Commodity only	182,860,883	-	182,860,883	-	-	182,860,883
Delta Conveyance	Delta Conveyance	25,000,000	4,438,630	12,329,529	8,231,841	-	25,000,000
<b>Total State Water Contract</b>		<b>302,958,078</b>	<b>21,322,682</b>	<b>242,090,557</b>	<b>39,544,839</b>	-	<b>302,958,078</b>
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program	Local Resources Program	-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot	Future Supply Actions & Stormwater Pilot	-	-	-	-	-	-
Conservation Program	Conservation Program	-	-	-	-	-	-
<b>Total Demand Management Costs</b>							
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment	Revenue Bond Debt Service net of BABs Interest Subsidy Payment	4,240,653	-	4,240,653	-	-	4,240,653
G.O. Bond Debt Service	G.O. Bond Debt Service	-	-	-	-	-	-
Debt Administration	Debt Administration	88,153	-	88,153	-	-	88,153
Bond Defeasance	Bond Defeasance	-	-	-	-	-	-
PAYGO	PAYGO	1,956,099	-	1,956,099	-	-	1,956,099
<b>Total Capital Financing Costs</b>		<b>6,284,905</b>		<b>6,284,905</b>			<b>6,284,905</b>
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment	Operating Equipment	249,050	-	249,050	-	-	249,050
Succession Planning Labor Pool	Succession Planning Labor Pool	243,709	-	243,709	-	-	243,709
OPEB/PERS Pre-Funding	OPEB/PERS Pre-Funding	-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>492,759</b>		<b>492,759</b>			<b>492,759</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>309,735,743</b>	<b>21,322,682</b>	<b>248,868,221</b>	<b>39,544,839</b>	-	<b>309,735,743</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>328,837,263</b>	<b>21,322,682</b>	<b>267,969,741</b>	<b>39,544,839</b>	-	<b>328,837,263</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service	Property Taxes - MWD Portion of SWP GO Debt Service	3,007,666	533,997	1,483,324	990,345	-	3,007,666
Property Taxes - MWD GO Debt Service	Property Taxes - MWD GO Debt Service	-	-	-	-	-	-
Interest on Investments	Interest on Investments	3,088,306	548,314	1,523,094	1,016,898	-	3,088,306
Hydro-Power Revenue	Hydro-Power Revenue	-	-	-	-	-	-
CRA Power Revenue	CRA Power Revenue	-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue	Wadsworth Pumping Plant (DVL) Power Revenue	-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)	Misc. allocated to supply (PVID Lease)	-	-	-	-	-	-
Property Taxes - above GO Debt Service	Property Taxes - above GO Debt Service	86,025,051	15,273,336	42,425,934	28,325,781	-	86,025,051
Revenue Reserve used for Revenue Bonds - I&P	Revenue Reserve used for Revenue Bonds - I&P	-	-	-	-	-	-
Annexation	Annexation	-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>92,121,023</b>	<b>16,355,647</b>	<b>45,432,352</b>	<b>30,333,024</b>	-	<b>92,121,023</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>236,716,240</b>	<b>4,967,036</b>	<b>222,537,389</b>	<b>9,211,816</b>	-	<b>236,716,240</b>



	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	183,458	-	183,458	-	-	183,458
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	5,542,239	-	5,542,239	-	-	5,542,239
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		404,882	-	404,882	-	-	404,882
Water Systems Operations	Office of the Manager	51,180	-	51,180	-	-	51,180
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	29,491	-	29,491	-	-	29,491
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	14,229	-	14,229	-	-	14,229
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	1,319,992	-	1,319,992	-	-	1,319,992
Water Systems Operations	C&D, Western Unit	369,053	-	369,053	-	-	369,053
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	3,714	-	3,714	-	-	3,714
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		576,458	-	576,458	-	-	576,458
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,098,302	-	1,098,302	-	-	1,098,302
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		2,087,502	-	2,087,502	-	-	2,087,502
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>11,680,500</b>	<b>-</b>	<b>11,680,500</b>	<b>-</b>	<b>-</b>	<b>11,680,500</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	73,670	-	73,670	-	-	73,670
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		189,852	-	189,852	-	-	189,852
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Sect	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Of		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		6,430,851	-	6,430,851	-	-	6,430,851
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	620,378	-	620,378	-	-	620,378
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>7,314,752</b>	-	<b>7,314,752</b>	-	-	<b>7,314,752</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		42,860,811	7,609,732	21,138,144	14,112,935	-	42,860,811
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		890,970	158,187	439,409	293,373	-	890,970
Bond Defeasance		-	-	-	-	-	-
PAYGO		19,770,537	3,510,164	9,750,456	6,509,917	-	19,770,537
<b>Total Capital Financing Costs</b>		<b>63,522,318</b>	<b>11,278,084</b>	<b>31,328,010</b>	<b>20,916,224</b>	-	<b>63,522,318</b>
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		95,372	-	95,372	-	-	95,372
Succession Planning Labor Pool		93,326	-	93,326	-	-	93,326
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>188,698</b>	-	<b>188,698</b>	-	-	<b>188,698</b>
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		<b>63,711,016</b>	<b>11,278,084</b>	<b>31,516,708</b>	<b>20,916,224</b>	-	<b>63,711,016</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>71,025,768</b>	<b>11,278,084</b>	<b>38,831,460</b>	<b>20,916,224</b>	-	<b>71,025,768</b>
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		667,045	667,045	-	-	-	667,045
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>667,045</b>	<b>667,045</b>	-	-	-	<b>667,045</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>70,358,723</b>	<b>10,611,039</b>	<b>38,831,460</b>	<b>20,916,224</b>	-	<b>70,358,723</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	70,254	-	70,254	-	-	70,254
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources	Human Resources	155,046	-	155,046	-	-	155,046
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer	Office of the Chief Financial Officer	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	5,826,334	-	5,826,334	-	-	5,826,334
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	420,584	-	420,584	-	-	420,584
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	-	-	-	-	-	-
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>6,472,218</b>	<b>-</b>	<b>6,472,218</b>	<b>-</b>	<b>-</b>	<b>6,472,218</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed Commodity		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<i>Group</i>	<i>Item</i>						
Office of General Manager	Board of Directors	73,371	-	73,371	-	-	73,371
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	-
Bay Delta Initiatives	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		189,081	-	189,081	-	-	189,081
Water Systems Operations	Office of the Manager	23,476	-	23,476	-	-	23,476
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	6,142	-	6,142	-	-	6,142
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	756,553	-	756,553	-	-	756,553
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	1,541	-	1,541	-	-	1,541
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		5,122,953	-	5,122,953	-	-	5,122,953
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	617,857	-	617,857	-	-	617,857
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		494,049	-	494,049	-	-	494,049
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>7,285,023</b>	-	<b>7,285,023</b>	-	-	<b>7,285,023</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>							
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>							
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		34,143,836	-	34,143,836	-	-	34,143,836
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		709,765	-	709,765	-	-	709,765
Bond Defeasance		-	-	-	-	-	-
PAYGO		15,749,632	-	15,749,632	-	-	15,749,632
<b>Total Capital Financing Costs</b>		<b>50,603,233</b>	-	<b>50,603,233</b>	-	-	<b>50,603,233</b>
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		94,984	-	94,984	-	-	94,984
Succession Planning Labor Pool		92,947	-	92,947	-	-	92,947
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>187,931</b>	-	<b>187,931</b>	-	-	<b>187,931</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>50,791,164</b>	-	<b>50,791,164</b>	-	-	<b>50,791,164</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>58,076,187</b>	-	<b>7,285,023</b>	<b>50,791,164</b>	-	<b>58,076,187</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		545,428	-	545,428	-	-	545,428
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>545,428</b>	-	<b>545,428</b>	-	-	<b>545,428</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>57,530,759</b>	-	<b>7,285,023</b>	<b>50,245,736</b>	-	<b>57,530,759</b>

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	69,968	-	69,968	-	-	69,968
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		154,416	-	154,416	-	-	154,416
Water Systems Operations	Office of the Manager	18,506	-	18,506	-	-	18,506
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	5,145	-	5,145	-	-	5,145
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	621,406	-	621,406	-	-	621,406
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	1,343	-	1,343	-	-	1,343
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		4,641,382	-	4,641,382	-	-	4,641,382
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	418,875	-	418,875	-	-	418,875
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		232,844	-	232,844	-	-	232,844
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>6,163,885</b>	<b>-</b>	<b>6,163,885</b>	<b>-</b>	<b>-</b>	<b>6,163,885</b>





	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	51,893	-	51,893	-	-	51,893
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	-
Bay Delta Initiatives	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		133,731	-	133,731	-	-	133,731
Water Systems Operations	Office of the Manager	23,476	-	23,476	-	-	23,476
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	6,142	-	6,142	-	-	6,142
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	756,553	-	756,553	-	-	756,553
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Sect	1,541	-	1,541	-	-	1,541
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,893,282	-	2,893,282	-	-	2,893,282
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	436,990	-	436,990	-	-	436,990
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		848,849	-	848,849	-	-	848,849
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>5,152,457</b>	-	<b>5,152,457</b>	-	-	<b>5,152,457</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>							
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>		<b>26,778,487</b>	-	<b>26,778,487</b>	-	-	<b>26,778,487</b>
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>							
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		19,283,363	-	19,283,363	-	-	19,283,363
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		400,853	-	400,853	-	-	400,853
Bond Defeasance		-	-	-	-	-	-
PAYGO		8,894,896	-	8,894,896	-	-	8,894,896
<b>Total Capital Financing Costs</b>		<b>28,579,112</b>	-	<b>28,579,112</b>	-	-	<b>28,579,112</b>
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		67,179	-	67,179	-	-	67,179
Succession Planning Labor Pool		65,738	-	65,738	-	-	65,738
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>132,917</b>	-	<b>132,917</b>	-	-	<b>132,917</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>55,490,516</b>	-	<b>55,490,516</b>	-	-	<b>55,490,516</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>60,642,973</b>	-	<b>60,642,973</b>	-	-	<b>60,642,973</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		569,534	-	569,534	-	-	569,534
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>569,534</b>	-	<b>569,534</b>	-	-	<b>569,534</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>60,073,438</b>	-	<b>60,073,438</b>	-	-	<b>60,073,438</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	49,486	-	49,486	-	-	49,486
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources	Human Resources	109,213	-	109,213	-	-	109,213
Water Systems Operations	Office of the Manager	18,506	-	18,506	-	-	18,506
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	5,145	-	5,145	-	-	5,145
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	621,406	-	621,406	-	-	621,406
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	1,343	-	1,343	-	-	1,343
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer	Office of the Chief Financial Officer	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	2,621,306	-	2,621,306	-	-	2,621,306
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	296,257	-	296,257	-	-	296,257
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	400,060	-	400,060	-	-	400,060
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>4,122,722</b>	<b>-</b>	<b>4,122,722</b>	<b>-</b>	<b>-</b>	<b>4,122,722</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<i>Group</i>	<i>Item</i>						
Office of General Manager	Office of General Manager	38,479	-	38,479	-	-	38,479
Bay Delta Initiatives	Board of Directors	-	-	-	-	-	-
External Affairs	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		99,162	-	99,162	-	-	99,162
Water Systems Operations	Office of the Manager	23,476	-	23,476	-	-	23,476
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	6,142	-	6,142	-	-	6,142
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	756,553	-	756,553	-	-	756,553
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	1,541	-	1,541	-	-	1,541
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,370,908	-	2,370,908	-	-	2,370,908
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	324,031	-	324,031	-	-	324,031
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		200,290	-	200,290	-	-	200,290
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>3,820,582</b>	-	<b>3,820,582</b>	-	-	<b>3,820,582</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		15,801,801	5,882,113	6,337,769	3,581,919	-	15,801,801
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		328,480	122,275	131,746	74,459	-	328,480
Bond Defeasance		-	-	-	-	-	-
PAYGO		7,288,945	2,713,260	2,923,442	1,652,243	-	7,288,945
<b>Total Capital Financing Costs</b>		<b>23,419,227</b>	<b>8,717,648</b>	<b>9,392,958</b>	<b>5,308,621</b>	-	<b>23,419,227</b>
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		49,814	-	49,814	-	-	49,814
Succession Planning Labor Pool		48,745	-	48,745	-	-	48,745
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>98,559</b>	-	<b>98,559</b>	-	-	<b>98,559</b>
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		<b>23,517,786</b>	<b>8,717,648</b>	<b>9,491,517</b>	<b>5,308,621</b>	-	<b>23,517,786</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>27,338,368</b>	<b>8,717,648</b>	<b>13,312,099</b>	<b>5,308,621</b>	-	<b>27,338,368</b>
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		256,751	-	256,751	-	-	256,751
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>256,751</b>	-	<b>256,751</b>	-	-	<b>256,751</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>27,081,617</b>	<b>8,717,648</b>	<b>13,055,348</b>	<b>5,308,621</b>	-	<b>27,081,617</b>

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	36,694	-	36,694	-	-	36,694
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources	Human Resources	80,982	-	80,982	-	-	80,982
Water Systems Operations	Office of the Manager	18,506	-	18,506	-	-	18,506
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	5,145	-	5,145	-	-	5,145
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	621,406	-	621,406	-	-	621,406
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	1,343	-	1,343	-	-	1,343
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer	Office of the Chief Financial Officer	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	2,148,036	-	2,148,036	-	-	2,148,036
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	219,676	-	219,676	-	-	219,676
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	94,396	-	94,396	-	-	94,396
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>3,226,185</b>	<b>-</b>	<b>3,226,185</b>	<b>-</b>	<b>-</b>	<b>3,226,185</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed Commodity		Variable Commodity	Hydroelectric	
			Standby				
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	-	-	-	-	-	-
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	-
Bay Delta Initiatives	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		-	-	-	-	-	-
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Sect	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	-	-	-	-	-	-
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		-	-	-	-	-	-
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		-	-	-	-	-	-
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		-	-	-	-	-	-
Bond Defeasance		-	-	-	-	-	-
PAYGO		-	-	-	-	-	-
<b>Total Capital Financing Costs</b>		-	-	-	-	-	-
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		-	-	-	-	-	-
Succession Planning Labor Pool		-	-	-	-	-	-
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		-	-	-	-	-	-
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>							
<b>REQUIREMENTS BEFORE OFFSETS:</b>							
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		-	-	-	-	-	-
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	520,112	-	-	-	520,112	-	520,112
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>	520,112	-	-	-	520,112	-	520,112
<b>NET REVENUE REQUIREMENTS:</b>	(520,112)	-	-	-	(520,112)	-	(520,112)

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	-	-	-	-	-	
Office of General Manager	Board of Directors	-	-	-	-	-	
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	
External Affairs	Legislative Services	-	-	-	-	-	
External Affairs	Media Communications Services	-	-	-	-	-	
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	
External Affairs	Conservation & Community Services	-	-	-	-	-	
Human Resources		-	-	-	-	-	
Water Systems Operations	Office of the Manager	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	
Water Systems Operations	Operations Support Services	-	-	-	-	-	
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	
Water Systems Operations	System Operations Unit	-	-	-	-	-	
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	
Water Systems Operations	Treatment Jensen	-	-	-	-	-	
Water Systems Operations	Treatment Diemer	-	-	-	-	-	
Water Systems Operations	Treatment Mills	-	-	-	-	-	
Water Systems Operations	Treatment Skinner	-	-	-	-	-	
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	
Water Systems Operations	Water Quality Section	-	-	-	-	-	
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	-	-	-	-	
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	
Office of the Chief Financial Officer		-	-	-	-	-	
Business Technology	Office of Manager	-	-	-	-	-	
Engineering Services		-	-	-	-	-	
Business Technology	Administrative Services	-	-	-	-	-	
Business Technology	Information Technology	-	-	-	-	-	
Water Resources Management	Resource Planning & Development	-	-	-	-	-	
Water Resources Management	Resource Implementation	-	-	-	-	-	
Water Resources Management	Office of the Group Manager	-	-	-	-	-	
Ethics Office		-	-	-	-	-	
Real Property		-	-	-	-	-	
General Counsel		-	-	-	-	-	
General Auditor		-	-	-	-	-	
<b>Total Departmental O&amp;M</b>		-	-	-	-	-	





	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	278,204	-	278,204	-	-	278,204
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	-
Bay Delta Initiatives	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		716,946	-	716,946	-	-	716,946
Water Systems Operations	Office of the Manager	544,899	-	544,899	-	-	544,899
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	202,898	-	202,898	-	-	202,898
Water Systems Operations	Office of the Manager, Operations Support Services	142,560	-	142,560	-	-	142,560
Water Systems Operations	Operations Support Services	87,273	-	87,273	-	-	87,273
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	15,709,772	-	9,918,040	5,791,732	-	15,709,772
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,830,070	-	2,830,070	-	-	2,830,070
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	102,120	-	102,120	-	-	102,120
Water Systems Operations	Environmental Health & Safety Section	1,564,196	-	1,564,196	-	-	1,564,196
Water Systems Operations	OSS, Fleet Services Unit	521,819	-	521,819	-	-	521,819
Water Systems Operations	OSS, Power Support Unit	245,918	-	245,918	-	-	245,918
Water Systems Operations	Office of the Manager, Operations & Planning Secti	35,757	-	35,757	-	-	35,757
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,296,600	-	2,296,600	-	-	2,296,600
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	2,342,754	-	2,342,754	-	-	2,342,754
Water Resources Managemen	Resource Planning & Development	1,020	-	1,020	-	-	1,020
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	128	-	128	-	-	128
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>27,622,934</b>	<b>-</b>	<b>21,831,202</b>	<b>5,791,732</b>	<b>-</b>	<b>27,622,934</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		15,306,552	4,492,310	4,631,248	6,182,994	-	15,306,552
G.O. Bond Debt Service		430,909	126,467	130,379	174,063	-	430,909
Debt Administration		318,185	93,384	96,272	128,529	-	318,185
Bond Defeasance		-	-	-	-	-	-
PAYGO		7,060,500	2,072,182	2,136,270	2,852,048	-	7,060,500
<b>Total Capital Financing Costs</b>		<b>23,116,146</b>	<b>6,784,343</b>	<b>6,994,168</b>	<b>9,337,634</b>	<b>-</b>	<b>23,116,146</b>
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		360,155	-	360,155	-	-	360,155
Succession Planning Labor Pool		352,430	-	352,430	-	-	352,430
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>712,585</b>	<b>-</b>	<b>712,585</b>	<b>-</b>	<b>-</b>	<b>712,585</b>
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		<b>23,828,731</b>	<b>6,784,343</b>	<b>7,706,753</b>	<b>9,337,634</b>	<b>-</b>	<b>23,828,731</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>51,451,665</b>	<b>6,784,343</b>	<b>29,537,955</b>	<b>9,337,634</b>	<b>5,791,732</b>	<b>51,451,665</b>
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		430,909	-	-	430,909	-	430,909
Interest on Investments		483,213	141,818	146,204	195,191	-	483,213
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>914,122</b>	<b>141,818</b>	<b>146,204</b>	<b>626,100</b>	<b>-</b>	<b>914,122</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>50,537,543</b>	<b>6,642,525</b>	<b>29,391,751</b>	<b>8,711,534</b>	<b>5,791,732</b>	<b>50,537,543</b>

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	265,301	-	265,301	-	-	265,301
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		585,505	-	585,505	-	-	585,505
Water Systems Operations	Office of the Manager	429,540	-	429,540	-	-	429,540
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	74,985	-	74,985	-	-	74,985
Water Systems Operations	Office of the Manager, Operations Support Services	119,421	-	119,421	-	-	119,421
Water Systems Operations	Operations Support Services	80,020	-	80,020	-	-	80,020
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	10,049,119	-	10,049,119	-	-	10,049,119
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,324,518	-	2,324,518	-	-	2,324,518
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	94,041	-	94,041	-	-	94,041
Water Systems Operations	Environmental Health & Safety Section	1,242,524	-	1,242,524	-	-	1,242,524
Water Systems Operations	OSS, Fleet Services Unit	332,801	-	332,801	-	-	332,801
Water Systems Operations	OSS, Power Support Unit	225,098	-	225,098	-	-	225,098
Water Systems Operations	Office of the Manager, Operations & Planning Section	31,168	-	31,168	-	-	31,168
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,080,714	-	2,080,714	-	-	2,080,714
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,588,267	-	1,588,267	-	-	1,588,267
Water Resources Managemen	Resource Planning & Development	911	-	911	-	-	911
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	128	-	128	-	-	128
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>19,524,059</b>	<b>-</b>	<b>19,524,059</b>	<b>-</b>	<b>-</b>	<b>19,524,059</b>

	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		307,777	0.0%	100.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources		793,156	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	570,415	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	216,434	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	149,235	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	87,273	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	63.1%	0.0%	36.9%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	52.0%	0.0%	48.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	75.0%	0.0%	25.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	62.1%	0.0%	37.9%	100.0%
Water Systems Operations	Treatment Weymouth	17,997,912	0.0%	57.7%	0.0%	42.3%	100.0%
Water Systems Operations	Water Quality Section	2,830,070	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	102,120	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	1,564,196	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	521,819	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	245,918	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	37,432	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Office of Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Engineering Services		2,542,508	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	2,591,784	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	1,020	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	128	0.0%	100.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		30,559,196	0.0%	0.0%	0.0%	0.0%	0.0%
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Colorado River Aqueduct Power Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
Local Resources Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Capital Financing</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		16,945,495	29.3%	30.3%	40.4%	0.0%	100.0%
G.O. Bond Debt Service		477,048	29.3%	30.3%	40.4%	0.0%	100.0%
Debt Administration		352,255	29.3%	30.3%	40.4%	0.0%	100.0%
Bond Defeasance		-	29.3%	30.3%	40.4%	0.0%	100.0%
PAYGO		7,816,500	29.3%	30.3%	40.4%	0.0%	100.0%
<b>Total Capital Financing Costs</b>		25,591,297	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Regional Recycled Water Program planning costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>							
Operating Equipment		398,439	0.0%	100.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		389,893	0.0%	100.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		788,331	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Increase/(Decrease) in Required Reserves</b>		-	28.5%	32.3%	39.2%	0.0%	100.0%
<b>Total General District Requirements</b>		26,379,629	0.0%	0.0%	0.0%	0.0%	0.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>		56,938,824	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - MWD GO Debt Service		477,048	0.0%	0.0%	100.0%	0.0%	100.0%
Interest on Investments		534,746	29.3%	30.3%	40.4%	0.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - above GO Debt Service		-	29.3%	30.3%	40.4%	0.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	29.3%	30.3%	40.4%	0.0%	100.0%
Annexation		-	29.3%	30.3%	40.4%	0.0%	100.0%
<b>Total Revenue Offsets</b>		1,011,794	0.0%	0.0%	0.0%	0.0%	0.0%
<b>NET REVENUE REQUIREMENTS:</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		307,777	-	307,777	-	-	307,777
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		793,156	-	793,156	-	-	793,156
Water Systems Operations	Office of the Manager	570,415	-	570,415	-	-	570,415
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	216,434	-	216,434	-	-	216,434
Water Systems Operations	Office of the Manager, Operations Support Services	149,235	-	149,235	-	-	149,235
Water Systems Operations	Operations Support Services	87,273	-	87,273	-	-	87,273
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	17,997,912	-	10,387,709	-	7,610,203	17,997,912
Water Systems Operations	Water Quality Section	2,830,070	-	2,830,070	-	-	2,830,070
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	102,120	-	102,120	-	-	102,120
Water Systems Operations	Environmental Health & Safety Section	1,564,196	-	1,564,196	-	-	1,564,196
Water Systems Operations	OSS, Fleet Services Unit	521,819	-	521,819	-	-	521,819
Water Systems Operations	OSS, Power Support Unit	245,918	-	245,918	-	-	245,918
Water Systems Operations	Office of the Manager, Operations & Planning Secti	37,432	-	37,432	-	-	37,432
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,542,508	-	2,542,508	-	-	2,542,508
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	2,591,784	-	2,591,784	-	-	2,591,784
Water Resources Managemen	Resource Planning & Development	1,020	-	1,020	-	-	1,020
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	128	-	128	-	-	128
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		30,559,196	-	22,948,992	-	7,610,203	30,559,196
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		16,945,495	4,973,323	5,127,137	6,845,035	-	16,945,495
G.O. Bond Debt Service		477,048	140,009	144,339	192,701	-	477,048
Debt Administration		352,255	103,383	106,580	142,291	-	352,255
Bond Defeasance		-	-	-	-	-	-
PAYGO		7,816,500	2,294,060	2,365,010	3,157,430	-	7,816,500
<b>Total Capital Financing Costs</b>		25,591,297	7,510,774	7,743,066	10,337,458	-	25,591,297
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		398,439	-	398,439	-	-	398,439
Succession Planning Labor Pool		389,893	-	389,893	-	-	389,893
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		788,331	-	788,331	-	-	788,331
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		26,379,629	7,510,774	8,531,397	10,337,458	-	26,379,629
<b>REQUIREMENTS BEFORE OFFSETS:</b>		56,938,824	7,510,774	31,480,390	10,337,458	7,610,203	56,938,824
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		477,048	-	-	477,048	-	477,048
Interest on Investments		534,746	156,942	161,796	216,008	-	534,746
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		1,011,794	156,942	161,796	693,056	-	1,011,794
<b>NET REVENUE REQUIREMENTS:</b>		55,927,030	7,353,832	31,318,593	9,644,402	7,610,203	55,927,030

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		293,502	-	293,502	-	-	293,502
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		647,743	-	647,743	-	-	647,743
Water Systems Operations	Office of the Manager	449,654	-	449,654	-	-	449,654
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	79,987	-	79,987	-	-	79,987
Water Systems Operations	Office of the Manager, Operations Support Services	125,013	-	125,013	-	-	125,013
Water Systems Operations	Operations Support Services	80,020	-	80,020	-	-	80,020
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	10,719,508	-	10,719,508	-	-	10,719,508
Water Systems Operations	Water Quality Section	2,324,518	-	2,324,518	-	-	2,324,518
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	94,041	-	94,041	-	-	94,041
Water Systems Operations	Environmental Health & Safety Section	1,242,524	-	1,242,524	-	-	1,242,524
Water Systems Operations	OSS, Fleet Services Unit	332,801	-	332,801	-	-	332,801
Water Systems Operations	OSS, Power Support Unit	225,098	-	225,098	-	-	225,098
Water Systems Operations	Office of the Manager, Operations & Planning Section	32,627	-	32,627	-	-	32,627
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,303,505	-	2,303,505	-	-	2,303,505
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,757,096	-	1,757,096	-	-	1,757,096
Water Resources Managemen	Resource Planning & Development	911	-	911	-	-	911
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	128	-	128	-	-	128
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>20,708,676</b>	<b>-</b>	<b>20,708,676</b>	<b>-</b>	<b>-</b>	<b>20,708,676</b>

	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		317,573	0.0%	100.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources		818,402	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	535,494	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	197,909	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	140,099	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	87,273	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	63.1%	0.0%	36.9%	100.0%
Water Systems Operations	Treatment Diemer	18,443,705	0.0%	52.0%	0.0%	48.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	75.0%	0.0%	25.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	62.1%	0.0%	37.9%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	57.7%	0.0%	42.3%	100.0%
Water Systems Operations	Water Quality Section	2,830,070	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	102,120	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	1,564,196	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	521,819	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	245,918	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	35,140	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Office of Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Engineering Services		3,016,758	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	2,674,282	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	1,020	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	128	0.0%	100.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		<b>31,531,905</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Colorado River Aqueduct Power Costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>							
Local Resources Program		-	0.0%	0.0%	0.0%	0.0%	0.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		20,106,312	29.3%	30.3%	40.4%	0.0%	100.0%
G.O. Bond Debt Service		566,031	29.3%	30.3%	40.4%	0.0%	100.0%
Debt Administration		417,960	29.3%	30.3%	40.4%	0.0%	100.0%
Bond Defeasance		-	29.3%	30.3%	40.4%	0.0%	100.0%
PAYGO		9,274,500	29.3%	30.3%	40.4%	0.0%	100.0%
<b>Total Capital Financing Costs</b>		<b>30,364,804</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Regional Recycled Water Program planning costs</b>							
		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>							
Operating Equipment		411,121	0.0%	100.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		402,303	0.0%	100.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		<b>813,424</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Increase/(Decrease) in Required Reserves</b>		<b>-</b>	<b>28.6%</b>	<b>32.1%</b>	<b>39.3%</b>	<b>0.0%</b>	<b>100.0%</b>
<b>Total General District Requirements</b>		<b>31,178,228</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>62,710,133</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - MWD GO Debt Service		566,031	0.0%	0.0%	100.0%	0.0%	100.0%
Interest on Investments		588,948	29.3%	30.3%	40.4%	0.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - above GO Debt Service		-	29.3%	30.3%	40.4%	0.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	29.3%	30.3%	40.4%	0.0%	100.0%
Annexation		-	29.3%	30.3%	40.4%	0.0%	100.0%
<b>Total Revenue Offsets</b>		<b>1,154,979</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	317,573	-	317,573	-	-	317,573
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		818,402	-	818,402	-	-	818,402
Water Systems Operations	Office of the Manager	535,494	-	535,494	-	-	535,494
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	197,909	-	197,909	-	-	197,909
Water Systems Operations	Office of the Manager, Operations Support Services	140,099	-	140,099	-	-	140,099
Water Systems Operations	Operations Support Services	87,273	-	87,273	-	-	87,273
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	18,443,705	-	9,594,971	-	8,848,734	18,443,705
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,830,070	-	2,830,070	-	-	2,830,070
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	102,120	-	102,120	-	-	102,120
Water Systems Operations	Environmental Health & Safety Section	1,564,196	-	1,564,196	-	-	1,564,196
Water Systems Operations	OSS, Fleet Services Unit	521,819	-	521,819	-	-	521,819
Water Systems Operations	OSS, Power Support Unit	245,918	-	245,918	-	-	245,918
Water Systems Operations	Office of the Manager, Operations & Planning Secti	35,140	-	35,140	-	-	35,140
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		3,016,758	-	3,016,758	-	-	3,016,758
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	2,674,282	-	2,674,282	-	-	2,674,282
Water Resources Managemen	Resource Planning & Development	1,020	-	1,020	-	-	1,020
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	128	-	128	-	-	128
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>31,531,905</b>	-	<b>22,683,172</b>	-	<b>8,848,734</b>	<b>31,531,905</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>							
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>							
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		20,106,312	5,900,989	6,083,494	8,121,829	-	20,106,312
G.O. Bond Debt Service		566,031	166,124	171,262	228,645	-	566,031
Debt Administration		417,960	122,667	126,461	168,833	-	417,960
Bond Defeasance		-	-	-	-	-	-
PAYGO		9,274,500	2,721,967	2,806,152	3,746,381	-	9,274,500
<b>Total Capital Financing Costs</b>		<b>30,364,804</b>	<b>8,911,747</b>	<b>9,187,368</b>	<b>12,265,688</b>		<b>30,364,804</b>
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment		411,121	-	411,121	-	-	411,121
Succession Planning Labor Pool		402,303	-	402,303	-	-	402,303
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>813,424</b>		<b>813,424</b>			<b>813,424</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>31,178,228</b>	<b>8,911,747</b>	<b>10,000,792</b>	<b>12,265,688</b>		<b>31,178,228</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>62,710,133</b>	<b>8,911,747</b>	<b>32,683,964</b>	<b>12,265,688</b>	<b>8,848,734</b>	<b>62,710,133</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		566,031	-	-	566,031	-	566,031
Interest on Investments		588,948	172,850	178,196	237,902	-	588,948
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>1,154,979</b>	<b>172,850</b>	<b>178,196</b>	<b>803,933</b>		<b>1,154,979</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>61,555,154</b>	<b>8,738,897</b>	<b>32,505,768</b>	<b>11,461,755</b>	<b>8,848,734</b>	<b>61,555,154</b>



	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		302,844	-	302,844	-	-	302,844
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		668,361	-	668,361	-	-	668,361
Water Systems Operations	Office of the Manager	422,126	-	422,126	-	-	422,126
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	73,141	-	73,141	-	-	73,141
Water Systems Operations	Office of the Manager, Operations Support Services	117,359	-	117,359	-	-	117,359
Water Systems Operations	Operations Support Services	80,020	-	80,020	-	-	80,020
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	9,802,014	-	9,802,014	-	-	9,802,014
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,324,518	-	2,324,518	-	-	2,324,518
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	94,041	-	94,041	-	-	94,041
Water Systems Operations	Environmental Health & Safety Section	1,242,524	-	1,242,524	-	-	1,242,524
Water Systems Operations	OSS, Fleet Services Unit	332,801	-	332,801	-	-	332,801
Water Systems Operations	OSS, Power Support Unit	225,098	-	225,098	-	-	225,098
Water Systems Operations	Office of the Manager, Operations & Planning Section	30,630	-	30,630	-	-	30,630
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,733,175	-	2,733,175	-	-	2,733,175
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,813,025	-	1,813,025	-	-	1,813,025
Water Resources Management	Resource Planning & Development	911	-	911	-	-	911
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	128	-	128	-	-	128
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>20,262,715</b>	<b>-</b>	<b>20,262,715</b>	<b>-</b>	<b>-</b>	<b>20,262,715</b>



Departmental O&M	Group	Item	Functionalization	Allocation Percentages					Total
				Demand	Fixed		Variable	Hydroelectric	
					Commodity	Standby			
	Office of General Manager		220,608	-	220,608	-	-	-	220,608
	Office of General Manager	Board of Directors	-	-	-	-	-	-	-
	Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-	-
	External Affairs	Legislative Services	-	-	-	-	-	-	-
	External Affairs	Media Communications Services	-	-	-	-	-	-	-
	External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-	-
	External Affairs	Conservation & Community Services	-	-	-	-	-	-	-
	Human Resources		568,519	-	568,519	-	-	-	568,519
	Water Systems Operations	Office of the Manager	519,709	-	519,709	-	-	-	519,709
	Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-	-
	Water Systems Operations	Office of the Manager, Treatment Section	189,535	-	189,535	-	-	-	189,535
	Water Systems Operations	Office of the Manager, Operations Support Services	135,969	-	135,969	-	-	-	135,969
	Water Systems Operations	Operations Support Services	87,273	-	87,273	-	-	-	87,273
	Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-	-
	Water Systems Operations	System Operations Unit	-	-	-	-	-	-	-
	Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-	-
	Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-	-
	Water Systems Operations	Treatment Jensen	-	-	-	-	-	-	-
	Water Systems Operations	Treatment Diemer	-	-	-	-	-	-	-
	Water Systems Operations	Treatment Mills	12,248,282	-	9,182,977	-	3,065,305	-	12,248,282
	Water Systems Operations	Treatment Skinner	-	-	-	-	-	-	-
	Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-	-
	Water Systems Operations	Water Quality Section	2,830,070	-	2,830,070	-	-	-	2,830,070
	Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-	-
	Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-	-
	Water Systems Operations	OSS, Manufacturing Services Unit	102,120	-	102,120	-	-	-	102,120
	Water Systems Operations	Environmental Health & Safety Section	1,564,196	-	1,564,196	-	-	-	1,564,196
	Water Systems Operations	OSS, Fleet Services Unit	521,819	-	521,819	-	-	-	521,819
	Water Systems Operations	OSS, Power Support Unit	245,918	-	245,918	-	-	-	245,918
	Water Systems Operations	Office of the Manager, Operations & Planning Secti	34,104	-	34,104	-	-	-	34,104
	Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-	-
	Office of the Chief Financial O		-	-	-	-	-	-	-
	Business Technology	Office of Manager	-	-	-	-	-	-	-
	Engineering Services		777,243	-	777,243	-	-	-	777,243
	Business Technology	Administrative Services	-	-	-	-	-	-	-
	Business Technology	Information Technology	1,857,742	-	1,857,742	-	-	-	1,857,742
	Water Resources Managemen	Resource Planning & Development	1,020	-	1,020	-	-	-	1,020
	Water Resources Managemen	Resource Implementation	-	-	-	-	-	-	-
	Water Resources Managemen	Office of the Group Manager	128	-	128	-	-	-	128
	Ethics Office		-	-	-	-	-	-	-
	Real Property		-	-	-	-	-	-	-
	General Counsel		-	-	-	-	-	-	-
	General Auditor		-	-	-	-	-	-	-
	<b>Total Departmental O&amp;M</b>		<b>21,904,256</b>	-	<b>18,838,951</b>	-	<b>3,065,305</b>	-	<b>21,904,256</b>
	<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-	-
	<b>State Water Contract</b>		-	-	-	-	-	-	-
	Supply - O&M		-	-	-	-	-	-	-
	Supply - Capital		-	-	-	-	-	-	-
	Power - O&M & Off-Aq Capital		-	-	-	-	-	-	-
	Power - Capital (less Off-Aq)		-	-	-	-	-	-	-
	Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-	-
	Transmission - O&M - Commodity only		-	-	-	-	-	-	-
	Delta Conveyance		-	-	-	-	-	-	-
	<b>Total State Water Contract</b>		-	-	-	-	-	-	-
	<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-	-
	<b>Supply Programs</b>		-	-	-	-	-	-	-
	<b>Demand Management</b>		-	-	-	-	-	-	-
	Local Resources Program		-	-	-	-	-	-	-
	Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-	-
	Conservation Program		-	-	-	-	-	-	-
	<b>Total Demand Management Costs</b>		-	-	-	-	-	-	-
	<b>Capital Financing</b>		-	-	-	-	-	-	-
	Revenue Bond Debt Service net of BABs Interest Subsidy Payment		5,180,229	1,520,342	1,567,363	2,092,524	-	-	5,180,229
	G.O. Bond Debt Service		145,833	42,801	44,124	58,909	-	-	145,833
	Debt Administration		107,684	31,604	32,582	43,498	-	-	107,684
	Bond Defeasance		-	-	-	-	-	-	-
	PAYGO		2,389,500	701,293	722,982	965,225	-	-	2,389,500
	<b>Total Capital Financing Costs</b>		<b>7,823,246</b>	<b>2,296,040</b>	<b>2,367,051</b>	<b>3,160,155</b>	-	-	<b>7,823,246</b>
	<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-	-
	<b>Other Operating Costs</b>		-	-	-	-	-	-	-
	Operating Equipment		285,593	-	285,593	-	-	-	285,593
	Succession Planning Labor Pool		279,468	-	279,468	-	-	-	279,468
	OPEB/PERS Pre-Funding		-	-	-	-	-	-	-
	<b>Total Other Operating Costs</b>		<b>565,061</b>	-	<b>565,061</b>	-	-	-	<b>565,061</b>
	<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-	-
	<b>Total General District Requirements</b>		<b>8,388,307</b>	<b>2,296,040</b>	<b>2,932,112</b>	<b>3,160,155</b>	-	-	<b>8,388,307</b>
	<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>30,292,564</b>	<b>2,296,040</b>	<b>21,771,064</b>	<b>3,160,155</b>	<b>3,065,305</b>	-	<b>30,292,564</b>
	<b>Revenue Offsets</b>		-	-	-	-	-	-	-
	Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-	-
	Property Taxes - MWD GO Debt Service		145,833	-	-	145,833	-	-	145,833
	Interest on Investments		284,495	83,496	86,079	114,920	-	-	284,495
	Hydro-Power Revenue		-	-	-	-	-	-	-
	CRA Power Revenue		-	-	-	-	-	-	-
	Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-	-
	Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-	-
	Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-	-
	Property Taxes - above GO Debt Service		-	-	-	-	-	-	-
	Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-	-
	Annexation		-	-	-	-	-	-	-
	<b>Total Revenue Offsets</b>		<b>430,329</b>	<b>83,496</b>	<b>86,079</b>	<b>260,754</b>	-	-	<b>430,329</b>
	<b>NET REVENUE REQUIREMENTS:</b>		<b>29,862,235</b>	<b>2,212,543</b>	<b>21,684,985</b>	<b>2,899,402</b>	<b>3,065,305</b>	-	<b>29,862,235</b>

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	210,377	-	210,377	-	-	210,377
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		464,290	-	464,290	-	-	464,290
Water Systems Operations	Office of the Manager	409,683	-	409,683	-	-	409,683
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	70,046	-	70,046	-	-	70,046
Water Systems Operations	Office of the Manager, Operations Support Services	113,900	-	113,900	-	-	113,900
Water Systems Operations	Operations Support Services	80,020	-	80,020	-	-	80,020
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	9,387,288	-	9,387,288	-	-	9,387,288
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,324,518	-	2,324,518	-	-	2,324,518
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	94,041	-	94,041	-	-	94,041
Water Systems Operations	Environmental Health & Safety Section	1,242,524	-	1,242,524	-	-	1,242,524
Water Systems Operations	OSS, Fleet Services Unit	332,801	-	332,801	-	-	332,801
Water Systems Operations	OSS, Power Support Unit	225,098	-	225,098	-	-	225,098
Water Systems Operations	Office of the Manager, Operations & Planning Section	29,727	-	29,727	-	-	29,727
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		704,180	-	704,180	-	-	704,180
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,259,454	-	1,259,454	-	-	1,259,454
Water Resources Managemen	Resource Planning & Development	911	-	911	-	-	911
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	128	-	128	-	-	128
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>16,948,985</b>	<b>-</b>	<b>16,948,985</b>	<b>-</b>	<b>-</b>	<b>16,948,985</b>

	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<i>Group</i>	<i>Item</i>						
Office of General Manager		259,109	0.0%	100.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	100.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	100.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources		667,737	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	505,489	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	181,992	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	132,249	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	87,273	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	63.1%	0.0%	36.9%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	52.0%	0.0%	48.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	75.0%	0.0%	25.0%	100.0%
Water Systems Operations	Treatment Skinner	14,076,596	0.0%	62.1%	0.0%	37.9%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	57.7%	0.0%	42.3%	100.0%
Water Systems Operations	Water Quality Section	2,830,070	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	102,120	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	1,564,196	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	521,819	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	245,918	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	33,171	0.0%	100.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	100.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Office of Manager	-	0.0%	100.0%	0.0%	0.0%	100.0%
Engineering Services		2,336,121	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	100.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	2,181,953	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	1,020	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	100.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	128	0.0%	100.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	100.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	100.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		<b>25,726,959</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Colorado River Aqueduct Power Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Supply Programs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Demand Management</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
Local Resources Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	100.0%	0.0%	0.0%	100.0%
Conservation Program		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Demand Management Costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Capital Financing</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		15,569,954	29.3%	30.3%	40.4%	0.0%	100.0%
G.O. Bond Debt Service		438,324	29.3%	30.3%	40.4%	0.0%	100.0%
Debt Administration		323,661	29.3%	30.3%	40.4%	0.0%	100.0%
Bond Defeasance		-	29.3%	30.3%	40.4%	0.0%	100.0%
PAYGO		7,182,000	29.3%	30.3%	40.4%	0.0%	100.0%
<b>Total Capital Financing Costs</b>		<b>23,513,938</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Regional Recycled Water Program planning costs</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Other Operating Costs</b>							
Operating Equipment		335,435	0.0%	100.0%	0.0%	0.0%	100.0%
Succession Planning Labor Pool		328,240	0.0%	100.0%	0.0%	0.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	100.0%	0.0%	0.0%	100.0%
<b>Total Other Operating Costs</b>		<b>663,675</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Increase/(Decrease) in Required Reserves</b>		<b>-</b>	<b>28.5%</b>	<b>32.2%</b>	<b>39.3%</b>	<b>0.0%</b>	<b>100.0%</b>
<b>Total General District Requirements</b>		<b>24,177,613</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>49,904,572</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - MWD GO Debt Service		438,324	0.0%	0.0%	100.0%	0.0%	100.0%
Interest on Investments		468,683	29.3%	30.3%	40.4%	0.0%	100.0%
Hydro-Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Property Taxes - above GO Debt Service		-	29.3%	30.3%	40.4%	0.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	29.3%	30.3%	40.4%	0.0%	100.0%
Annexation		-	29.3%	30.3%	40.4%	0.0%	100.0%
<b>Total Revenue Offsets</b>		<b>907,008</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>-</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		259,109	-	259,109	-	-	259,109
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		667,737	-	667,737	-	-	667,737
Water Systems Operations	Office of the Manager	505,489	-	505,489	-	-	505,489
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	181,992	-	181,992	-	-	181,992
Water Systems Operations	Office of the Manager, Operations Support Services	132,249	-	132,249	-	-	132,249
Water Systems Operations	Operations Support Services	87,273	-	87,273	-	-	87,273
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	14,076,596	-	8,739,382	5,337,214	-	14,076,596
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,830,070	-	2,830,070	-	-	2,830,070
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	102,120	-	102,120	-	-	102,120
Water Systems Operations	Environmental Health & Safety Section	1,564,196	-	1,564,196	-	-	1,564,196
Water Systems Operations	OSS, Fleet Services Unit	521,819	-	521,819	-	-	521,819
Water Systems Operations	OSS, Power Support Unit	245,918	-	245,918	-	-	245,918
Water Systems Operations	Office of the Manager, Operations & Planning Secti	33,171	-	33,171	-	-	33,171
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		2,336,121	-	2,336,121	-	-	2,336,121
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	2,181,953	-	2,181,953	-	-	2,181,953
Water Resources Managemen	Resource Planning & Development	1,020	-	1,020	-	-	1,020
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	128	-	128	-	-	128
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		25,726,959	-	20,389,745	5,337,214	-	25,726,959
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		15,569,954	4,569,616	4,710,944	6,289,393	-	15,569,954
G.O. Bond Debt Service		438,324	128,643	132,622	177,059	-	438,324
Debt Administration		323,661	94,991	97,929	130,741	-	323,661
Bond Defeasance		-	-	-	-	-	-
PAYGO		7,182,000	2,107,841	2,173,032	2,901,128	-	7,182,000
<b>Total Capital Financing Costs</b>		23,513,938	6,901,091	7,114,527	9,498,320	-	23,513,938
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		335,435	-	335,435	-	-	335,435
Succession Planning Labor Pool		328,240	-	328,240	-	-	328,240
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		663,675	-	663,675	-	-	663,675
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		24,177,613	6,901,091	7,778,202	9,498,320	-	24,177,613
<b>REQUIREMENTS BEFORE OFFSETS:</b>		49,904,572	6,901,091	28,167,947	9,498,320	5,337,214	49,904,572
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		438,324	-	-	438,324	-	438,324
Interest on Investments		468,683	137,554	141,808	189,322	-	468,683
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		907,008	137,554	141,808	627,646	-	907,008
<b>NET REVENUE REQUIREMENTS:</b>		48,997,565	6,763,537	28,026,139	8,870,674	5,337,214	48,997,565

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	247,091	-	247,091	-	-	247,091
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources	Human Resources	545,317	-	545,317	-	-	545,317
Water Systems Operations	Office of the Manager	398,473	-	398,473	-	-	398,473
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	67,258	-	67,258	-	-	67,258
Water Systems Operations	Office of the Manager, Operations Support Services	110,783	-	110,783	-	-	110,783
Water Systems Operations	Operations Support Services	80,020	-	80,020	-	-	80,020
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	9,013,681	-	9,013,681	-	-	9,013,681
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	2,324,518	-	2,324,518	-	-	2,324,518
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	94,041	-	94,041	-	-	94,041
Water Systems Operations	Environmental Health & Safety Section	1,242,524	-	1,242,524	-	-	1,242,524
Water Systems Operations	OSS, Fleet Services Unit	332,801	-	332,801	-	-	332,801
Water Systems Operations	OSS, Power Support Unit	225,098	-	225,098	-	-	225,098
Water Systems Operations	Office of the Manager, Operations & Planning Section	28,913	-	28,913	-	-	28,913
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer	Office of the Chief Financial Officer	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	2,116,520	-	2,116,520	-	-	2,116,520
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	1,479,252	-	1,479,252	-	-	1,479,252
Water Resources Management	Resource Planning & Development	911	-	911	-	-	911
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	128	-	128	-	-	128
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	-	-	-	-	-	-
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>18,307,330</b>	<b>-</b>	<b>18,307,330</b>	<b>-</b>	<b>-</b>	<b>18,307,330</b>





		Allocation Percentages					Total
		Functionalization	Fixed			Variable Commodity	
			Demand	Commodity	Standby		Hydroelectric
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		1,098,439	-	1,098,439	-	-	1,098,439
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		2,830,733	-	2,830,733	-	-	2,830,733
Water Systems Operations	Office of the Manager	2,375,735	-	2,375,735	-	-	2,375,735
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	397,952	-	397,952	-	-	397,952
Water Systems Operations	Office of the Manager, Treatment Section	145,661	-	145,661	-	-	145,661
Water Systems Operations	Office of the Manager, Operations Support Services	621,553	-	621,553	-	-	621,553
Water Systems Operations	Operations Support Services	6,132,892	-	6,132,892	-	-	6,132,892
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	9,314,505	-	9,314,505	-	-	9,314,505
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	2,314,289	-	2,314,289	-	-	2,314,289
Water Systems Operations	Treatment Diemer	2,717,040	-	2,717,040	-	-	2,717,040
Water Systems Operations	Treatment Mills	1,804,359	-	1,804,359	-	-	1,804,359
Water Systems Operations	Treatment Skinner	2,073,698	-	2,073,698	-	-	2,073,698
Water Systems Operations	Treatment Weymouth	2,651,367	-	2,651,367	-	-	2,651,367
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	16,733,044	-	16,733,044	-	-	16,733,044
Water Systems Operations	C&D, Western Unit	14,453,818	-	14,453,818	-	-	14,453,818
Water Systems Operations	OSS, Manufacturing Services Unit	6,521,308	-	6,521,308	-	-	6,521,308
Water Systems Operations	Environmental Health & Safety Section	5,159,489	-	5,159,489	-	-	5,159,489
Water Systems Operations	OSS, Fleet Services Unit	6,217,173	-	6,217,173	-	-	6,217,173
Water Systems Operations	OSS, Power Support Unit	4,718,959	-	4,718,959	-	-	4,718,959
Water Systems Operations	Office of the Manager, Operations & Planning Secti	155,901	-	155,901	-	-	155,901
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		8,256,243	-	8,256,243	-	-	8,256,243
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	9,249,945	-	9,249,945	-	-	9,249,945
Water Resources Managemen	Resource Planning & Development	1,035,345	-	1,035,345	-	-	1,035,345
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	129,530	-	129,530	-	-	129,530
Ethics Office		-	-	-	-	-	-
Real Property		1,955,213	-	1,955,213	-	-	1,955,213
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		109,064,191	-	109,064,191	-	-	109,064,191
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>							
Supply Programs		-	-	-	-	-	-
<b>Demand Management</b>							
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		55,026,824	20,483,362	22,070,098	12,473,364	-	55,026,824
G.O. Bond Debt Service		6,181,029	2,300,846	2,479,080	1,401,103	-	6,181,029
Debt Administration		1,143,871	425,798	458,782	259,290	-	1,143,871
Bond Defeasance		-	-	-	-	-	-
PAYGO		25,382,391	9,448,423	10,180,342	5,753,627	-	25,382,391
<b>Total Capital Financing Costs</b>		87,734,115	32,658,430	35,188,303	19,887,383	-	87,734,115
<b>Regional Recycled Water Program planning costs</b>		9,373,710	-	9,373,710	-	-	9,373,710
<b>Other Operating Costs</b>							
Operating Equipment		1,422,007	-	1,422,007	-	-	1,422,007
Succession Planning Labor Pool		1,391,506	-	1,391,506	-	-	1,391,506
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		2,813,513	-	2,813,513	-	-	2,813,513
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		99,921,339	32,658,430	47,375,526	19,887,383	-	99,921,339
<b>REQUIREMENTS BEFORE OFFSETS:</b>		208,985,529	32,658,430	156,439,716	19,887,383	-	208,985,529
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		6,181,029	2,300,846	2,479,080	1,401,103	-	6,181,029
Interest on Investments		1,962,707	-	1,962,707	-	-	1,962,707
Hydro-Power Revenue		-	-	-	-	-	-
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		8,143,736	2,300,846	4,441,787	1,401,103	-	8,143,736
<b>NET REVENUE REQUIREMENTS:</b>		200,841,793	30,357,584	151,997,929	18,486,280	-	200,841,793

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		1,047,493	-	1,047,493	-	-	1,047,493
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		2,311,762	-	2,311,762	-	-	2,311,762
Water Systems Operations	Office of the Manager	1,872,775	-	1,872,775	-	-	1,872,775
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	404,399	-	404,399	-	-	404,399
Water Systems Operations	Office of the Manager, Treatment Section	53,832	-	53,832	-	-	53,832
Water Systems Operations	Office of the Manager, Operations Support Services	520,668	-	520,668	-	-	520,668
Water Systems Operations	Operations Support Services	5,623,200	-	5,623,200	-	-	5,623,200
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	8,038,489	-	8,038,489	-	-	8,038,489
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	1,480,389	-	1,480,389	-	-	1,480,389
Water Systems Operations	Treatment Diemer	1,443,986	-	1,443,986	-	-	1,443,986
Water Systems Operations	Treatment Mills	1,382,891	-	1,382,891	-	-	1,382,891
Water Systems Operations	Treatment Skinner	1,327,853	-	1,327,853	-	-	1,327,853
Water Systems Operations	Treatment Weymouth	1,579,147	-	1,579,147	-	-	1,579,147
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	12,046,823	-	12,046,823	-	-	12,046,823
Water Systems Operations	C&D, Western Unit	11,114,639	-	11,114,639	-	-	11,114,639
Water Systems Operations	OSS, Manufacturing Services Unit	6,005,378	-	6,005,378	-	-	6,005,378
Water Systems Operations	Environmental Health & Safety Section	4,098,455	-	4,098,455	-	-	4,098,455
Water Systems Operations	OSS, Fleet Services Unit	3,965,127	-	3,965,127	-	-	3,965,127
Water Systems Operations	OSS, Power Support Unit	4,319,452	-	4,319,452	-	-	4,319,452
Water Systems Operations	Office of the Manager, Operations & Planning Section	135,890	-	135,890	-	-	135,890
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		7,480,135	-	7,480,135	-	-	7,480,135
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	6,270,986	-	6,270,986	-	-	6,270,986
Water Resources Managemen	Resource Planning & Development	924,676	-	924,676	-	-	924,676
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	129,923	-	129,923	-	-	129,923
Ethics Office		-	-	-	-	-	-
Real Property		921,486	-	921,486	-	-	921,486
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>84,499,854</b>	<b>-</b>	<b>84,499,854</b>	<b>-</b>	<b>-</b>	<b>84,499,854</b>

	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		55,242	0.0%	0.0%	0.0%	0.0%	100.0%
Office of General Manager	Board of Directors	-	0.0%	0.0%	0.0%	0.0%	100.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Legislative Services	-	0.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Media Communications Services	-	0.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Manager, External Affairs/Special Projects	-	0.0%	0.0%	0.0%	0.0%	100.0%
External Affairs	Conservation & Community Services	-	0.0%	0.0%	0.0%	0.0%	100.0%
Human Resources		142,362	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager	133,503	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	21,693	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Treatment Section	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations Support Services	34,928	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Support Services	87,273	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	System Operations Unit	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Power Operations and Planning	43,276	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Jensen	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Diemer	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Mills	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Skinner	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Treatment Weymouth	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Water Quality Section	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Eastern Unit	842,974	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	C&D, Western Unit	852,671	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Manufacturing Services Unit	131,171	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Environmental Health & Safety Section	99,040	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Fleet Services Unit	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	OSS, Power Support Unit	2,110,239	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Office of the Manager, Operations & Planning Section	8,761	0.0%	0.0%	0.0%	0.0%	100.0%
Water Systems Operations	Security Team & Security Management	-	0.0%	0.0%	0.0%	0.0%	100.0%
Office of the Chief Financial Officer		-	0.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Office of Manager	-	0.0%	0.0%	0.0%	0.0%	100.0%
Engineering Services		456,685	0.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Administrative Services	-	0.0%	0.0%	0.0%	0.0%	100.0%
Business Technology	Information Technology	465,195	0.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Planning & Development	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Resource Implementation	-	0.0%	0.0%	0.0%	0.0%	100.0%
Water Resources Management	Office of the Group Manager	-	0.0%	0.0%	0.0%	0.0%	100.0%
Ethics Office		-	0.0%	0.0%	0.0%	0.0%	100.0%
Real Property		-	0.0%	0.0%	0.0%	0.0%	100.0%
General Counsel		-	0.0%	0.0%	0.0%	0.0%	100.0%
General Auditor		-	0.0%	0.0%	0.0%	0.0%	100.0%
<b>Total Departmental O&amp;M</b>		5,485,014	0.0%	0.0%	0.0%	0.0%	0.0%
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	0.0%	0.0%	0.0%	0.0%
Supply - Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	0.0%	0.0%	0.0%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - O&M - Commodity only		-	0.0%	0.0%	0.0%	0.0%	0.0%
Delta Conveyance		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total State Water Contract</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Colorado River Aqueduct Power Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply Programs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Demand Management</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
Local Resources Program		-	0.0%	0.0%	0.0%	100.0%	100.0%
Future Supply Actions & Stormwater Pilot		-	0.0%	0.0%	0.0%	100.0%	100.0%
Conservation Program		-	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total Demand Management Costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Capital Financing</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		3,043,750	0.0%	0.0%	0.0%	100.0%	100.0%
G.O. Bond Debt Service		-	0.0%	0.0%	0.0%	100.0%	100.0%
Debt Administration		63,272	0.0%	0.0%	0.0%	100.0%	100.0%
Bond Defeasance		-	0.0%	0.0%	0.0%	100.0%	100.0%
PAYGO		1,404,000	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total Capital Financing Costs</b>		4,511,022	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Regional Recycled Water Program planning costs</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Other Operating Costs</b>							
Operating Equipment		71,515	0.0%	0.0%	0.0%	100.0%	100.0%
Succession Planning Labor Pool		69,981	0.0%	0.0%	0.0%	100.0%	100.0%
OPEB/PERS Pre-Funding		-	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total Other Operating Costs</b>		141,496	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Increase/(Decrease) in Required Reserves</b>		-	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total General District Requirements</b>		4,652,518	0.0%	0.0%	0.0%	0.0%	0.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>		10,137,532	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	0.0%	0.0%	0.0%	100.0%	100.0%
Property Taxes - MWD GO Debt Service		-	0.0%	0.0%	0.0%	100.0%	100.0%
Interest on Investments		95,208	0.0%	0.0%	0.0%	100.0%	100.0%
Hydro-Power Revenue		11,747,864	0.0%	0.0%	0.0%	100.0%	100.0%
CRA Power Revenue		-	0.0%	0.0%	0.0%	100.0%	100.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	0.0%	0.0%	0.0%	100.0%	100.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	0.0%	0.0%	0.0%	100.0%	100.0%
Misc. allocated to supply (PVID Lease)		-	0.0%	0.0%	0.0%	100.0%	100.0%
Property Taxes - above GO Debt Service		-	0.0%	0.0%	0.0%	100.0%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	0.0%	0.0%	0.0%	100.0%	100.0%
Annexation		-	0.0%	0.0%	0.0%	100.0%	100.0%
<b>Total Revenue Offsets</b>		11,843,071	0.0%	0.0%	0.0%	0.0%	0.0%
<b>NET REVENUE REQUIREMENTS:</b>		(1,705,539)	0.0%	0.0%	0.0%	0.0%	0.0%

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Board of Directors	55,242	-	-	-	55,242	55,242
Office of General Manager	Bay Delta Initiatives	-	-	-	-	-	-
Bay Delta Initiatives	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		142,362	-	-	-	142,362	142,362
Water Systems Operations	Office of the Manager	133,503	-	-	-	133,503	133,503
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	21,693	-	-	-	21,693	21,693
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	34,928	-	-	-	34,928	34,928
Water Systems Operations	Operations Support Services	87,273	-	-	-	87,273	87,273
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	43,276	-	-	-	43,276	43,276
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	842,974	-	-	-	842,974	842,974
Water Systems Operations	C&D, Western Unit	852,671	-	-	-	852,671	852,671
Water Systems Operations	OSS, Manufacturing Services Unit	131,171	-	-	-	131,171	131,171
Water Systems Operations	Environmental Health & Safety Section	99,040	-	-	-	99,040	99,040
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	2,110,239	-	-	-	2,110,239	2,110,239
Water Systems Operations	Office of the Manager, Operations & Planning Secti	8,761	-	-	-	8,761	8,761
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial O		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		456,685	-	-	-	456,685	456,685
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	465,195	-	-	-	465,195	465,195
Water Resources Managemen	Resource Planning & Development	-	-	-	-	-	-
Water Resources Managemen	Resource Implementation	-	-	-	-	-	-
Water Resources Managemen	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>5,485,014</b>	-	-	-	<b>5,485,014</b>	<b>5,485,014</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-
<b>State Water Contract</b>		-	-	-	-	-	-
Supply - O&M		-	-	-	-	-	-
Supply - Capital		-	-	-	-	-	-
Power - O&M & Off-Aq Capital		-	-	-	-	-	-
Power - Capital (less Off-Aq)		-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby		-	-	-	-	-	-
Transmission - O&M - Commodity only		-	-	-	-	-	-
Delta Conveyance		-	-	-	-	-	-
<b>Total State Water Contract</b>		-	-	-	-	-	-
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	-	-	-
<b>Supply Programs</b>		-	-	-	-	-	-
<b>Demand Management</b>		-	-	-	-	-	-
Local Resources Program		-	-	-	-	-	-
Future Supply Actions & Stormwater Pilot		-	-	-	-	-	-
Conservation Program		-	-	-	-	-	-
<b>Total Demand Management Costs</b>		-	-	-	-	-	-
<b>Capital Financing</b>		-	-	-	-	-	-
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		3,043,750	-	-	-	3,043,750	3,043,750
G.O. Bond Debt Service		-	-	-	-	-	-
Debt Administration		63,272	-	-	-	63,272	63,272
Bond Defeasance		-	-	-	-	-	-
PAYGO		1,404,000	-	-	-	1,404,000	1,404,000
<b>Total Capital Financing Costs</b>		<b>4,511,022</b>	-	-	-	<b>4,511,022</b>	<b>4,511,022</b>
<b>Regional Recycled Water Program planning costs</b>		-	-	-	-	-	-
<b>Other Operating Costs</b>		-	-	-	-	-	-
Operating Equipment		71,515	-	-	-	71,515	71,515
Succession Planning Labor Pool		69,981	-	-	-	69,981	69,981
OPEB/PERS Pre-Funding		-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>141,496</b>	-	-	-	<b>141,496</b>	<b>141,496</b>
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-
<b>Total General District Requirements</b>		<b>4,652,518</b>	-	-	-	<b>4,652,518</b>	<b>4,652,518</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>10,137,532</b>	-	-	-	<b>10,137,532</b>	<b>10,137,532</b>
<b>Revenue Offsets</b>		-	-	-	-	-	-
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-
Interest on Investments		95,208	-	-	-	95,208	95,208
Hydro-Power Revenue		11,747,864	-	-	-	11,747,864	11,747,864
CRA Power Revenue		-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-
Property Taxes - above GO Debt Service		-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-
Annexation		-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>11,843,071</b>	-	-	-	<b>11,843,071</b>	<b>11,843,071</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>(1,705,539)</b>	-	-	-	<b>(1,705,539)</b>	<b>(1,705,539)</b>

	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager		52,680	-	-	-	52,680	52,680
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	-	-	-	-	-
Human Resources		116,262	-	-	-	116,262	116,262
Water Systems Operations	Office of the Manager	105,240	-	-	-	105,240	105,240
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	22,045	-	-	-	22,045	22,045
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	29,259	-	-	-	29,259	29,259
Water Systems Operations	Operations Support Services	80,020	-	-	-	80,020	80,020
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	38,049	-	-	-	38,049	38,049
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	606,893	-	-	-	606,893	606,893
Water Systems Operations	C&D, Western Unit	655,684	-	-	-	655,684	655,684
Water Systems Operations	OSS, Manufacturing Services Unit	120,794	-	-	-	120,794	120,794
Water Systems Operations	Environmental Health & Safety Section	78,672	-	-	-	78,672	78,672
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	1,931,586	-	-	-	1,931,586	1,931,586
Water Systems Operations	Office of the Manager, Operations & Planning Section	7,636	-	-	-	7,636	7,636
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		413,756	-	-	-	413,756	413,756
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	315,378	-	-	-	315,378	315,378
Water Resources Management	Resource Planning & Development	-	-	-	-	-	-
Water Resources Management	Resource Implementation	-	-	-	-	-	-
Water Resources Management	Office of the Group Manager	-	-	-	-	-	-
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>4,573,953</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4,573,953</b>	<b>4,573,953</b>



	Functionalization	Allocation Percentages					Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	115,632	-	115,632	-	-	115,632
Bay Delta Initiatives	Board of Directors	-	-	-	-	-	-
External Affairs	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	2,951,233	-	2,951,233	-	-	2,951,233
Human Resources	Human Resources	297,989	-	297,989	-	-	297,989
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Secti	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Of	Office of the Chief Financial Of	-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services	Engineering Services	-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	973,734	-	973,734	-	-	973,734
Water Resources Managemen	Resource Planning & Development	112,205	-	112,205	-	-	112,205
Water Resources Managemen	Resource Implementation	6,236,085	-	6,236,085	-	-	6,236,085
Water Resources Managemen	Office of the Group Manager	794,221	-	794,221	-	-	794,221
Ethics Office	Ethics Office	-	-	-	-	-	-
Real Property	Real Property	-	-	-	-	-	-
General Counsel	General Counsel	-	-	-	-	-	-
General Auditor	General Auditor	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>11,481,098</b>	-	<b>11,481,098</b>	-	-	<b>11,481,098</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M	Supply - O&M	-	-	-	-	-	-
Supply - Capital	Supply - Capital	-	-	-	-	-	-
Power - O&M & Off-Aq Capital	Power - O&M & Off-Aq Capital	-	-	-	-	-	-
Power - Capital (less Off-Aq)	Power - Capital (less Off-Aq)	-	-	-	-	-	-
Transmission - Capital - Commodity, Demand, & Standby	Transmission - Capital - Commodity, Demand, & Standby	-	-	-	-	-	-
Transmission - O&M - Commodity only	Transmission - O&M - Commodity only	-	-	-	-	-	-
Delta Conveyance	Delta Conveyance	-	-	-	-	-	-
<b>Total State Water Contract</b>							
<b>Colorado River Aqueduct Power Costs</b>							
<b>Supply Programs</b>							
<b>Demand Management</b>							
Local Resources Program	Local Resources Program	20,346,694	-	20,346,694	-	-	20,346,694
Future Supply Actions & Stormwater Pilot	Future Supply Actions & Stormwater Pilot	7,145,000	-	7,145,000	-	-	7,145,000
Conservation Program	Conservation Program	25,000,000	-	25,000,000	-	-	25,000,000
<b>Total Demand Management Costs</b>		<b>52,491,694</b>	-	<b>52,491,694</b>	-	-	<b>52,491,694</b>
<b>Capital Financing</b>							
Revenue Bond Debt Service net of BABs Interest Subsidy Payment	Revenue Bond Debt Service net of BABs Interest Subsidy Payment	-	-	-	-	-	-
G.O. Bond Debt Service	G.O. Bond Debt Service	-	-	-	-	-	-
Debt Administration	Debt Administration	-	-	-	-	-	-
Bond Defeasance	Bond Defeasance	-	-	-	-	-	-
PAYGO	PAYGO	-	-	-	-	-	-
<b>Total Capital Financing Costs</b>							
<b>Regional Recycled Water Program planning costs</b>							
<b>Other Operating Costs</b>							
Operating Equipment	Operating Equipment	149,693	-	149,693	-	-	149,693
Succession Planning Labor Pool	Succession Planning Labor Pool	146,483	-	146,483	-	-	146,483
OPEB/PERS Pre-Funding	OPEB/PERS Pre-Funding	-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>296,176</b>	-	<b>296,176</b>	-	-	<b>296,176</b>
<b>Increase/(Decrease) in Required Reserves</b>							
<b>Total General District Requirements</b>		<b>52,787,870</b>	-	<b>52,787,870</b>	-	-	<b>52,787,870</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>64,268,969</b>	-	<b>64,268,969</b>	-	-	<b>64,268,969</b>
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service	Property Taxes - MWD Portion of SWP GO Debt Service	-	-	-	-	-	-
Property Taxes - MWD GO Debt Service	Property Taxes - MWD GO Debt Service	-	-	-	-	-	-
Interest on Investments	Interest on Investments	603,588	-	603,588	-	-	603,588
Hydro-Power Revenue	Hydro-Power Revenue	-	-	-	-	-	-
CRA Power Revenue	CRA Power Revenue	-	-	-	-	-	-
Wadsworth Pumping Plant (DVL) Power Revenue	Wadsworth Pumping Plant (DVL) Power Revenue	-	-	-	-	-	-
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	-	-	-	-	-	-
Misc. allocated to supply (PVID Lease)	Misc. allocated to supply (PVID Lease)	-	-	-	-	-	-
Property Taxes - above GO Debt Service	Property Taxes - above GO Debt Service	-	-	-	-	-	-
Revenue Reserve used for Revenue Bonds - I&P	Revenue Reserve used for Revenue Bonds - I&P	-	-	-	-	-	-
Annexation	Annexation	-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>603,588</b>	-	<b>603,588</b>	-	-	<b>603,588</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>63,665,381</b>	-	<b>63,665,381</b>	-	-	<b>63,665,381</b>

	Functionalization	Allocation Percentages					Total
		Fixed			Variable Commodity	Hydroelectric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	110,269	-	110,269	-	-	110,269
Office of General Manager	Board of Directors	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	-	-	-	-	-
External Affairs	Legislative Services	-	-	-	-	-	-
External Affairs	Media Communications Services	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-
External Affairs	Conservation & Community Services	1,907,026	-	1,907,026	-	-	1,907,026
Human Resources		243,357	-	243,357	-	-	243,357
Water Systems Operations	Office of the Manager	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Treatment Section	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Operations Support Services	-	-	-	-	-	-
Water Systems Operations	Desert Region / C&D CRA	-	-	-	-	-	-
Water Systems Operations	System Operations Unit	-	-	-	-	-	-
Water Systems Operations	Power Operations and Planning	-	-	-	-	-	-
Water Systems Operations	Operations Planning & Programs Unit	-	-	-	-	-	-
Water Systems Operations	Treatment Jensen	-	-	-	-	-	-
Water Systems Operations	Treatment Diemer	-	-	-	-	-	-
Water Systems Operations	Treatment Mills	-	-	-	-	-	-
Water Systems Operations	Treatment Skinner	-	-	-	-	-	-
Water Systems Operations	Treatment Weymouth	-	-	-	-	-	-
Water Systems Operations	Water Quality Section	-	-	-	-	-	-
Water Systems Operations	C&D, Eastern Unit	-	-	-	-	-	-
Water Systems Operations	C&D, Western Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Manufacturing Services Unit	-	-	-	-	-	-
Water Systems Operations	Environmental Health & Safety Section	-	-	-	-	-	-
Water Systems Operations	OSS, Fleet Services Unit	-	-	-	-	-	-
Water Systems Operations	OSS, Power Support Unit	-	-	-	-	-	-
Water Systems Operations	Office of the Manager, Operations & Planning Section	-	-	-	-	-	-
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-
Office of the Chief Financial Officer		-	-	-	-	-	-
Business Technology	Office of Manager	-	-	-	-	-	-
Engineering Services		-	-	-	-	-	-
Business Technology	Administrative Services	-	-	-	-	-	-
Business Technology	Information Technology	660,142	-	660,142	-	-	660,142
Water Resources Management	Resource Planning & Development	100,211	-	100,211	-	-	100,211
Water Resources Management	Resource Implementation	3,997,376	-	3,997,376	-	-	3,997,376
Water Resources Management	Office of the Group Manager	796,630	-	796,630	-	-	796,630
Ethics Office		-	-	-	-	-	-
Real Property		-	-	-	-	-	-
General Counsel		-	-	-	-	-	-
General Auditor		-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>7,815,011</b>	<b>-</b>	<b>7,815,011</b>	<b>-</b>	<b>-</b>	<b>7,815,011</b>



	Functionalization	Allocation Percentages					% Total
		Demand	Fixed		Variable Commodity	Hydroelectric	
			Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
Office of General Manager	Office of General Manager	1,478,072	0.0%	1.3%	0.0%	0.0%	1.3%
Office of General Manager	Board of Directors	1,938,982	0.0%	0.0%	0.0%	0.0%	0.0%
Bay Delta Initiatives	Bay Delta Initiatives	-	0.0%	1.8%	0.0%	0.0%	1.8%
External Affairs	Legislative Services	6,312,296	0.0%	0.0%	0.0%	0.0%	0.0%
External Affairs	Media Communications Services	5,410,993	0.0%	0.0%	0.0%	0.0%	0.0%
External Affairs	Manager, External Affairs/Special Projects	10,013,226	0.0%	0.0%	0.0%	0.0%	0.0%
External Affairs	Conservation & Community Services	2,951,233	0.0%	0.6%	0.0%	0.0%	0.6%
Human Resources		3,809,068	0.0%	2.8%	0.0%	0.0%	2.8%
Water Systems Operations	Office of the Manager	39,789	0.0%	1.8%	0.0%	0.0%	1.9%
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	2,536	0.0%	0.3%	0.0%	0.0%	0.3%
Water Systems Operations	Office of the Manager, Treatment Section	-	0.0%	0.1%	0.0%	0.0%	0.1%
Water Systems Operations	Office of the Manager, Operations Support Services	10,410	0.0%	0.5%	0.0%	0.0%	0.5%
Water Systems Operations	Operations Support Services	15,868	0.0%	2.4%	0.0%	0.0%	2.4%
Water Systems Operations	Desert Region / C&D CRA	-	0.0%	8.7%	0.0%	0.0%	8.7%
Water Systems Operations	System Operations Unit	-	0.0%	2.7%	0.0%	0.0%	2.7%
Water Systems Operations	Power Operations and Planning	-	0.0%	1.1%	0.0%	0.0%	1.2%
Water Systems Operations	Operations Planning & Programs Unit	-	0.0%	0.9%	0.0%	0.0%	0.9%
Water Systems Operations	Treatment Jensen	-	0.0%	3.8%	0.0%	0.0%	3.8%
Water Systems Operations	Treatment Diemer	-	0.0%	3.7%	0.0%	0.0%	3.7%
Water Systems Operations	Treatment Mills	-	0.0%	3.6%	0.0%	0.0%	3.6%
Water Systems Operations	Treatment Skinner	-	0.0%	3.4%	0.0%	0.0%	3.4%
Water Systems Operations	Treatment Weymouth	-	0.0%	4.1%	0.0%	0.0%	4.1%
Water Systems Operations	Water Quality Section	-	0.0%	7.7%	0.0%	0.0%	7.7%
Water Systems Operations	C&D, Eastern Unit	-	0.0%	4.8%	0.0%	0.2%	5.0%
Water Systems Operations	C&D, Western Unit	191,971	0.0%	3.8%	0.0%	0.2%	4.0%
Water Systems Operations	OSS, Manufacturing Services Unit	16,283	0.0%	2.3%	0.0%	0.0%	2.3%
Water Systems Operations	Environmental Health & Safety Section	4,716	0.0%	4.1%	0.0%	0.0%	4.2%
Water Systems Operations	OSS, Fleet Services Unit	1,339,807	0.0%	2.2%	0.0%	0.0%	2.2%
Water Systems Operations	OSS, Power Support Unit	16,616	0.0%	1.9%	0.0%	0.0%	2.5%
Water Systems Operations	Office of the Manager, Operations & Planning Section	2,611	0.0%	0.1%	0.0%	0.0%	0.1%
Water Systems Operations	Security Team & Security Management	-	0.0%	0.0%	0.0%	0.0%	0.0%
Office of the Chief Financial Officer		27,615,004	0.0%	0.0%	0.0%	0.0%	0.0%
Business Technology	Office of Manager	1,010,651	0.0%	0.0%	0.0%	0.0%	0.0%
Engineering Services		2,502,987	0.0%	12.3%	0.0%	0.1%	12.5%
Business Technology	Administrative Services	39,427,446	0.0%	0.0%	0.0%	0.0%	0.0%
Business Technology	Information Technology	12,446,835	0.0%	7.6%	0.0%	0.1%	7.7%
Water Resources Management	Resource Planning & Development	-	0.0%	1.5%	0.0%	0.0%	1.5%
Water Resources Management	Resource Implementation	19,771	0.0%	3.5%	0.0%	0.0%	3.5%
Water Resources Management	Office of the Group Manager	2,473	0.0%	0.9%	0.0%	0.0%	0.9%
Ethics Office		1,608,910	0.0%	0.0%	0.0%	0.0%	0.0%
Real Property		7,017,786	0.0%	1.9%	0.0%	0.0%	1.9%
General Counsel		17,002,271	0.0%	0.0%	0.0%	0.0%	0.0%
General Auditor		4,549,453	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total Departmental O&amp;M</b>		146,758,065	0.0%	98.5%	0.0%	1.5%	100.0%
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
Supply - O&M		-	0.0%	7.2%	0.0%	0.0%	7.2%
Supply - Capital		-	0.0%	4.7%	0.0%	0.0%	4.7%
Power - O&M & Off-Aq Capital		-	0.0%	0.0%	16.6%	0.0%	16.6%
Power - Capital (less Off-Aq)		-	0.0%	0.0%	0.0%	0.0%	0.0%
Transmission - Capital - Commodity, Demand, & Standby		-	1.3%	3.7%	2.4%	0.0%	7.4%
Transmission - O&M - Commodity only		-	0.0%	14.3%	0.0%	0.0%	14.3%
Delta Conveyance		-	0.3%	1.0%	0.6%	0.0%	2.0%
<b>Total State Water Contract</b>		-	1.7%	30.8%	3.1%	16.6%	52.1%
<b>Colorado River Aqueduct Power Costs</b>		-	0.0%	0.0%	0.0%	4.5%	4.5%
<b>Supply Programs</b>		-	0.0%	4.8%	0.0%	0.0%	4.8%
<b>Demand Management</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
Local Resources Program		-	0.0%	1.6%	0.0%	0.0%	1.6%
Future Supply Actions & Stormwater Pilot		-	0.0%	0.6%	0.0%	0.0%	0.6%
Conservation Program		-	0.0%	2.0%	0.0%	0.0%	2.0%
<b>Total Demand Management Costs</b>		-	0.0%	4.1%	0.0%	0.0%	4.1%
<b>Capital Financing</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		16,682,093	4.5%	9.2%	7.6%	0.2%	21.5%
G.O. Bond Debt Service		-	0.2%	0.2%	0.2%	0.0%	0.6%
Debt Administration		346,779	0.1%	0.2%	0.2%	0.0%	0.4%
Bond Defeasance		-	0.0%	0.0%	0.0%	0.0%	0.0%
PAYGO		7,695,000	2.1%	4.3%	3.5%	0.1%	9.9%
<b>Total Capital Financing Costs</b>		24,723,872	6.8%	14.0%	11.4%	0.4%	32.6%
<b>Regional Recycled Water Program planning costs</b>		-	0.0%	1.2%	0.0%	0.0%	1.2%
<b>Other Operating Costs</b>							
Operating Equipment		1,913,469	0.0%	0.4%	0.0%	0.0%	0.4%
Succession Planning Labor Pool		1,872,428	0.0%	0.4%	0.0%	0.0%	0.4%
OPEB/PERS Pre-Funding		-	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total Other Operating Costs</b>		3,785,896	0.0%	0.8%	0.0%	0.0%	0.8%
<b>Increase/(Decrease) in Required Reserves</b>		62,500,000	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total General District Requirements</b>		91,009,769	8.5%	55.5%	14.5%	21.1%	100.0%
<b>REQUIREMENTS BEFORE OFFSETS:</b>		237,767,834	6.9%	63.7%	11.8%	17.1%	100.0%
<b>Revenue Offsets</b>							
Property Taxes - MWD Portion of SWP GO Debt Service		-	6.9%	63.7%	11.8%	17.1%	100.0%
Property Taxes - MWD GO Debt Service		-	6.9%	63.7%	11.8%	17.1%	100.0%
Interest on Investments		2,233,019	6.9%	63.7%	11.8%	17.1%	100.0%
Hydro-Power Revenue		-	6.9%	63.7%	11.8%	17.1%	100.0%
CRA Power Revenue		-	6.9%	63.7%	11.8%	17.1%	100.0%
Wadsworth Pumping Plant (DVL) Power Revenue		-	6.9%	63.7%	11.8%	17.1%	100.0%
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		16,798,248	6.9%	63.7%	11.8%	17.1%	100.0%
Misc. allocated to supply (PVID Lease)		-	6.9%	63.7%	11.8%	17.1%	100.0%
Property Taxes - above GO Debt Service		-	6.9%	63.7%	11.8%	17.1%	100.0%
Revenue Reserve used for Revenue Bonds - I&P		-	6.9%	63.7%	11.8%	17.1%	100.0%
Annexation		-	6.9%	63.7%	11.8%	17.1%	100.0%
<b>Total Revenue Offsets</b>		19,031,267	6.9%	63.7%	11.8%	17.1%	100.0%
<b>NET REVENUE REQUIREMENTS:</b>		-	0.0%	0.0%	0.0%	0.0%	0.0%

	Functionalization	Allocation Percentages					Total	
		Demand	Fixed		Variable Commodity	Hydroelectric		
			Commodity	Standby				
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager	Office of General Manager	-	1,857,623	-	-	25,704	1,883,327	
Office of General Manager	Board of Directors	-	-	-	-	-	-	
Bay Delta Initiatives	Bay Delta Initiatives	-	2,704,166	-	-	-	2,704,166	
External Affairs	Legislative Services	-	-	-	-	-	-	
External Affairs	Media Communications Services	-	-	-	-	-	-	
External Affairs	Manager, External Affairs/Special Projects	-	-	-	-	-	-	
External Affairs	Conservation & Community Services	-	-	-	-	-	-	
Human Resources		-	930,475	-	-	-	930,475	
Water Systems Operations	Office of the Manager	-	4,099,677	-	-	56,727	4,156,403	
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	2,698,320	-	-	51,349	2,749,668	
Water Systems Operations	Office of the Manager, Conveyance & Distribution S	-	445,897	-	-	10,756	456,653	
Water Systems Operations	Office of the Manager, Treatment Section	-	204,560	-	-	-	204,560	
Water Systems Operations	Office of the Manager, Operations Support Services	-	750,186	-	-	14,276	764,461	
Water Systems Operations	Operations Support Services	-	3,503,235	-	-	39,043	3,542,278	
Water Systems Operations	Desert Region / C&D CRA	-	12,821,136	-	-	-	12,821,136	
Water Systems Operations	System Operations Unit	-	3,922,135	-	-	-	3,922,135	
Water Systems Operations	Power Operations and Planning	-	1,669,160	-	-	18,565	1,687,725	
Water Systems Operations	Operations Planning & Programs Unit	-	1,287,101	-	-	-	1,287,101	
Water Systems Operations	Treatment Jensen	-	5,625,470	-	-	-	5,625,470	
Water Systems Operations	Treatment Diemer	-	5,487,141	-	-	-	5,487,141	
Water Systems Operations	Treatment Mills	-	5,254,979	-	-	-	5,254,979	
Water Systems Operations	Treatment Skinner	-	5,045,835	-	-	-	5,045,835	
Water Systems Operations	Treatment Weymouth	-	6,000,752	-	-	-	6,000,752	
Water Systems Operations	Water Quality Section	-	11,229,480	-	-	-	11,229,480	
Water Systems Operations	C&D, Eastern Unit	-	7,106,755	-	-	296,115	7,402,869	
Water Systems Operations	C&D, Western Unit	-	5,610,318	-	-	-	5,610,318	
Water Systems Operations	OSS, Manufacturing Services Unit	-	3,336,613	-	-	58,938	3,395,550	
Water Systems Operations	Environmental Health & Safety Section	-	6,052,765	-	-	38,386	6,091,151	
Water Systems Operations	OSS, Fleet Services Unit	-	3,240,285	-	-	-	3,240,285	
Water Systems Operations	OSS, Power Support Unit	-	2,760,586	-	-	942,458	3,703,045	
Water Systems Operations	Office of the Manager, Operations & Planning Secti	-	195,792	-	-	3,726	199,518	
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-	
Office of the Chief Financial Of		-	-	-	-	-	-	
Business Technology	Office of Manager	-	-	-	-	-	-	
Engineering Services		-	-	-	-	-	-	
Business Technology	Administrative Services	-	18,103,150	-	-	201,879	18,305,030	
Business Technology	Information Technology	-	11,120,963	-	-	153,879	11,274,842	
Water Resources Managemen	Resource Planning & Development	-	2,222,499	-	-	-	2,222,499	
Water Resources Managemen	Resource Implementation	-	5,146,782	-	-	-	5,146,782	
Water Resources Managemen	Office of the Group Manager	-	1,319,839	-	-	-	1,319,839	
Ethics Office		-	-	-	-	-	-	
Real Property		-	2,772,672	-	-	-	2,772,672	
General Counsel		-	-	-	-	-	-	
General Auditor		-	-	-	-	-	-	
<b>Total Departmental O&amp;M</b>		-	144,526,345	-	-	2,231,720	146,758,065	
<b>GENERAL DISTRICT REQUIREMENTS</b>		-	-	-	-	-	-	
<b>State Water Contract</b>		-	-	-	-	-	-	
Supply - O&M		-	6,561,570	-	-	-	6,561,570	
Supply - Capital		-	4,242,757	-	-	-	4,242,757	
Power - O&M & Off-Aq Capital		-	-	-	15,083,627	-	15,083,627	
Power - Capital (less Off-Aq)		-	-	-	-	-	-	
Transmission - Capital - Commodity, Demand, & Standby		1,199,224	3,331,177	2,224,068	-	-	6,754,469	
Transmission - O&M - Commodity only		-	12,988,060	-	-	-	12,988,060	
Delta Conveyance		315,263	875,729	584,683	-	-	1,775,675	
<b>Total State Water Contract</b>		1,514,486	27,999,293	2,808,751	15,083,627	-	47,406,158	
<b>Colorado River Aqueduct Power Costs</b>		-	-	-	4,090,101	-	4,090,101	
<b>Supply Programs</b>		-	4,346,146	-	-	-	4,346,146	
<b>Demand Management</b>		-	-	-	-	-	-	
Local Resources Program		-	1,445,165	-	-	-	1,445,165	
Future Supply Actions & Stormwater Pilot		-	507,488	-	-	-	507,488	
Conservation Program		-	1,775,675	-	-	-	1,775,675	
<b>Total Demand Management Costs</b>		-	3,728,328	-	-	-	3,728,328	
<b>Capital Financing</b>		-	-	-	-	-	-	
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		4,065,221	8,418,106	6,902,958	-	216,188	19,602,473	
G.O. Bond Debt Service		206,326	220,312	158,566	-	-	585,204	
Debt Administration		84,506	174,991	143,495	-	4,494	407,487	
Bond Defeasance		-	-	-	-	-	-	
PAYGO		1,875,177	3,883,045	3,184,148	-	99,722	9,042,092	
<b>Total Capital Financing Costs</b>		6,231,229	12,696,454	10,389,168	-	320,404	29,637,256	
<b>Regional Recycled Water Program planning costs</b>		-	1,065,405	-	-	-	1,065,405	
<b>Other Operating Costs</b>		-	-	-	-	-	-	
Operating Equipment		-	360,353	6,746	-	5,079	372,179	
Succession Planning Labor Pool		-	352,624	6,602	-	4,971	364,196	
OPEB/PERS Pre-Funding		-	-	-	-	-	-	
<b>Total Other Operating Costs</b>		-	712,977	13,348	-	10,050	736,375	
<b>Increase/(Decrease) in Required Reserves</b>		-	-	-	-	-	-	
<b>Total General District Requirements</b>		-	7,745,715	50,548,603	13,211,267	19,173,728	330,454	91,009,769
<b>REQUIREMENTS BEFORE OFFSETS:</b>	237,767,834	7,745,715	195,074,948	13,211,267	19,173,728	2,562,175	237,767,834	
<b>Revenue Offsets</b>		-	-	-	-	-	-	
Property Taxes - MWD Portion of SWP GO Debt Service		-	-	-	-	-	-	
Property Taxes - MWD GO Debt Service		-	-	-	-	-	-	
Interest on Investments	2,233,019	153,918	1,422,543	262,526	381,009	13,022	2,233,019	
Hydro-Power Revenue		-	-	-	-	-	-	
CRA Power Revenue		-	-	-	-	-	-	
Wadsworth Pumping Plant (DVL) Power Revenue		-	-	-	-	-	-	
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	16,798,248	1,157,875	10,701,313	1,974,897	2,866,201	97,962	16,798,248	
Misc. allocated to supply (PVID Lease)		-	-	-	-	-	-	
Property Taxes - above GO Debt Service		-	-	-	-	-	-	
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-	
Annexation		-	-	-	-	-	-	
<b>Total Revenue Offsets</b>	19,031,267	1,311,793	12,123,856	2,237,424	3,247,209	110,985	19,031,267	
<b>NET REVENUE REQUIREMENTS:</b>	218,736,567	6,433,922	182,951,092	10,973,844	15,926,519	2,451,190	218,736,567	

Group	Item	Total Costs to Be Allocated	A&G Cost Redistribution	Adjusted Costs	Allocation Categories					Total
					Demand	Fixed		Variable Commodity	Hydroelectric	
						Commodity	Standby			
<b>Departmental O&amp;M</b>										
Office of General Manager		1,478,072	4,452,899	5,930,972	-	5,850,026	-	-	80,946	5,930,972
Office of General Manager	Board of Directors	1,939,982	(1,938,982)	-	-	-	-	-	-	-
Bay Delta Initiatives	Bay Delta Initiatives	-	12,003,361	12,003,361	-	12,003,361	-	-	-	12,003,361
External Affairs	Legislative Services	6,312,296	(6,312,296)	-	-	-	-	-	-	-
External Affairs	Media Communications Services	5,410,993	(5,410,993)	-	-	-	-	-	-	-
External Affairs	Manager, External Affairs/Special Projects	10,013,226	(10,013,226)	-	-	-	-	-	-	-
External Affairs	Conservation & Community Services	-	930,475	3,881,708	-	3,881,708	-	-	-	3,881,708
Human Resources		3,809,068	10,778,324	14,587,392	-	14,388,303	-	-	199,089	14,587,392
Water Systems Operations	Office of the Manager	39,789	9,858,868	9,898,657	-	9,713,805	-	-	184,852	9,898,657
Water Systems Operations	Office of the Manager, Conveyance & Distribution Section	2,536	1,375,116	1,377,653	-	1,345,204	-	-	32,449	1,377,653
Water Systems Operations	Office of the Manager, Treatment Section	-	1,338,988	1,338,988	-	1,338,988	-	-	-	1,338,988
Water Systems Operations	Office of the Manager, Operations Support Services	10,410	2,624,411	2,634,821	-	2,585,617	-	-	49,204	2,634,821
Water Systems Operations	Operations Support Services	15,668	11,444,426	11,460,294	-	11,333,978	-	-	126,316	11,460,294
Water Systems Operations	Desert Region / C&D CRA	-	43,885,383	43,885,383	-	43,885,383	-	-	-	43,885,383
Water Systems Operations	System Operations Unit	-	13,236,640	13,236,640	-	13,236,640	-	-	-	13,236,640
Water Systems Operations	Power Operations and Planning	-	5,621,943	5,621,943	-	5,660,102	-	-	61,841	5,621,943
Water Systems Operations	Operations Planning & Programs Unit	-	3,955,032	3,955,032	-	3,955,032	-	-	-	3,955,032
Water Systems Operations	Treatment Jensen	-	23,649,531	23,649,531	-	17,857,799	-	5,791,732	-	23,649,531
Water Systems Operations	Treatment Diemer	-	26,647,886	26,647,886	-	17,799,152	-	8,848,734	-	26,647,886
Water Systems Operations	Treatment Mills	-	19,307,620	19,307,620	-	16,242,315	-	3,065,305	-	19,307,620
Water Systems Operations	Treatment Skinner	-	21,196,128	21,196,128	-	15,858,914	-	5,337,214	-	21,196,128
Water Systems Operations	Treatment Weymouth	-	26,650,032	26,650,032	-	19,039,828	-	7,610,203	-	26,650,032
Water Systems Operations	Water Quality Section	-	39,249,971	39,249,971	-	39,249,971	-	-	-	39,249,971
Water Systems Operations	C&D, Eastern Unit	-	28,477,232	28,477,232	-	27,338,143	-	-	1,139,089	28,477,232
Water Systems Operations	C&D, Western Unit	191,971	21,549,892	21,741,863	-	21,735,853	-	-	-	21,735,853
Water Systems Operations	OSS, Manufacturing Services Unit	16,283	10,936,390	10,952,673	-	10,762,564	-	-	190,109	10,952,673
Water Systems Operations	Environmental Health & Safety Section	4,716	21,802,283	21,806,999	-	21,669,573	-	-	137,425	21,806,999
Water Systems Operations	OSS, Fleet Services Unit	1,339,807	12,313,362	13,653,168	-	13,653,168	-	-	-	13,653,168
Water Systems Operations	OSS, Power Support Unit	16,816	11,977,838	11,994,454	-	8,941,758	-	3,052,697	-	11,994,454
Water Systems Operations	Office of the Manager, Operations & Planning Section	2,611	866,038	868,649	-	656,162	-	-	12,487	868,649
Water Systems Operations	Security Team & Security Management	-	-	-	-	-	-	-	-	-
Office of the Chief Financial Officer		27,615,004	(27,615,004)	-	-	-	-	-	-	-
Business Technology	Office of the Manager	1,010,651	(1,010,651)	-	-	-	-	-	-	-
Engineering Services		2,502,987	57,211,107	59,714,094	-	59,055,529	-	-	658,565	59,714,094
Business Technology	Administrative Services	39,427,446	(39,427,446)	-	-	-	-	-	-	-
Business Technology	Information Technology	12,446,835	32,913,197	45,360,032	-	44,740,959	-	-	619,074	45,360,032
Water Resources Management	Resource Planning & Development	-	7,322,719	7,322,719	-	7,322,719	-	-	-	7,322,719
Water Resources Management	Resource Implementation	19,771	21,583,026	21,602,796	-	21,602,796	-	-	-	21,602,796
Water Resources Management	Office of the Group Manager	2,473	4,014,219	4,016,692	-	4,016,692	-	-	-	4,016,692
Ethics Office		1,608,910	(1,608,910)	-	-	-	-	-	-	-
Real Property		7,017,796	7,812,354	14,830,139	-	14,830,139	-	-	-	14,830,139
General Counsel		17,002,271	(17,002,271)	-	-	-	-	-	-	-
General Auditor		4,549,453	(4,549,453)	-	-	-	-	-	-	-
<b>Total Departmental O&amp;M</b>		<b>146,758,065</b>	<b>401,891,447</b>	<b>548,649,512</b>		<b>510,279,590</b>		<b>30,653,188</b>	<b>7,716,734</b>	<b>548,649,512</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>										
<b>State Water Contract</b>										
Supply - O&M		92,381,352	6,561,570	98,942,922	-	98,942,922	-	-	-	98,942,922
Supply - Capital		59,734,418	4,242,757	63,977,175	-	63,977,175	-	-	-	63,977,175
Power - O&M & Off-Aq Capital		212,364,687	15,083,627	227,448,314	-	-	-	227,448,314	-	227,448,314
Power - Capital (less Off-Aq)		(13,053,358)	-	(13,053,358)	-	-	-	-	-	(13,053,358)
Transmission - Capital - Commodity, Demand, & Standby		95,097,195	6,754,469	101,851,664	18,083,276	50,231,321	33,537,067	-	-	101,851,664
Transmission - O&M - Commodity only		182,860,883	12,988,060	195,848,944	-	195,848,944	-	-	-	195,848,944
Delta Conveyance		25,000,000	1,775,675	26,775,675	4,753,893	13,205,258	8,816,524	-	-	26,775,675
<b>Total State Water Contract</b>		<b>654,385,178</b>	<b>47,406,158</b>	<b>701,791,336</b>	<b>22,837,169</b>	<b>422,205,261</b>	<b>42,353,591</b>	<b>214,394,956</b>	<b>-</b>	<b>701,791,336</b>
<b>Colorado River Aqueduct Power Costs</b>		<b>57,585,160</b>	<b>4,090,101</b>	<b>61,675,261</b>				<b>61,675,261</b>		<b>61,675,261</b>
<b>Supply Programs</b>		<b>61,190,053</b>	<b>4,346,146</b>	<b>65,536,199</b>		<b>65,536,199</b>				<b>65,536,199</b>
<b>Demand Management</b>										
Local Resources Program		20,346,694	1,445,165	21,791,859	-	21,791,859	-	-	-	21,791,859
Future Supply Actions & Stormwater Pilot		7,145,000	507,488	7,652,488	-	7,652,488	-	-	-	7,652,488
Conservation Program		25,000,000	1,775,675	26,775,675	-	26,775,675	-	-	-	26,775,675
<b>Total Demand Management Costs</b>		<b>52,491,694</b>	<b>3,728,328</b>	<b>56,220,022</b>		<b>56,220,022</b>				<b>56,220,022</b>
<b>Capital Financing</b>										
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		292,668,300	2,920,380	295,588,680	61,300,085	126,937,901	104,090,755	-	3,259,939	295,588,680
G.O. Bond Debt Service		8,239,175	585,204	8,824,379	3,111,216	3,322,118	2,391,045	-	-	8,824,379
Debt Administration		6,083,846	60,707	6,144,553	1,274,276	2,638,723	2,163,788	-	67,766	6,144,553
Bond Defeasance		-	-	-	-	-	-	-	-	-
PAYGO		135,000,000	1,347,092	136,347,092	28,276,077	58,553,033	48,014,260	-	1,503,722	136,347,092
<b>Total Capital Financing Costs</b>		<b>441,991,321</b>	<b>4,913,383</b>	<b>446,904,704</b>	<b>93,961,655</b>	<b>191,451,775</b>	<b>156,659,848</b>		<b>4,831,427</b>	<b>446,904,704</b>
<b>Regional Recycled Water Program planning costs</b>		<b>15,000,000</b>	<b>1,065,405</b>	<b>16,065,405</b>		<b>16,065,405</b>				<b>16,065,405</b>
<b>Other Operating Costs</b>										
Operating Equipment		7,153,432	(1,541,290)	5,612,141	-	5,433,817	101,730	-	76,594	5,612,141
Succession Planning Labor Pool		7,000,000	(1,508,231)	5,491,769	-	5,317,268	99,548	-	74,952	5,491,769
OPERPERS Pre-Funding		-	-	-	-	-	-	-	-	-
<b>Total Other Operating Costs</b>		<b>14,153,432</b>	<b>(3,049,521)</b>	<b>11,103,910</b>		<b>10,751,085</b>	<b>201,279</b>		<b>151,546</b>	<b>11,103,910</b>
<b>Increase/(Decrease) in Required Reserves</b>		<b>62,500,000</b>	<b>(62,500,000)</b>							
<b>Total General District Requirements</b>		<b>1,359,296,837</b>		<b>1,359,296,837</b>	<b>116,798,823</b>	<b>762,230,106</b>	<b>199,214,717</b>	<b>276,070,217</b>	<b>4,982,973</b>	<b>1,359,296,837</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>1,506,054,903</b>	<b>401,891,447</b>	<b>1,907,946,350</b>	<b>116,798,823</b>	<b>1,272,509,696</b>	<b>199,214,717</b>	<b>306,723,405</b>	<b>12,699,707</b>	<b>1,907,946,350</b>
<b>Revenue Offsets</b>										
Property Taxes - MWD Portion of SWP GO Debt Service		3,007,666	-	3,007,666	533,997	1,483,324	990,345	-	-	3,007,666
Property Taxes - MWD GO Debt Service		8,239,175	-	8,239,175	2,300,846	2,479,080	3,459,248	-	-	8,239,175
Interest on Investments		17,918,655	0	17,918,655	2,174,536	9,713,726	2,987,020	2,935,143	108,230	17,918,655
Hydro-Power Revenue		11,747,864	-	11,747,864	-	-	-	-	-	11,747,864
CRA Power Revenue		9,647,870	-	9,647,870	-	-	-	9,647,870	-	9,647,870
Wadsworth Pumping Plant (DVL) Power Revenue		520,112	-	520,112	-	-	-	520,112	-	520,112
Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)		16,798,248	0	16,798,248	1,157,875	10,701,313	1,974,897	2,866,201	97,962	16,798,248
Misc. allocated to supply (PVID Lease)		3,667,408	-	3,667,408	-	-	-	-	-	3,667,408
Property Taxes - above GO Debt Service		128,812,532	(0)	128,812,532	15,273,336	85,213,415	28,325,781	-	-	128,812,532
Revenue Reserve used for Revenue Bonds - I&P		-	-	-	-	-	-	-	-	-
Annexation		-	-	-	-	-	-	-	-	-
<b>Total Revenue Offsets</b>		<b>200,359,529</b>	<b>(0)</b>	<b>200,359,529</b>	<b>21,440,590</b>	<b>113,258,266</b>	<b>37,737,291</b>	<b>15,969,326</b>	<b>11,954,056</b>	<b>200,359,529</b>
<b>NET REVENUE REQUIREMENTS:</b>		<b>\$ 1,707,586,820</b>	<b>\$ 401,891,447</b>	<b>\$ 1,707,586,820</b>	<b>\$ 95,358,233</b>	<b>\$ 1,159,251,430</b>	<b>\$ 161,477,426</b>	<b>\$ 290,754,079</b>	<b>\$ 745,651</b>	<b>\$ 1,707,586,820</b>

	Total to Be Allocated Excluding A&G and Negative Values	Line Item Costs by Allocation Category (w/o A&G)					Total Allocations
		Fixed			Variable Commodity	Hydro- Electric	
		Demand	Commodity	Standby			
<b>Departmental O&amp;M</b>							
<b>Group</b>	<b>Item</b>						
	Office of General Manager	3,859,914	-	3,807,234	-	52,680	3,859,914
	Office of General Manager Board of Directors	-	-	-	-	-	-
	Bay Delta Initiatives	5,542,239	-	5,542,239	-	-	5,542,239
	External Affairs Legislative Services	-	-	-	-	-	-
	External Affairs Media Communications Services	-	-	-	-	-	-
	External Affairs Manager, External Affairs/Special Pro	-	-	-	-	-	-
	External Affairs Conservation & Community Services	1,907,026	-	1,907,026	-	-	1,907,026
	Human Resources	8,518,628	-	8,402,366	-	116,262	8,518,628
	Water Systems Operations Office of the Manager	5,635,498	-	5,530,258	-	105,240	5,635,498
	Water Systems Operations Office of the Manager, Conveyance &	935,920	-	913,875	-	22,045	935,920
	Water Systems Operations Office of the Manager, Treatment Se	419,249	-	419,249	-	-	419,249
	Water Systems Operations Office of the Manager, Operations Su	1,566,778	-	1,537,520	-	29,259	1,566,778
	Water Systems Operations Operations Support Services	7,259,965	-	7,179,946	-	80,020	7,259,965
	Water Systems Operations Desert Region / C&D CRA	26,277,162	-	26,277,162	-	-	26,277,162
	Water Systems Operations System Operations Unit	8,038,489	-	8,038,489	-	-	8,038,489
	Water Systems Operations Power Operations and Planning	3,459,025	-	3,420,975	-	38,049	3,459,025
	Water Systems Operations Operations Planning & Programs Uni	2,637,938	-	2,637,938	-	-	2,637,938
	Water Systems Operations Treatment Jensen	11,529,507	-	11,529,507	-	-	11,529,507
	Water Systems Operations Treatment Diemer	11,246,000	-	11,246,000	-	-	11,246,000
	Water Systems Operations Treatment Mills	10,770,179	-	10,770,179	-	-	10,770,179
	Water Systems Operations Treatment Skinner	10,341,534	-	10,341,534	-	-	10,341,534
	Water Systems Operations Treatment Weymouth	12,298,655	-	12,298,655	-	-	12,298,655
	Water Systems Operations Water Quality Section	23,015,031	-	23,015,031	-	-	23,015,031
	Water Systems Operations C&D, Eastern Unit	15,172,321	-	14,565,428	-	606,893	15,172,321
	Water Systems Operations C&D, Western Unit	12,154,138	-	11,498,454	-	655,684	12,154,138
	Water Systems Operations OSS, Manufacturing Services Unit	6,959,244	-	6,838,451	-	120,794	6,959,244
	Water Systems Operations Environmental Health & Safety Sectio	12,483,929	-	12,405,257	-	78,672	12,483,929
	Water Systems Operations OSS, Fleet Services Unit	6,641,026	-	6,641,026	-	-	6,641,026
	Water Systems Operations OSS, Power Support Unit	7,589,460	-	5,657,874	-	1,931,586	7,589,460
	Water Systems Operations Office of the Manager, Operations &	408,915	-	401,279	-	7,636	408,915
	Water Systems Operations Security Team & Security Managemen	-	-	-	-	-	-
	Office of the Chief Financial C	-	-	-	-	-	-
	Business Technology Office of the Manager	-	-	-	-	-	-
	Engineering Services	37,516,505	-	37,102,750	-	413,756	37,516,505
	Business Technology Administrative Services	-	-	-	-	-	-
	Business Technology Information Technology	23,108,002	-	22,792,624	-	315,378	23,108,002
	Water Resources Managem Resource Planning & Development	4,555,053	-	4,555,053	-	-	4,555,053
	Water Resources Managem Resource Implementation	10,548,427	-	10,548,427	-	-	10,548,427
	Water Resources Managem Office of the Group Manager	2,705,036	-	2,705,036	-	-	2,705,036
	Ethics Office	-	-	-	-	-	-
	Real Property	5,682,644	-	5,682,644	-	-	5,682,644
	General Counsel	-	-	-	-	-	-
	General Auditor	-	-	-	-	-	-
	<b>Total Departmental O&amp;M</b>	<b>300,783,438</b>	<b>-</b>	<b>296,209,485</b>	<b>-</b>	<b>4,573,953</b>	<b>300,783,438</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>							
<b>State Water Contract</b>							
	Supply - O&M	92,381,352	-	92,381,352	-	-	92,381,352
	Supply - Capital	59,734,418	-	59,734,418	-	-	59,734,418
	Power - O&M & Off-Aq Capital	212,364,687	-	-	-	212,364,687	212,364,687
	Power - Capital (less Off-Aq)	-	-	-	-	-	-
	Transmission - Capital - Commodity, Demand, & Standby	95,097,195	16,884,052	46,900,144	31,312,999	-	95,097,195
	Transmission - O&M - Commodity only	182,860,883	-	182,860,883	-	-	182,860,883
	Delta Conveyance	25,000,000	4,438,630	12,329,529	8,231,841	-	25,000,000
	<b>Total State Water Contract</b>	<b>667,438,536</b>	<b>21,322,682</b>	<b>394,206,327</b>	<b>39,544,839</b>	<b>212,364,687</b>	<b>667,438,536</b>
	<b>Colorado River Aqueduct Power Costs</b>	<b>57,585,160</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>57,585,160</b>	<b>57,585,160</b>
	<b>Supply Programs</b>	<b>61,190,053</b>	<b>-</b>	<b>61,190,053</b>	<b>-</b>	<b>-</b>	<b>61,190,053</b>
	<b>Demand Management</b>						
	Local Resources Program	20,346,694	-	20,346,694	-	-	20,346,694
	Future Supply Actions & Stormwater Pilot	7,145,000	-	7,145,000	-	-	7,145,000
	Conservation Program	25,000,000	-	25,000,000	-	-	25,000,000
	<b>Total Demand Management Costs</b>	<b>52,491,694</b>	<b>-</b>	<b>52,491,694</b>	<b>-</b>	<b>-</b>	<b>52,491,694</b>
	<b>Capital Financing</b>						
	Revenue Bond Debt Service net of BABs Interest Subsidy Payment	275,986,207	57,234,864	118,519,795	97,187,797	3,043,750	275,986,207
	G.O. Bond Debt Service	8,239,175	2,904,890	3,101,806	2,232,479	-	8,239,175
	Debt Administration	5,737,067	1,189,770	2,463,732	2,020,293	63,272	5,737,067
	Bond Defeasance	-	-	-	-	-	-
	PAYGO	127,305,000	26,400,901	54,669,988	44,830,112	1,404,000	127,305,000
	<b>Total Capital Financing Costs</b>	<b>417,267,448</b>	<b>87,730,426</b>	<b>178,755,320</b>	<b>146,270,680</b>	<b>4,511,022</b>	<b>417,267,448</b>
	<b>Regional Recycled Water Program planning costs</b>	<b>15,000,000</b>	<b>-</b>	<b>15,000,000</b>	<b>-</b>	<b>-</b>	<b>15,000,000</b>
	<b>Other Operating Costs</b>						
	Operating Equipment	5,239,963	-	5,073,464	94,984	71,515	5,239,963
	Succession Planning Labor Pool	5,127,572	-	4,964,645	92,947	69,981	5,127,572
	QPEBIPERS Pre-Funding	-	-	-	-	-	-
	<b>Total Other Operating Costs</b>	<b>10,367,535</b>	<b>-</b>	<b>10,038,108</b>	<b>187,931</b>	<b>141,496</b>	<b>10,367,535</b>
	<b>Increase/(Decrease) in Required Reserves</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total General District Requirements</b>	<b>1,281,340,426</b>	<b>109,053,108</b>	<b>711,681,503</b>	<b>186,003,450</b>	<b>269,949,847</b>	<b>1,281,340,426</b>
	<b>REQUIREMENTS BEFORE OFFSETS:</b>	<b>1,582,123,865</b>	<b>109,053,108</b>	<b>1,007,890,988</b>	<b>186,003,450</b>	<b>269,949,847</b>	<b>1,582,123,865</b>
	<b>Revenue Offsets</b>						
	Property Taxes - MWD Portion of SWP GO Debt Service	3,007,666	533,997	1,483,324	990,345	-	3,007,666
	Property Taxes - MWD GO Debt Service	8,239,175	2,300,846	2,479,080	3,459,248	-	8,239,175
	Interest on Investments	15,685,636	2,020,618	8,291,183	2,724,493	2,554,135	15,685,636
	Hydro-Power Revenue	11,747,864	-	-	-	11,747,864	11,747,864
	CRA Power Revenue	9,647,870	-	-	-	9,647,870	9,647,870
	Wadsworth Pumping Plant (DVL) Power Revenue	520,112	-	-	-	520,112	520,112
	Misc. allocated to A&G (CVWD, Lease, Late Fees, etc.)	-	-	-	-	-	-
	Misc. allocated to supply (PVID Lease)	3,667,408	-	3,667,408	-	-	3,667,408
	Property Taxes - above GO Debt Service	128,812,532	15,273,336	85,213,415	28,325,781	-	128,812,532
	Revenue Reserve used for Revenue Bonds - I&P	-	-	-	-	-	-
	Annexation	-	-	-	-	-	-
	<b>Total Revenue Offsets</b>	<b>181,328,263</b>	<b>20,128,797</b>	<b>101,134,410</b>	<b>35,499,868</b>	<b>12,722,117</b>	<b>181,328,263</b>
	<b>NET REVENUE REQUIREMENTS:</b>	<b>\$ 1,400,795,602</b>	<b>\$ 88,924,311</b>	<b>\$ 906,756,578</b>	<b>\$ 150,503,582</b>	<b>\$ 257,227,730</b>	<b>\$ (2,616,600)</b>

		A&G Line Item Allocators by Allocation Category						Total
		Fixed			Variable	Demand	Hydro-Electric	
		Demand	Commodity	Standby	Commodity	Management		
<b>Departmental O&amp;M</b>								
<b>Group</b>	<b>Item</b>							
Office of General Manager		0.00%	1.27%	0.00%	0.00%	0.00%	0.02%	1.28%
Office of General Manager	Board of Directors	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bay Delta Initiatives	Bay Delta Initiatives	0.00%	1.84%	0.00%	0.00%	0.00%	0.00%	1.84%
External Affairs	Legislative Services	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
External Affairs	Media Communications Services	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
External Affairs	Manager, External Affairs/Special Projects	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
External Affairs	Conservation & Community Services	0.00%	0.63%	0.00%	0.00%	0.00%	0.00%	0.63%
Human Resources		0.00%	2.79%	0.00%	0.00%	0.00%	0.04%	2.83%
Water Systems Operations	Office of the Manager	0.00%	1.84%	0.00%	0.00%	0.00%	0.03%	1.87%
Water Systems Operations	Office of the Manager, Conveyance & Dist	0.00%	0.30%	0.00%	0.00%	0.00%	0.01%	0.31%
Water Systems Operations	Office of the Manager, Treatment Section	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.14%
Water Systems Operations	Office of the Manager, Operations Support	0.00%	0.51%	0.00%	0.00%	0.00%	0.01%	0.52%
Water Systems Operations	Operations Support Services	0.00%	2.39%	0.00%	0.00%	0.00%	0.03%	2.41%
Water Systems Operations	Desert Region / C&D CRA	0.00%	8.74%	0.00%	0.00%	0.00%	0.00%	8.74%
Water Systems Operations	System Operations Unit	0.00%	2.67%	0.00%	0.00%	0.00%	0.00%	2.67%
Water Systems Operations	Power Operations and Planning	0.00%	1.14%	0.00%	0.00%	0.00%	0.01%	1.15%
Water Systems Operations	Operations Planning & Programs Unit	0.00%	0.88%	0.00%	0.00%	0.00%	0.00%	0.88%
Water Systems Operations	Treatment Jensen	0.00%	3.83%	0.00%	0.00%	0.00%	0.00%	3.83%
Water Systems Operations	Treatment Diemer	0.00%	3.74%	0.00%	0.00%	0.00%	0.00%	3.74%
Water Systems Operations	Treatment Mills	0.00%	3.58%	0.00%	0.00%	0.00%	0.00%	3.58%
Water Systems Operations	Treatment Skinner	0.00%	3.44%	0.00%	0.00%	0.00%	0.00%	3.44%
Water Systems Operations	Treatment Weymouth	0.00%	4.09%	0.00%	0.00%	0.00%	0.00%	4.09%
Water Systems Operations	Water Quality Section	0.00%	7.65%	0.00%	0.00%	0.00%	0.00%	7.65%
Water Systems Operations	C&D, Eastern Unit	0.00%	4.84%	0.00%	0.00%	0.00%	0.20%	5.04%
Water Systems Operations	C&D, Western Unit	0.00%	3.82%	0.00%	0.00%	0.00%	0.22%	4.04%
Water Systems Operations	OSS, Manufacturing Services Unit	0.00%	2.27%	0.00%	0.00%	0.00%	0.04%	2.31%
Water Systems Operations	Environmental Health & Safety Section	0.00%	4.12%	0.00%	0.00%	0.00%	0.03%	4.15%
Water Systems Operations	OSS, Fleet Services Unit	0.00%	2.21%	0.00%	0.00%	0.00%	0.00%	2.21%
Water Systems Operations	OSS, Power Support Unit	0.00%	1.88%	0.00%	0.00%	0.00%	0.64%	2.52%
Water Systems Operations	Office of the Manager, Operations & Plan	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.14%
Water Systems Operations	Security Team & Security Management	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Office of the Chief Financial Officer		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Business Technology	Office of Manager	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Engineering Services		0.00%	12.34%	0.00%	0.00%	0.00%	0.14%	12.47%
Business Technology	Administrative Services	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Business Technology	Information Technology	0.00%	7.58%	0.00%	0.00%	0.00%	0.10%	7.68%
Water Resources Management	Resource Planning & Development	0.00%	1.51%	0.00%	0.00%	0.00%	0.00%	1.51%
Water Resources Management	Resource Implementation	0.00%	3.51%	0.00%	0.00%	0.00%	0.00%	3.51%
Water Resources Management	Office of the Group Manager	0.00%	0.90%	0.00%	0.00%	0.00%	0.00%	0.90%
Ethics Office		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Real Property		0.00%	1.89%	0.00%	0.00%	0.00%	0.00%	1.89%
General Counsel		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Auditor		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total Departmental O&amp;M</b>		<b>0.00%</b>	<b>98.48%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>1.52%</b>	<b>100.00%</b>
<b>GENERAL DISTRICT REQUIREMENTS</b>								
<b>State Water Contract</b>								
Supply - O&M		0.00%	7.21%	0.00%	0.00%	0.00%	0.00%	7.21%
Supply - Capital		0.00%	4.66%	0.00%	0.00%	0.00%	0.00%	4.66%
Power - O&M & Off-Aq Capital		0.00%	0.00%	0.00%	16.57%	0.00%	0.00%	16.57%
Power - Capital (less Off-Aq)		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Transmission - Capital - Commodity, Demand, & Standby		1.32%	3.66%	2.44%	0.00%	0.00%	0.00%	7.42%
Transmission - O&M - Commodity only		0.00%	14.27%	0.00%	0.00%	0.00%	0.00%	14.27%
Delta Conveyance		0.35%	0.96%	0.64%	0.00%	0.00%	0.00%	1.95%
<b>Total State Water Contract</b>		<b>1.66%</b>	<b>30.77%</b>	<b>3.09%</b>	<b>16.57%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>52.09%</b>
<b>Colorado River Aqueduct Power Costs</b>		<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>4.49%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>4.49%</b>
<b>Supply Programs</b>		<b>0.00%</b>	<b>4.78%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>4.78%</b>
<b>Demand Management</b>								
Local Resources Program		0.00%	1.59%	0.00%	0.00%	0.00%	0.00%	1.59%
Future Supply Actions & Stormwater Pilot		0.00%	0.56%	0.00%	0.00%	0.00%	0.00%	0.56%
Conservation Program		0.00%	1.95%	0.00%	0.00%	0.00%	0.00%	1.95%
<b>Total Demand Management Costs</b>		<b>0.00%</b>	<b>4.10%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>4.10%</b>
<b>Capital Financing</b>								
Revenue Bond Debt Service net of BABs Interest Subsidy Payment		4.47%	9.25%	7.58%	0.00%	0.00%	0.24%	21.54%
G.O. Bond Debt Service		0.23%	0.24%	0.17%	0.00%	0.00%	0.00%	0.64%
Debt Administration		0.09%	0.19%	0.16%	0.00%	0.00%	0.00%	0.45%
Bond Defeasance		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
PAYGO		2.06%	4.27%	3.50%	0.00%	0.00%	0.11%	9.94%
<b>Total Capital Financing Costs</b>		<b>6.85%</b>	<b>13.95%</b>	<b>11.42%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.35%</b>	<b>32.56%</b>
<b>Regional Recycled Water Program planning costs</b>		<b>0.00%</b>	<b>1.17%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>1.17%</b>
<b>Other Operating Costs</b>								
Operating Equipment		0.00%	0.40%	0.01%	0.00%	0.00%	0.01%	0.41%
Succession Planning Labor Pool		0.00%	0.39%	0.01%	0.00%	0.00%	0.01%	0.40%
OPEB/PERS Pre-Funding		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total Other Operating Costs</b>		<b>0.00%</b>	<b>0.78%</b>	<b>0.01%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.01%</b>	<b>0.81%</b>
<b>Increase/(Decrease) in Required Reserves</b>		<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
<b>Total General District Requirements</b>		<b>8.51%</b>	<b>55.54%</b>	<b>14.52%</b>	<b>21.07%</b>	<b>0.00%</b>	<b>0.36%</b>	<b>100.00%</b>
<b>REQUIREMENTS BEFORE OFFSETS:</b>		<b>6.89%</b>	<b>63.70%</b>	<b>11.76%</b>	<b>17.06%</b>	<b>0.00%</b>	<b>0.58%</b>	<b>100.00%</b>

Functionalization of A&G Costs  
 Summary of Allocation Results before Inclusion of Administrative and General Costs  
 Fiscal Year Ending 2022

Functional Categories	Functional Costs Allocated for FY 2022	Allocation Categories (Costs Exclude Administrative and General)					Total Allocated Excluding A&G
		Fixed			Variable Commodity	Hydro-Electric	
		Demand	Commodity	Standby			
<b>Source of Supply</b>							
CRA	\$ 41,916,172.30	\$ -	\$ 41,916,172	\$ -	\$ -	\$ -	\$ 41,916,172
SWP	120,277,952	-	120,277,952	-	-	-	120,277,952
Other Supply	39,082,592	-	39,082,592	-	-	-	39,082,592
<b>Subtotal: Source of Supply</b>	<b>201,276,717</b>	-	201,276,717	-	-	-	<b>201,276,717</b>
<b>Conveyance &amp; Aqueduct</b>							
CRA							
CRA Power	62,318,203	-	15,063,197	-	47,255,006	-	62,318,203
CRA All Other	66,894,029	2,559,670	59,587,220	4,747,139	-	-	66,894,029
SWP	-	-	-	-	-	-	-
SWP Power	197,439,478	-	-	-	197,439,478	-	197,439,478
SWP All Other	236,716,240	4,967,036	222,537,389	9,211,816	-	-	236,716,240
Other Conveyance & Aqueduct	70,358,723	10,611,039	38,831,460	20,916,224	-	-	70,358,723
<b>Subtotal: Conveyance &amp; Aqueduct</b>	<b>633,726,673</b>	18,137,744	336,019,266	34,875,179	244,694,485	-	<b>633,726,673</b>
<b>Storage</b>							
Storage Costs Other Than Power							
Emergency	57,530,759	-	7,285,023	50,245,736	-	-	57,530,759
Drought	60,073,438	-	60,073,438	-	-	-	60,073,438
Regulatory	27,081,617	8,717,648	13,055,348	5,308,621	-	-	27,081,617
Storage Power	(520,112)	-	-	-	(520,112)	-	(520,112)
<b>Subtotal: Storage</b>	<b>144,165,702</b>	8,717,648	80,413,810	55,554,357	(520,112)	-	<b>144,165,702</b>
<b>Treatment</b>							
Jensen	50,537,543	6,642,525	29,391,751	8,711,534	5,791,732	-	50,537,543
Weymouth	55,927,030	7,353,832	31,318,593	9,644,402	7,610,203	-	55,927,030
Diemer	61,555,154	8,738,897	32,505,768	11,461,755	8,848,734	-	61,555,154
Mills	29,862,235	2,212,543	21,684,985	2,899,402	3,065,305	-	29,862,235
Skinner	48,997,565	6,763,537	28,026,139	8,870,674	5,337,214	-	48,997,565
<b>Subtotal: Treatment</b>	<b>246,879,526</b>	31,711,335	142,927,236	41,587,767	30,653,188	-	<b>246,879,526</b>
<b>Distribution</b>	<b>200,841,793</b>	30,357,584	151,997,929	18,486,280	-	-	<b>200,841,793</b>
<b>Demand Management</b>	<b>63,665,381</b>	-	63,665,381	-	-	-	<b>63,665,381</b>
<b>Hydro-Electric</b>	<b>(1,705,539)</b>	-	-	-	-	(1,705,539)	<b>(1,705,539)</b>
<b>Total Costs Allocated</b>	<b>\$ 1,488,850,253</b>	<b>\$ 88,924,311</b>	<b>\$ 976,300,338</b>	<b>\$ 150,503,582</b>	<b>\$ 274,827,561</b>	<b>\$ (1,705,539)</b>	<b>\$ 1,488,850,253</b>
<b>A&amp;G Costs to be Functionalized</b>		<b>\$ 6,433,922</b>	<b>\$ 182,951,092</b>	<b>\$ 10,973,843.790</b>	<b>\$ 15,926,519</b>	<b>\$ 2,451,190</b>	<b>\$ 218,736,567</b>

Percentages Used for Functionalization of A&G Costs

Allocation Categories				
Demand	Fixed		Variable Commodity	Hydro-Electric
	Commodity	Standby		
0.0%	4.3%	0.0%	0.0%	0.0%
0.0%	12.3%	0.0%	0.0%	0.0%
0.0%	4.0%	0.0%	0.0%	0.0%
0.0%	20.6%	0.0%	0.0%	0.0%
0.0%	1.5%	0.0%	17.2%	0.0%
2.9%	6.1%	3.2%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	71.8%	0.0%
5.6%	22.8%	6.1%	0.0%	0.0%
11.9%	4.0%	13.9%	0.0%	0.0%
20.4%	34.4%	23.2%	89.0%	0.0%
0.0%	0.7%	33.4%	0.0%	0.0%
0.0%	6.2%	0.0%	0.0%	0.0%
9.8%	1.3%	3.5%	0.0%	0.0%
0.0%	0.0%	0.0%	-0.2%	0.0%
9.8%	8.2%	36.9%	-0.2%	0.0%
7.5%	3.0%	5.8%	2.1%	0.0%
8.3%	3.2%	6.4%	2.8%	0.0%
9.8%	3.3%	7.6%	3.2%	0.0%
2.5%	2.2%	1.9%	1.1%	0.0%
7.6%	2.9%	5.9%	1.9%	0.0%
35.7%	14.6%	27.6%	11.2%	0.0%
34.1%	15.6%	12.3%	0.0%	0.0%
0.0%	6.5%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%

Administrative and General Costs Redistributed Among Functional Categories

Administrative and General Costs by Allocation Categories						Total A&G Costs Allocated	Functional Categories
Fixed			Variable		Hydro-Electric		
Demand	Commodity	Standby	Commodity	Commodity			
\$ -	\$ 7,854,765	\$ -	\$ -	\$ -	\$ -	\$ 7,854,765	Source of Supply
-	22,539,153	-	-	-	-	22,539,153	CRA
-	7,323,774	-	-	-	-	7,323,774	SWP
-	37,717,692	-	-	-	-	37,717,692	Other Supply
-	-	-	-	-	-	-	Subtotal: Source of Supply
-	2,822,726	-	2,738,473	-	-	5,561,199	Conveyance & Aqueduct
185,199	11,166,182	346,134	-	-	-	11,697,515	CRA
-	-	-	-	-	-	-	CRA Power
-	-	-	-	-	-	-	CRA All Other
-	-	-	11,441,806	-	-	11,441,806	SWP
359,379	41,701,776	671,672	-	-	-	42,732,827	SWP Power
767,738	7,276,714	1,525,089	-	-	-	9,569,541	SWP All Other
1,312,316	62,967,398	2,542,895	14,180,278	-	-	81,002,887	Other Conveyance & Aqueduct
-	1,365,157	3,663,626	-	-	-	5,028,783	Subtotal: Conveyance & Aqueduct
-	11,257,295	-	-	-	-	11,257,295	Storage
630,746	2,446,471	387,074	-	-	-	3,464,291	Storage Costs Other Than Power
-	-	-	(30,141)	-	-	(30,141)	Emergency
630,746	15,068,923	4,050,700	(30,141)	-	-	19,720,228	Drought
480,605	5,507,786	635,194	335,636	-	-	6,959,222	Regulatory
532,070	5,868,861	703,214	441,019	-	-	7,545,163	Storage Power
632,284	6,091,328	835,724	512,793	-	-	8,072,129	Subtotal: Storage
160,084	4,063,598	211,407	177,637	-	-	4,612,726	Treatment
489,361	5,251,881	646,798	309,297	-	-	6,697,336	Jensen
2,294,404	26,783,453	3,032,337	1,776,381	-	-	33,886,575	Weymouth
2,196,456	28,483,230	1,347,912	-	-	-	32,027,598	Diemer
-	11,930,397	-	-	-	-	11,930,397	Mills
-	-	-	-	-	2,451,190	2,451,190	Skinner
\$ 6,433,922	\$ 182,951,092	\$ 10,973,844	\$ 15,926,519	\$ 2,451,190	\$ -	\$ 218,736,567	Subtotal: Treatment
-	-	-	-	-	-	-	Distribution
-	-	-	-	-	-	-	Demand Management
-	-	-	-	-	-	-	Hydro-Electric
-	-	-	-	-	-	-	Total Costs Allocated

**Summary of Functionalization Percentages**  
Fiscal Year Ending 2022

	Source of Supply	Conveyance & Aqueduct	Storage	Water Quality	Treatment	Distribution	Demand Management	Hydro-Electric	Administrative & General	Total Allocated
Departmental Operations & Maintenance										
Office of General Manager	5%	11%	2%	0%	19%	15%	2%	1%	46%	100%
Water Systems Operations	6%	18%	1%	0%	41%	32%	0%	2%	1%	100%
Water Resources Management	66%	0%	0%	0%	0%	5%	29%	0%	0%	100%
Engineering Services	4%	22%	24%	0%	25%	19%	0%	1%	6%	100%
Bay Delta Initiatives	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%
Business Technology	4%	8%	2%	0%	13%	11%	1%	1%	61%	100%
Real Property	7%	37%	8%	0%	0%	10%	0%	0%	37%	100%
Human Resources	7%	15%	3%	0%	25%	20%	2%	1%	27%	100%
Office of the Chief Financial Officer	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
External Affairs	0%	0%	0%	0%	0%	0%	11%	0%	89%	100%
General Counsel	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
General Auditor	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
Ethics Office	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
Total Departmental O&M	7%	15%	3%	0%	25%	20%	2%	1%	27%	100%
General District Requirements										
State Water Contract*	23%	77%	0%	0%	0%	0%	0%	0%	0%	100%
Colorado River Aqueduct Power Costs	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%
Supply Programs	56%	0%	44%	0%	0%	0%	0%	0%	0%	100%
Demand Management	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%
Capital Financing	4%	21%	23%	0%	25%	20%	0%	1%	6%	100%
Regional Recycled Water Program planning costs	38%	0%	0%	0%	0%	62%	0%	0%	0%	100%
Other Operating Costs	7%	15%	3%	0%	25%	20%	2%	1%	27%	100%
Increase/(Decrease) in Required Reserves	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
Total General District Requirements	16%	48%	10%	0%	8%	7%	4%	0%	7%	100%
Revenue Offsets	24%	53%	1%	0%	2%	4%	0%	6%	9%	100%
<b>Net Revenue Requirements</b>	<b>12%</b>	<b>37%</b>	<b>8%</b>	<b>0%</b>	<b>14%</b>	<b>12%</b>	<b>4%</b>	<b>0%</b>	<b>13%</b>	<b>100%</b>

\* Includes Delta Conveyance planning costs



**Cost Allocation Summary (by budget line item)**  
 Fiscal Year Ending 2022

	Allocation Categories					Total Allocated
	Fixed			Variable Commodity	Hydro-Electric	
	Demand	Commodity	Standby			
Departmental Operations & Maintenance						
Office of General Manager	\$ -	\$ 5,850,026	\$ -	\$ -	\$ 80,946	\$ 5,930,972
Water Systems Operations	-	322,587,357	-	30,653,188	6,159,061	359,399,606
Water Resources Management	-	32,942,208	-	-	-	32,942,208
Engineering Services	-	59,055,529	-	-	658,565	59,714,094
Bay Delta Initiatives	-	12,003,361	-	-	-	12,003,361
Business Technology	-	44,740,959	-	-	619,074	45,360,032
Real Property	-	14,830,139	-	-	-	14,830,139
Human Resources	-	14,388,303	-	-	199,089	14,587,392
Office of the Chief Financial Officer	-	-	-	-	-	-
External Affairs	-	3,881,708	-	-	-	3,881,708
General Counsel	-	-	-	-	-	-
General Auditor	-	-	-	-	-	-
Ethics Office	-	-	-	-	-	-
Total Departmental O&M <i>(including Administrative and General)</i>	-	510,279,590	-	30,653,188	7,716,734	548,649,512
General District Requirements						
State Water Contract*	22,837,169	422,205,621	42,353,591	214,394,956	-	701,791,336
Colorado River Aqueduct Power Costs	-	-	-	61,675,261	-	61,675,261
Supply Programs	-	65,536,199	-	-	-	65,536,199
Demand Management	-	56,220,022	-	-	-	56,220,022
Capital Financing	93,961,655	191,451,775	156,659,848	-	4,831,427	446,904,704
Regional Recycled Water Program planning costs	-	16,065,405	-	-	-	16,065,405
Other Operating Costs	-	10,751,085	201,279	-	151,546	11,103,910
Increase/(Decrease) in Required Reserves	-	-	-	-	-	-
Total General District Requirements <i>(including Administrative and General)</i>	116,798,823	762,230,106	199,214,717	276,070,217	4,982,973	1,359,296,837
Revenue Offsets	(21,440,590)	(113,258,266)	(37,737,291)	(15,969,326)	(11,954,056)	(200,359,529)
<b>Net Revenue Requirements</b>	<b>\$ 95,358,233.42</b>	<b>\$ 1,159,251,430.20</b>	<b>\$ 161,477,426.01</b>	<b>\$ 290,754,079.41</b>	<b>\$ 745,651.14</b>	<b>\$ 1,707,586,820.19</b>

\* Includes Delta Conveyance planning costs

Fiscal Year Ending 2022	Supply			Conveyance & Aqueduct					Storage				Treatment	Distribution	Demand Mgt.	Hydro	Total
	CRA	SWC	Other	CRA power	CRA other	SWC power	SWC other	Other C&A	Emergency	Drought	Regulatory	Power					
Dept. Operations & Maintenance	8,921,842	15,790,459	14,040,416	5,931,513	51,157,329	-	19,101,520	7,314,752	7,285,023	5,152,457	3,820,582	-	137,345,251	109,064,191	11,481,098	5,485,014	401,891,447
<b>General District Requirements</b>																	
State Water Contract*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	166,778,256
Capital O&M	-	59,734,418	-	-	-	(13,053,358)	120,097,195	-	-	-	-	-	-	-	-	-	487,806,922
Colorado River Aqueduct Power	-	92,381,352	-	57,585,160	-	212,364,687	182,860,883	-	-	-	-	-	-	-	-	-	57,585,160
Supply Programs	33,161,566	-	1,250,000	-	-	-	-	-	-	26,778,487	-	-	-	-	-	-	61,190,053
Demand Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52,491,694	-	52,491,694
Capital Financing Program	-	-	18,174,215	8,978,669	15,051,199	-	6,284,905	63,522,318	50,603,233	28,579,112	23,419,227	-	110,409,432	87,734,115	-	4,511,022	417,267,448
Regional Recycling Water Project	-	-	5,626,290	-	-	-	-	-	-	-	-	-	-	-	-	9,373,710	15,000,000
Other Operating Costs	230,155	407,344	362,199	153,014	1,319,698	-	492,759	188,698	187,931	132,917	98,559	-	3,543,075	2,813,513	296,176	141,496	10,367,535
<b>Revenue Offsets</b>	(397,392)	(48,035,621)	(370,528)	(10,330,154)	(634,198)	(1,871,851)	(92,121,023)	(667,045)	(545,428)	(569,534)	(256,751)	(520,112)	(4,418,232)	(8,143,736)	(603,588)	(11,843,071)	(181,328,263)
Admin. & General	7,854,765	22,539,153	7,323,774	5,561,199	11,697,515	11,441,806	42,732,827	9,569,541	5,028,783	11,257,295	3,464,291	(30,141)	33,886,575	32,027,598	11,930,397	2,451,190	218,736,567
<b>Net Revenue Requirement</b>	<b>49,770,937</b>	<b>142,817,106</b>	<b>46,406,366</b>	<b>67,879,402</b>	<b>78,591,543</b>	<b>208,881,284</b>	<b>279,449,067</b>	<b>79,928,264</b>	<b>62,559,542</b>	<b>71,330,734</b>	<b>30,545,908</b>	<b>(550,253)</b>	<b>280,766,101</b>	<b>232,869,391</b>	<b>75,595,778</b>	<b>745,651</b>	<b>1,707,586,820</b>

\* Includes Delta Conveyance planning costs

Fiscal Year Ending 2022	Supply			Conveyance & Aqueduct					Storage				Treatment	Distribution	Demand Mgt.	Hydro	Total
	CRA	SWC	Other	CRA power	CRA other	SWC power	SWC other	Other C&A	Emergency	Drought	Regulatory	Power					
<b>Fixed Demand engineering factors</b>	-	-	-	0.0%	17.8%	0.0%	17.8%	17.8%	0.0%	0.0%	37.2%	0.0%	29.3%	37.2%	-	-	21,322,682
SWC Capital	-	-	-	-	-	-	21,322,682	-	-	-	-	-	-	-	-	-	88,846,281
Capital Financing	-	-	-	-	2,672,268	-	1,115,855	11,278,084	-	-	8,717,648	-	32,403,995	32,658,430	-	-	3,489,300
Regional Recycling Water Project	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,489,300
A&G less Offsets	-	-	-	-	72,601	-	(17,112,123)	100,693	-	-	630,746	-	1,601,744	(3,593,690)	-	-	(18,300,030)
<b>Total fixed demand</b>	-	-	-	-	2,744,869	-	5,326,414	11,378,777	-	-	9,348,395	-	34,005,739	32,554,040	-	-	95,358,233
<b>Fixed Commodity engineering factors</b>	100%	100%	100%	100%	49.3%	0%	49.3%	49.3%	0%	100%	40.1%	0%	30.3%	40.1%	-	-	175,570,012
Capital Financing	-	-	18,174,215	8,978,669	7,422,968	-	3,099,597	31,328,010	-	28,579,112	9,392,958	-	33,406,181	35,188,303	-	-	9,385,887
Regional Recycled Water Program	-	-	5,626,290	-	-	-	-	-	-	-	-	-	-	-	-	-	118,964,092
SWC Capital	-	59,734,418	-	-	-	-	59,229,673	-	-	-	-	-	-	-	-	-	275,242,235
SWC O&M	-	92,381,352	-	-	-	-	182,860,883	-	-	-	-	-	-	-	-	-	363,635,856
Dept. O&M	8,921,842	15,790,459	14,040,416	5,931,513	51,157,329	-	19,101,520	7,314,752	7,285,023	5,152,457	3,820,582	-	104,574,674	109,064,191	11,481,098	-	61,190,053
Supply Programs	33,161,566	-	1,250,000	-	-	-	-	-	-	26,778,487	-	-	-	-	-	-	52,491,694
Demand Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52,491,694	-	52,491,694
Other Operating Costs	230,155	407,344	362,199	153,014	1,319,698	-	492,759	188,698	187,931	132,917	98,559	-	3,543,075	2,813,513	296,176	10,226,039	
A&G less Offsets	7,457,373	(25,496,468)	6,953,246	2,822,726	10,853,407	-	(545,268)	7,276,714	1,177,226	10,687,761	2,189,720	-	28,186,759	29,655,555	11,326,809	-	92,545,562
<b>Total fixed commodity</b>	<b>49,770,937</b>	<b>142,817,106</b>	<b>46,406,366</b>	<b>17,885,923</b>	<b>70,753,402</b>	<b>-</b>	<b>264,239,165</b>	<b>46,108,173</b>	<b>8,650,180</b>	<b>71,330,734</b>	<b>15,501,819</b>	<b>-</b>	<b>169,710,689</b>	<b>180,481,159</b>	<b>75,595,778</b>	<b>-</b>	<b>1,159,251,430</b>
<b>Fixed Standby engineering factors</b>	-	-	-	0%	33%	0%	32.9%	32.9%	100%	0%	22.7%	0%	40.4%	22.7%	-	-	39,544,839
SWC Capital	-	-	-	-	-	-	39,544,839	-	-	-	-	-	-	-	-	-	148,340,133
Capital Financing	-	-	-	-	4,955,963	-	2,069,454	20,916,224	50,603,233	-	5,308,621	-	44,599,256	19,887,383	-	-	2,124,813
Regional Recycled Water Program	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(28,532,360)
A&G less Offsets	-	-	-	-	137,309	-	(31,730,805)	1,525,089	3,306,129	-	387,074	-	20,848	(2,178,003)	-	-	161,477,426
<b>Total fixed standby</b>	-	-	-	-	5,093,272	-	9,883,488	22,441,313	53,909,362	-	5,695,694	-	44,620,104	19,834,192	-	-	161,477,426
<b>Variable Commodity</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	199,311,329
SWC Power	-	-	-	-	-	199,311,329	-	-	-	-	-	-	-	-	-	-	57,585,160
CRA Power	-	-	-	57,585,160	-	-	-	-	-	-	-	-	-	-	-	-	32,770,577
Variable Treatment	-	-	-	-	-	-	-	-	-	-	-	-	32,770,577	-	-	-	1,087,013
A&G less Offsets	-	-	-	(7,591,681)	-	-	9,569,955	-	-	-	-	-	(550,253)	(341,007)	-	-	290,754,079
<b>Total variable commodity</b>	-	-	-	49,993,479	-	208,881,284	-	-	-	-	-	-	(550,253)	32,429,570	-	-	290,754,079
<b>Hydroelectric</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,137,532	10,137,532
A&G less Offsets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(9,391,881)	(9,391,881)
<b>Total hydroelectric</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	745,651	745,651
<b>Total Costs</b>	<b>49,770,937</b>	<b>142,817,106</b>	<b>46,406,366</b>	<b>67,879,402</b>	<b>78,591,543</b>	<b>208,881,284</b>	<b>279,449,067</b>	<b>79,928,264</b>	<b>62,559,542</b>	<b>71,330,734</b>	<b>30,545,908</b>	<b>(550,253)</b>	<b>280,766,101</b>	<b>232,869,391</b>	<b>75,595,778</b>	<b>745,651</b>	<b>1,707,586,820</b>

THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_\_

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**RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA  
FIXING AND ADOPTING WATER RATES  
TO BE EFFECTIVE JANUARY 1, 2021 AND 2022**

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The Board of Directors of The Metropolitan Water District of Southern California (the “Board”) hereby finds that:

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

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

3. The rate structure adopted by Resolution 8805 was the product of a three-year process that included a strategic planning process commenced by the Board in July 1998, discussions with member agencies, retail agencies and other stakeholders and numerous meetings of Metropolitan’s Board, Audit, Budget and Finance Committee, Budget, Finance and Investment Committee and Subcommittee on Rate Structure Implementation; and

4. Development of the rate structure adopted by Resolution 8805 included Strategic Plan Policy Principles adopted by the Board on December 14, 1999, to provide a framework for the development of a revised rate structure; a Composite Rate Structure Framework adopted by the Board on April 11, 2000 (the “Rate Structure Framework”); a Rate Structure Action Plan adopted by the Board on December 12, 2000; and study of (i) a detailed rate design proposal

presented in December 2000 (the “December 2000 Proposal”) developed from the Rate Structure Framework and (ii) an alternative rate structure proposal presented in September 2001 (the “Proposal”) that addressed concerns which were raised about the December 2000 Proposal; and

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

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

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

8. By Resolution 8805 the Board found and determined that the cost of service process reasonably and fairly: (i) identified revenue requirements; (ii) allocated costs to the service functions that Metropolitan provides to its member agencies; (iii) classified service function costs based upon use of and benefit from Metropolitan’s system, and (iv) allocated costs to rates and charges based upon customary water industry standards; and

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

10. The Board received the Final Report on Rates and Charges, dated June 28, 2002, that (i) described the rate structure process and design; (ii) identified revenue requirements; (iii) showed the costs of major service functions that Metropolitan undertakes, (iv) classified these

service function costs based on the use of and benefit of the Metropolitan system to create a logical nexus between the costs and the revenues required from each of the rates and charges; and (iv) set forth the rates and charges necessary to defray such costs; and

11. Metropolitan's water rates approved by the Board thereafter (on March 11, 2003, March 9, 2004, March 8, 2005, March 14, 2006, April 10, 2007, March 11, 2008, April 14, 2009, April 14, 2010, April 10, 2012, April 8, 2014, April 12, 2016, and April 10, 2018) have utilized the unbundled water rate elements in the rate structure approved by Resolution 8774 and implemented by Resolution 8805; and

12. The cost of service process supporting Metropolitan's water rates approved by the Board on March 11, 2003 and in following years is consistent with the cost of service process described in the 2001 Cost of Service Report. Raftelis Financial Consultants, Inc. ("RFC"), the firm engaged in 1998 to perform a comprehensive cost of service study and assist in the development of the rate structure, confirmed to the Board in a report dated April 6, 2010, that the fiscal year 2010/11 cost of service report presented to the Board in January 2010 was accurate and consistent with the 2001 Cost of Service Report and that the fiscal year 2010/11 cost of service report and rate methodology was consistent with water industry best practices and complies with cost of service and rate guidelines in the American Water Works Association's Manual M-1, *Principles of Water Rates, Fees and Charges*; and

13. In *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.*, San Francisco Superior Court Case Nos. CPF-10-510830 and CPF-12-512466 (the "2010 and 2012 Cases," collectively), the San Diego County Water Authority challenged Metropolitan's water rates adopted on April 13, 2010 and April 10, 2012, and Metropolitan is defending such challenges; and

14. On June 21, 2017, the Court of Appeal entered a decision in the 2010 and 2012 Cases in *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.*, 12 Cal.App.5th 1124, holding that Metropolitan may recover its State Water Project transportation costs through its transportation rates and that based on the administrative record before it the rates in CYs 2011 through 2014 did not support Metropolitan's Water Stewardship Rate allocation to its transportation rates, and on September 27, 2017, the California Supreme Court denied SDCWA's Petition for Review, making the decision final; and

15. San Diego County Water Authority has filed lawsuits also challenging Metropolitan's water rates adopted on April 8, 2014, April 12, 2016, and April 10, 2018, each also titled *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.*, pending in the San Francisco Superior Court under Case Nos. CPF-14-514004, CPF-16-515282, and CPF-18-516389, and the Court has ordered the cases stayed pending the 2010 and 2012 Cases; and

16. Pursuant to Resolution 8329, adopted by the Board on July 9, 1991, and Resolution 9199, adopted by the Board on March 8, 2016, and as each is thereafter amended and supplemented, proceeds of the rates and other revenues from the sale or availability of water are pledged to the payment of Metropolitan's outstanding revenue bonds and to the payment of

Metropolitan's outstanding subordinate revenue bonds and to revenue bonds and subordinate bonds to be issued pursuant to Resolution 8329 and Resolution 9199; and

17. On January 31, 2020, the General Manager and Chief Financial Officer provided to the Board and the public a board letter describing the proposed biennial budget for fiscal years 2020/21 and 2021/22, identifying key assumptions, addressing key circumstances such as current state water supply conditions, and continued maintenance of the current ad valorem tax rate, incorporating a ten-year financial forecast; determining anticipated total revenues and revenues anticipated to be derived from water transactions and firm revenue sources required during fiscal years 2020/21 and 2021/22, identifying revenue requirements for that period and recommending rates and charges consistent with cost of service principles to be effective January 1, 2021, and January 1, 2022, and explaining that costs and revenues may be at variance with forecasts and variations will be addressed, for example by contributions to, or withdraws from, financial reserves maintained for this purpose; and

18. The recommended rates were developed using the same unbundled water rate elements in the rate structure approved by Resolution 8774 and implemented by Resolution 8805, as detailed in the FYs 2020/21 and 2021/22 Cost of Service Report for Proposed Water Rates and Charges (the "2020 Cost of Service Report") provided to the Board and the public on January 31, 2020; and

19. The detailed proposed departmental and non-departmental biennial budget for fiscal years 2020/21 and 2021/22 (the "Proposed Biennial Budget") was distributed to the Board and the public on January 31, 2020; and

20. On January 31, 2020, the capital investment plan (CIP) appendix to the detailed Proposed Biennial Budget for fiscal years 2020/21 and 2021/22 was also provided to the Board and the public, providing detailed information on proposed capital projects and capital improvement costs; and

21. Board workshops and discussions regarding the Proposed Biennial Budget and future water rates and charges were held on February 10, 2020, March 9, 2020, and April 13, 2020, at the regularly scheduled Finance and Insurance Committee meetings, and on February 25, 2020, at a special meeting of the Finance and Insurance Committee; and

22. The Board conducted a public hearing at its regular meeting on March 10, 2020, at which interested parties were given the opportunity to present their views regarding the proposed water rates and charges; and

23. Notice of the public hearing was published prior to the hearing in various newspapers of general circulation within Metropolitan's service area; and

24. Metropolitan received written comments regarding the proposed water rates and charges, which, together with Metropolitan's responses, have been provided to the Board and the public; and

25. After the Board completed Workshop #3 on March 10, 2020, COVID-19 spread throughout the United States and the World. The World Health Organization declared a COVID-19 pandemic on March 11, 2020. Stay-at-home orders, other social distancing directives, and state-of-emergency orders went into effect within Metropolitan's service area, throughout California, and throughout the nation. Utility retailers, including some member agencies of Metropolitan and agencies that purchase water from them, anticipate their customers are likely to be adversely impacted financially. Those impacts may result in the inability to pay utility bills, which would also create financial stress on Metropolitan's member agencies. The extent of the financial impact to be caused by the COVID-19 pandemic is unknown at this time, as is the relief measures the federal and state governments may provide to assist in such impacts. But it is clear that the financial impact to our region and beyond will be significant and far-reaching. For example, the rate of CIP expenditures is anticipated to decrease based on delays in projects. Additionally, staff updated the projections in treated and untreated water demands based on the anticipated impacts of PFAS and PFOS on groundwater basins. Accordingly, staff provided the Board with updated recommendations for the biennial budget, rates, and charges; and

26. Before the April 2020 Board meeting, the General Manager and Chief Financial Officer provided to the Board and the public a board letter describing the modifications to the Proposed Biennial Budget for fiscal years 2020/21 and 2021/22 (updated with minor revisions since the version distributed on January 31, 2020); updates to the determination of total revenues and of revenues to be derived from water transactions and firm revenue sources required during fiscal years 2020/21 and 2021/22, and updates to the proposed rates to be effective January 1, 2021 and January 1, 2022, and charges to be effective January 1, 2021; and

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

28. All board letters, reports, presentations and other documents referred to in this Resolution may be viewed by Board members and the public on Metropolitan's web page at <http://www.mwdh2o.com> or in the office of the Board Executive Secretary;

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

**Section 1.** That the Board of Directors of The Metropolitan Water District of Southern California hereby fixes and adopts the following water rates, to be effective on January 1, 2021, and January 1, 2022, as shown in the table below, in order to enhance Metropolitan's fiscal stability and ability to ensure the region's long-term water supply while reasonably and fairly allocating the cost of providing service to its member agencies and other users of Metropolitan's system:

**Table 1. Rates and Charges**

<b>Rates &amp; Charges Effective January 1st</b>	<b>Current 2020</b>	<b>Proposed 2021</b>	<b>% Change</b>	<b>Proposed 2022</b>	<b>% Change</b>
Tier 1 Supply Rate (\$/AF)	\$208	\$243	17%	\$243	0%
Tier 2 Supply Rate (\$/AF)	\$295	\$285	(3%)	\$285	0%
System Access Rate (\$/AF)	\$346	\$373	8%	\$389	4%
Water Stewardship Rate (\$/AF)*	\$65	-	(100%)	-	
System Power Rate (\$/AF)	\$136	\$161	18%	\$167	4%
Full Service Untreated Volumetric Cost (\$/AF)					
Tier 1	\$755	\$777	3%	\$799	3%
Tier 2	\$842	\$819	(3%)	\$841	3%
Treatment Surcharge (\$/AF)	\$323	\$327	1%	\$344	5%
Full Service Treated Volumetric Cost (\$/AF)					
Tier 1	\$1,078	\$1,104	2%	\$1,143	4%
Tier 2	\$1,165	\$1,146	(2%)	\$1,185	3%
Readiness-to-Serve Charge (\$M)	\$136	\$130	(4%)	\$140	8%
Capacity Charge (\$/cfs)	\$8,800	\$10,700	22%	\$12,200	14%
Overall Rate Increase			3.0%		4.0%

**Section 2.** The Board finds and determines that the rates specified in Section 1 utilize the unbundled water rate and charge elements of the rate structure approved by Resolution 8774 and implemented by Resolution 8805, and that the cost of service process supporting the rates and charges specified in Section 1 is the cost of service process described in the 2020 Cost of Service report. The adopted rates and charges and cost of service reports will be on file and available for review by interested parties at Metropolitan's headquarters.

**Section 3.** The Board finds and determines that the cost of service process reasonably, fairly and proportionately: (i) identifies revenue requirements; (iii) shows the costs of major service functions that Metropolitan undertakes, (ii) assigns costs to the service functions; (iv) allocates service function costs based upon use of and benefit from Metropolitan's system, and (v) distributes costs to rates and charges based upon customary water industry standards. Accordingly, the Board finds that the cost of service process supports the rates and charges by creating a logical nexus between the costs and the revenues required and the rates and charges necessary to defray Metropolitan's costs of providing its services and for use of its water system.

**Section 4.** The Board finds and determines that the rates specified in Section 1 are fixed by the Board pursuant to Sections 133 and 134 of the Act, and, so far as practicable, will result in revenue which, together with revenue from water standby or availability service charges or assessments, will pay the operating expenses of Metropolitan, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by Metropolitan, and provide for the payment of the interest and principal of its bonded debt. Actual revenues and expenses may vary from budgeted amounts for a variety of reasons, and Administrative Code Section 5202(e) contemplates variation in actuals to budget and provides policy guidance to the Board, and the Board finds and determines that Metropolitan's financial obligations may include liabilities and future commitments, such as retiree obligations and debt service, that are not reflected in the budget, but that can be addressed



in a fiscally prudent manner to reduce future obligations and keep future rate increases reasonable within the policy guidance provided by Administrative Code Section 5202(e).

**Section 5.** The Board finds and determines that the rates specified in Section 1, together with other revenues from Metropolitan's charges, ad valorem property taxes, and other miscellaneous revenue, do not exceed the reasonable and necessary cost of providing Metropolitan's water services for which the rates and charges are made, or of conferring the benefit provided, and is fairly apportioned to each member agency as specified in Section 6 below.

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

**Section 7.** The Board finds and determines that each of the rates specified in Section 1 are set for Metropolitan's services and are not levied for separate general revenue purposes.

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

**Section 9.** If any provision of this is held invalid, that invalidity shall not affect other provisions of this Resolution which can be given effect without the invalid portion or application, and to that end the provisions of this Resolution are severable.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a Resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on April 14, 2020.

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Secretary of the Board of Directors  
of The Metropolitan Water District  
of Southern California

THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_\_

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**RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA  
FIXING AND ADOPTING  
A READINESS-TO-SERVE CHARGE EFFECTIVE JANUARY 1, 2021**

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The Board of Directors of The Metropolitan Water District of Southern California (the “Board”) hereby finds that:

1. Pursuant to Resolution 8774, the Board of The Metropolitan Water District of Southern California (“Metropolitan”) approved a rate structure proposal at its meeting on October 16, 2001, described in Board Letter 9-6, including a Readiness-To-Serve (“RTS”) Charge; and
2. Providing firm revenue sources is a goal of such rate structure; and
3. The amount of revenue to be raised by the RTS Charge shall be as determined by the Board and allocation of the RTS Charge among member public agencies (“member agencies”) shall be in accordance with the method established by the Board; and
4. The RTS Charge is a charge fixed and adopted by Metropolitan and charged to its member agencies, and is not a fee or charge imposed upon real property or upon persons as an incident of property ownership; and
5. Metropolitan has legal authority to fix and adopt such RTS Charge as a water rate pursuant to Sections 133 and 134 of the Metropolitan Water District Act (the “Act”), and to fix it as an availability of service charge pursuant to Section 134.5 of the Act; and
6. Under authority of Sections 133 and 134 of the Act, the Board has the authority to fix the rate or rates for water as will result in revenue which, together with other revenues, will pay Metropolitan’s operating expenses and provide for payment of other costs, including payment of the interest and principal of Metropolitan’s non-tax funded bonded debt; and
7. The RTS Charge recovers the capital expenditures for infrastructure projects needed to provide emergency storage capacity and available capacity needed to maintain reliable deliveries during outages and service interruptions and during periods of hydrologic variability; and
8. Pursuant to Resolution 8329, adopted by the Board on July 9, 1991, and Resolution 9199, adopted by the Board on March 8, 2016, and as each is thereafter amended and supplemented, proceeds of the RTS Charge and other revenues from the sale or availability of water are pledged to the payment of Metropolitan’s outstanding revenue bonds and to the payment of Metropolitan’s outstanding subordinate revenue

bonds and to revenue bonds and subordinate bonds to be issued pursuant to Resolution 8329 and Resolution 9199; and

9. Under authority of Section 134.5 of the Act, an RTS Charge levied as an availability of service charge may be collected from the member agencies within Metropolitan, or may continue to be collected as a standby charge against individual parcels within Metropolitan's service area; and

10. Certain member agencies of Metropolitan have opted in prior fiscal years to provide collection of all or a portion of their RTS Charge obligation through a Metropolitan water standby charge ("Standby Charge") levied on parcels within those member agencies; and

11. Under authority of Section 134.5 of the Act, the Standby Charge may continue to be levied on each acre of land or each parcel of land less than an acre within Metropolitan to which water is made available for any purpose by Metropolitan, whether the water is actually used or not; and

12. Metropolitan is willing to comply with the requests of member agencies opting to have Metropolitan continue to levy the Standby Charge within their respective territories, on the terms and subject to the conditions contained herein; and

13. In *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.*, San Francisco Superior Court Case Nos. CPF-16-515282, CPG-17-563350, and CPF-18-516389 (the "2016, 2017, and 2018 Cases", collectively), the San Diego County Water Authority challenged Metropolitan's water charges adopted on April 12, 2016, April 11, 2017, and on April 10, 2018, respectively, and also challenged Metropolitan's rates. Metropolitan is defending such challenges; and

14. Metropolitan maintains that its rates and charges are appropriate. There is no final judgment in the identified cases and Metropolitan does not anticipate a final judgment in CY 2021; and

15. On April 14, 2020, the Board considered the rates and charges presented by the General Manager and approved the biennial budget for fiscal years 2020/21 and 2021/22 and adopted recommended water rates for calendar years 2021 and 2022 and charges for calendar year 2021, and received information and documents available at <http://mwdh2o.com/WhoWeAre/Pages/FY-2020-21-and-2021-22-CY-2021-22.aspx> and <http://mwdh2o.com/WhoWeAre/Mission/Pages/review-applicability-of-property-tax-limit.aspx>; and

16. In approving the Proposed Biennial Budget and adopting the rates and charges on April 14, 2020, the Board determined the amount of revenue to be raised by the RTS Charge in calendar year 2021 to be \$130,000,000, based on information and documents available at <http://mwdh2o.com/WhoWeAre/Pages/FY-2020-21-and-2021-22-CY-2021-22.aspx> and <http://mwdh2o.com/WhoWeAre/Mission/Pages/review-applicability-of-property-tax-limit.aspx>. The amount of the RTS Charge was updated from the recommendation in the 2020 Cost of Service Report, to reflect modifications made to respond to the COVID-19 pandemic and the effect of PFAS/PFOS will have on certain projections. However, the COS methodology remains the same; and

17. Written notice of intention of Metropolitan's Board to consider and take action at its regular meeting of April 14, 2020, to adopt Metropolitan's RTS Charge for calendar year 2021 was given to each of Metropolitan's member agencies; and

18. The RTS Charge for calendar year 2021 applicable to each member agency is reflected in the Engineer's Report dated April 2020 and its method of its calculation and the specific data used in its determination are as specified in the cost of service report. Following modifications made by staff to the budget

due to changed conditions resulting from COVID-19 pandemic and the PFAS/PFOS effect on groundwater basins, the RTS Charge was updated accordingly. The updated RTS Charge continues to be supported by the Engineer's Report provided to the Board; and

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

NOW, THEREFORE, the Board does hereby resolve, determine and order as follows:

**Section 1.** That the Board hereby fixes and adopts an RTS Charge for the period from January 1, 2021, through December 31, 2021.

**Section 2.** That said RTS Charge shall be in an amount sufficient to provide for payment of debt service not paid from *ad valorem* property taxes, and other appropriately allocated costs, for capital expenditures for infrastructure projects needed to provide emergency storage capacity and available capacity needed to maintain reliable deliveries during outages and service interruptions and during periods of hydrologic variability.

**Section 3.** That such RTS Charge for January 1, 2021, through and including December 31, 2021, shall be in the amounts specified in Section 4, which shall be determined on a historic basis for each acre-foot of water, excluding water sales of reclaimed water under the Local Projects Program, and Local Resources Program, groundwater under the Groundwater Recovery Program, and Local Resources Program, groundwater under the Groundwater Recovery Program and deliveries under Replenishment and Interim Agricultural Water, included in Metropolitan's average water deliveries to its member agencies for the applicable ten-year period identified in Section 4. The aggregate RTS Charge for the period from January 1, 2021, through and including December 31, 2021 shall also be as specified in Section 4.

**Section 4.** That the RTS Charge for January 1, 2021, through December 31, 2021, shall be allocated among the member agencies in proportion to the average of deliveries through Metropolitan's system (in acre-feet) to each member agency during the ten-year period ending June 30, 2019. Metropolitan sales of reclaimed water under the Local Projects Program, groundwater under the Groundwater Recovery Program, and deliveries under the Replenishment and Interim Agricultural Water Service Programs are not included in the RTS Charge water sales calculation. The allocation of the RTS Charge among member agencies is based on sales data recorded by Metropolitan and shall be conclusive in the absence of manifest error.

The amount of the RTS Charge to be charged to each member agency effective January 1, 2021, is as follows:

## Schedule 1

## Calendar Year 2021 Readiness-To-Serve Charge

Calendar Year 2021 RTS Charge			
Member Agency	Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2009/10 - FY2018/19	RTS Share	12 months @ \$130 million per year (1/21-12/21)
Anaheim	17,327.0	1.17%	\$ 1,526,562
Beverly Hills	10,447.3	0.71%	920,439
Burbank	12,323.6	0.84%	1,085,747
Calleguas MWD	97,187.9	6.59%	8,562,554
Central Basin MWD	42,103.2	2.85%	3,709,422
Compton	779.3	0.05%	68,659
Eastern MWD	94,362.5	6.40%	8,313,628
Foothill MWD	8,395.4	0.57%	739,661
Fullerton	8,125.5	0.55%	715,882
Glendale	16,548.0	1.12%	1,457,930
Inland Empire Utilities Agency	56,560.7	3.83%	4,983,172
Las Virgenes MWD	20,448.6	1.39%	1,801,585
Long Beach	30,374.2	2.06%	2,676,061
Los Angeles	269,779.5	18.28%	23,768,407
Municipal Water District of Orange County	207,817.5	14.08%	18,309,363
Pasadena	18,839.6	1.28%	1,659,827
San Diego County Water Authority	258,318.0	17.51%	22,758,613
San Fernando	35.6	0.00%	3,136
San Marino	837.7	0.06%	73,804
Santa Ana	10,780.4	0.73%	949,787
Santa Monica	5,511.2	0.37%	485,554
Three Valleys MWD	62,229.1	4.22%	5,482,576
Torrance	15,990.2	1.08%	1,408,786
Upper San Gabriel Valley MWD	26,406.0	1.79%	2,326,450
West Basin MWD	115,327.9	7.82%	10,160,744
Western MWD	68,688.3	4.66%	6,051,651
<b>MWD Total</b>	<b>1,475,544.2</b>	<b>100.00%</b>	<b>\$ 130,000,000</b>

Totals may not foot due to rounding

The General Manager shall establish and make available to member public agencies procedures for administration of the readiness-to-serve charge, including filing and consideration of applications for reconsideration of their respective readiness-to-serve charge. The General Manager shall review any applications for reconsideration submitted in a timely manner. The General Manager shall also establish reasonable procedures for the filing of appeals from his determination.

**Section 5.** That the RTS Charge specified in Schedule 1, together with other revenues from Metropolitan's water rates, other charges, ad valorem property taxes, and other miscellaneous revenue, does not exceed the reasonable and necessary cost of providing Metropolitan's water services for which the rates and charges are made, or of conferring the benefit provided, and is fairly apportioned to each member agency as specified in Section 6 below.

**Section 6.** That water conveyed through Metropolitan's system for the purposes of water transfers, exchanges or other similar arrangements shall be included in the calculation of a member agency's rolling ten-year average firm demands used to allocate the RTS Charge.

**Section 7.** That the RTS Charge and the amount applicable to each member agency, the method of its calculation, and the specific data used in its determination are as specified in the adopted rates and charges to be effective January 1, 2021, which forms the basis of the RTS Charge, and the corresponding 2020 Cost of Service Report. The adopted rates and charges and cost of service reports are on file and available for review by interested parties at Metropolitan's headquarters.

**Section 8.** That except as provided in Section 10 below with respect to any RTS Charge collected by means of the Standby Charge, the RTS Charge shall be due monthly, quarterly or semiannually as agreed upon by Metropolitan and the member agency.

**Section 9.** That such RTS Charge may, at the request of any member agency which elected to utilize the Standby Charge as a mechanism for collecting the RTS Charge obligation in fiscal year 1996/97, be collected by continuing the Standby Charge at rates not to exceed rates levied in fiscal year 1996/97 upon land within Metropolitan's (and such member agency's) service area to which water is made available by Metropolitan for any purpose, whether such water is used or not.

**Section 10.** That the Standby Charge shall be collected on the tax rolls, together with the *ad valorem* property taxes which are levied by Metropolitan for the payment of pre-1978 voter-approved indebtedness. Any amounts so collected shall be applied as a credit against the applicable member agency's RTS Charge obligation. After such member agency's RTS Charge allocation is fully satisfied, any additional collections shall be credited to other outstanding obligations of such member agency to Metropolitan that funds the capital costs or maintenance and operation expenses for Metropolitan's water system, or future RTS Charge obligations of such agency. Notwithstanding the provisions of Sections 8 and 9 above, any member agency requesting to have all or a portion of its RTS Charge obligation collected through Standby Charge levies within its territory as provided herein shall pay any portion not collected through net Standby Charge collections to Metropolitan within 50 days after Metropolitan issues an invoice for remaining RTS Charge obligations for such member agency, as provided in Administrative Code Section 4507.

**Section 11.** That notice is hereby given to the public and to each member agency of The Metropolitan Water District of Southern California of the intention of Metropolitan's Board to consider and take action at its regular meeting to be held May 12, 2020 (or such other date as the Board shall hold its regular meeting in such month), on the General Manager's recommendation to continue the Standby Charge for fiscal year 2020/21 under authority of Section 134.5 of the Act on land within Metropolitan at rates not to exceed rates, per acre of land, or per parcel of land less than an acre, levied in fiscal year 1996/97 upon land within Metropolitan's (and such member agency's) service area. Such Standby Charge will be continued as a means of collecting the RTS Charge.

**Section 12.** That no failure to collect, and no delay in collecting, any Standby Charge shall excuse or delay payment of any portion of the RTS Charge when due.

**Section 13.** That the RTS Charge is fixed and adopted by Metropolitan as a rate or charge on its member agencies, and is not a fee or charge imposed upon real property or upon persons as incidents of property ownership, and the Standby Charge is collected within the respective territories of electing member agencies as a mechanism for collection of the RTS Charge. In the event that the Standby Charge, or any portion thereof, is determined to be an unauthorized or invalid fee, charge or assessment by a final judgment in any proceeding at law or in equity, which judgment is not subject to appeal, or if the collection of the Standby Charge shall be permanently enjoined and appeals of such injunction have been declined or exhausted, or if Metropolitan shall

determine to rescind or revoke the Standby Charge, then no further Standby Charge shall be collected within any member agency and each member agency which has requested continuation of the Standby Charge as a means of collecting its RTS Charge obligation shall pay such RTS Charge obligation in full, as if continuation of such Standby Charge had never been sought.

**Section 14.** That the General Manager and the General Counsel are hereby authorized to do all things necessary and desirable to accomplish the purposes of this Resolution, including, without limitation, the commencement or defense of litigation.

**Section 15.** That if any provision of this Resolution or the application to any member agency, property or person whatsoever is held invalid, that invalidity shall not affect other provisions or applications of this Resolution which can be given effect without the invalid portion or application, and to that end the provisions of this Resolution are severable.

**Section 16.** That the General Manager is hereby authorized and directed to take all necessary action to satisfy relevant statutes requiring notice by mailing or by publication.

**Section 17.** That the Board Executive Secretary is hereby directed to transmit a certified copy of this Resolution to the presiding officer of the governing body of each member agency.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a Resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on April 14, 2020.

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Secretary of the Board of Directors  
of The Metropolitan Water District  
of Southern California

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

**PROGRAM TO SET A READINESS-TO-SERVE CHARGE EFFECTIVE JANUARY 1, 2021,  
INCLUDING LOCAL OPTION TO CONTINUE COLLECTING A STANDBY CHARGE,  
DURING FISCAL YEAR 2020/21**

**April 2020**

**BACKGROUND**

The Metropolitan Water District of Southern California is a public agency with a primary purpose to provide imported wholesale water service for domestic and municipal uses to its 26 member public agencies. Approximately 19 million people reside within Metropolitan's service area, which covers approximately 5,200 square miles and includes portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura. Metropolitan historically provided between 40 and 60 percent of the water used within its service area. To supply Southern California with reliable and safe water, Metropolitan imports water from the Colorado River and Northern California to supplement its member agencies' local supplies, and helps its member agencies develop increased water conservation, recycling, storage and other local resource programs.

**REPORT PURPOSES**

As part of its role as a regional imported water supplier, Metropolitan builds capital facilities and implements water management programs that ensure the delivery of reliable high quality water supplies throughout its service area. The purpose of this report is to: (1) identify and describe those facilities and programs that will be financed in part by Metropolitan's Readiness-to-Serve (RTS) Charge, and (2) describe the method and basis for levying Metropolitan's Standby Charge for those agencies electing to continue to collect a portion of their RTS obligation through Metropolitan's Standby Charge in fiscal year 2020/21. **Because the Standby Charge is levied and collected on a fiscal year basis the calculations in this report also are for the fiscal year, even though the RTS Charge is levied on a calendar year basis.** The RTS Charge for calendar year 2020 was adopted by Metropolitan's Board on April 9, 2019 and the RTS Charge for 2021 will be considered by the Board on April 14, 2020. The Board will consider the continuation of the Standby Charge for fiscal year 2020/21 on May 12, 2020.

Metropolitan collects the RTS Charge from its member agencies to recover a portion of the capital costs including debt service on bonds issued to finance capital facilities needed to meet demands on Metropolitan's system for emergency storage and available capacity to meet outages and hydrologic variability. The Standby Charge is collected from parcels of land within Metropolitan's member agencies that have elected to collect all or a portion of their RTS obligation through the Standby Charge, as a method of recovering the costs of special benefits conferred on parcels within their service area. The RTS Charge will partially pay for the facilities and programs described in this report, namely, the amount attributable to the portions providing emergency storage and available capacity to meet outages and hydrologic variability. The Standby Charge, when collected, will be utilized solely for capital payments and debt service on the capital facilities funded by the RTS Charge, as identified in this report.

The budgeted total RTS revenue for fiscal year 2020/21 is \$130 million, of which \$43.8 million is estimated to be collected via the Standby Charge. The Standby Charge is collected on property tax bill.



## **METROPOLITAN'S RESPONSE TO FLUCTUATING WATER DEMANDS AND AVAILABILITY OF WATER SOURCES**

Metropolitan's member agencies have widely differing imported water supply needs and the availability of imported water supply from various sources also varies widely. Some agencies have no local water resources and rely on Metropolitan for 100 percent of their annual water needs. Other agencies have adequate local surface supplies and storage and/or groundwater basins that provide them with the majority of their water supplies during wet and average years. However, during dry periods and/or based on a variety of other factors, these agencies rely on Metropolitan to make up any shortfalls in local water supplies. Similar coordination challenges arise in managing water available from Metropolitan's various water supply sources.

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

### **CAPITAL FACILITIES — CONVEYANCE AND DISTRIBUTION**

Metropolitan's total water system has been built over time to meet the widely differing needs of its member agencies and the various sources of water available to Metropolitan. To meet those needs, Metropolitan's water delivery system is comprised of three basic conveyance and delivery components that form one integrated water system:

- State Water Project (SWP);
- Colorado River Aqueduct (CRA); and
- Distribution System

The system draws on diverse supply sources, transports water across a large part of the State and distributes water in six counties, where member agencies or their retail sub-agencies serve an estimated 19 million people. The CRA and the California Aqueduct of the SWP convey imported water into the Metropolitan service area. This water is then delivered to Metropolitan's member agencies via a regional network of canals, pipelines, and appurtenant facilities, which constitute the Distribution System. Supply, treatment, and storage facilities augment the Distribution System. The system is an interconnected regional conveyance and distribution system with the ability to deliver supplies from each of the SWP, the CRA, and its storage portfolio throughout its vast and diverse service area to almost every member agency. This flexibility derives from the capital facilities and provides local and system-wide benefits to all member agencies, as the facilities directly contribute to the reliable delivery of water supplies throughout Metropolitan's service area.

As the 2007 Integrated Area Study (IAS) emphasized, regional system flexibility is a key component of overall reliability.<sup>1</sup> Today, system flexibility continues to be essential to the availability of Metropolitan's services.<sup>2</sup> Metropolitan must maintain operational flexibility—the ability to respond to short-term changes in regional water supply, water quality, treatment requirements, and member agency demands. Metropolitan must maintain delivery flexibility—the ability to maintain partial to full water supply deliveries during planned and unplanned facility outages. Metropolitan is also required by state statute to serve as large an area as is determined to be reasonable and practical with SWP water; and where a blend of water sources is served, to have the objective to the extent determined to be reasonable and practical, that at least 50 percent of the blend be SWP water. (MWD Act, Sec. 136.)

Operational flexibility has been achieved by creating an interconnected regional delivery network integrating the SWP and the CRA conveyance systems with the Distribution System. This integrated network allows Metropolitan to incorporate supply from the SWP and the CRA with a diverse portfolio of geographically dispersed storage programs, including the Central Valley groundwater storage programs, carryover storage in San Luis Reservoir, flexible storage capacity in Castaic Lake and Lake Perris, Lake Mead storage, the Desert Water Agency/Coachella Valley Water District Advanced Delivery account, in-basin surface storage in Diamond Valley Lake and Lake Mathews, and in-basin groundwater Conjunctive Use Programs. This integrated, regional network also allows Metropolitan to move supplies throughout the system in response to service demands, supply availability and operational needs.

Therefore, each of Metropolitan's integrated conveyance, distribution and storage assets contributes to regional system reliability. It is fair and reasonable for member agencies and all property owners within the service area to share the cost of developing and maintaining these assets because they all benefit from regional system reliability.

#### State Water Project Description and Benefits

One of Metropolitan's two major sources of water is the SWP.<sup>3</sup> The SWP 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 consists of a complex system of dams, reservoirs, power plants, pumping plants, canals and aqueducts to deliver water. See Figure 1. SWP water consists of water from rainfall and snowmelt runoff that 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. In addition to the delivery of SWP water, the SWP is also used to convey transfers of SWP water and non-SWP water. Metropolitan receives water from the SWP through the California Aqueduct, which is 444 miles long, and at four delivery points near the northern and eastern boundaries of Metropolitan's service area.

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<sup>1</sup> 2007 Integrated Area Study, Report No. 1317, pg. 2-10.

<sup>2</sup> 2020 Annual Operating Plan

<sup>3</sup> For historical and current information regarding the SWP, refer to Bulletin 132, published periodically by DWR since 1963. The most recently published Bulletin is Bulletin 132-17 dated January 2019 and titled "Management of the California State Water Project."

Figure 1. Facilities of the State Water Project



The SWP is managed and operated by the Department of Water Resources (DWR). 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). The Contractors are participants in the SWP through long-term contracts for the delivery of SWP water and use of the SWP transportation facilities.

In 1960, Metropolitan signed the first water supply contract (as amended, the State Water Contract) with DWR. In addition to SWP water, Metropolitan also obtains water from water transfers, groundwater banking and exchange programs delivered through the California Aqueduct.

Since 1960, the SWP system has been extended, improved, and refurbished. All such costs are payable by the Contractors. On October 10, 2017, Metropolitan's Board voted to support financing for the California WaterFix project. California WaterFix was a comprehensive science-based solution proposed by the state to modernize critical water delivery infrastructure of the SWP. At the time of the Metropolitan Board's approval, the project proposed construction of new water intakes in the north Delta and two 40-foot diameter tunnels under the Delta terminating at a forebay in the south Delta. The estimated cost of the project, at the time of Metropolitan Board's approval, was \$17 billion in 2017 dollars, with Metropolitan's share about 26% of that, or \$4.3 billion. Metropolitan's biennial budget for fiscal years 2018/19 and 2019/20 included costs of \$4 million and \$13 million for each fiscal year, respectively. On July 10, 2018, the Metropolitan Board approved increased funding for up to about a 65% share of the project.

On April 29, 2019, Governor Newsom issued an executive order directing State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system that included consideration of a single-tunnel Delta conveyance facility instead of the approved two-tunnel WaterFix project. In light of this order, DWR and the State Water Contractors embarked on a new public process to further negotiate proposed amendments related to cost allocation for a potential new Bay-Delta conveyance project. **As a result, the costs of any such new project are yet unknown and Metropolitan's projected up to \$10.8 billion costs for California WaterFix are no longer included in its current or future budgeting or projections.** Metropolitan's biennial budget for fiscal years 2020/21 and 2021/22 includes its planned contribution of \$25 million per year towards DWR's planning costs of a new Delta conveyance project.

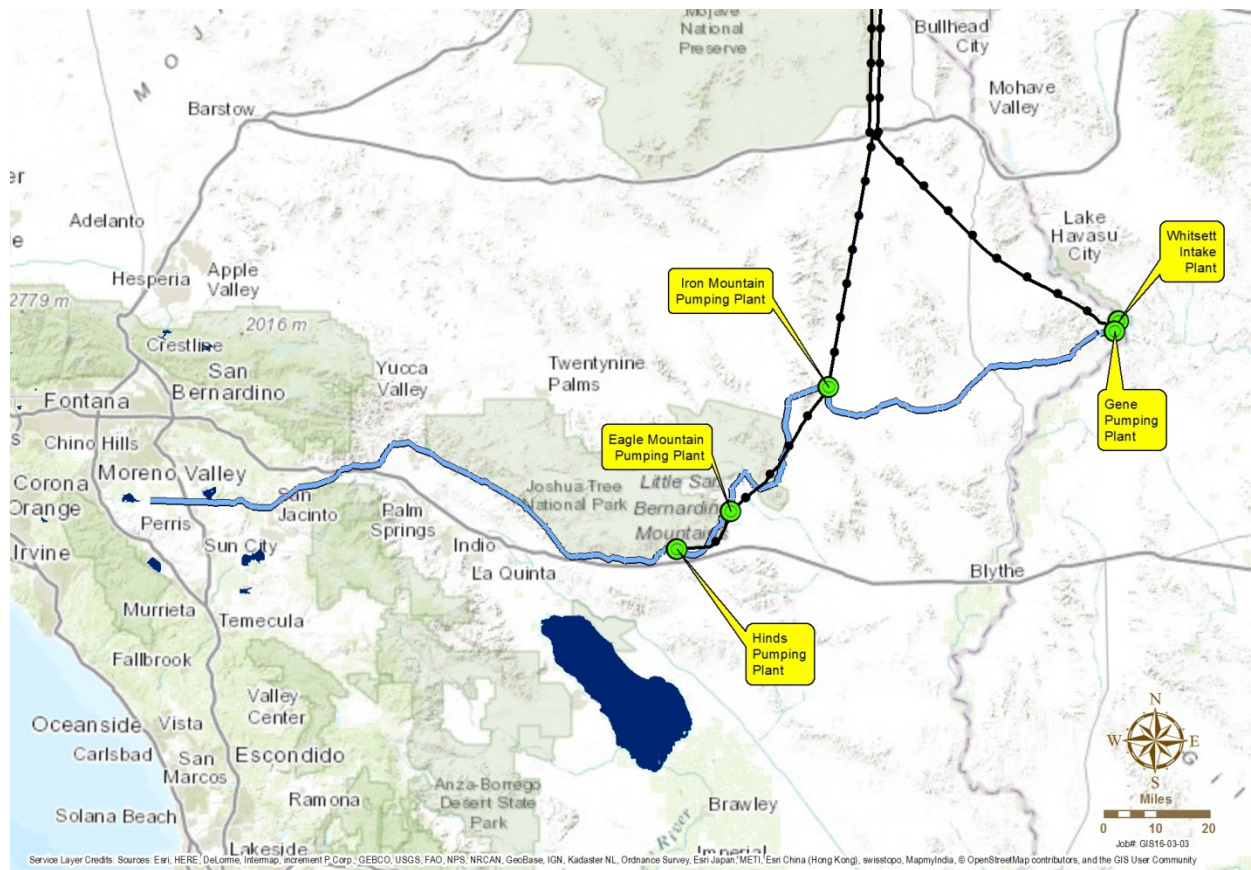
All Metropolitan member agencies benefit from the SWP system and its supplies, which can be distributed to all member agencies. Metropolitan's member agencies distribute that water to parcels as retail water providers or as wholesale water providers to retail agencies. In this way, the SWP water that Metropolitan delivers to its member agencies contributes to water available to existing and future end users throughout Metropolitan's service area. The cost of the net capital payments for the SWP less the portion covered by property taxes in fiscal year 2020/21 is \$41.8 million, as shown in Table 1. Real property throughout Metropolitan's service area benefits from the availability of the SWP facilities and its integration into Metropolitan's system and therefore all such costs may be attributed to such parcels. However, Metropolitan's Standby Charge collects only \$43.8 million of the total \$284.2 million system costs, representing 15% of the total system costs.

#### Colorado River Aqueduct Description and Benefits

Metropolitan's other major source of water is the CRA. Metropolitan was established to obtain an allotment of Colorado River water, and its first mission was to construct and operate the CRA. The CRA consists of five pumping plants, 450 miles of high voltage power lines, one electric substation, four regulating reservoirs, and 242 miles of aqueducts, siphons, canals, conduits and pipelines terminating at Lake Mathews in Riverside County. See Figure 2. 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.

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, as well as outside services to provide repair and maintenance, and professional services. The CRA activities benefit from Water System 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 cost functions, such as the CRA Conveyance and Aqueduct function. The capital cost of the Colorado River Aqueduct and Inland Feeder in fiscal year 2020/21 is \$74.6 million, and is included in the Non-SWP Conveyance System line item in Table 1. Real property throughout Metropolitan's service area benefits from the availability of the CRA facilities and its integration into Metropolitan's system and therefore all such costs may be attributed to such parcels. However, Metropolitan's Standby Charge collects only \$43.8 million of the total \$284.2 million system costs, representing 15% of the total system costs.

**Figure 2. Colorado River Aqueduct**



### Metropolitan's Conveyance and Distribution System Benefits

For purposes of this report, components of the conveyance system are considered to include only those major trunk facilities that transport water from primary supply sources to either regional storage facilities or feeder lines



linked to the primary conveyance facilities. See Figure 3. For a list of Metropolitan’s conveyance facilities within its service area, see Table 3. All other water transport facilities, including pipelines, feeders, laterals, canals and aqueducts, are considered to be distribution facilities. Distribution facilities can be further identified in that they generally have at least one connection to a member agency's local distribution system. For a list of Metropolitan’s distribution facilities, see Table 3.

All water transport facilities not specifically identified as part of the regional conveyance system are considered to be distribution facilities (Distribution System). While conveyance and aqueduct system components are regional in nature and generally do not link directly to local agency distribution systems, Distribution System facilities do ultimately connect to local agency systems. As a result, these facilities rely on conveyance and aqueduct facilities to import water from regional supply sources. The Distribution System is a complex network of facilities which routes water from the CRA and SWP to the member agencies. Beginning at the terminal delivery points of the CRA and SWP, Metropolitan's Distribution System includes approximately 775 miles of pipelines, feeders, and canals. Distribution System operations are coordinated from the Operations Control Center in Eagle Rock. The control center plans, schedules, and balances daily water operations in response to member agency demands and the operational limits of the system as a whole. Metropolitan’s storage and treatment facilities augment the Distribution System. Metropolitan operates and maintains separate untreated and treated distribution facilities.

**Figure 3. Metropolitan’s Distribution and Storage Facilities**



Metropolitan has an ongoing commitment, through physical system improvements and the maintenance and rehabilitation of existing facilities, to maintain the reliable delivery of water throughout the entire service area. System improvement projects include additional conveyance and distribution facilities to maintain the dependable delivery of water supplies, provide alternative system delivery capacity, and enhance system operations. Conveyance and distribution system improvement benefits also include projects to upgrade obsolete facilities or equipment, or to rehabilitate or replace facilities or equipment. These projects are needed to enhance system operations, comply with new regulations, and maintain a reliable distribution system. A list of conveyance and distribution system facilities is provided in Table 3 along with the fiscal year 2020/21 estimated conveyance and distribution system benefits. The capital cost of the Distribution System in fiscal year 2020/21 is \$70.4 million, and is included in the Distribution System line item in Table 1. Real property throughout Metropolitan's service area benefits from the availability of the Distribution System and its integration into Metropolitan's system and therefore all such costs may be attributed to such parcels. However, Metropolitan's Standby Charge collects only \$43.8 million of the total \$284.2 million system costs, representing 15% of the total system costs.

## **CAPITAL FACILITIES – WATER STORAGE**

### System Storage Benefits

The Metropolitan system, for purposes of meeting demands during times of shortage, regulating system flows, and ensuring system reliability in the event of a system outage, provides over 1,000,000 acre-feet of system storage capacity. Diamond Valley Lake provides 810,000 acre-feet of that storage capacity, effectively doubling Southern California's previous surface water storage capacity. Other existing imported water storage available to the region consists of Metropolitan's raw water reservoirs, a share of the SWP's raw water reservoirs in and near the service area, and the portion of the groundwater basins used for conjunctive-use storage.

Water stored in system storage during above average supply conditions (surplus) provides a reserve against shortages when supply sources are limited or disrupted. Water storage also preserves Metropolitan's capability to deliver water during scheduled maintenance periods, when conveyance facilities must be removed from service for rehabilitation, repair, or maintenance. The benefits of these capital facilities are both local and system-wide, as the facilities directly contribute to the reliable delivery of water supplies throughout Metropolitan's service area. The capital costs of water storage in fiscal year 2020/21 is \$97.4 and, as shown in Table 1. Real property throughout Metropolitan's service area benefits from the availability of the storage capacity throughout the service area and its integration into Metropolitan's system and therefore all such costs may be attributed to such parcels. However, Metropolitan's Standby Charge collects only \$43.8 million of the total \$284.2 million system costs, representing 15% of the total system costs.

## **DEMAND MANAGEMENT PROGRAMS**

Demand management programs include 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 the delivery of 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 or to Metropolitan's own supply. Rather, the effect of these downstream programs in terms of water supply is to produce or conserve a local supply of water for the local agencies. The financial effect for Metropolitan is to avoid and defer the need for additional infrastructure

construction, operation, and maintenance, thus contributing to infrastructure savings for all users of the system. The programs also free up conveyance capacity in the system to the benefit of all system users.

Therefore, investments in demand side management programs like conservation, water recycling and groundwater recovery help to increase regional water supply reliability, reduce demands for imported water supplies, decrease the burden on the district's infrastructure and reduce system costs, and free up conveyance capacity to the benefit of all system users. The total budgeted costs of the demand management programs in fiscal year 2020/21 is \$48.5 million, but are not included in Table 1 for this report. Metropolitan's Board suspended the billing and collection of the WSR for calendar years 2018, 2019, and 2020 on exchange deliveries to SDCWA pending Metropolitan's completion of a cost allocation study of its demand management costs. Having completed the demand management cost allocation process, in December 2019 Metropolitan's Board directed staff: (1) to incorporate the use of the 2019/20 fiscal-year-end balance of the Water Stewardship Fund to fund all demand management costs in the proposed FY 2020/21 and 2021/22 biennial budget; and (2) to not incorporate the WSR, or any other rates or charges to recover demand management costs, with the proposed rates and charges for CYs 2021 and 2022. Thus, the portion of the demand management program costs that should be functionalized as conveyance, storage, and distribution infrastructure costs for purposes of Table 1 has not yet been determined. However, even without such costs, Metropolitan's infrastructure costs exceed the revenue collected pursuant to the RTS Charge.

#### Local Resources Program Benefits

In 1982, Metropolitan's Board adopted the Local Resources Program (LRP) with the goal of developing local water resources in a cost-efficient manner. Financial incentives are provided to member agency-sponsored projects that best help the region achieve its local resource production goals of restoring degraded groundwater resources for potable use as well as developing recycled water and seawater desalination supplies. These projects provide new water supplies within Metropolitan's service area, which, as explained, help to increase regional water supply reliability, reduce demands for imported water supplies, decrease the burden on the district's infrastructure and reduce system costs, and free up conveyance capacity to the benefit of all system users.

In 1999, the California Legislature and Governor recognized the regional benefit of demand management programs by enacting Senate Bill 60, which states: "It is the intent of the Legislature that the Metropolitan Water District of Southern California expand water conservation, water recycling, and groundwater recovery efforts" and "The Metropolitan Water District of Southern California shall place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures." (MWD Act, Sec. 130.5.)

Combined production from participating recycling and groundwater recovery projects produced approximately 188,000 acre-feet of water in fiscal year 2018/19 with financial incentive payments of about \$29 million. Regional recycling, recovered groundwater, and desalinated seawater production are projected to be about 618,000 acre-feet per year, by year 2025. An estimate of the costs of the program in fiscal year 2020/21 as measured by Metropolitan's estimated incentive payments for recycling and groundwater recovery projects is shown in Table 2.

#### Water Conservation Benefits

Metropolitan actively promotes water conservation programs within its service area as a cost-effective strategy for ensuring the long-term reliability of supplies and as a means of reducing the need to increase imported supplies and offset the need to transport or store additional water into or within the Metropolitan service area. Through the Conservation Credits Program, Metropolitan provides financial incentives in regional conservation programs and also reimburses local agencies for a share of their costs of implementing their own conservation programs. Since fiscal year 1990/91, Metropolitan has spent over \$798 million in financial incentives to support regional and local conservation projects.



The actual conservation of water takes place at the retail consumer level. Regional conservation approaches have proven to be effective at reaching retail consumers throughout the service area and successfully implementing water saving devices, programs and practices. Regional investments in demand management programs, of which conservation is a key part along with local supply programs, benefit all member agencies regardless of project location. These programs help to increase regional water supply reliability, reduce demands for imported water supplies, decrease the burden on the district's infrastructure and reduce system costs, and free up conveyance capacity to the benefit of all system users. Thus, water conservation, as a demand management program, contributes to transportation infrastructure savings for all users of the regional water system.

Through fiscal year 2018/19, Metropolitan's Conservation Credits Program has saved over 2,976,000 acre-feet since inception. In order to comply with the Governor's mandate of reducing demand by 20 percent by the year 2020, Metropolitan has continued to increase its conservation efforts to meet that mandate.

In 1999, the California Legislature and Governor recognized the regional benefit of conservation, as well as local supply development, by enacting Senate Bill 60 which states: "It is the intent of the Legislature that the Metropolitan Water District of Southern California expand water conservation, water recycling, and groundwater recovery efforts" and "The Metropolitan Water District of Southern California shall place increased emphasis on sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures." (MWD Act, Sec. 130.5.) An estimate of the costs of water conservation programs as measured by Metropolitan's incentive payments is given in Table 2.

### **METROPOLITAN'S REVENUE**

Metropolitan's major capital facilities are financed largely from the proceeds of revenue bond issues, which are repaid over future years. The principal source of revenue for repayment of these bonds is water sales to its member agencies, which is currently Metropolitan's largest source of revenue. In addition, *ad valorem* property taxes provide an additional limited revenue source, which is used to pay pre-1978 voter-approved indebtedness. However, the use of water rates as a primary source of revenue has placed an increasing burden on member agencies and their ratepayers, which would more equitably continue to be paid in part by assessments on land that in part derives its value from the availability of water through an integrated and reliable water system.

#### **Readiness-To-Serve**

In December 1993, Metropolitan's Board approved a revenue structure that included additional charges to establish a commitment to Metropolitan's capital improvement program and provide revenue stability. This revenue structure included the RTS Charge, which in 1995 certain member agencies opted to pay in part pursuant to the collection of a standby charge. In October 2001, the Board adopted the current unbundled rate structure, and maintained the RTS Charge.

As noted above, Metropolitan levies the RTS Charge on its member agencies to recover capital costs, including a portion of the debt service on bonds issued to finance capital facilities needed to meet existing demands on Metropolitan's system for emergency storage and available capacity.

The estimated fiscal year 2020/21 RTS Charge for each member agency is shown in Table 4.

#### **Standby Charge Option**

Metropolitan's Standby Charge is authorized by the State Legislature and has been levied by Metropolitan since fiscal year 1992/93. The Standby Charge recognizes that there are economic benefits to lands that have access to a water supply, whether or not such lands are using it, which excludes lands permanently committed to open space and maintained in their natural state that are not now and will not in the future be supplied water and lands that the

General Manager, in his discretion, finds do not now and cannot reasonably be expected to derive a benefit from the projects to which the proceeds of the Standby Charge will be applied. Utilization of the Standby Charge transfers some of the burden of maintaining Metropolitan's capital infrastructure from water rates and *ad valorem* taxes to all the benefiting properties within the service area. A fraction of the value of this benefit and of the cost of providing it can be effectively recovered, in part, through the levying of a standby charge. The projects to be supported in part by the Standby Charge are capital projects that provide both local and Metropolitan-wide benefit to current landowners as well as existing water users.

Although a standby charge could have been set to recover all Conveyance, Distribution, and Storage costs as detailed in Table 1, Metropolitan's continued Standby Charge only collects about 15% of those costs. For fiscal year 2020/21, the amount to be recovered by the RTS Charge is estimated to be \$130 million and of that only \$43.8 million is estimated to be recovered by the Standby Charge.

The Standby Charge for each acre or parcel of less than an acre varies from member agency to member agency, as permitted under the legislation establishing Metropolitan's Standby Charge. The water Standby Charge for each member agency is continued at amounts not to exceed the rates in place since fiscal year 1996/97 and is shown in Table 5, which consists of composite rates by member agencies, not to exceed \$15.00. The composite rates consist in part of a uniform component of \$5 applicable throughout Metropolitan, and in part of a variable component, not exceeding \$10 in any member public agency, reflecting the allocation of historical water deliveries by the member agencies as of fiscal year 1993/94 when the composite rates were initially established. Metropolitan will continue Standby Charges only within the service areas of the member agencies that have requested that the Standby Charge be utilized for purposes of meeting their outstanding RTS obligation.

The Standby Charge is proposed to be collected from: (1) parcels on which water standby charges have been levied in fiscal year 1996/97 and annually thereafter and (2) parcels annexed to Metropolitan and to an electing member agency after January 1997. Table 6 lists parcels annexed, or to be annexed, to Metropolitan and to electing member agencies during fiscal year 2018/19, such parcels being subject to the Standby Charge upon annexation.

The estimated costs of Metropolitan's wholesale water system, which could be paid by a Standby Charge, exceed \$284.2 million for fiscal year 2020/21, as shown in Table 1. An average total Standby Charge of about \$66.06 per acre of land or per parcel of land less than one acre would be necessary to pay for the total potential program benefits. Benefits in this amount will accrue to each acre of property and parcel within Metropolitan's service area, as Metropolitan delivers water to member agencies that contributes to water available to these properties, via that member agency or a retail sub-agency. Because Metropolitan's water deliveries to member agencies contributes to water available only to properties located within Metropolitan's service area boundaries (except for certain contractual deliveries as permitted under Section 131 of the Metropolitan Water District Act), any benefit received by the public at large or by properties outside of the area is merely incidental.

Table 5 shows that the distribution of Standby Charge revenues from the various member agency service areas would provide net revenue flow of approximately \$43.8 million for fiscal year 2020/21. Metropolitan will use other revenue sources, such as water sales revenues, RTS Charge revenues (except to the extent collected through standby charges, as described above), interest income, and revenue from sales of hydroelectric power, to pay for the remaining program costs. Additionally, the actual Standby Charge proposed to be continued ranges from \$5 to \$15 per acre of land or per parcel of land less than one acre. Thus, the benefits of Metropolitan's investments in water conveyance, storage, distribution, and demand management programs far exceed the recommended Standby Charge.

## Equity

The RTS Charge is a firm revenue source. The revenues to be collected through this charge will not vary with sales in the current year. This charge is levied on Metropolitan's member agencies and is not a fee or charge upon real property or upon persons as an incident of property ownership. It ensures that agencies that only occasionally purchase water from Metropolitan but receive the reliability benefits of Metropolitan's system pay an equitable share of the costs to provide that reliability. Within member agencies that elect to pay the RTS Charge through Metropolitan's standby charges, the Standby Charge results in a lower RTS Charge than would otherwise be necessary due to the amount of revenue collected from lands which benefit from the availability of Metropolitan's water system. With the Standby Charge, these properties are now contributing a more appropriate share of the cost of importing water to Southern California.

Metropolitan's water system increases the availability and reliable delivery of water throughout Metropolitan's service area. A reliable system benefits existing end users and land uses through retail water service provided by Metropolitan member agencies or by water retailers that purchase water from a Metropolitan member agency, and through the replenishment of groundwater basins and reservoir storage as reserves against shortages due to droughts, natural emergencies, or scheduled facility shutdowns for maintenance. The benefits of reliable water resources from the SWP, CRA, Storage, and system improvements accrue to more than 250 cities and communities within Metropolitan's six-county service area. Metropolitan's regional water system is interconnected, so water supplies from the SWP and CRA can be used throughout most of the service area and therefore benefit water users and properties system-wide.

Additional Metropolitan deliveries required due to the demands of property development will be reduced by the implementation of demand management projects, including water conservation, water recycling, and groundwater recovery projects. As with the SWP, CRA and Storage and the conveyance and distribution facilities, demand management programs increase the future reliability of water resources. In addition, demand management programs provide system-wide benefits by decreasing the demand for imported water, which helps to decrease the burden on the district's infrastructure and reduce system costs, and free up conveyance capacity to the benefit of all system users.

A major advantage of a firm revenue source, such as a RTS charge, is that it contributes to revenue stability during times of drought or low water sales. It affords Metropolitan additional security, when borrowing funds, that a portion of the revenue stream will be unaffected by drought or by rainfall. This security will help maintain Metropolitan's historically high credit rating, which results in lower interest expense to Metropolitan, and therefore, lower overall cost to its member agencies.

## SUMMARY

The foregoing and the attached tables describe the current costs of Metropolitan's system and benefits provided by the projects listed as mainstays to the water system for Metropolitan's service area. Benefits are provided to member agencies, their retail sub-agencies, water users and property owners. The projects represented by this report provide both local benefits as well as benefits throughout the entire service area. It is recommended, for calendar year 2021, that the Metropolitan Board of Directors adopt the RTS Charge as set forth in Table 4 with an option for local agencies to request that a Standby Charge be collected for fiscal year 2020/21 from lands within Metropolitan's service area as a credit against such member agency's RTS Charge, up to the Standby Charge amounts collected by Metropolitan within the applicable member agency for fiscal year 1996/97. The maximum Standby Charge would not exceed \$15 per acre of land or per parcel of less than one acre. The recommended Standby Charge exceeds the costs of the system described in this Engineer's Report by at least \$240 million. A preliminary listing of all parcels subject to the proposed 2020/21 Standby Charge and the amounts proposed to be continued for each is available in the office of the Chief Financial Officer. A final listing is available upon receipt of final information from each county.

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**TABLE 1**  
**ESTIMATED COSTS OF**  
**WATER SYSTEM INFRASTRUCTURE**  
**BENEFITING REAL PROPERTY WITHIN METROPOLITAN'S SERVICE AREA**

	Estimated Program Costs for FY2020/21	Dollars Per Parcel of 1 Acre or Less
<b>Capital Payments for Water System Infrastructure</b>		
Net Capital Payments to State Water Project (SWP) (less portion paid by property taxes)	\$ 41,766,881	\$9.71
Non Tax Supported Capital Costs for Non-SWP Conveyance System <sup>1</sup>	\$ 74,568,374	\$17.34
Non Tax Supported Capital Costs for Distribution System <sup>2</sup>	\$ 70,409,322	\$16.37
Non Tax Supported Capital Costs for Water Storage <sup>3</sup>	\$ 97,417,140	\$22.65
<b>Total Capital Payments</b>	<b>\$ 284,161,717</b>	<b>\$66.06</b>
<b>Estimated Standby Charge Revenues</b>	\$ 43,803,133	\$10.18
Percent Collected by Standby Charge	15%	
<b>Total Remaining Costs Not Paid by Standby Charge</b>	<b>\$ 240,358,584</b>	<b>\$55.88</b>

**Notes:**

[1] Non-SWP Conveyance include the Colorado River Aqueduct and Inland Feeder.

[2] Distribution facilities include the pipelines, laterals, feeders and canals that distribute water throughout the service area.

[3] System storage includes Diamond Valley Lake, Lake Mathews, Lake Skinner and several other smaller surface reservoirs which provide storage for operational purposes.

Totals may not foot due to rounding

<b>TABLE 2</b>	
<b>WATER RECYCLING, GROUNDWATER RECOVERY AND CONSERVATION PROJECTS</b>	
<b>Project Name</b>	<b>FISCAL YEAR 2020/21 Payment</b>
<b>Water Recycling Projects</b>	<b>\$7,865,397</b>
Alamitos Barrier Reclaimed Water Project	
Anaheim Water Recycling Demonstration Project	
Burbank Recycled Water System Expansion Phase II Project	
Development of Non-Domestic Water System in Ladera Ranch and Talega Valley	
Direct Reuse Project Phase IIA	
Dry Weather Runoff Reclamation Facility	
Eastern Recycled Water Pipeline Reach 16 Project	
El Toro Phase II Recycled Water Distribution System Expansion Project	
El Toro Recycled Water System Expansion	
Elsinore Valley Recycled Water Program	
EMWD Recycled Water System Expansion Project	
Escondido Regional Reclaimed Water Project	
Glendale Verdugo-Scholl and Brand Park Project	
Griffith Park South Water Recycling Project	
Groundwater Reliability Improvement Program Recycled Water Project	
Hansen Area Water Recycling Phase I Project	
Hansen Dam Golf Course Water Recycling Project	
Harbor Water Recycling Project	
Lake Mission Viejo Advanced Purification WTF	
Leo J. Vander Lans Water Treatment Facility Expansion Project	
Long Beach Reclaimed Water Master Plan Phase I System Expansion	
Los Angeles Taylor Yard Park Water Recycling Project	
Michelson/Los Alisos Water Reclamation Plant Upgrades and Distribution System Expansion Project	
North Atwater Area Water Recycling Project	
North City Water Reclamation Project	
North Hollywood Area Water Recycling Project	
Otay Recycled Water System	
Oxnard Advanced Water Purification Facility Project	

<b>TABLE 2 (Continued)</b>	
<b>WATER RECYCLING, GROUNDWATER RECOVERY AND CONSERVATION PROJECTS</b>	
<b>Project Name</b>	<b>FISCAL YEAR 2020/21 Payment</b>
<b>Water Recycling Projects (continued)</b>	
Padre Dam MWD Reclaimed Water System Phase I	
Rowland Water District Portion of the City of Industry Regional Recycled Water Project	
San Clemente Recycled Water System Expansion Project	
San Elijo Water Reclamation System	
Santa Maria Water Reclamation Project	
Sepulveda Basin Sports Complex Water Recycling Project	
Sepulveda Basin Water Recycling Project - Phase 4	
Terminal Island Recycled Water Expansion Project	
USGVMWD Portion of the City of Industry Regional Recycled Water Project	
Van Nuys Area Water Recycling Project	
Walnut Valley Water District Portion of the City of Industry Regional Recycled Water Project	
West Basin Water Recycling Program Phase V Project	
Westside Area Water Recycling Project	

<b>TABLE 2 (Continued)</b>	
<b>WATER RECYCLING, GROUNDWATER RECOVERY AND CONSERVATION PROJECTS</b>	
<b>Project Name</b>	<b>FISCAL YEAR 2020/21 Payment</b>
<b>Groundwater Recovery Projects</b>	<b>\$9,393,860</b>
Beverly Hills Desalter Project	
Cal Poly Pomona Water Treatment Plant	
Capistrano Beach Desalter Project	
Chino Basin Desalination Program / IEUA	
Chino Basin Desalination Program / Western	
Colored Water Treatment Facility Project	
Irvine Desalter Project	
IRWD Wells 21 & 22 Desalter Project	
Madrona Desalination Facility (Goldsworthy Desalter) Project	
Menifee Basin Desalter Project	
Perris II Brackish Groundwater Desalter	
Pomona Well #37-Harrison Well Groundwater Treatment Project	
Round Mountain Water Treatment Plant	
San Juan Basin Desalter Project	
Temescal Basin Desalting Facility Project	
<b>On-site Retrofit Program</b>	<b>\$2,000,000</b>
<b>Future Supply Actions</b>	<b>\$4,272,500</b>
<b>Conservation Projects</b>	<b>\$25,000,000</b>
Regionwide Residential	
Regionwide Commercial	
Member Agency Administered/MWD Funded	
Water Incentive Savings Program	
Landscape Training Classes	
Landscape Irrigation Surveys	
Pilot programs/Studies	
Inspections	
Landscape Transformation Program (Turf Removal)	
Disadvantaged Communities Program	
<b>Total Demand Management Programs</b>	<b>\$48,531,757</b>



<b>TABLE 3 CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS</b>
<b>Description</b>
<b>Storage Facilities</b>
ALAMEDA CORRIDOR, PIPELINE RELOCATION, PROTECTION
CAPITAL PROGRAM FOR PROJECTS COSTING LESS THAN \$250,000-LIVE OAK
CAPITAL PROGRAM FOR PROJECTS COSTING LESS THAN \$250,000-MORRIS DAM
CHINO BASIN GROUNDWATER SERVICE CONNECTION CB-15T
CHLORINATION AND PH CONTROL FACILITIES- ORANGE COUNTY & GARVEY (50/50)
CLEARING OF LAKE MATHEWS RESERVOIR AREA
CONVERSION OF DEFORMATION SURVEY MONITORING AT COPPER BASIN
COPPER BASIN AND GENE WASH DAM, INSTALL SEEPAGE ALARM (50/50)
COPPER BASIN RESERVOIR SUPERVISORY CONTROL
COPPER BASIN SEWER SYSTEM
CORONA DEL MAR RESERVOIR- REPLENISHMENT
CORONA DEL MAR RESERVOIR-: CHLORINATION STATION
CRANE - LAKE MATHEWS OUTLET TOWER (ORG CONST)
DAM SEISMIC ASSESSMENT - PHASE 3
DAM SEISMIC UPGRADES - PHASE 3
DIAMOND VALLEY LAKE DAM MONITORING SYSTEM UPGRADE
DIAMOND VALLEY LAKE INLET/OUTLET TOWER FISH SCREEN REPLACEMENT - CONSTRUCTION
DIAMOND VALLEY LAKE, CAL PLAZA CHARGES
DIAMOND VALLEY LAKE, CONSULTANT COSTS
DIAMOND VALLEY LAKE, DAM DEFORMATION MONITORING
DIAMOND VALLEY LAKE, EAST DAM SUMP PUMP ELECTRICAL STUDY
DIAMOND VALLEY LAKE, GENERAL CONSTRUCTION MGMT, 2000-2001
DIAMOND VALLEY LAKE, INUNDATION MAPS
DIAMOND VALLEY LAKE, UNDERGROUND TANK CLOSURE
DIAMOND VALLEY RECREATION, EAST MARINA
DIAMOND VALLEY RECREATION, FISHERY
DIAMOND VALLEY RECREATION, MUSEUM FOUNDATION REHABILITATION
DIAMOND VALLEY RECREATION, SEARL PARKWAY IMPROVEMENTS, PHASE I
DIAMOND VALLEY TRAILS PROGRAM, TRAILS
DISTRICT DESIGN AND INSPECTION - MORRIS DAM
DISTRICT RESERV. AQUEOUS AMMONIA FEED SYSTEM
DISTRICT RESERVOIR - LONGTERM CHEMICAL FAC CONTAINMENT
DOMESTIC WATER SUPPLY - LAKE MATHEWS (ORG CONST)
DOMESTIC WATER SYSTEM-PALOS VERDES RESERVOIR (INTERIM CONST)
DVL - SEARL PARKWAY EXTENSION - PHASE 2
DVL - SEARL PARKWAY LANDSCAPING
DVL EAST DAM ELECTRICAL UPGRADES
DVL EAST DAM POWER LINE REALIGNMENT
DVL INLET/OUTLET FISH SCREEN REHABILITATION
DVL RECREATION - ALTERNATE ACCESS ROAD
DVL RECREATION, COMMUNITY PARK AND REGIONAL AQUATIC FACILITY
DVL SECURITY ENHANCEMENT
DVL, CONSTRUCTION
DVL, CONSTRUCTION CLAIMS SUPPORT
DVL, CONSTRUCTION MANAGEMENT SERVICE
DVL, CONSTRUCTION SUPERVISION
DVL, CONSTRUCTION, WEST DAM FOUNDATION
DVL, DEDICATION CEREMONY
DVL, DISTURBED
DVL, DOMENIGONI PARK
DVL, EAST DAM
DVL, EAST DAM EMBANKMENT
DVL, EAST DAM FENCING
DVL, EAST DAM INLET OUTLET TOWER CONSTRUCTION
DVL, EAST DAM LANDSCAPE SCREENING
DVL, EAST DAM NORTH RIM REMEDIATION
DVL, EAST DAM P-1 FACILITIES
DVL, EAST DAM SITE COMPLETION
DVL, EAST DAM STATE STREET IMPROVEMENTS
DVL, EAST DAM VERTICAL SLEEVE VALVE
DVL, EAST MARINA, PHASE 2
DVL, EXCAVATION
DVL, FIXED CONE, SPHERE
DVL, GENERAL
DVL, GRADING OF CONT
DVL, INSTALL NEW WATERLINE
DVL, MISC SMALL CONS
DVL, NORTH HIGH WATER ROAD
DVL, P-1 PUMPING FACILITY
DVL, PROCUREMENT
DVL, SCOTT ROAD EXTENSION
DVL, SOUTH HIGH WATER ROAD & QUARRY
DVL, SPILLWAY
DVL, START UP
DVL, VALLEY-WIDE SITE ROUGH GRADING
DVL, WORK PACKAGE
DVL, WORK PACKAGE 1
DVL, WORK PACKAGE 10, INLET OUTLET WORK
DVL, WORK PACKAGE 11, FOREBAY
DVL, WORK PACKAGE 12, TUNNEL
DVL, WORK PACKAGE 13, P-1 PUMP OPERATIONS FACILITY
DVL, WORK PACKAGE 14, PC-1
DVL, WORK PACKAGE 15, SITE CLEARING
DVL, WORK PACKAGE 16, GROUNDWATER MONITORING
DVL, WORK PACKAGE 17, FIELD OFFICE
DVL, WORK PACKAGE 18, TEMPORARY VISITOR CENTER
DVL, WORK PACKAGE 19, PERMANENT VISITOR CENTER
DVL, WORK PACKAGE 2, EASTSIDE PIPELINE
DVL, WORK PACKAGE 20, EAST DAM EXCAVATION, FOUNDATION
DVL, WORK PACKAGE 21, WEST DAM EXCAVATION, FOUNDATION
DVL, WORK PACKAGE 23, WEST RECREATION AREA
DVL, WORK PACKAGE 24, EAST RECREATION AREA
DVL, WORK PACKAGE 25, EXCAVATION
DVL, WORK PACKAGE 26, ELECTRICAL TRANSMISSION LINES
DVL, WORK PACKAGE 27, MAJOR EQUIPMENT P-1
DVL, WORK PACKAGE 28, MAJOR EQUIPMENT, GATES

<b>TABLE 3 CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS</b>	
<b>Description</b>	
	<b>Storage Facilities</b>
	DVL WORK PACKAGE 29, MAJOR EQUIPMENT, PC-1
	DVL WORK PACKAGE 30, INSTRUMENTATION AND CONTROL SYSTEMS
	DVL WORK PACKAGE 31, GEOGRAPHICAL INFO
	DVL WORK PACKAGE 32, PERMIT
	DVL WORK PACKAGE 33, MAJOR EQUIPMENT, VALVES
	DVL WORK PACKAGE 34, EMERGENCY RELEASE
	DVL WORK PACKAGE 35
	DVL WORK PACKAGE 36, TRANSMISSION LINE TO PC-1
	DVL WORK PACKAGE 38, RUNOFF EROSION
	DVL WORK PACKAGE 39, SADDLE DAM FOUNDATION
	DVL WORK PACKAGE 4, NEWPORT ROAD RELOCATION
	DVL WORK PACKAGE 40
	DVL WORK PACKAGE 42, GEOTECHNICAL
	DVL WORK PACKAGE 43, MOBILIZATION
	DVL WORK PACKAGE 44, SITE DEVELOPMENT
	DVL WORK PACKAGE 47, HAZARDOUS MATERIAL
	DVL WORK PACKAGE 48, GENERAL ADMIN
	DVL WORK PACKAGE 49
	DVL WORK PACKAGE 5, SALT CREEK FLOOD CONTROL
	DVL WORK PACKAGE 52, HISTORY ARCHEOLOGY INVENTORY
	DVL WORK PACKAGE 53, PREHISTORIC ARCHEOLOGY
	DVL WORK PACKAGE 54, PLANTS, WILDLIFE
	DVL WORK PACKAGE 55, AIR QUALITY, NOISE
	DVL WORK PACKAGE 6, SURFACE WATER MITIGATION
	DVL WORK PACKAGE 7, DESIGN WEST DAM ACCESS
	DVL WORK PACKAGE 8, DESIGN EAST DAM ACCESS
	DVL WORK PACKAGE 9, SADDLE DAM
	DVL WORKING INVENTORY, 80,000 ACRE FEET (10% OF CAPACITY)
	EAST DAM TUNNELS
	EAST MARINA BOAT RAMP EXTENSION
	ELECTRICAL SERVICE - LAKE MATHEWS (ORG CONST)
	ELECTRICAL SYSTEM - LAKE MATHEWS (ORG CONST)
	FIRST SAN DIEGO AQUEDUCT - REPLACE PIPELINE SECTION BOTH BARRELS
	FLOATING BOAT HOUSE - LAKE MATHEW
	FLOOD RELEASE VALVE, MORRIS DAM & WATER SUPPLY SYSTEM,PV RESER.
	FOOTBRIDGE - LAKE MATHEWS (ORG CONST)
	FOOTHILL FEEDER- LIVE OAK RESERVOIR- CLAIMS
	FOOTHILL FEEDER- LIVE OAK RESERVOIR- RESIDENCE
	GARVEY RESERVIOR OPERATION & MAINTENANCE CENTER
	GARVEY RESERVIOR OPERATION & MAINTENANCE CENTER (RETIREMENT)
	GARVEY RESERVOIR - JUNCTION STRUCTURE,REPLACE VALVE # 1
	GARVEY RESERVOIR COVER AND LINER REPLACEMENT PROJECT
	GARVEY RESERVOIR DRAINAGE & EROSION CONTROL IMPROVEMENTS
	GARVEY RESERVOIR- EMERGENCY GENERATOR
	GARVEY RESERVOIR- FLOATING COVER
	GARVEY RESERVOIR HYPOCHLORITE FEED SYSTEM
	GARVEY RESERVOIR- JUNCTION STRUCTURE, REPLACE VALVE #1
	GARVEY RESERVOIR- JUNCTION STRUCTURE, REPLACE VALVE #1 - INTEREST
	GARVEY RESERVOIR- JUNCTION STRUCTURE, REPLACE VALVES # 4 & 5
	GARVEY RESERVOIR- MODIFY DESILTING BASINS
	GARVEY RESERVOIR REPAIR
	GARVEY RESERVOIR, LOWER ACCESS ROAD, PAVING & DRAINS
	GARVEY RESERVOIR, REPLACE VALVE # 4 & 5
	GARVEY RESERVOIR, TWO VALVES AT JUNCTION STRUCTURE
	GARVEY RESERVOIR: CONT. 565, SPEC.412
	GARVEY RESERVOIR: TWO COTTAGES WITH GARAGES
	GARVEY RESERVOIR-HYPOCHLORINATION
	GARVEY RESERVOIR-HYPOCHLORINE STATION
	GARVEY RESERVOIR-INLET AND OUTLET CONDUIT SYSTEM MODIFICATION
	GARVEY RESEVOIR-JUNCTION STRUCTURE REPLACE TWO VALVES
	GARVEY RSVR REPLACE VENTURI THROAT SECTION
	HEADWORKS OF DISTRIBUTION SYSTEM LAKE MATHEWS
	HEADWORKS: ADDITIONAL VALVES
	HEADWORKS: MOTOR OPERATED SLIDE GATES
	HOUSE AND GARAGE AT CORONA DEL MAR RESERVOIR
	HOUSE AND GARAGE AT ORANGE COUNTY RESERVOIR
	HOUSE AT PALOS VERDES RESERVOIR
	HOWELL-BUNGER VALVE OPERATOR, LAKE MATHEWS, 5 VALVES 1939
	HOWELL-BUNGER VALVE OPERATOR, LAKE MATHEWS, 5 VALVES 1955
	JENSEN FINISHED WATER RESERVOIR NO. 1 COVER REHABILITATION
	JENSEN FINISHED WATER RESERVOIR NO. 2 FLOATING COVER IMPROVEMENT
	JENSEN FWR # 2 FLOATING COVER REPLACEMENT
	JENSEN, REPAIR COVER OVER RESERVOIR 1
	LAKE MATHEWS - REPLACE STANDBY GENERATOR
	LAKE MATHEWS - ELECTRICAL SYSTEM IMPROVEMENT
	LAKE MATHEWS ABOVEGROUND STORAGE TANK REPLACEMENT
	LAKE MATHEWS BUILDING
	LAKE MATHEWS BUILDINGS 8 & 15, RENOVATION OF ASSEMBLY AREA AND ADMIN. BLDG.
	LAKE MATHEWS- CARPENTER AND VEHICLE MAINTENANCE BUILDING
	LAKE MATHEWS- CHLORINATION FACILITIES
	LAKE MATHEWS CHLORINATION FACILITY- REPLACE CHLORINATION EQPMT.
	LAKE MATHEWS CNTRL TOWER-REPL. 45 30-INCH GATE/BUTTERFLY VALVES
	LAKE MATHEWS CONTROL TOWER - REPLACE 45 10-INCH GATE VALVE
	LAKE MATHEWS DAM SAFETY INSTRUMENTATION UPGRADES
	LAKE MATHEWS DAM SPILLWAY ASSESSMENT
	LAKE MATHEWS DIKE

<b>TABLE 3</b>	
<b>CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS</b>	
<b>Description</b>	
<b>Storage Facilities</b>	
LAKE MATHEWS DISCHARGE FACILITY UPGRADES	
LAKE MATHEWS DIVERSION TUNNEL	
LAKE MATHEWS DIVERSION TUNNEL WALKWAY REPAIR	
LAKE MATHEWS- DOCK AND BOAT SHELTER	
LAKE MATHEWS DOMESTIC FACILITIES	
LAKE MATHEWS- DOMESTIC WATER SYSTEM	
LAKE MATHEWS ELECTRICAL RELIABILITY	
LAKE MATHEWS- ELECTRICAL SYSTEM IMPROVEMENT	
LAKE MATHEWS- EMERGENCY GENERATOR	
LAKE MATHEWS ENLARGEMENT (SPEC NO. 505)	
LAKE MATHEWS FOREBAY LINING AND TOWER REPAIRS	
LAKE MATHEWS FOREBAY OUTLET STRCTR-REPL.CONCRETE BLOCK BLDG	
LAKE MATHEWS FOREBAY OUTLET, CONCRETE BLDG	
LAKE MATHEWS FOREBAY- REPLACE FOOTBRIDGE	
LAKE MATHEWS FOREBAY WALKWAY REPAIRS	
LAKE MATHEWS FOREBAY, HEADWORK FACILITY AND EQUIPMENT UPGRADE	
LAKE MATHEWS HEADWORKS-INSTALL AIR MTRS,3 HOWELL BNGR VALVE OP.	
LAKE MATHEWS- HOUSE AND GARAGE	
LAKE MATHEWS IO TOWER EMERGENCY GENERATOR	
LAKE MATHEWS- IMPROVE MAIN SUBSTATION	
LAKE MATHEWS- IMPROVEMENT OF DOMESTIC WATER & FIRE PROT. SYSTEM	
LAKE MATHEWS -LUMBER STORAGE BUILDING	
LAKE MATHEWS -LUMBER STORAGE BUILDING - INTEREST	
LAKE MATHEWS LUMBER STORAGE ROOF COVER	
LAKE MATHEWS MAIN DAM AND SPILLWAY	
LAKE MATHEWS MAIN DAM SUB DRAIN SYSTEM	
LAKE MATHEWS MAINTENANCE BUILDING	
LAKE MATHEWS MAINTN.FACILITIES-REPLACE 75 KVA TRANSFORMER.SERV.	
LAKE MATHEWS- MODIFY CHLORINATION	
LAKE MATHEWS- MODIFY CHLORINE STORAGE TANK FOUNDATIONS	
LAKE MATHEWS- MODIFY ELECTRICAL SERVICE	
LAKE MATHEWS MULTIPLE SPECIES RESERVE, MANAGER'S OFFICE AND RESIDENCE	
LAKE MATHEWS OFFICE BLDG MODIFICATIONS-AMERICANS W/ DISABILITY	
LAKE MATHEWS OFFICE TRAILER MODIFICATIONS-AMERICANS W/ DISABILITY	
LAKE MATHEWS -OPERATOR RESIDENCE	
LAKE MATHEWS OULET TOWER	
LAKE MATHEWS OUTLET FACILITIES	
LAKE MATHEWS OUTLET TOWER NO. 2 VALVE REHABILITATION	
LAKE MATHEWS OUTLET TOWER- REPLACE CRANES	
LAKE MATHEWS OUTLET TOWER-REPLACE GATE VALVES	
LAKE MATHEWS OUTLET TOWER-REPLACE GATE VALVES (RETIREMENT)	
LAKE MATHEWS OUTLET TUNNEL	
LAKE MATHEWS- PREFABRICATED AIRCRAFT HANGER	
LAKE MATHEWS- PREFABRICATED AIRCRAFT HANGER - INTEREST	
LAKE MATHEWS- PROPANE STORAGE TANK	
LAKE MATHEWS- PROPANE STORAGE TANK - INTEREST	
LAKE MATHEWS- REPLACE HOWELL-BUNGER VALVE OPERATORS	
LAKE MATHEWS- REPLACE VALVES	
LAKE MATHEWS RESERVOIR-RELOCATE SOUTHERLY SECURITY FENCE	
LAKE MATHEWS RESERVOIR-RELOCATE SOUTHERLY SECURITY FENCE - INTEREST	
LAKE MATHEWS- SEEPAGE ALARMS	
LAKE MATHEWS- SEEPAGE ALARMS - INTEREST	
LAKE MATHEWS SODIUM HYPOCHLORITE TANK REPLACEMENT	
LAKE MATHEWS SODIUM HYPOCHLORITE INJECTION SYSTEM	
LAKE MATHEWS- SPRAY PAINT BOOTH	
LAKE MATHEWS WASTEWATER SYSTEM REPLACEMENT	
LAKE MATHEWS WATERSHED, DRAINAGE	
LAKE MATHEWS WATERSHED, DRAINAGE WATER QUALITY MGMT PLAN (CAJALCO CREEK DAM)	
LAKE MATHEWS, HAZEL ROAD	
LAKE MATHEWS, REPLACE CHLORINATION EQUIPMENT	
LAKE MATHEWS,DIKE #1- INSTALL PIEZOMETERS, STAS.55+00 & 85+50	
LAKE MATHEWS: VALVES AND FITTINGS IN HEADWORKS	
LAKE MATHEWS-CONST. CONCR.TRAFFIC BARR. WALL TO PROTECT HQ FACIL.	
LAKE MATTHEWS FIRE WATER LINE	
LAKE PERRIS POLLUTION PREVENTION AND SOURCE WATER PROTECTION (CAPITAL PORTION)	
LAKE SKINNER - AERATION SYSTEM	
LAKE SKINNER - CHLORINATION SYSTEM OUTLET TOWER BYPASS PPLN	
LAKE SKINNER - CHLORINATION SYSTEM OUTLET TOWER BYPASS PPLN - INTEREST	
LAKE SKINNER - INSTALL OUTLET CONDUIT FLOWMETER	
LAKE SKINNER (AULD VALLEY RESERVOIR)- CLAIMS	
LAKE SKINNER AERATOR AIR COMPRESSORS REPLACEMENT	
LAKE SKINNER- EQUIPMENT YARD SECURITY	
LAKE SKINNER- EQUIPMENT YARD SECURITY - INTEREST	
LAKE SKINNER FACILITIES	
LAKE SKINNER FACILITIES - EMPLOYEE HOUSING	
LAKE SKINNER FACILITIES - FENCING	
LAKE SKINNER FACILITIES - LANDSCAPING	
LAKE SKINNER FACILITIES - RELOCATE BENTON ROAD	
LAKE SKINNER OUTLET CONDUIT REPAIR	
LAKE SKINNER OUTLET TOWER SEISMIC ASSESSMENT	
LAKE SKINNER- PROPANE STORAGE TANK	
LAKE SKINNER- PROPANE STORAGE TANK - INTEREST	
LIVE OAK RESERVOIR & RESERVOIR BYPASS SCHEDULE 264A	
LIVE OAK RESERVOIR REHABILITATION	
LIVE OAK RESERVOIR SURFACE REPAIR	
MAINTENANCE FACILITIES, 75KVA TRANSFORMER SERVICE-LAKE MATHEWS (ORG CONST)	
MILLS FINISHED WATER RESERVOIR REHABILITATION	
MINOR CAPITAL PROJECTS FOR FY 1989/90 - LAKE MATHEWS	
MINOR CAPITAL PROJECTS FOR FY 1989/90 - PALOS VERDES RESERVOIR	
MINOR CAPITAL PROJECTS-LAKE SKINNER, INLET CANAL ELECTRIC FISH BARRIER	
MINOR CAPITAL PROJECTS-LIVE OAK RESERVOIR, DESILT BASIN IMPROVEMENTS	
MODIFICATION OF THE LAKE MATHEWS SERVICE WATER SYSTEM	
MORRIS DAM COTTAGE	
MORRIS DAM- ENLARGMT. OF SPILLWAY FACLT.& UPPER FDR.VALVE MODF	
MORRIS DAM ROAD IMPROVEMENT	
MORRIS DAM, SEISMIC STABILITY REANALYSIS	

<b>TABLE 3 CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS</b>	
<b>Description</b>	
<b>Storage Facilities</b>	
MORRIS DAM-REPLACE EMERGENCY POWER SYSTEM	
MORRIS RESERVOIR- CAPITAL OBLIGATION PAID	
MORRIS RESERVOIR- INTEREST OBLIGATION PAID	
O.C.RESERVOIR - IMPROVE DOMESTIC SYSTEM	
ORANGE COUNTY RESERVOIR -- JUNCTION STRUCTURE,REPLACE VALVE # 1	
ORANGE COUNTY RESERVOIR (SPEC NO. 341)	
ORANGE COUNTY RESERVOIR CHLORINATION STATION	
ORANGE COUNTY RESERVOIR- EMBANKMENT AND SPILLWAY	
ORANGE COUNTY RESERVOIR- EMERGENCY GENERATOR	
ORANGE COUNTY RESERVOIR- FLOATING COVER	
ORANGE COUNTY RESERVOIR- HOUSE	
ORANGE COUNTY RESERVOIR- MODIFY DOMESTIC WATER SYSTEM	
ORANGE COUNTY RESERVOIR- REPLACE RESIDENCE NO. 95D	
ORANGE COUNTY RESERVOIR-MODIFY ELEC. CONTROL CENTER	
ORANGE COUNTY RESERVOIR-REPLACE CHLORINATION EQUIPMENT	
ORANGE COUNTY RESERVOIR-REPLACE CHLORINATION SYSTEM	
P V RESERVOIR-REPLACE CHLORINATION SYSTEM	
PALOS VERDES CHLORINATION STATION AND COTTAGE	
PALOS VERDES RESERVOIR	
PALOS VERDES RESERVOIR - INLET/OUTLET TOWER	
PALOS VERDES RESERVOIR- BY PASS PIPELINES	
PALOS VERDES RESERVOIR COVER REPLACEMENT	
PALOS VERDES RESERVOIR- FENCING AROUND	
PALOS VERDES RESERVOIR- REPLACE DOMESTIC WATER SYSTEM PIPING	
PALOS VERDES RESERVOIR. SODIUM HYPOCHLORITE FEED SYSTEM UPGRADE	
PALOS VERDES RESERVOIR, BYPASS PIPELINE RELIEF STRUCTURE MODIFN.	
PALOS VERDES RESERVOIR, COVERING	
PALOS VERDES RESERVOIR, REPLACE ACCESS AND PERIMETER ROADS	
PALOS VERDES RESERVOIR: INCREASING ELEVATION OF SPILLWAY CREST	
PALOS VERDES RESERVOIR-INSTALL VALVE & CHLORINATION NOZZLE, INL. TWR	
PALOS VERDES RESERVOIR-REPLACE CHLORINATION SYSTEM	
PAMO RESERVOIR- WATER STORAGE FEASIBILITY STUDY	
PAMO RESERVOIR- WATER STORAGE FEASIBILITY STUDY- INTEREST	
PV RESERVOIR GROUNDWATER MANAGEMENT	
RECORD DRAWING RESTORATION PROGRAM, CRA	
REPAIRS TO AZUSA CONDUIT	
REPLACEMENT OF A 30 INCH GATE VALVE P.V.R.	
RESIDENCE # 95-D, ORANGE COUNTY RESERVOIR	
RESIDENCE 45-D - CORONA DEL MAR RESERVOIR	
RESIDENCE 80-D - ORANGE COUNTY RESERVOIR	
RESIDENCE 90-D - LAKE MATHEW	
RESIDENCE 91-D - SAN JACINTO RESERVOIR	
RESIDENCE 93-D - SAN JACINTO RESERVOIR	
ROADS AT LAKE MATHEWS ABOVE FLOODLINE	
SAN DIEGO ACQUEDUCT: COTTAGE AT SAN JACINTO RESERVOIR	
SAN JACINTO RESERVOIR - SAN DIEGO AQUEDUCT	
SECOND OUTLET, PALOS VERDES RESERVOIR (SPEC NO. 597)	
SEEPAGE CONTROL AT LAKE MATHEWS	
SKINNER DAM SAFETY INSTRUMENTATION UPGRADES	
SKINNER DAM SPILLWAY ASSESSMENT	
TEMPORARY EMPLOYEE LABOR SETTLEMENT	
VALVE - GENE RESERVOIR (REPLACED 201)	
VALVE STRUCTURE MODIFICATIONS-UPPER FDR, SAN GABRIEL CROSSING (INTERIM CONST)	
WADSWORTH PUMP PLANT CONDUIT PROTECTION	
WADSWORTH PUMP PLANT, PUMP MOTOR CONVERSION	
WADSWORTH/DVL CONTROL & PROTECTION SYSTEM UPGRADE - CONSTRUCTION & STARTUP	
WATER QUALITY PROJECT UPSTREAM	
WATER SUPPLY SYSTEM, OPERATING TOWER, LAKE MATHEWS	
WEYMOUTH FINISHED WATER RESERVOIR GATE REPLACEMENT	
<b>Sub-total Storage facilities costs</b>	<b>97,417,140</b>

**TABLE 3  
CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS**

**Description**

**Conveyance and Aqueduct Facilities**

2.4 KV STANBY DIESEL ENGINE GENERATOR REPLACEMENT - GENE  
 2.4 KV STANBY DIESEL ENGINE GENERATOR REPLACEMENT - INTAKE  
 2.4 KV STANBY DIESEL ENGINE GENERATOR REPLACEMENT - IRON  
 ACCESS STRUCTURE, TRANSITION STRUCTURE AND MANHOLE COVER REPLACEMENT  
 ALL PUMPING PLANTS - 230 KV & 69 KV DISCONNECTS REPLACEMENT  
 ALL PUMPING PLANTS - BRIDGE CRANES  
 ALL PUMPING PLANTS - TRANSFORMER BANK BRIDGE  
 ALLEN MCCOLLOCH PIPELINE - CORROSION INTERFERENCE MITIGATION  
 ALLEN MCCOLLOCH PIPELINE - RIGHT OF WAY  
 ALLEN MCCOLLOCH PIPELINE - UPDATE / MODIFY ALL BOYLE ENGINEERING DRAWINGS  
 AMP VALVE & SERVICE CONNECTION VAULT REPAIR  
 AQUEDUCT & PUMPING PLANT ISOLATION / ACCESS FIXTURES - STUDY  
 AQUEDUCT & PUMPING PLANT ISOLATION GATES  
 ARROWHEAD EAST TUNNEL CONSTRUCTION  
 ARROWHEAD TDS REDUCTION  
 ARROWHEAD TUNNELS CLAIMS COST  
 ARROWHEAD TUNNELS CONNECTOR ROAD  
 ARROWHEAD TUNNELS CONSTRUCTION  
 ARROWHEAD TUNNELS ENGINEERING  
 ARROWHEAD TUNNELS RE-DESIGN  
 ARROWHEAD WEST TUNNEL CONSTRUCTION  
 AULD VALLEY CONTROL STRUCTURE AREA FACILITIES UPGRADE STUDY  
 AUXILIARY POWER SYSTEM REHABILITATION / UPGRADES STUDY  
 AUXILIARY POWER SYSTEM REHABILITATION/UPGRADES  
 BACHELOR MOUNTAIN COMMUNICATION SITE ACQUISITION  
 BACHELOR MOUNTAIN TELECOM SITE IMPROVEMENTS  
 BANK TRANSFORMERS REPLACEMENT STUDY  
 BLACK METAL MOUNTAIN - COMMUNICATIONS FACILITY UPGRADE  
 BOX SPRINGS FEEDER REHAB PHASE III  
 BUDGET ADJUSTMENT  
 CABAZON RADIAL GATE FACILITY IMPROVEMENTS  
 CAJALCO CREEK MITIGATION FLOWS  
 CAST-IRON BLOW OFF REPLACEMENT - PHASE 4  
 CATHODIC PROTECTION STUDY - DESIGN AND CONSTRUCTION  
 CCRP - BLOW-OFF VALVES PHASE 4 PROJECT  
 CCRP - CONTINGENCY  
 CCRP - EMERGENCY REPAIR  
 CCRP - HEADGATE OPERATORS & CIRCUIT BREAKERS REHAB.  
 CCRP - PART 1 & 2  
 CCRP - SAND TRAP CLEANING EQUIPMENT & TRAVELING CRANE STUDY  
 CCRP - TRANSITION & MAN-WAY ACCESS COVER REPLACEMENT - STUDY & DESIGN  
 CCRP - TUNNELS STUDY  
 CEPSRP - 230 KV SYSTEM SYNCHRONIZERS  
 CEPSRP - ALL PUMPING PLANTS - CONTINGENCY & OTHER CREDITS  
 CEPSRP - ALL PUMPING PLANTS - REPLACE 6.9 KV TRANSFORMER BUSHINGS  
 CEPSRP - ALL PUMPING PLANTS - REPLACE 230KV , 69 KV & 6.9 KV LIGHTENING ARRESTERS  
 CEPSRP - ALL PUMPING PLANTS - REPLACE 230KV TRANSFORMER PROTECTION  
 CEPSRP - SWITCHYARDS & HEAD GATES REHABILITATION  
 CEPSRP- ALL PUMPING PLANTS - IRON MOUNTAIN - 230KV BREAKER SWITCH. INST.  
 COLORADO RIVER AQUEDUCT - PUMPING  
 COLORADO RIVER AQUEDUCT - SIPHONS AND RESERVOIR OUTLETS REFURBISHMENT  
 COLORADO RIVER AQUEDUCT CONVEYANCE RELIABILITY, PHASE II REPAIRS AND INSTRUMENTATION  
 CONTROL SYSTEM DRAWING UPGRADE STUDY (PHASE 1) - STUDY  
 COPPER BASIN AND GENE DAM OUTLET WORKS REHABILITATION (STUDY & DESIGN)  
 COPPER BASIN AND GENE WASH RESERVOIRS DISCHARGE VALVE REHABILITATION  
 COPPER BASIN INTERIM CHLORINATION SYSTEM  
 COPPER BASIN OUTLET GATES RELIABILITY  
 COPPER BASIN OUTLET REHABILITATION  
 COPPER BASIN OUTLET, AND COPPER BASIN & GENE WASH DAM SLUICWAYS REHABILITATION  
 COPPER BASIN POWER & PHONE LINES REPLACEMENT  
 COPPER BASIN RESERVOIR OUTLET STRUCTURE REHABILITATION PROJECT  
 COPPER SULFATE STORAGE AT LAKE SKINNER AND LAKE MATHEWS  
 CORROSION CONTROL OZONE MATERIAL TEST FACILITY  
 COST OF LAND AND RIGHT OF WAY  
 CRA - ACCESS STRUCTURE, TRANSITION STRUCTURE AND MANHOLE COVER REPLACEMENT  
 CRA - AQUEDUCT AND PUMPING PLANT ISOLATION GATES  
 CRA - AQUEDUCT RESERVOIR AND DISCHARGE LINE ISOLATION GATES  
 CRA - AUXILIARY POWER SYSTEM REHAB  
 CRA - BANK TRANSFORMERS REPLACEMENT STUDY  
 CRA - BLOW-OFF VALVES PHASE 4  
 CRA - CIRCULATING WATER SYSTEM STRAINER REPLACEMENT  
 CRA - CONTROL SYSTEM IMPLEMENTATION PHASE CLOSE OUT  
 CRA - CONVEYANCE RELIABILITY PROGRAM PART 1 & PART 2  
 CRA - COPPER BASIN OUTLET, AND COPPER BASIN & GENE WASH SLUICWAYS REHABILITATION  
 CRA - COPPER BASIN POWER & PHONE LINES REPLACEMENT  
 CRA - CUT & COVER FORNAT WASH EXPOSURE STUDY  
 CRA - DANBYTOWER FOOTER REPLACEMENT  
 CRA - DELIVERY LINE NO. 1 SUPPORTS REHAB - FIVE PUMPING PLANTS  
 CRA - DELIVERY LINES 2&3 SUPPORTS REHAB - GENE & INTAKE  
 CRA - DELIVERY LINES 2&3 SUPPORTS REHAB - IRON, EAGLE, & HINDS  
 CRA - DESERT PUMP PLANT OIL CONTAINMENT  
 CRA - DESERT SEWER SYSTEM REHABILITATION PROJECT  
 CRA - DESERT WATER TANK ACCESS & SAFETY IMPROVEMENTS  
 CRA - DISCHARGE CONTAINMENT PROGRAM - INVESTIGATION  
 CRA - DISCHARGE LINE ISOLATION GATES  
 CRA - DWCV-4 VALVE REPLACEMENT  
 CRA - EAGLE MOUNTAIN SAND TRAPS INFLOW STUDY  
 CRA - ELECTRICAL/ POWER SYST REL. PROG. - IRON MTN - 230KV BREAKER SWITC. INST.  
 CRA - GENE PUMPING PLANT MAIN TRANSFORMER AREA  
 CRA - HINDS PUMP UNIT NO. 8 REFURBISHMENT  
 CRA - INTAKE PUMPING PLANT - COOLING AND REJECT WATER DISCHARGE TO LAKE HAVASU  
 CRA - INTAKE PUMPING PLANT AUTOMATION PROGRAMMING  
 CRA - INVESTIGATION OF SIPHONS AND RESERVOIR OUTLETS

**TABLE 3  
CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS**

**Description**

**Conveyance and Aqueduct Facilities**

- CRA - IRON MOUNTAIN RESERVOIR AND CANAL LINER REPAIRS
- CRA - IRON MTN. TUNNEL REHABILITATION
- CRA - LAKEVIEW SIPHON FIRST BARREL - REPAIR DETERIORATED JOINTS
- CRA - MAIN PUMP MOTOR EXCITERS
- CRA - MAIN PUMP STUDY
- CRA - MOUNTAIN SIPHONS SEISMIC VULNERABILITY STUDY
- CRA - PUMPING PLANT RELIABILITY PROGRAM CONTINGENCY
- CRA - PUMPING PLANTS VULNERABILITY ASSESSMENT
- CRA - PUMPING WELL CONVERSION
- CRA - QUAGGA MUSSEL BARRIERS
- CRA - REAL PROPERTY - BOUNDARY SURVEYS
- CRA - RELIABILITY PROGRAM 230 KV & 69 KV DISCONNECTS REPLACEMENT STUDY ( 5 PLANTS)
- CRA - RELIABILITY PROGRAM INVESTIGATION
- CRA - RELIABILITY PROGRAM PHASE 6 (AQUEDUCT PHASE 6 REHAB.) - SPEC 1568
- CRA - RELIABILITY PHASE II CONTINGENCY
- CRA - SAND TRAP CLEANING EQUIPMENT AND TRAVELING CRANE
- CRA - SERVICE CONNECTION DWCV-2T VALVES REPLACEMENT AND STRUCTURE CONSTRUCTION
- CRA - SERVICE CONNECTION DWCV-4 A, B, C, & D PLUG VALVES REPLACEMENT
- CRA - SIPHONS, TRANSITIONS, CANALS, AND TUNNELS REHABILITATION AND IMPROVEMENTS
- CRA - SUCTION & DISCHARGE LINES EXPANSION JOINT REHAB
- CRA - SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM
- CRA - SWITCHYARDS AND HEAD GATES REHAB
- CRA - SWITCHYARDS AND HEAD GATES REHABILITATION
- CRA - TRANSFORMER OIL & CHEMICAL UNLOADING PAD CONTAINMENT
- CRA - TUNNELS VULNERABILITY STUDY - REPAIRS TO TUNNELS
- CRA - WEST PORTAL UPGRADE - REHAB OF STILLING WELL, SLIDE GATE OPERATORS AND RADIAL GATES
- CRA 2.4 KV STANDBY DIESEL ENGINE GENERATORS REPLACEMENT
- CRA 230 KV & 69 KV DISCONNECTS SWITCH REPLACEMENT
- CRA 230 KV SYSTEM INTER-AGENCY OPERABILITY UPGRADES
- CRA 230 KV TRANSMISSION SYSTEM REGULATORY AND OPERATIONAL FLEXIBILITY UPGRADES
- CRA 230KV & 69KV PROTECTION PANEL UPGRADE
- CRA 6.9 KV LEAD JACKETED CABLES
- CRA 6.9 KV POWER CABLES REPLACEMENT
- CRA 69KV PANEL UPGRADE
- CRA ACCESS STRUCTURE, TRANSITION STRUCTURE AND MANHOLE COVERS REPLACEMENT
- CRA ALL PUMPING PLANTS - FLOW METER UPGRADES
- CRA AQUEDUCT BLOCKER GATE REPLACEMENT
- CRA AQUEDUCT ISOLATION GATES REPLACEMENT
- CRA BLACK METAL COMMUNICATION SITE II UPGRADE
- CRA CANAL CRACK REHAB AND EVALUATION
- CRA CANAL CRACK REHABILITATION
- CRA CANAL IMPROVEMENTS
- CRA CIRCULATING WATER SYSTEM STRAINER REPLACEMENT
- CRA CONDUIT FORMAT WASH EROSION REPAIRS
- CRA CONDUIT STRUCTURAL PROTECTION
- CRA CONVEYANCE RELIABILITY PROGRAM (CCRP) - BLOW-OFF REPAIR
- CRA CONVEYANCE RELIABILITY PROGRAM PART 1 & PART 2
- CRA COPPER BASIN AND GENE WASH DAM SLUICWAYS
- CRA COPPER BASIN OUTLET GATES RELIABILITY STUDY
- CRA DELIVERY LINE REHABILITATION
- CRA DESERT AIRFIELDS IMPROVEMENT
- CRA DESERT REGION SECURITY IMPROVEMENTS
- CRA DISCHARGE CONTAINMENT PROGRAM - CONTINGENCY
- CRA DISCHARGE CONTAINMENT PROGRAM - GENE & IRON DRAIN SYSTEMS
- CRA DISCHARGE CONTAINMENT PROGRAM - INVESTIGATION
- CRA DISCHARGE CONTAINMENT PROGRAM - OIL & CHEMICAL UNLOADING PAD CONTAINMENT
- CRA ELECTRICAL / POWER SYSTEM RELIABILITY PROGRAM (CEPSRP)
- CRA ENERGY EFFICIENCY IMPROVEMENTS
- CRA GENE PUMPING PLANT HEAVY EQUIPMENT SERVICE PIT
- CRA GENE STORAGE WAREHOUSE REPLACEMENT
- CRA HINDS PUMPING PLANT - WASH AREA UPGRADE
- CRA INTAKE PPLANT - POWER & COMMUNICATION LINE REPLACEMENT
- CRA IRON GARAGE HEAVY EQUIPMENT SERVICE PIT REPLACEMENT
- CRA IRON HOUSING REPLACEMENT
- CRA IRON MOUNTAIN SUCTION JOINT REFURBISHMENT PILOT
- CRA MAIN PUMP & MOTOR REFURISHMENT
- CRA MAIN PUMP AND MOTOR REFURISHMENT
- CRA MAIN PUMP CONTROLS & INSTRUMENTATION
- CRA MAIN PUMP DISCHARGE VALVE REFURBISHMENT
- CRA MAIN PUMP MOTOR EXCITERS ASSESSMENT
- CRA MAIN PUMP MOTOR EXCITERS REHABILITATION
- CRA MAIN PUMP STUDY
- CRA MAIN PUMP SUCTION AND DISCHARGE LINES, EXPANSION JOINT REPAIRS
- CRA MAIN PUMPING PLANT DISCHARGE LINE ISOLATION BULKHEAD COUPLING CONSTRUCTION
- CRA MAIN PUMPING PLANT UNIT COOLERS & HEAT ESCHANGERS
- CRA MAIN PUMPING PLANTS DISCHARGE LINE ISOLATION BULHEAD COUPLINGS
- CRA MAIN PUMPING PLANTS LUBRICATION SYSTEM
- CRA MAIN PUMPING PLANTS SERVICE WATER & SAND REMOVAL SYSTEM
- CRA MAIN TRANSFORMER REPLACEMENT/REHABILITATION
- CRA MAIN TRANSFORMER REPLACEMENT/REHAB.
- CRA MILE 12 POWER LINE & FLOW MONITORING EQUIP. STUDY
- CRA OVER-CURRENT RELAY REPLACEMENT
- CRA PROTECTIVE SLABS
- CRA PUMP PLANT FLOW METER REPLACEMENT
- CRA PUMP PLANT FLOW METER UPGRADE
- CRA PUMP PLANT SUMP PIPING REPLACEMENT STUDY
- CRA PUMP PLANT SUMP SYSTEM REHABILITATION
- CRA PUMP PLANT UNINTERRUPTABLE POWER STUDY (UPS) UPGRADE
- CRA PUMP PLANTS 2.3KV AND 480V SWITCH RACK REHABILITATION
- CRA PUMP PLANTS 2300KV & 480 V SWITCHRACK REHAB
- CRA PUMP WELLS CONVERSION AND BLOW-OFF REPAIR
- CRA PUMPING PLANT DELIVERY LINE REHABILITATION
- CRA PUMPING PLANT REHABILITATION STUDY
- CRA PUMPING PLANT REHABILITATION STUDY AND INVESTIGATION
- CRA PUMPING PLANT RELIABILITY PROGRAM - HIGH PRESSURE COMPRESSOR REPLACEMENT
- CRA PUMPING PLANT RELIABILITY PROGRAM - SUCTION & DISCHARGE LINES EXPANSION JOINT STUDY
- CRA PUMPING PLANT RELIABILITY PROGRAM - SUCTION AND DISCHARGE LINES-EXPANSION JOINT REPAIRS

**TABLE 3  
CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS**

**Description**

**Conveyance and Aqueduct Facilities**

CRA PUMPING PLANT STORAGE BUILDINGS AT HINDS, EAGLE MOUNTAIN AND IRON MOUNTAIN  
 CRA PUMPING PLANT SUMP SYSTEM REHABILITATION  
 CRA PUMPING PLANT WASTEWATER SYSTEM - GENE & IRON MTN.  
 CRA PUMPING PLANT WASTEWATER SYSTEM - INTAKE  
 CRA PUMPING PLANT WASTEWATER SYSTEM REPLACEMENT - HINDS & EAGLE MTN.  
 CRA PUMPING PLANTS - AUXILIARY POWER SYSTEM REHABILITATE/UPGRADES  
 CRA PUMPING PLANTS 230KV & 69K DISCONNECT SWITCH REPLACEMENT  
 CRA PUMPING PLANTS ASPHALT REPLACEMENT  
 CRA PUMPING PLANTS CRANE IMPROVEMENTS  
 CRA PUMPING PLANTS SWITCH HOUSE FAULT CURRENT PROTECTION  
 CRA PUMPING PLANTS VULNERABILITY ASSESSMENT  
 CRA PUMPING PLANTS WATER TREATMENT SYSTEMS REPLACEMENT  
 CRA PUMPING PLT RELIABILITY PROGRAM, DISCHARGE LINE COUPLING INSTALLATION  
 CRA PUMPING WELL CONVERSION  
 CRA QUAGGA MUSSEL BARRIERS  
 CRA RADIAL GATES AND SLIDE GATE REHABILITATION  
 CRA RADIAL GATES REPLACEMENT  
 CRA RELIABILITY PHASE II - PUMPING PLANTS 230KV & 69KV DISCONNECT SWITCH REPLACEMENT  
 CRA RELIABILITY PROGRAM - DISCHARGE VALVE LUBRICATORS  
 CRA RELIABILITY PROGRAM - MOTOR BREAKER FAULTY CURRENT STUDY (5 PLANTS)  
 CRA RELIABILITY PROGRAM PHASE 6 (AQUEDUCT PHASE 6 REHAB.) - SPEC 1568  
 CRA RELIABILTY PHASE II - PUMPING PLANT SWITCH HOUSE FAULT CURRENT PROTECTION  
 CRA SAND TRAP EQUIPMENT UPGRADES  
 CRA SEISMIC EVALUATION - SWITCH HOUSE AND PUMP ANCHORAGE  
 CRA SEISMIC UPGRADE OF 6.9KV SWITCH HOUSES  
 CRA SERVICE CONNECTION DWCV-2T VALVES REPLACEMENT AND STRUCTURE CONSTRUCTION  
 CRA SERVICE CONNECTION DWCV-4 VALVES REPLACEMENT  
 CRA SIPHON REHAB  
 CRA SIPHONS, TRANSITIONS, CANALS, AND TUNNELS REHABILITATION AND IMPROVEMENTS  
 CRA SURGE CHAMBER DISCHARGE LINE BY-PASS COVERS  
 CRA SWITCHRACKS & ANCILLARY STRUCTURES EROSION CONTROL  
 CRA TRANSFORMER OIL AND SODIUM HYPOCHLORITE CONTAINMENT  
 CRA TRANSITION STRUCTURE AND MANHOLE COVERS REPLACEMENT  
 CRA UPS REPLACEMENT  
 CRA VILLAGES DOMESTIC WATER MAIN DISTRIBUTION REPLACEMENT STUDY  
 CRA WATER DISTRIBUTION SYSTEM REPLACEMENT AND CRA ROADWAY ASPHALT REPLACEMENT - ALL PP  
 CUF DECHLORINATION SYSTEM  
 DAM SLUICeways AND OUTLETS REHABILITATION  
 DANBY TOWER FOOTER REPLACEMENT  
 DANBY TOWERS FOUNDATION REHABILITATION  
 DESERT FACILITIES FIRE PROTECTION SYSTEMS UPGRADE  
 DESERT LAND ACQUISITIONS  
 DESERT PUMP PLANT OIL CONTAINMENT  
 DESERT ROADWAY IMPROVEMENT  
 DESERT SEPTIC SYSTEM  
 DESERT SEWER SYSTEM REHABILITATION  
 DESERT WATER TANK ACCESS - FIRE WATER, CIRCULATING WATER, DOMESTIC WATER- STUDY  
 DISCHARGE LINE ISOLATION BULKHEAD COUPLINGS  
 DISTRIBUTION SYSTEM FACILITIES - REHABILITATION PROGRAM  
 DISTRIBUTION SYSTEM FACILITIES REHABILITATION PROGRAM - MAINTENANCE & STORAGE SHOP (PC-1)  
 DISTRIBUTION SYSTEM RELIABILITY PROGRAM - PHASE 2  
 DVL INLET / OUTLET TOWER FISH SCREENS REPLACEMENT  
 DVL TO SKINNER TRANSMISSION LINE STUDY  
 E. THORNTON IBBETSON GUEST QUARTERS  
 EAGLE AND HINDS EQUIPMENT WASH AREA UPGRADE  
 EAGLE KITCHEN UPGRADE  
 EAGLE MOUNTAIN PUMPING PLANT SCADA SYSTEM  
 EAGLE MOUNTAIN SAND TRAPS STUDY  
 EAGLE MOUNTAIN SIPHONS SEISMIC VULNERABILITY STUDY  
 EAGLE MTN SAND TRAPS STUDY  
 EAGLE ROCK ASPHALT REPAIR PROJECT  
 EAGLE ROCK MAIN ROOF REPLACEMENT  
 ENHANCED VAPOR RECOVERY UPGRADES FOR GASOLINE DISPENSERS  
 ENVIRONMENTAL MITIGATION  
 ETIWANDA PIPELINE LINER REPAIR  
 ETIWANDA RESERVOIR LINER REPAIR  
 FUTURE SYSTEM RELIABILITY PROJECTS  
 GARVEY RESERVOIR - AUTOMATED DATA ACQUISITION SYSTEM  
 GARVEY RESERVOIR AUTOMATED DATA ACQUISITION SYSTEM REPLACEMENT  
 GENE & INTAKE P.P. - FREQUENCY PROTECTION RELAY REPLACEMENT  
 GENE & INTAKE PUMPING PLANT SURGE CHAMBER OUTLET GATES RE-COATING  
 GENE & INTAKE PUMPING PLANTS - REPLACE UNDER FREQUENCY PROTECTION RELAY  
 GENE AIR CONDITION  
 GENE CAMP STATION SERVICE TRANSFORMER REPLACEMENT  
 GENE PUMPING PLANT - AIR STRIP EXTENSION PROJECT  
 GENE PUMPING PLANT - HEAVY EQUIPMENT SERVICE PIT  
 GENE PUMPING PLANT - PEDDLER SUBSTATION REPLACEMENT  
 GENE PUMPING PLANT - SCADA SYSTEM  
 GENE PUMPING PLANT EXPANSION JOINT REHABILITATION  
 GENE PUMPING PLANT MAIN TRANSFORMER AREA  
 GENE PUMPING PLANT STANDBY GENERATOR REPLACEMENT  
 GENE STORAGE BUILDING REPLACEMENT  
 GENE STORAGE WAREHOUSE REPLACEMENT  
 HEADGATE OPERATORS & CIRCUIT BREAKERS REHAB.  
 HIGHLAND PIPELINE CONSTRUCTION  
 HINDS EAGLE & IRON MOUNTAINS STORAGE BUILDINGS  
 HINDS PUMPING PLANT DISCHARGE VALVE PIT PLATFORM REPLACEMENT  
 HINDS PUMPING PLANT EQUIPMENT WASH AREA UPGRADES  
 HINDS PUMPING PLANT SCADA SYSTEM  
 HINDS PUMPING PLANT STANDBY GENERATOR REPLACEMENT  
 INLAND FDR, ARROWHEAD TUNNELS REDESIGN  
 INLAND FDR, ARROWHEAD WEST TUNNEL CONSTRUCTION  
 INLAND FDR, CONTRACT 9, CONSTRUCTION OF RIVERSIDE PPLN SOUTH  
 INLAND FDR, OWNER CONTROLLED INSURANCE PROGRAM  
 INLAND FDR, REACH 4, RUSD PPLN  
 INLAND FDR-CNTR #1/DEVIL CYN-WATERMAN RD

**TABLE 3  
CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS**

**Description**

**Conveyance and Aqueduct Facilities**

INLAND FDR-CNTR #4-SOFT GRND TNL/SANTA ANA  
 INLAND FDR-CONT #8-PIPEL PARALLEL TO DAVIS RD  
 INLAND FDR-ENVIRON. MITIG.  
 INLAND FEEDER - RIGHT OF WAY AND EASEMENT PROCUREMENT  
 INLAND FEEDER CONTINGENCY  
 INLAND FEEDER COST OF LAND AND RIGHT OF WAY  
 INLAND FEEDER ENVIRONMENTAL MITIGATION  
 INLAND FEEDER GROUNDWATER MONITORING  
 INLAND FEEDER HIGHLAND PIPELINE CLAIMS COST  
 INLAND FEEDER HIGHLAND PIPELINE CONSTRUCTION  
 INLAND FEEDER HIGHLAND PIPELINE DESIGN  
 INLAND FEEDER MENTONE PIPELINE CONSTRUCTION  
 INLAND FEEDER MENTONE PIPELINE DESIGN  
 INLAND FEEDER MENTONE PIPELINE RUSD CONSTRUCTION  
 INLAND FEEDER OWNER CONTROLLED INSURANCE PROGRAM  
 INLAND FEEDER PROGRAM REMAINING BUDGET/CONTINGENCY  
 INLAND FEEDER PROJECT MANAGEMENT SUPPORT  
 INLAND FEEDER PURCHASE OF LAND AND RIGHT OF WAY  
 INLAND FEEDER RAISE BURIED STRUCTURES AND REALIGN DAVIS RD.  
 INLAND FEEDER REVERSE OSMOSIS PLANT  
 INLAND FEEDER RIVERSIDE BADLANDS TUNNEL CONSTRUCTION  
 INLAND FEEDER RIVERSIDE NORTH PIPELINE DESIGN  
 INLAND FEEDER RUSD CLAIMS DEFENSE  
 INLAND FEEDER STUDIES  
 INLAND FEEDER UNDERGROUND STORAGE TANK REMOVAL & ABOVEGROUND STORAGE TANK INSTALLATION  
 INLAND FEEDER, ARROWHEAD EAST TUNNEL  
 INLAND FEEDER, ARROWHEAD TUNNELS CONSTRUCTION  
 INLAND FEEDER, CONTRACT #5, OPAL AVENUE PORTAL / BADLANDS TUNNEL  
 INLAND FEEDER, CONTRACT #7, RIVERSIDE NORTH PIPELINE CONSTRUCTION  
 INLAND FEEDER, PROGRAM MANAGEMENT  
 INLAND FEEDER/SBMWD HIGHLAND INTERTIE BYPASS LINE REHAB  
 INSULATION JOINT TEST STATIONS  
 INTAKE AND POWER COMMUNICATION LINE RELOCATION  
 INTAKE POWER AND COMMUNICATIONS LINE RELOCATION  
 INTAKE PPLANT - POWER & COMMUNICATION LINE REPLACEMENT  
 INTAKE PUMPING PLANT - COOLING AND REJECT WATER DISCHARGE TO LAKE HAVASU  
 INTAKE PUMPING PLANT AUTOMATION PROGRAMMING  
 INTAKE PUMPING PLANT INSTRUMENTATION REPLACEMENT  
 INTAKE PUMPING PLANT INSTRUMENTATION REPLACEMENT & AUTOMATION  
 INTAKE PUMPING PLANT INSTRUMENTATION REPLACEMENT & AUTOMATION (4 PLANTS)  
 INTAKE PUMPING PLANT POWER & COMMUNICATION LINE REPLACEMENT  
 INTAKE PUMPING PLANT SCADA SYSTEM  
 INTAKE PUMPING PLANT STANDBY GENERATOR REPLACEMENT  
 IRON MOUNTAIN GENERATOR REPLACEMENT  
 IRON MOUNTAIN PUMPING PLANT  
 IRON MOUNTAIN PUMPING PLANT DELIVERY LINE NO. 1 RELINING  
 IRON MOUNTAIN PUMPING PLANT HOUSING REPLACEMENT  
 IRON MOUNTAIN PUMPING PLANT SCADA SYSTEM  
 IRON MOUNTAIN SERVICE PIT REHABILITATION  
 JULIAN HINDS PUMPING PLANT DELIVERY PIPE EXPANSION JOINT PHASE 2 REPAIRS  
 JULIAN HINDS PUMPING PLANT DELIVERY PIPE EXPANSION JOINT PHASE 1 REPAIR  
 LAKE MATHEWS FOREBAY & HEADWORK FACILITY & EQUIPMENT  
 LAKE MATHEWS FOREBAY WALKWAY REPAIRS  
 LAKE MATHEWS ICS  
 LAKE MATHEWS INTERIM CHLORINATION SYSTEM  
 LAKE SKINNER - OUTLET CONDUIT FLOWMETER INSTALLATION  
 LAKE SKINNER BYPASS PIPELINE NO. 2 CATHODIC PROTECTION  
 LAKE SKINNER OUTLET CONDUIT  
 LAKEVIEW PIPELINE LEAK REPAIR AT STA. 2510+49  
 LAVERNE FACILITIES - EMERGENCY GENERATOR  
 LAVERNE FACILITIES - MATERIAL TESTING  
 LOWER FEEDER EROSION PROTECTION  
 MAGAZINE CANYON - VALVE REPLACEMENT FOR SAN FERNADO TUNNEL (STATION 778+80)  
 MAGAZINE CANYON OIL & WATER SEPARATOR  
 MAGAZINE CANYON OIL/WATER SEPARATOR  
 MAPES LAND ACQUISITION  
 MENTONE PPLN, RUSD, DEFENSE OF CLAIM  
 MILE 12 FLOW AND CHLORINE MONITORING STATION UPGRADES  
 MILE 12 POWER LINE & FLOW MONITORING EQUIPMENT STUDY  
 MILLS PLANT SUPPLY PUMP STATION STUDY  
 MINOR CAP FY 2011/12  
 MOTOR BREAKER FAULTY (5 PPLANTS)  
 NEWHALL TUNNEL - REPAIR STEEL LINER  
 NEWHALL TUNNEL - UPGRADE LINER SYSTEM  
 NITROGEN STORAGE STUDY AT DVL, INLAND FEEDER PC-1, AND LAKE MATHEWS  
 OC 44 SERVICE CONNECTIONS & EOC#2 METER ACCESS ROAD REPAIR  
 OC 88 PUMP PLANT FIRE PROTECTION STUDY  
 OC-71 SERVICE CONNECTION REPAIRS  
 OLINDA PCS FACILITY REHABILITATION AND UPGRADE  
 OLINDA PRESSURE CONTROL STRUCTURE FACILITY REHABILITATION AND UPGRADE  
 ORANGE COUNTY 44 SERVICE CONNECTIONS & EOC#2 METER ACCESS ROAD REPAIR  
 ORANGE COUNTY 88 PUMP PLANT FIRE PROTECTION STUDY  
 OWNER CONTROLLED INSURANCE PROGRAM  
 PALO VERDE VALLEY LAND PURCHASE - 16,000 ACRES  
 PALOS VERDES FEEDER REHABILITATION OF DOMINGUEZ CHANNEL  
 PALOS VERDES RESERVOIR SPILLWAY MODIFICATION  
 PROJECT MANAGEMENT SUPPORT  
 PUDDINGSTONE RADIAL GATE REHABILITATION  
 PURCHASE OF LAND AND RIGHT OF WAY  
 QUAGGA MUSSEL STUDY  
 R&R FOR CRA  
 REPAIR UPPER FEEDER LEAKING EXPANSION JOINT  
 REPAIRS TO TUNNELS  
 RIALTO FEEDER REPAIR @ STA. 3662+23  
 RIALTO FEEDER REPAIR OF ANOMALOUS PIPE SECTION  
 RIVERSIDE BADLANDS TUNNEL CONSTRUCTION  
 RIVERSIDE BRANCH - ALESSANDRO BLVD, LEFT LAND TURN LANE



<b>TABLE 3 CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS</b>	
<b>Description</b>	
<b>Conveyance and Aqueduct Facilities</b>	
RIVERSIDE BRANCH - CONSTRUCTION OF CONTROL PANEL DISPLAY WALL	
RIVERSIDE NORTH PIPELINE DESIGN & CONSTRUCTION	
RIVERSIDE SOUTH PIPELINE CONSTRUCTION	
SAN DIEGO PIPELINE REPAIR AT STATION 1268+57	
SAN FERNANDO TUNNEL STATION 778+80 VALVE REPLACEMENT	
SAN GABRIEL TOWER SEISMIC ASSESSMENT	
SAN GABRIEL TOWER SLIDE GATE REHABILITATION	
SAN JACINTO TUNNEL EAST ADIT REHABILITATION	
SAN JACINTO TUNNEL, WEST PORTAL	
SAN JOAQUIN RESERVOIR - NEW DESIGN	
SAN JOAQUIN RESERVOIR IMPROVEMENT- FLOATING COVER	
SAN JOAQUIN RESERVOIR IMPROVEMENTS	
SAN JOAQUIN RESERVOIR IMPROVEMENTS STUDY	
SAND TRAP CLEANING EQUIPMENT AND TRAVELING CRANE STUDY	
SANTA ANA RIVER BRIGDE SEISMIC RETROFIT	
SANTIAGO TOWER ACCESS ROAD UPGRADE	
SANTIAGO TOWER PATROL ROAD REPAIR	
SD5 REPAIR	
SECOND LOWER FEEDER STRAY CURRENT MITIGATION SYSTEMS REFURBISHMENT	
SECURITY FENCING AT OC-88 PUMPING PLANT	
SEISMIC EVALUATION OF CRA STRUCTURES	
SEISMIC PROGRAM	
SEISMIC UPGRADE OF 11 FACILITIES OF THE CONVEYANCE & DISTRIBUTION SYSTEM	
SEPULVEDA FEEDER CORROSION INTERFERENCE MITIGATION	
SEPULVEDA FEEDER REPAIR AT STATION 1099	
SEPULVEDA FEEDER STRAY CURRENT MITIGATION SYSTEM REFURBISHMENT	
SERVICE CONNECTION & EOCF #2 METER ACCESS ROAD UPGRADE & BETTERMENT	
SERVICE CONNECTION DWCV-2T VALVES REPLACEMENT AND STUCTURE CONSTRUCTION	
SKINNER BR - IMPROVE CABAZON RADIAL GATE FACILITY	
SUCTION & DISCHARGE LINES EXPANSION JOINT STUDY	
SWITCHYARDS AND HEAD GATES REHAB	
TEMESCAL HYDRO-ELECTRIC PLANT ACCESS ROAD UPGRADE	
TEMESCAL POWER PLANT ACCESS ROAD PAVING	
TRANSFORMER OIL & CHEMICAL UNLOADING PAD CONTAINMENT	
TRANSFORMER OIL AND SODIUM HYPOCHLORITE CONTAINMENT PROJECT	
U.S. BUREAU OF LAND MANAGEMENT LAND ACQUISITION	
UPPER FEEDER CATHODIC PROTECTION SYSTEM	
UPPER FEEDER GATES REHABILITATION PROJECTS	
UPPER FEEDER LEAKING EXPANSION JOINT REPAIR	
VALLEY BRANCH - PIPELINE CORROSION TEST STATION	
WASTEWATER SYSTEM REHABILITATION - GENE/IRON MTN	
WASTEWATER SYSTEM REHABILITATION - HINDS/EAGLE MTN	
WEST VALLEY FEEDER #2 CATHODIC PROTECTION SYSTEM REHABILITATION	
WHITE WATER SIPHON PROTECTION	
WHITEWATER SIPHON EROSION PROTECTION	
WHITEWATER SIPHON PROTECTION STRUCTURE	
<b>Sub-total Conveyance and Aqueduct facilities costs</b>	<b>\$ 74,568,374</b>

<b>TABLE 3 CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS</b>
<b>Description</b>
<b>Distribution Facilities</b>
108TH STREET PRESSURE CONTROL STRUCTURE VALVE REPLACEMENT
42" CONICAL PLUG VALVE REPLACEMENT
ACCUSONIC FLOW METER UPGRADE
ACCUSTIC FIBER OPTIC MONITORING OF PCCP LINES
ALAMEDA CORRIDOR PIPELINE
ALL FACILITIES - WATER DISCHARGE ELIMINATION
ALL FACILITIES, INSPECTION AND REPLACEMENT OF CRITICAL VACUUM VALVES
ALL FEEDERS - MANHOLE LOCKING DEVICE RETROFIT
ALL PUMPING PLANTS - INSTALL HYPOCHLORINATION STATIONS
ALLEN MCCOLLOCH PIPELINE 2010 REFURBISHMENT
ALLEN MCCOLLOCH PIPELINE CATHODIC PROTECTION
ALLEN MCCOLLOCH PIPELINE INTERCONNECTIONS
ALLEN MCCOLLOCH PIPELINE LOCAL CONTROL MODIFICATIONS
ALLEN MCCOLLOCH PIPELINE REPAIR
ALLEN MCCOLLOCH PIPELINE REPAIR - CARBON FIBER LINING REPAIR
ALLEN MCCOLLOCH PIPELINE REPAIR - SERVICE CONNECTIONS UPGRADES
ALLEN MCCOLLOCH PIPELINE REPAIR - STATION 276+63
ALLEN MCCOLLOCH PIPELINE REPAIR - SURGE SUPPRESSION SYSTEM AT OC88A
ALLEN MCCOLLOCH PIPELINE REPAIR - VALVE ACTUATOR REPLACEMENTS
ALLEN MCCOLLOCH PIPELINE REPAIR SERVICE CONNECTIONS SIMPLIFICATION
ALLEN MCCOLLOCH PIPELINE STRUCTURE - ROOF SLAB REPAIRS
ALLEN MCCOLLOCH PIPELINE VALVE VAULT REPAIRS
ALLEN-MCCOLLOCH CORROSION/INTERFERENCE MITIGATION, STATION 719+34 TO 1178+02
ALLEN-MCCOLLOCH PIPELINE
ALLEN-MCCOLLOCH PIPELINE OC-76 TURNOUT RELOCATION
ALLEN-MCCOLLOCH PIPELINE PCCP REHABILITATION
ALLEN-MCCOLLOCH PIPELINE REFURBISHMENT - STAGE 2
ALLEN-MCCOLLOCH PIPELINE VALVE AND SERVICE CONNECTION VAULT REPAIRS
AMP -SERVICE CONNECTIONS UPGRADES
AMP -VALVE ACTUATOR REPLACEMENTS
AMP COMPLETION RESOLUTION RIGHT OF WAY ISSUES
AMR - RTU UPGRADE - PHASE 2
ANODE WELL REPLACEMENT FOR ORANGE COUNTY AND RIALTO FEEDERS
APPIAN WAY VALVE REPLACEMENT
ARROW HIGHWAY PROPERTY DEVELOPMENT
ASPHALT REPAIRS TO PERIMETER OF SEPULVEDA PCS
ASSESS THE CONDITION OF METROPOLITAN'S PRESTRESSED CONCRETE CYLINDER PIPE
ASSESS THE CONDITIONS OF MET'S
ASSESSMENT OF PRESTRESSED CONCRETE CYLINDER PIPELINES - PHASE 3
AULD VALLEY CONTROL STRUCTURE AREA FACILITIES
AUTOMATED RESERVOIR WATER QUALITY MONITORING
AUTOMATIC METER READING SYSTEM - RTU UPGRADE PHASE 2
AUTOMATIC METER READING SYSTEM UPGRADE
AUTOMATION COMMUNICATION UPGRADE
AUTOMATION DOCUMENTATION SURVEY F/A
BAR 97- ENHANCED AREA VEHICLE TESTING
BATTERY MONITORING SYSTEM FOR AUTOMATIC METER READING SYSTEM
BIXBY VALVE REPLACEMENT
BLACK METAL MOUNTAIN ELECTRICAL TRANSFORMER
BOX SPRINGS FEEDER BROKEN BACK REPAIR
BOX SPRINGS FEEDER BROKEN BACK REPAIR PHASE I
BOX SPRINGS FEEDER PHASE 3 AND 4 ENVIRONMENTAL MONITORING
BOX SPRINGS FEEDER REPAIR - PHASE II
BOX SPRINGS FEEDER REPAIRS PHASE 3 AND PHASE 4
C&D CRANE INSTALLATION AT OC-88 PUMPING PLANT
CAJALCO CREEK DAM MANHOLE COVER RETROFIT
CAJALCO CREEK DETENTION DAM SPILLWAY ACCESS ROAD
CALABASAS FEEDER CARBON FIBER /BROKEN BACK REPAIR
CALABASAS FEEDER INTERFERENCE MITIGATION
CALABASAS FEEDER PCCP REHABILITATION
CALABASAS FEEDER REPAIR, STUDY
CAPITAL PROGRAM FOR PROJECTS COSTING LESS THAN \$250,000 FOR FY 2010/11
CAPITAL PROJECTS COSTING LESS THAN \$250,000 FOR FY2008-09
CARBON CREEK PRESSURE CONTROL STRUCTURE SEISMIC ASSESSMENT
CASA LOMA AND SAN DIEGO CANAL LINING STUDY - PART 2
CASA LOMA SIPHON BARREL 1 & 2 DVL AND SD CANAL FLOW METER REPLACEMENT
CASA LOMA SIPHON BARREL NO. 1 JOINT REPAIR
CASA LOMA SIPHON NO 1, CASA LOMA CANAL & SAN DIEGO CANAL FLOW METER REPLACEMENT
CATHODIC PROTECTION FOR THE FOOTHILL FEEDER
CATHODIC PROTECTION SYSTEM UPGRADES
CCP-PHASE 2 CONSTRUCTION
CDSRP - DISCHARGE ELIMINATION
CDSRP - ENTRAINED AIR IN UPPER FEEDER PIPELINE STUDY
CDSRP - SEPULVEDA FEEDER REPAIRS
CDSRP - SEPULVEDA TANKS RECOATING
CENTRAL POOL AUGMENTATION - TUNNEL AND PIPELINE & RIGHT-OF-WAY ACQUISITION
CENTRAL POOL AUGMENTATION (CPA) PROGRAM - PIPELINE AND TUNNEL ALIGNMENT
CENTRAL POOL AUGMENTATION AND WATER QUALITY PROJECT (CPAWQP)
CHEMICAL INVENTORY AND USAGE REWRITE AND ELECTRICAL SYSTEM LOG
CHEMICAL UNLOADING FACILITY RETROFIT
CHEVALIER FALCON MILLING MACHINE
COASTAL JUNCTION REVERSE FLOW BYPASS
COASTAL PRESSURE CONTROL STRUCTURE ROOF REPLACEMENT
COLLIS AVENUE VALVE REPLACEMENT
COLLIS VALVE REPLACEMENT
COLORADO RIVER AQUEDUCT CASA LOMA SIPHON BARREL NO. 1 PROJECT NO. 2 - PERMANENT REPAIRS
COMMUNICATIONS STRUCTURE ALARM MONITORING
COMPREHENSIVE INFORMATION SECURITY ASSESSMENT PHASE III
CONSTRUCTION PHASE 2
CONTRACT & LITIGATION TASKS -CONTRACT # 1396
CONTROL SYSTEM DATA STORAGE AND REPORTING
CONTROL SYSTEM DRAWING & DOCUMENTATION UPDATE
CONTROL SYSTEM ENHANCEMENT PROGRAM (CSEP) - DIGITAL SUBNET STANDARDIZATION
CONTROL SYSTEMS AUTOMATION COMMUNICATION UPGRADE
CONTROLS COMMUNICATIONS FRAME RELAY CONVERSION - APPROPRIATED

**TABLE 3  
CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS**

**Description**

**Distribution Facilities**

CONVERSION OF DEFORMATION SURVEY MONITORING AT GENE WASH, COPPER BASIN, AND DIEMER BASIN 8  
 CONVEYANCE AND DISTRIBUTION SYSTEM ELECTRICAL STRUCTURES REHABILITATION  
 CONVEYANCE AND DISTRIBUTION SYSTEM REHABILITATION PROGRAM (CDSRP) - CURRENT DRAIN STATIONS  
 COPPER BASIN ICS  
 COPPER BASIN SEWER SYSTEM  
 CORONA POWER PLANT REPLACE EMERGENCY GENERATOR  
 CORROSION MATERIALS TESTING FACILITY SCADA UPGRADE  
 COVINA PRESSURECONTROL FACILITY  
 COYOTE CREEK NORTHERN PERIMETER LANDSCAPING  
 COYOTE PRESSURE CONTROL STRUCTURE ROOF REPLACEMENT  
 CPA PIPELINE & TUNNEL ALIGNMENT  
 CPA PIPELINE & TUNNEL ALIGNMENT - NON FUNDED PORTION  
 CPA PIPELINE & TUNNEL ALIGNMENT - STUDY  
 CPA WATER TREATMENT PLANT - NON FUNDED PORTION  
 CPA WATER TREATMENT PLANT - RIGHT OF WAY - PHASE 2  
 CPAWQP - PHASE 2  
 CPAWQP - STUDY AND LAND ACQUISITION - CONTINGENCY  
 CPAWQP - STUDY AND LAND ACQUISITION - PIPELINE & TUNNEL ALIGNMENT - STUDY  
 CPAWQP - STUDY AND LAND ACQUISITION - RIGHT-OF-WAY-ACQUISITION  
 CPAWQP - STUDY AND LAND ACQUISITION - WATER TREATMENT PLANT - RIGHT OF WAY - PHASE 2  
 CPAWQP - STUDY AND LAND ACQUISITION - WATER TREATMENT PLANT - STUDY  
 CRA - PC-1 EFFLUENT OPEN CHANNEL TRASH RACK  
 CRA CABAZON & POTRERO SHAFT COVERS  
 CRA CONTROL INTEGRATION  
 CRA PROTECTIVE SLAB AT STATION 9704+77  
 CROSS CONNECTION PREVENTION PROGRAM - PHASE II CONSTRUCTION  
 CROSS CONNECTION PREVENTION PROJECT, COMPLETE PRELIMINARY DESIGN AND CEQA DOCUMENTATION  
 CSEP - ELECTRONIC SYSTEM LOG (ESL)  
 CSEP - ENERGY MANAGEMENT SYSTEM PHASE II  
 CSEP - ENHANCED DISTRIBUTION SYSTEM CONTROL PROJECT  
 CSEP - IMPLEMENTATION  
 CSEP - OPERATIONS & BUSINESS DATA INTEGRATION PILOT  
 CSEP - PLANT INFLUENT REDUNDANT FLOW METERING AND SPLITTING  
 CSEP - PLC PHASE 2 - LIFE-CYCLE REPLACEMENT  
 CSEP - PLC STANDARDIZATION  
 CSEP - PLC STANDARDIZATION PHASE II  
 CSEP - POWER MANAGEMENT SYSTEM  
 CSEP - WATER PLANNING APPLICATION  
 CSEP IMPLEMENTATION  
 CSEP- SMART OPS (FORMERLY REAL TIME OPERATIONS SIMULATION)  
 CURRENT DRAIN STATIONS  
 DAM REHABILITATION & SAFETY IMPROVEMENTS ST. JOHN'S CANYON CHANNEL EROSION MITIGATION  
 DANBY TOWER FOUNDATION INVESTIGATION AND SHORT TERM MITIGATION  
 DEODERA PCS PAVEMENT UPGRADE & BETTERMENT  
 DESERT BRANCH - REPLACE STOLEN COPPER GROUND WIRE FOOTINGS/GROUNDING, AND COPPER PIPING  
 DESERT BRANCH PUMP PLANT AUXILIARY (STATION SERVICE)  
 DESERT BRANCH, PURCHASE & INSTALL 5 PORT VIDEO CONFERENCING  
 DESERT FACILITIES DOMESTIC WATER GAC SYSTEM INSTALLATION  
 DESERT HIGH VOLTAGE TRANSMISSION TOWERS - REPLACE COPPER GROUND WIRES ON  
 DETAIL SEISMIC EVALUATION OF WATER STORAGE TANK  
 DFP - ELIMINATE BACKUP GENERATOR TIE-BUS & INSTALL MANUAL TRANSFER SWITCH FOR CHLORINE SCRUBBER  
 DIEMER FILTRATION PLANT - SLOPE REPAIR  
 DISCHARGE ELIMINATION  
 DIST SYS-AIR RELEASE & VAC VALVE MODS  
 DISTRIBUTION SYSTEM - CAPP CONSTRUCTION PACKAGES 9,11,12  
 DISTRIBUTION SYSTEM - STANDPIPE STRENGTHENING PROGRAM  
 DISTRIBUTION SYSTEM - STATIONARY CORROSION REFERENCE  
 DISTRIBUTION SYSTEM - TREATED WATER CROSS CONNECTION PREVENTION PROJECT - FINAL DESIGN & CONSTRUCTION  
 DISTRIBUTION SYSTEM ASSESSMENTS/UPGRADES OF LOS ANGELES COUNTY  
 DISTRIBUTION SYSTEM ASSESSMENTS/UPGRADES OF RIVERSIDE AND SAN DIEGO COUNTY  
 DISTRIBUTION SYSTEM ASSESSMENTS/UPGRADES OF SAN BERNARDINO COUNTY  
 DISTRIBUTION SYSTEM CONTROL & EQUIP UPGRADE - ENHANCED DISTRIB. SYSTEM AUTOMATION PHASE I  
 DISTRIBUTION SYSTEM EQUIPMENT & INSTRUMENTATION UPGRADES  
 DISTRIBUTION SYSTEM INFRASTRUCTURE PROTECTION IMPROVEMENTS FOR ORANGE COUNTY  
 DISTRIBUTION SYSTEM REHABILITATION PROGRAM - ASSESS THE STATE OF MWD'S DISTRIBUTION SYSTEM  
 DISTRIBUTION SYSTEM REPLACEMENT OF AREA CONTROL SYSTEMS - WILLOWGLEN RTUS ADMINISTRATION  
 DISTRIBUTION SYSTEM REPLACEMENT OF AREA CONTROL SYSTEMS (DSRACS)  
 DISTRICT WIDE - ENHANCED VAPOR RECOVERY PHASE 2 GASOLINE DISPENSING  
 DSRACS - OPERATIONS CONTROL CENTER - CONTRACT #1396  
 DSRACS - SKINNER AREA  
 DSRACS - SOFTWARE DEVELOPMENT COST  
 DSRACS - WEYMOUTH  
 DVL & CONTROL SYSTEM REPLACEMENT INVESTIGATION & PREPARATION FOR PRELIMINARY DESIGN  
 EAGLE EQUIPMENT WASH AREA UPGRADE  
 EAGLE ROCK - ASPHALT REHABILITATION  
 EAGLE ROCK - FIRE PROTECTION AT THE WESTERN AREA OF THE EAGLE ROCK CONTROL CENTER PERIMETER GROUNDS  
 EAGLE ROCK CONTROL CENTER FIREHYDRANT  
 EAGLE ROCK LATERAL INTERCONNECTION REPAIR  
 EAGLE ROCK MAIN BUILDING ROOF REPLACEMENT - STUDY  
 EAGLE ROCK OCC - REHAB CONTROL ROOM  
 EAGLE ROCK OPERATIONS CONTROL CENTER  
 EAGLE ROCK RESIDENCE CONVERSION  
 EAGLE ROCK TOWER AND PUDDINGSTONE SPILLWAY GATES REHABILITATION  
 EAGLE ROCK TOWER SLIDEGATE REHABILITATION  
 EAST INFLUENT CHANNEL REPAIR PROJECT  
 EAST ORANGE COUNTY FEEDER #2 REPAIR  
 EAST VALLEY FEEDER VALVE STRUCTURE ELECTRICAL UPGRADE  
 EASTERN AND DESERT REGIONS PLUMBING RETROFIT  
 EASTERN REGION PCCP JOINT MODIFICATION 2012  
 E-DISCOVERY STORAGE MANAGEMENT SYSTEM UPGRADE  
 ELECTRIC CURRENT DRAIN STATION INSTALLATIONS  
 ELECTRICAL UPGRADES AT 15 STRUCTURES IN THE OC REGION  
 ELECTROMAGNETIC INSPECTIONS OF PCCP LINES  
 ELECTRONIC SYSTEM LOG (ESL)

<b>TABLE 3 CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS</b>
<b>Description</b>
<b>Distribution Facilities</b>
ENERGY MANAGEMENT SYSTEM - PHASE 2
ENHANCED DISTRIBUTION SYSTEM AUTOMATIC FLOW TRANSFERS SOFTWARE REDEVELOPMENT
ENHANCED DISTRIBUTION SYSTEM AUTOMATION PHASE I
ENHANCED DISTRIBUTION SYSTEM AUTOMATION PHASE II
ENVIRONMENTAL REGULATORY AGREEMENTS AND OTHER REGULATORY AGENCY
EQUIPMENT UPGRADE AT THE NORTH PORTAL OF THE HOLLYWOOD TUNNEL
ETIWANDA / RIALTO PIPELINE INTER-TIE CATHODIC PROTECTION
ETIWANDA CAVITATION FACILITY INFRASTRUCTURE REHABILITATION
ETIWANDA CAVITATION TEST FACILITY COMMUNICATION AND CONTROL SYSTEM REPLACEMENT
ETIWANDA HEP NEEDLE VALVE OPERATORS
ETIWANDA PIPELINE - LINING REPLACEMENT
ETIWANDA PIPELINE AND CONTROL FACILITY - RIGHT OF WAY
ETIWANDA PIPELINE AND CONTROL FACILITY - AS BUILTS
ETIWANDA PIPELINE AND CONTROL FACILITY - CATHODIC PROTECTION
ETIWANDA PIPELINE AND CONTROL FACILITY - EMERGENCY DISCHARGE CONDUITS
ETIWANDA PIPELINE AND CONTROL FACILITY - LANDSCAPING AND IRRIGATION
ETIWANDA PIPELINE AND CONTROL FACILITY - RESIDENCES
ETIWANDA PIPELINE AND CONTROL FACILITY - RIALTO FEEDER TO UPPER PIPELINE
ETIWANDA PIPELINE LINING REPAIRS
ETIWANDA RESERVOIR - EXTEND OUTLET STRUCTURE
FACILITY AND PROCESS RELIABILITY ASSESSMENT
FAIRPLEX AND WALNUT PCS VALVES REPLACEMENT
FILTER ISOLATION GATE AND BACKWASH CONTROL WEIR COVERS MODULES 1- 6
FLOW METER REPLACEMENT PROJECT
FLOWMETER MODIFICATION - LAKE SKINNER INLET, ETIWANDA EFFLUENT & WADSWORTH CROSS CHANNEL
FOOTHILL & SEPULVEDA FEEDER PCCP CARBON FIBER JOINT REPAIRS
FOOTHILL FEEDER - CASTAIC VALLEY BLOW-OFF VALVES REPLACEMENT
FOOTHILL FEEDER ADEN AVE. REHABILITATION
FOOTHILL FEEDER CARBON FIBER REPAIR
FOOTHILL FEEDER CATHODIC PROTECTION
FOOTHILL FEEDER PIPELINE REPLACEMENT PROJECT
FOOTHILL FEEDER POWER PLANT EXPANSION
FOOTHILL FEEDER REPAIR @ SANTA CLARITA RIVER
FOOTHILL FEEDER CARBON FIBER REPAIRS
FOOTHILL HYDROELECTRIC RUNNER REPLACEMENT
FOOTHILL PCS - UNINTERRUPTIBLE POWER SOURCE SYSTEMS INSTALLATION
FOOTHILL PCS FLOOD PUMP INSTALLATION DESIGN DOCUMENTATION
FOOTHILL PCS INTERNAL VALVE LINERS UPGRADE
FUTURE SYSTEM RELIABILITY PROGRAM
GARVEY RESERVOIR - HYPOCHLORITE FEED SYSTEM
GARVEY RESERVOIR - INSTALL HYPOCHLORINATION STATIONS
GARVEY RESERVOIR - LOWER ACCESS PAVING ROAD & DRAINS
GARVEY RESERVOIR CONTROL VALVES REPLACEMENT
GARVEY RESERVOIR HYPOCHLORITE FEED SYSTEM
GARVEY RESERVOIR SITE DRAINAGE REPAIRS AND MODIFICATIONS
GARVEY RESERVOIR SODIUM HYPOCHLORITE FEED SYSTEM REHABILITATION
GENE & IRON POOLS
GENE AIR CONDITIONING SYSTEM REPLACEMENT
GENE MESS HALL AIR CONDITIONING UNIT
GENE SPARE PARTS WAREHOUSE IMPROVEMENTS
GLENDALE 01 SERVICE CONNECTION REHAB
GLENDALE-01 SERVICE CONNECION REHABILITATION AND UPGRADE
GLENDALE-01 SERVICE CONNECTION REHABILITATION
GREG AVE PCS FACILITY REHABILITATION
GREG AVENUE CONTROL STRUCTURE VALVE REPLACEMENT
GREG AVENUE PCS - PUMP MODIFICATIONS AND NEW CONTROL BUILDING
GREG AVENUE PCS CONTROL BUILDING INTERIOR REHABILITATION
HINDS GARAGE ASBESTOS SHEETING REPLACEMENT
HOLLYWOOD TUNNEL NORTH PORTAL EQUIPMENT UPGRADES
HVAC MODIFICATIONS FOR ELECTRICAL SAFETY AND RELIABILITY
HYDRAULIC MODELING PROJECT
HYDROELECTRIC PLANT CARBON DIOXIDE (CO2) FIRE SUPPRESSION SYSTEM MODIFICATIONS
HYDROELECTRIC POWER PLANT (HEP) DISCHARGE ELIMINATION
IAS PROJECTS - CPA
IAS PROJECTS - DVL-SKINNER
IAS PROJECTS - MILLS SUPPLY RELIABILITY
INLAND FEEDER AND LAKEVIEW PIPELINE INTERTIE
INLAND PCSUST REMOVAL & AST INSTALLATION
INSTALL MOTION SENSORS IN NEW EXPANSION
INSTALL TEST LEADS AT FOUR LOCATIONS
INSULATION JOINT TEST STATIONS
INTAKE PUMPING PLANT - UNDER FREQUENCY PROTECTION RELAY UPGRADE
IRON MOUNTAIN - TRANSFORMER OIL TANK RELOCATION
JENSEN DISTRIBUTION SYSTEM - REPLACEMENT OF AREA CONTROL SYSTEMS - CONTRACT # 1396
JENSEN FILTRATION PLANT - REPLACE ADMINISTRATION BUILDING AIR CONDITIONING
JENSEN FILTRATION PLANT - ROAD RECONSTRUCTION
LA VERNE FACILITIES - BRIDGEPORT E-2-PATH
LA VERNE FACILITIES - ENERGY CONSERVATION ECM1 - 10
LA VERNE FACILITIES - EXPANSION OF THE SANITARY SEWER
LA VERNE FACILITIES - HAZARDOUS WASTE STORAGE
LA VERNE FACILITIES - MAIN TRANSFORMERS REPLACEMENT
LA VERNE FACILITIES - MATERIALS TESTING LABORATORY
LA VERNE FACILITIES - REPLACEMENT OF FLOCCULATOR STUB SHAFT - BASINS 1 & 2
LA VERNE MACHINE SHOP - AIR CONDITIONING UNIT REPLACEMENT
LA VERNE MACHINE SHOP - REPAIR HORIZONTAL BORING MILL
LA-35 DISCHARGE STRUCTURE REPAIRS
LAKE MATHEWS - CONSTRUCTION OF BACKUP COMPUTER FACILITIES
LAKE MATHEWS - DIVERSION TUNNEL WALKWAY REPAIR
LAKE MATHEWS - FACILITY WIDE EMERGENCY WARNING AND PAGING SYSTEM
LAKE MATHEWS - FOREBAY MCC ROOF IMPROVEMENT
LAKE MATHEWS - MAIN DAM TOE SEEPAGE COLLECTION
LAKE MATHEWS - MULTIPLE SPECIES MANAGER'S OFFICE & RESIDENCE
LAKE MATHEWS - RENOVATION OF BLDGS. 8 & 15, GENERAL ASSEMBLY & ADMIN. BLDG. OFFICE AREAS
LAKE MATHEWS - RETROFIT LOWER ENTRANCE GATE SWING ARM
LAKE MATHEWS FOREBAY MCC ROOF IMPROVEMENT

**TABLE 3  
CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS**

**Description****Distribution Facilities**

LAKE MATHEWS MAIN DAM TOE SEEPAGE COLLECTION  
 LAKE MATHEWS RETROFIT LOWER ENTRANCE GATE SWING ARM  
 LAKE PERRIS BYPASS PIPELINE EXPLORATION  
 LAKE PERRIS EMERGENCY STANDBY GENERATOR AND TRANSFER SWITCH REPLACEMENT  
 LAKE SKINNER - AERATOR AIR COMPRESSOR REPLACEMENT  
 LAKE SKINNER - OUTLET TOWER VALVE REHABILITATION  
 LAKE SKINNER - REPLACEMENT AERATOR RING  
 LAKE SKINNER AERATOR AIR COMPRESSOR REPLACEMENT  
 LAKE SKINNER AREA DISTRIBUTION SYSTEM VALVE REPLACEMENT  
 LAKE SKINNER DAM ROAD REHAB  
 LAKE SKINNER EAST BYPASS SCREENING STRUCTURES  
 LAKE SKINNER OUTLET TOWER CHLORINE SYSTEM MODIFICATION  
 LAKE SKINNER WEST BYPASS SCREENING STRUCTURE  
 LAKE SKINNER WEST BYPASS SCREENING STRUCTURE REHABILITATION  
 LAKE VIEW PIPE LINE REPAIRS  
 LAKEVIEW PIPELINE - REPLACE VACUUM/AIR RELEASE  
 LAKEVIEW PIPELINE CATHODIC PROTECTION SYSTEM  
 LAKEVIEW PIPELINE REPAIR  
 LOWER FEEDER - CATHODIC PROTECTION  
 LOWER FEEDER WR 33 - AREA REPAIR AND REMEDIATION  
 MAGAZINE CANYON CANOPY  
 MAGAZINE CANYON-ISOLATION GATE JACKING FRAME  
 MAPES LAND ACQUISITION  
 MICROWAVE COMMUNICATION SITES BUILDING UPGRADE  
 MIDDLE CROSS FEEDER CATHODIC PROTECTION  
 MIDDLE FEEDER - CATHODIC PROTECTION SYSTEMS  
 MIDDLE FEEDER - NORTH CATHODIC PROTECTION SYSTEM  
 MIDDLE FEEDER BLOW-OFF VALVE REPLACEMENT AT STA 782+53.16  
 MIDDLE FEEDER NORTH CATHODIC PROTECTION SYSTEM  
 MIDDLE FEEDER RELOCATION FOR SCE MESA SUBSTATION  
 MILLS FILTRATION PLANT - INVESTIGATION TO RELOCATE ACCESS ROAD  
 MINOR CAP 08/09 PLACEHOLDER  
 MINOR CAP FY 2009/10  
 MINOR CAP FY 2012/13  
 MINOR CAP FY 2014/16  
 MINOR CAPITAL PROJECTS PROGRAM 07/08 - REMAINING FUNDS  
 MOUNT OLYMPUS TUNNEL COST RIGHT-OF-WAY (ROW)  
 MWD ROAD GUARDRAIL  
 NITROGEN STORAGE COMPLIANCE AT DVL, INLAND FEEDER PCS, AND LAKE MATHEWS  
 NITROGEN STORAGE STUDY  
 NON PCCP LINES CONDITION INSPECTION AND ASSESSMENT  
 NORTH PORTAL OF HOLLYWOOD TUNNEL  
 NORTH REACH CONSTRUCTION / INSPECTION / CM  
 NORTH REACH CONSTRUCTION/ASBUILT  
 NORTH REACH ENVIRONMENTAL - CONSTRUCTION  
 NORTH REACH FINAL DESIGN & ADV/NTP  
 NORTH REACH POST DESIGN / ASBUILT  
 NORTH REACH PROGRAM MANAGEMENT - CONSTRUCTION  
 NORTHERN PIPELINE ENVIRONMENTAL FINAL DESIGN  
 NORTHERN PIPELINE RIGHT OF WAY FINAL DESIGN  
 OAK ST. PCS ROOF REPLACEMENT  
 OAK STREET PRESSURE CONTROL STRUCTURE ROOF REPLACEMENT - CONSTRUCTION  
 OC 44 SERVICE CONNECTIONS & EOC#2 METER ACCESS ROAD REHAB  
 OC FEEDER STA 1920+78 BLOWOFF STRUCTURE & RIP-RAP REPAIRS  
 OC RESERVOIR SODIUM HYPOCHLORITE PUMP AND PIPING REPLACEMENT  
 OC-71 FLOW CONTROL FACILITY  
 OC-88 - SECURITY FENCING AT PUMP PLANT  
 OC-88 EMERGENCY STANDBY GENERATOR UPGRADE STUDY  
 OC-88 PUMP PLANT AIR COMPRESSOR UPGRADE  
 OC-88 PUMP STATION FLOW METER UPGRADE  
 OC-88 PUMPING PLANT SURGE TANKS UPGRADES  
 OLINDA PCS AND SANTIAGO TOWER EMERGENCY GENERATORS  
 OLINDA PCS VALVE REPLACEMENT  
 OLINDA PRESSURE CONTROL STRUCTURE  
 OLINDA PRESSURE CONTROL STRUCTURE AND SANTIAGO TOWER EMERGENCY GENERATORS  
 ON-CALL RESOURCES MANAGEMENT APPLICATION  
 OPERATIONS CONTROL CENTER AT EAGLE ROCK  
 OPERATIONS CONTROL CENTER UPS REPLACEMENT  
 OPERATIONS SCOPING STUDY  
 ORANGE CO FDR, BLOW-OFF STRUCTURE AND ACCESS ROAD REPAIR  
 ORANGE COUNTY - 88 PUMP PLANT AIR COMPRESSOR UPGRADE  
 ORANGE COUNTY - 88 SECURITY FENCING AT PUMP PLANT  
 ORANGE COUNTY AREA DISTRIBUTION SYSTEM VALVE REPLACEMENT  
 ORANGE COUNTY C & D ELECTRICAL IMPROVEMENTS - STUDY  
 ORANGE COUNTY C&D INSTRUMENTATION PANEL IMPROVEMENTS  
 ORANGE COUNTY C&D TEAM SUPPORT FACILITY  
 ORANGE COUNTY CONVEYANCE AND DISTRIBUTION SERVICE CENTER  
 ORANGE COUNTY FEEDER CATHODIC PROTECTION  
 ORANGE COUNTY FEEDER EXTENSION LINING REPAIR  
 ORANGE COUNTY FEEDER INSPECTION  
 ORANGE COUNTY FEEDER INTERNAL INSPECTION STUDY  
 ORANGE COUNTY FEEDER LINING REPAIRS  
 ORANGE COUNTY FEEDER PRESSURE CONTROL STRUCTURES  
 ORANGE COUNTY FEEDER RELOCATION IN FULLERTON  
 ORANGE COUNTY FEEDER SCHEDULE 37SC CATHODIC PROTECTION  
 ORANGE COUNTY FEEDER STA 1920+78 BLOWOFF STRUCTURE & RIP-RAP REPAIRS  
 ORANGE COUNTY RESERVOIR - INSTALL HYPOCHLORINATION STATIONS  
 ORANGE COUNTY RESERVOIR - PIEZOMETERS & SEEPAGE MONITORING AUTOMATION  
 OXIDATION DEMONSTRATION PLANT CONTROL SYSTEM REPLACEMENT  
 PALOS ALTOS FEEDER - 108TH ST.  
 PALOS VERDES FEEDER - LONG BEACH LATERAL TURNOUT STRUCTURES STA. 1442+15 VALVE REPLACEMENTS  
 PALOS VERDES FEEDER PCS - VALVE REPLACEMENT  
 PALOS VERDES RESERVOIR - INSTALL HYPOCHLORINATION STATIONS  
 PC-1 EFFLUENT OPEN CHANNEL TRASH RACK  
 PC-1 EFFLUENT OPEN CHANNEL TRASH RACK PROJECT  
 PCCP HYDRAULIC ANALYSES

**TABLE 3  
CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS**

**Description**

**Distribution Facilities**

PCCP REHABILITATION - PROGRAM MANAGEMENT  
 PERIMETER FENCING AT PLACERITA CREEK  
 PERMANENT LEAK DETECTION/PIPELINE MONITORING SYSTEM  
 PERRIS PCS - UNINTERRUPTIBLE POWER SOURCE SYSTEMS INSTALLATION  
 PERRIS PCS ROOF REHAB  
 PERRIS PRESSURE CONTROL STRUCTURE ROOF REPLACEMENT  
 PERRIS PUMPBACK COVER  
 PERRIS VALLEY PIPELINE - DESIGN-BUILD (EMWD)  
 PERRIS VALLEY PIPELINE - GENERAL  
 PERRIS VALLEY PIPELINE - NORTH REACH  
 PERRIS VALLEY PIPELINE - RESERVED FOR STAGE II DESIGN / BUILD  
 PERRIS VALLEY PIPELINE - SOUTH REACH  
 PERRIS VALLEY PIPELINE - STUDY  
 PERRIS VALLEY PIPELINE - TIE-IN (WMWD)  
 PERRIS VALLEY PIPELINE - TUNNELS  
 PERRIS VALLEY PIPELINE - VALVES  
 PERRIS VALLEY PIPELINE DESIGN-BUILD (EMWD)  
 PERRIS VALLEY PIPELINE NORTH REACH  
 PERRIS VALLEY PIPELINE SOUTH REACH  
 PERRIS VALLEY PIPELINE TIE-IN (WMWD)  
 PERRIS VALLEY PIPELINE VALVES  
 PLACENTIA RAILROAD LOWERING PROJECT  
 PLACERITA CREEK PERIMETER FENCING  
 PLANT INFLUENT REDUNDANT FLOW METERING AND SPLITTING  
 PLC REPLACEMENT PHASE II  
 PRESTRESSED CONCRETE CYLINDER PIPE - PHASE 2  
 PRESTRESSED CONCRETE CYLINDER PIPE (PCCP) STRUCTURAL PERFORMANCE RISK ANALYSIS  
 PRESTRESSED CONCRETE CYLINDER PIPE -PHASE 3  
 PROGRAMMATIC ENVIRONMENTAL DOCUMENTATION OF ORANGE COUNTY  
 PROGRAMMATIC ENVIRONMENTAL DOCUMENTATION OF SAN BERNARDINO COUNTY  
 PROGRAMMABLE LOGIC CONTROLLER (PLC) STANDARDIZATION  
 PROGRAMMATIC ENVIRONMENTAL DOCUMENTATION FOR THE LOS ANGELES CO. OPERATING REGION  
 PROGRAMMATIC ENVIRONMENTAL DOCUMENTATION FOR THE ORANGE COUNTY OPERATING REGION  
 PROGRAMMATIC ENVIRONMENTAL DOCUMENTATION FOR THE RIVERSIDE/SAN DIEGO CO. OPERATING REGION  
 PROGRAMMATIC ENVIRONMENTAL DOCUMENTATION FOR THE WESTERN SAN BERNARDINO COUNTY OPERATING REGION  
 PUDDINGSTONE SPILLWAY CROSS CONNECTION  
 PV RESERVOIR HYPOCHLORITE PUMP AND PIPING REPLACEMENT  
 R&R FOR DISTRIBUTION  
 REAL PROPERTY ACQUISITION  
 RED MOUNTAIN - OCT. 2007 FIRE DAMAGE - COMMUNICATION POWER TOWERS & METER STRUCTURES REPAIR/REPLACE (INCIDENT NO. 2007-1023-0271)  
 RED MOUNTAIN HEP FLOOD DAMAGE  
 RED MTN COMM. TOWER & METER STRUCTURE  
 REHABILITATION OF THE GREG AVE PCS CONTROL BUILDING INTERIOR  
 RELOCATION OF ORANGE COUNTY FEEDER  
 RELOCATION OF PORTION OF ORANGE COUNTY FEEDER (MWD'S SHARE)  
 REMAINING PORTIONS  
 REPAIRS TO THE LA-35 DISCHARGE STRUCTURE  
 REPLACE 2 FIRE & DOMESTIC WATER SYSTEM  
 REPLACE COMMUNICATION LINE TO THE SAN GABRIEL CONTROL TOWER  
 REPLACE COPPER GROUNDWIRES ON DESERT HIGH VOLTAGE TRANSMISSION TOWERS  
 REPLACE VALVE POSITION INDICATORS  
 REPLACEMENT OF COMMUNICATION LINE AT SAN GABRIEL TOWER  
 REPLACEMENT/ RELINE AT-RISK PCCP LINES - STAGE 1  
 RIALTO FEEDER BROKEN BACK REPAIR  
 RIALTO FEEDER VALVE STRUCTURE  
 RIALTO FEEDER, REPAIRS AT SELECT LOCATIONS, STUDY  
 RIALTO PIPELINE - CONSTRUCTION PHASE 1  
 RIALTO PIPELINE - CONSTRUCTION PHASE 2  
 RIALTO PIPELINE IMPROVEMENTS  
 RIALTO PIPELINE IMPROVEMENTS - CONSTRUCTION  
 RIALTO PIPELINE IMPROVEMENTS - CONSTRUCTION PHASE III  
 RIALTO PIPELINE IMPROVEMENTS - DESIGN PHASE 2  
 RIALTO PIPELINE IMPROVEMENTS - DESIGN PHASE 3  
 RIALTO PIPELINE IMPROVEMENTS - FINAL DESIGN  
 RIALTO PIPELINE IMPROVEMENTS - VALVE PROCUREMENT  
 RIALTO PIPELINE IMPROVEMENTS PHASE 1 FINAL DESIGN  
 RIALTO PIPELINE PCCP REHABILITATION  
 RIALTO PIPELINE REPAIR @ STA 3196+44  
 RIALTO PIPELINE REPAIR AT THOMPSON CREEK  
 RIALTO PIPELINE REPAIRS AT STATION 3198+44  
 RIALTO PIPELINE VALVE PROCUREMENT  
 RIGHT OF WAY INFRASTRUCTURE PROTECTION PROGRAM - LOS ANGELES COUNTY REGION  
 RIGHT OF WAY INFRASTRUCTURE PROTECTION PROGRAM - O. C. REGION  
 RIGHT OF WAY INFRASTRUCTURE PROTECTION PROGRAM - RIVERSIDE AND SAN DIEGO COUNTY REGION  
 RIGHT OF WAY INFRASTRUCTURE PROTECTION PROGRAM - WESTERN SAN BERNARDINO COUNTY REGION  
 RIGHT OF WAY SURVEY AND MAPPING  
 RIO HONDO PRESSURE CONTROL STRUCTURE VALVE REPLACEMENTS  
 ROBERT B. DIEMER FILTRATION PLANT - LAND ACQUISITION  
 ROOF REPLACEMENT AT SOTO ST. FACILITY  
 SAN DIEGO #3 BLOWOFF TO PUMPWELL CONVERSION  
 SAN DIEGO CANAL - EAST & WEST BYPASS SCREENING STRUCTURES STUDY  
 SAN DIEGO CANAL - ELECTRICAL VAULT & CONDUCTOR REPLACEMENT  
 SAN DIEGO CANAL - FENCING  
 SAN DIEGO CANAL - INSTALL ACOUSTIC FLOW METER  
 SAN DIEGO CANAL - PIEZOMETER  
 SAN DIEGO CANAL - REPLACE SODIUM BISULFATE TANK  
 SAN DIEGO CANAL - SEEPAGE STUDY  
 SAN DIEGO CANAL BISULFITE TANK REPLACEMENT  
 SAN DIEGO CANAL LINER REPAIR  
 SAN DIEGO CANAL RADIAL GATE (VO-6) REHABILITATION  
 SAN DIEGO CANAL RADIAL GATE (VO-8) REHABILITATION  
 SAN DIEGO CANAL RADIAL GATE REHAB  
 SAN DIEGO CANAL SEEPAGE STUDY  
 SAN DIEGO CANAL WEST BYPASS TRASH RACK  
 SAN DIEGO PIPELINE #4 VALVE REPLACEMENT  
 SAN DIEGO PIPELINE 1 BLOW-OFF VALVE REPLACEMENT  
 SAN DIEGO PIPELINE 3 & 5 REMOTE CONTROL OF BYPASS

**TABLE 3  
CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS**

**Description**

**Distribution Facilities**

SAN DIEGO PIPELINE 4 AND AULD VALLEY PIPELINE CARBON FIBER REPAIRS  
 SAN DIEGO PIPELINE 5 & LAKE SKINNER OUTLET REPAIR  
 SAN DIEGO PIPELINE 6 - PRESSURE CONTROL STRUCTURE/HYDROELECTRIC PLANT - FEASIBILITY STUDY  
 SAN DIEGO PIPELINE 6 NORTH REACH, ENVIRONMENTAL MONITORING DURING CONSTRUCTION  
 SAN DIEGO PIPELINE NO. 3 BYPASS  
 SAN DIEGO PIPELINE NO. 3 PIPING MODIFICATIONS  
 SAN DIEGO PIPELINE NO. 5 - OCT. 2007 FIRE DAMAGE - REPLACE ABOVE GROUND CORROSION CONTROL SYSTEM EQUIPMENT, AND STRUCTURAL APPURTENANCES  
 SAN DIEGO PIPELINE NO. 6 - RIVERSIDE BRANCH - ETIWANDA FACILITY/DROP INLET STRUCTURE  
 SAN DIEGO PIPELINE NO. 6 - RIVERSIDE BRANCH - PLEASANT PEAK, COMMUNICATIONS  
 SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL CONSTRUCTION - AS BUILT  
 SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL COST OF RIGHT OF WAY (OPTIONAL PORTAL SITE)  
 SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL ENVIRONMENTAL CONSTRUCTION  
 SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL ENVIRONMENTAL PRELIMINARY DESIGN  
 SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL PRELIMINARY DESIGN  
 SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL PROGRAM MANAGEMENT  
 SAN DIEGO PIPELINE NO. 6 - RIVERSIDE TUNNEL RIGHT OF WAY PRELIMINARY DESIGN  
 SAN DIEGO PIPELINE NO. 6 - CONTRACT NO.1 SAN DIEGO CANAL TO MOUNT OLYMPUS  
 SAN DIEGO PIPELINE NO. 6 - CONTRACT NO.2 MOUNT OLYMPUS TUNNEL & PORTALS  
 SAN DIEGO PIPELINE NO. 6 - NORTH REACH CONSTRUCTION - AS BUILT  
 SAN DIEGO PIPELINE NO. 6 - NORTH REACH ENVIRONMENTAL - CONSTRUCTION  
 SAN DIEGO PIPELINE NO. 6 - NORTH REACH ENVIRONMENTAL PRELIMINARY DESIGN  
 SAN DIEGO PIPELINE NO. 6 - NORTH REACH FINAL DESIGN & ADV/NTP  
 SAN DIEGO PIPELINE NO. 6 - NORTH REACH POST DESIGN  
 SAN DIEGO PIPELINE NO. 6 - NORTH REACH PRELIMINARY DESIGN  
 SAN DIEGO PIPELINE NO. 6 - NORTH REACH PROGRAM MANAGEMENT - CONSTRUCTION  
 SAN DIEGO PIPELINE NO. 6 - NORTH REACH PROGRAM MANAGEMENT - DESIGN  
 SAN DIEGO PIPELINE NO. 6 - NORTH REACH RIGHT OF WAY FINAL DESIGN  
 SAN DIEGO PIPELINE NO. 6 - NORTH REACH RIGHT OF WAY PRELIMINARY DESIGN  
 SAN DIEGO PIPELINE NO. 6 - NORTHERN PIPELINE COST OF RIGHT OF WAY  
 SAN DIEGO PIPELINE NO. 6 - NORTHERN REACH ENVIRONMENTAL FINAL DESIGN  
 SAN DIEGO PIPELINE NO. 6 - OPERATIONS SCOPING STUDY  
 SAN DIEGO PIPELINE NO. 6 - PIPELINE/TUNNEL STUDY - DESIGN  
 SAN DIEGO PIPELINE NO. 6 - PIPELINE/TUNNEL STUDY - ENVIRONMENTAL  
 SAN DIEGO PIPELINE NO. 6 - PIPELINE/TUNNEL STUDY - PROJECT MANAGEMENT  
 SAN DIEGO PIPELINE NO. 6 - PIPELINE/TUNNEL STUDY - RIGHT OF WAY  
 SAN DIEGO PIPELINE NO. 6 - PROJECT MANAGEMENT  
 SAN DIEGO PIPELINE NO. 6 - RIGHT OF WAY  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH - PROGRAM MANAGEMENT  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH / TUNNEL STUDY  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH CONSTRUCTION / AS BUILT  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH COST OF RIGHT OF WAY  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH ENVIRONMENTAL - CONSTRUCTION  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH ENVIRONMENTAL FINAL DESIGN  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH ENVIRONMENTAL PRELIMINARY DESIGN  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH FINAL DESIGN/ADV  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH PRELIMINARY DESIGN  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH RIGHT OF WAY FINAL DESIGN  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH RIGHT OF WAY PRELIMINARY DESIGN  
 SAN DIEGO PIPELINE NO. 6 - SOUTH REACH TUNNEL ALIGNMENT ANALYSIS  
 SAN DIEGO PIPELINE NO. 6 AREA STUDY  
 SAN DIEGO PIPELINE NO. 6 ENVIRONMENTAL MITIGATION  
 SAN DIEGO PIPELINE NO.4 & AULD VALLEY PIPELINE CARBON FIBER REPAIR STUDY  
 SAN DIEGO PIPELINE NOS. 1AND 3 - VALVE REPLACEMENT  
 SAN DIMAS AND RED MOUNTAIN POWER PLANTS STANDBY DIESEL ENGINE GENERATOR REPLACEMENTS  
 SAN DIMAS CONTROL STRUCTURE 500 GALLONS DIESEL TANK REPLACEMENT  
 SAN DIMAS HEP BATTERY BANK AND GENERATOR BREAKER  
 SAN DIMAS PCS - UNINTERRUPTIBLE POWER SOURCE SYSTEMS INSTALLATION  
 SAN FRANCISQUITO PIPELINE BLOW OFF STRUCTURE, STA 287+70, ACCESS ROAD CONSTRUCTION  
 SAN GABRIEL TOWER SEISMIC UPGRADE  
 SAN GABRIEL TOWER SLIDE GATE REHABILITATION  
 SAN JACINTO #1 AND #2 CASA LOMA FAULT CROSSING STRUCTURE UPGRADE  
 SAN JACINTO DIVERSION STRUCTURE SLIDE GATE V-03 REPLACEMENT  
 SAN JOAQUIN RELIEF STRUCTURE FOR EASTERN ORANGE COUNTY FEEDER #2  
 SAN JOAQUIN RELIEF STRUCTURE FOR EASTR OC FDR #2  
 SAN JOAQUIN RESERVOIR, INSTALL BULKHEAD  
 SANTA ANA RIVER BRIDGE EXPANSION JOINT REPLACEMENT  
 SANTA ANA RIVER BRIDGE SEISMIC RETROFIT  
 SANTA ANA RIVER BRIDGE SEISMIC UPGRADE  
 SANTA MONICA FEEDER RELOCATION  
 SANTA MONICA FEEDER STATION 495+10 REHABILITATION  
 SANTIAGO CONTROL TOWER CATHODIC PROTECTION  
 SANTIAGO LATERAL REPLACE MOTOR - OPERATED VALVE  
 SANTIAGO LATERAL SECTIONALIZATION VALVE REPLACEMENT  
 SANTIAGO LATERAL STA 216+40 BUTTERFLY VALVE REPLACEMENT  
 SANTIAGO PRESSURE CONTROL STRUCTURE  
 SANTIAGO TOWER ACCESS ROAD IMPROVEMENT  
 SCADA COMMUNICATIONS MPLS UPGRADE - AT&T REGION (MINOR CAP)  
 SCADA COMMUNICATIONS MPLS UPGRADE - VERIZON REGION (MINOR CAP)  
 SCADA SYSTEM HARDWARE UPGRADE  
 SCADA SYSTEM NT SOFTWARE UPGRADE  
 SCADA SYSTEM SUPPORT PROGRAMS  
 SD AND CASA LOMA CANALS LINING  
 SD CANAL EAST & WEST BYPASS SCREENING STRUCTURES STUDY  
 SD CANAL REPLACE SODIUM BISULFITE TANK  
 SD PIPELINE 3 CULVERT ROAD REHAB  
 SD PIPELINE 3,4, AND 5 PROTECTIVE COVER  
 SD PIPELINE 4 EXPLORATORY EXCAVATION  
 SD PIPELINE 5 EXPLORATORY EXCAVATION  
 SD PIPELINES 3 AND 5 REMOTE CONTROL BYPASS STRUCTURE GATES AND ISOLATION VALVES  
 SECOND LOWER & SEPULVEDA FEEDERS SCI DRAIN STATIONS  
 SECOND LOWER CROSS FEEDER - VALVE PROCUREMENT  
 SECOND LOWER CROSS FEEDER CONSTRUCTION  
 SECOND LOWER CROSS FEEDER FINAL DESIGN  
 SECOND LOWER FEEDER - INSTALL LINER  
 SECOND LOWER FEEDER CATHODIC PROTECTION SYSTEM  
 SECOND LOWER FEEDER CURRENT MITIGATION REFURBISHMENT  
 SECOND LOWER FEEDER PCCP REHABILITATION

<b>TABLE 3 CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS</b>
<b>Description</b>
<b>Distribution Facilities</b>
SECOND LOWER FEEDER PCCP REHABILITATION - PHASE I: PIPE PROCUREMENT
SECOND LOWER FEEDER PCCP REHABILITATION - PHASE I: PRELIMINARY DESIGN
SECOND LOWER FEEDER PCCP REHABILITATION - PHASE I: REACH 1
SECOND LOWER FEEDER PCCP REHABILITATION - PHASE I: REACH 2
SECOND LOWER FEEDER PCCP REHABILITATION - PHASE I: REACH 3
SECOND LOWER FEEDER PCCP REHABILITATION - PHASE I: REACH 4
SECOND LOWER FEEDER PCCP REHABILITATION - PHASE I: REACH 5
SECOND LOWER FEEDER PCCP REHABILITATION - PHASE I: REACH 6
SECOND LOWER FEEDER PCCP REHABILITATION - PHASE I: ROW ACQUISITION
SECOND LOWER FEEDER PCCP REHABILITATION - PHASE I: VALVE PROCUREMENT
SECOND LOWER FEEDER PCCP REPAIRS
SECOND LOWER FEEDER RELIABILITY AT 3 LOCATIONS - SEISMIC STUDY
SEISMIC UPGRADE OF 11 FACILITIES ON THE ALLEN MCCOLLOCH PIPELINE
SEISMIC UPGRADES AT 10 SERVICE CONNECTION STRUCTURES ALONG AMP
SELECTED PRESSURE REPLACE VALVE POSITION INDICATORS
SEPULVEDA CANYON CONTROL FACILITY BYPASS PROJECT
SEPULVEDA CANYON CONTROL FACILITY WATER STORAGE TANKS SEISMIC UPGRADE
SEPULVEDA CANYON POWER PLANT TAIL RACE COATINGS
SEPULVEDA CANYON TANKS EXTERIOR AND INTERIOR RECOATING
SEPULVEDA FEEDER - CARBON FIBER LINER REPAIRS
SEPULVEDA FEEDER CATHODIC PROTECTION SYSTEM
SEPULVEDA FEEDER CORROSION/INTERFERENCE MITIGATION, STATION 950+00 TO 1170+00
SEPULVEDA FEEDER HEP AUTO PILOT
SEPULVEDA FEEDER REPAIRS AT 3 SITES
SEPULVEDA FEEDER SOUTH CATHODIC PROTECTION SYSTEM
SEPULVEDA FEEDER STATION 2002+02 TO 2273+28 STRAY CURRENT INTERFERENCE MITIGATION
SEPULVEDA FEEDER STRAY CURRENT MITIGATION REFURBISHMENT
SEPULVEDA PCS - PERIMETER ASPHALT REPAIRS
SEPULVEDA PIPELINE PCCP REHABILITATION
SEPULVEDA-WEST BASIN INTERCONNECTION VALVE REPLACEMENTS
SERVICE CONNECTION LV-01 UPGRADES
SERVICE CONNECTION OC-26 - RELOCATION OF METER CABINET, INSTRUMENT HOUSING & AIR VENT STACK
SERVICE CONNECTIONS CB-12 & CB-16 TURNOUT VALVE REPLACEMENT & ELECTRICAL UPGRADE
SIMULATION AND MODELING APPLICATION FOR REAL TIME OPERATIONS SMART OPS
SITE 3 SECOND LOWER FEEDER URGENT REPAIRS - FINAL DESIGN
SITES 1 & 2 SECOND LOWER FEEDER URGENT REPAIRS - FINAL DESIGN & PIPE FABRICATION
SKINNER BRANCH - AIR INJECTION MODIFICATIONS TO RED MOUNTAIN POWER PLANT
SKINNER BRANCH - CASA LOMA CANAL
SKINNER BRANCH - CASA LOMA SIPHON BARREL ONE
SKINNER BRANCH - CATWALK FOR TRAVELING MAINTENANCE BRIDGE FOR
SKINNER BRANCH - FABRICATE & REPLACE THE STEMS, NUTS & KEYS
SKINNER BRANCH - REPAIR MODULE 1 AND 2 FLOCCULATORS BRIDGES
SKINNER DAM REMEDIATION
SKINNER DISTRIBUTION SYSTEM - CONTRACT # 1396
SKINNER ELECTRICAL BUILDING HVAC UPGRADE
SKINNER FACILITY AREA PAVING
SKINNER FILTRATION PLANT - ELEVATED SLAB IN SERVICE BLDG 1
SKINNER HELIPAD REHAB
SKINNER REPLACEMENT FOR WETCELL BATTERY AND INVERTER
SKINNER SCADA SERVERS RELOCATION
SMART-OPS (FORMERLY RTOS)
SOTO STREET FACILITY - BUILDING SEISMIC UPGRADE
SOTO STREET FACILITY - REPLACE HEATING
SOTO STREET FACILITY - ROOF REPLACEMENT
SOUTH COUNTY PIPELINE PROTECTION AT SAN JUAN CREEK CROSSING
SOUTH REACH / TUNNEL STUDY
SOUTH REACH CONSTRUCTION/ASBUILT - FUTURE UNAPPROPRIATED
SOUTH REACH DESIGN - FUTURE/UNAPPROPRIATED
SOUTH REACH ENVIRONMENTAL - FUTURE/UNAPPROPRIATED
SOUTH REACH FEASIBILITY STUDY
SOUTH REACH PROJECT MANAGEMENT - FUTURE/UNAPPROPRIATED
SOUTH REACH RIGHT OF WAY - FUTURE/UNAPPROPRIATED
SPECIAL SERVICE BRANCH - REPLACE PLATE BENDING
ST. JOHN'S CANYON CHANNEL EROSION MITIGATION
SYSTEM RELIABILITY PROGRAM
SYSTEM-WIDE ASPHALT REPLACEMENT
TEMESCAL POWER PLANT REPLACE EMERGENCY GENERATOR
TREATED WATER CROSS CONNECTION PREVENTION - FINAL DESIGN & CONSTRUCTION
TREATED WATER CROSS CONNECTION PREVENTION - UNFUNDED WORK
TWO-WAY RADIO ENHANCEMENT - EMERGENCY SERVICES, FIRE CONTROL, EVACUATION & BLDG. MAINT.
TWO-WAY RADIO ENHANCEMENT FOR EMERGENCY SERVICES, FIRE CONTROL, EVACUATION AND BLDG. MAINTENANCE
UNDER GROUND STORAGE TANK DISPENSER SPILL CONTAINMENT & REMEDIATION
UNION STATION TWO-WAY RADIO ENHANCEMENT FOR EMERGENCY SERVICES, FIRE CONTROL, EVACUATION AND BUILDING MAINTENANCE
UPGRADE CATHODIC PROTECTION RECTIFIERS
UPGRADE HOLLYWOOD TUNNEL PORTAL SLEEVE VALVE EQUIPMENT
UPGRADE SUNSET GARAGE
UPPER FEEDER - SANTA ANA RIVER BRIDGE REPAIRS
UPPER FEEDER - STRUCTURAL PROTECTION
UPPER FEEDER AIR ENTRAINMENT
UPPER FEEDER CATHODIC PROTECTION SYSTEM
UPPER FEEDER GATE REHABILITATION
UPPER FEEDER JUNCTION STRUCTURE SEISMIC UPGRADE
UPPER FEEDER SANTA ANA RIVER DISCHARGE PAD
UPPER FEEDER SERVICE CONNECTIONS UPGRADES
UPPER NEWPORT BAY BLOW-OFF STRUCTURE REHABILITATION
UPS SYSTEMS INSTALLATION AT FOOTHILL PCS
UPS SYSTEMS INSTALLATION AT FERRIS CONTROL STRUCTURE
UTILITY BUSINESS ARCHITECTURE (OBJECT MAPPING/MODELING)
VACUUM AIR RELEASE VALVE RELOCATION PILOT PROGRAM
VALLEY & LOS ANGELES DISTRIBUTION VALVE POSITION DISPLAY UPGRADE
VALVE PROCUREMENT
VIDEO CONFERENCE SYSTEM UPGRADE
VIDEOCONFERENCING UPGRADE



<b>TABLE 3 CONVEYANCE, DISTRIBUTION, AND STORAGE SYSTEM COSTS</b>	
<b>Description</b>	
<b>Distribution Facilities</b>	
WADSWORTH PUMPING PLANT - MODIFICATION/REPAIRS OF FIFTY-NINE 6.9KV BREAKERS/CABINETS	
WADSWORTH PUMPING PLANT CONDUIT REPAIR AND PROTECTION	
WADSWORTH PUMPING PLANT CONTROL & PROTECTION UPGRADES	
WADSWORTH PUMPING PLANT FOREBAY GANTRY CRANE UPGRADE	
WADSWORTH PUMPING PLANT RECOATING 144" YARD PIPING	
WADSWORTH PUMPING PLANT STOP LOGS ADDITION - STUDY	
WATER DELIVERY SYSTEM AUTOMATION	
WATER PLANNING APPLICATION	
WATER QUALITY - REMOTE MONITORING	
WATER QUALITY LABORATORY BUILDING EXPANSION	
WATER QUALITY MONITORING AND EVENT DETECTION SYSTEM	
WEST COAST FEEDER - CATHODIC PROTECTION SYSTEMS	
WEST OC FEEDER VALVE REPLACEMENT	
WEST ORANGE COUNTY FEEDER OC-09 REHABILITATION	
WEST ORANGE COUNTY FEEDER VALVE REPLACEMENT	
WEST VALLEY AREA STUDY	
WEST VALLEY FEEDER # 1 STAGE 2 VALVE STRUCTURE MODIFICATIONS - CONSTRUCTION	
WEST VALLEY FEEDER NO. 1 ACCESS ROADS AND STRUCTURE IMPROVEMENTS (STAGE 3)	
WEST VALLEY FEEDER NO. 1 ACCESS ROADS AND STRUCTURES IMPROVEMENTS	
WEST VALLEY FEEDER NO. 1 VALVE STRUCTURE MODIFICATIONS	
WESTERN REGION PLUMBING RETROFIT	
WEYM. PLT/LA VERNE FAC-BACKFLO PREV ASSY	
WEYMOUTH - BUILDING NO. 4 - HAND RAIL AND STAIRS ADDITION	
WEYMOUTH - FLAG POLE AREA LANDSCAPE UPGRADE	
WEYMOUTH ASPHALT REHABILITATION	
WEYMOUTH COMPRESSED AIR SYSTEM	
WEYMOUTH DISTRIBUTION SYSTEM - REPLACEMENT OF AREA CONTROL SYSTEMS - CONTRACT #1396	
WFP - ASPHALT REHABILITATION	
WFP - COMPRESSED AIR SYSTEM IMPROVEMENT	
WFP - PURCHASE OF REAL PROPERTY	
WFP - REPAIR TO BLDG # 1	
YORBA LINDA FEEDER - STA 924+11 PORTAL ACCESS	
YORBA LINDA FEEDER BYPASS	
YORBA LINDA PORTAL STRUCTURE ACCESS/TELEGRAPH CREEK BRIDGE	
<b>Sub-total Distribution facilities costs</b>	<b>\$ 70,409,322</b>

<b>FISCAL YEAR 2020/21 ESTIMATED READINESS-TO-SERVE CHARGE REVENUE</b>							
<b>Member Agency</b>	<b>Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2008/09 - FY2017/18</b>	<b>RTS Share</b>	<b>6 months @ \$136 million per year (7/20-12/20)</b>	<b>Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2009/10 - FY2018/19</b>	<b>RTS Share</b>	<b>6 months @ \$130 million per year (1/21-6/21)</b>	<b>Total RTS Charge FY 2020/21</b>
Anaheim	18,484.7	1.19%	808,227	17,327.0	1.17%	763,281	1,571,508
Beverly Hills	10,636.8	0.68%	465,085	10,447.3	0.71%	460,220	925,304
Burbank	12,505.3	0.80%	546,783	12,323.6	0.84%	542,874	1,089,657
Calleguas MWD	100,327.3	6.45%	4,386,723	97,187.9	6.59%	4,281,277	8,668,000
Central Basin MWD	45,375.1	2.92%	1,983,986	42,103.2	2.85%	1,854,711	3,838,697
Compton	1,052.6	0.07%	46,024	779.3	0.05%	34,329	80,353
Eastern MWD	95,589.5	6.15%	4,179,567	94,362.5	6.40%	4,156,814	8,336,381
Foothill MWD	8,761.7	0.56%	383,098	8,395.4	0.57%	369,830	752,928
Fullerton	8,520.9	0.55%	372,569	8,125.5	0.55%	357,941	730,510
Glendale	17,219.1	1.11%	752,890	16,548.0	1.12%	728,965	1,481,855
Inland Empire Utilities Agency	58,335.2	3.75%	2,550,655	56,560.7	3.83%	2,491,586	5,042,242
Las Virgenes MWD	20,859.4	1.34%	912,059	20,448.6	1.39%	900,792	1,812,851
Long Beach	31,074.3	2.00%	1,358,696	30,374.2	2.06%	1,338,030	2,696,727
Los Angeles	298,801.6	19.21%	13,064,838	269,779.5	18.28%	11,884,203	24,949,041
Municipal Water District of Orange County	214,227.5	13.77%	9,366,909	207,817.5	14.08%	9,154,682	18,521,591
Pasadena	19,306.1	1.24%	844,142	18,839.6	1.28%	829,913	1,674,056
San Diego County Water Authority	287,538.4	18.49%	12,572,364	258,318.0	17.51%	11,379,307	23,951,671
San Fernando	35.7	0.00%	1,561	35.6	0.00%	1,568	3,129
San Marino	854.7	0.05%	37,371	837.7	0.06%	36,902	74,273
Santa Ana	11,281.3	0.73%	493,265	10,780.4	0.73%	474,893	968,158
Santa Monica	6,403.0	0.41%	279,966	5,511.2	0.37%	242,777	522,742
Three Valleys MWD	62,968.2	4.05%	2,753,229	62,229.1	4.22%	2,741,288	5,494,517
Torrance	16,507.9	1.06%	721,793	15,990.2	1.08%	704,393	1,426,186
Upper San Gabriel Valley MWD	22,639.8	1.46%	989,905	26,406.0	1.79%	1,163,225	2,153,130
West Basin MWD	116,023.0	7.46%	5,073,004	115,327.9	7.82%	5,080,372	10,153,376
Western MWD	69,876.5	4.49%	3,055,289	68,688.3	4.66%	3,025,826	6,081,114
<b>MWD Total</b>	<b>1,555,205.6</b>	<b>100.00%</b>	<b>\$ 68,000,000</b>	<b>1,475,544.2</b>	<b>100.00%</b>	<b>\$ 65,000,000</b>	<b>\$ 133,000,000</b>
Totals may not foot due to rounding							

**TABLE 5**  
**FISCAL YEAR 2020/21**  
**ESTIMATED STANDBY CHARGE REVENUE**

<b>Member Agencies</b>	<b>Total Parcel Charge</b>	<b>Number Of Parcels Or Acres</b>	<b>Gross Revenues (Dollars) <sup>1</sup></b>
Anaheim	\$ 8.55	68,630	\$ 586,789
Beverly Hills	-	-	-
Burbank	14.20	29,143	413,833
Calleguas MWD	9.58	259,345	2,484,527
Central Basin MWD	10.44	340,322	3,552,963
Compton	5.00	18,144	90,721
Eastern MWD	6.94	401,288	2,784,940
Foothill MWD	10.28	30,350	311,994
Fullerton	10.71	35,249	377,521
Glendale	12.23	45,065	551,143
Inland Empire Utilities Agency	7.59	260,763	1,979,191
Las Virgenes MWD	8.03	53,527	429,823
Long Beach	12.16	92,468	1,124,411
Los Angeles	-	-	-
Municipal Water District of Orange County <sup>2</sup>	10.09	659,398	7,497,253
Pasadena	11.73	39,289	460,865
San Diego County Water Authority	11.51	1,109,879	12,774,707
San Fernando	-	5,102	-
San Marino	8.24	4,972	40,972
Santa Ana	7.88	54,815	431,940
Santa Monica	-	-	-
Three Valleys MWD	12.21	152,246	1,858,926
Torrance	12.23	40,595	496,476
Upper San Gabriel Valley MWD	9.27	213,920	1,983,041
West Basin MWD	-	-	-
Western MWD	9.23	386,901	3,571,097
<b>MWD Total</b>		<b>4,301,414</b>	<b>\$ 43,803,133</b>

(1) Estimates per FY2019/20 parcel information

(2) Adjusted for inclusion of Coastal MWD

Note: Totals may not foot due to rounding.



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_\_

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**RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA  
FIXING AND ADOPTING  
A CAPACITY CHARGE  
EFFECTIVE JANUARY 1, 2021**

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The Board of Directors of The Metropolitan Water District of Southern California (the “Board”) hereby finds that:

1. The Board of The Metropolitan Water District of Southern California (“Metropolitan”), pursuant to Sections 133, 134 and 134.5 of the Metropolitan Water District Act (the “Act”), is authorized to fix such rate or rates for water as will result in revenue which, together with revenue from any water standby or availability of service charge or assessment, will pay the operating expenses of Metropolitan, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by Metropolitan, and provide for the payment of the interest and principal of its bonded debt; and
2. The amount of revenue to be raised by the Capacity Charge shall be as determined by the Board and allocation of such charges among member agencies shall be in accordance with the method established by the Board; and
3. The Capacity Charge is a charge fixed and adopted by Metropolitan and charged to its member agencies, and is not a fee or charge imposed upon real property or upon persons as an incident of property ownership; and
4. The Capacity Charge is intended to recover the debt service and other appropriately allocated costs to construct, operate and maintain projects needed to meet peak demands on Metropolitan’s distribution system, as shown in the FYs 2020/21 and 2021/22 Cost of Service Report for Proposed Water Rates and Charges (the “2020 Cost of Service Report”); and
5. Pursuant to Resolution 8329, adopted by the Board on July 9, 1991, and Resolution 9199, adopted by the Board on March 8, 2016, and as each is thereafter amended and supplemented, proceeds of the RTS Charge, Capacity Charge, and other revenues from the sale or availability of water are pledged to the payment of Metropolitan’s outstanding revenue bonds and to the payment of Metropolitan’s outstanding subordinate revenue bonds and to revenue bonds and subordinate bonds to be issued pursuant to Resolution 8329 and Resolution 9199; and
6. The Capacity Charge is charged (on a dollar per cubic-foot-per-second basis) to member public agencies (“member agencies”), based upon the amount of capacity used by such member agency that is designed to recover the cost of providing peaking capacity within the distribution system; and

7. In *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.*, San Francisco Superior Court Case Nos. CPF-16-515282, CPG-17-563350, and CPF-18-516389 (the “2016, 2017, and 2018 Cases”, collectively), the San Diego County Water Authority challenged Metropolitan’s water charges adopted on April 12, 2016, April 11, 2017, and April 10, 2018, respectively, and also challenged Metropolitan’s rates. Metropolitan is defending such challenges; and

8. Metropolitan maintains that its rates and charges are appropriate. There is no final judgment in the identified cases and Metropolitan does not anticipate a final judgement in CY 2021; and

9. On April 14, 2020, the Board considered the rates and charges presented by the General Manager and approved the biennial budget for fiscal years 2020/21 and 2021/22 and adopted recommended water rates for calendar years 2021 and 2022 and charges for calendar year 2021, and received information and documents available at <http://mwdh2o.com/WhoWeAre/Pages/FY-2020-21-and-2021-22-CY-2021-22.aspx> and <http://mwdh2o.com/WhoWeAre/Mission/Pages/review-applicability-of-property-tax-limit.aspx>; and

10. In approving the biennial budget and adopting the rates and charges on April 14, 2020, the Board determined the amount of revenue to be raised by the Capacity Charge in calendar year 2021 to be based on a Capacity Charge in such year of \$10,700 per cubic-foot-per-second, based on information and documents available at <http://mwdh2o.com/WhoWeAre/Pages/FY-2020-21-and-2021-22-CY-2021-22.aspx> and <http://mwdh2o.com/WhoWeAre/Mission/Pages/review-applicability-of-property-tax-limit.aspx>. The amount of the Capacity Charge was updated from the recommendation in the 2020 Cost of Service Report, to reflect modifications made to respond to the COVID-19 pandemic and the effect of PFAS/PFOS will have on certain projections. However, the COS methodology remains the same; and

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

NOW, THEREFORE, the Board does hereby resolve, determine and order as follows:

**Section 1.** That the Board hereby fixes and adopts a Capacity Charge, as described below, to be effective January 1, 2021.

**Section 2.** That said Capacity Charge shall be in an amount sufficient to provide for payment of the capital financing costs not paid from *ad valorem* property taxes, as well as other appropriately allocated costs, incurred to provide peaking capacity within Metropolitan’s distribution system.

**Section 3.** That such Capacity Charge effective January 1, 2021, shall be a charge as specified in Section 5 (set in dollars per cubic-foot-per-second of the peak day capacity) for capacity provided to a member agency.

**Section 4.** That the Capacity Charge specified in Section 5, together with other revenues from Metropolitan’s water rates, other charges, ad valorem property taxes, and other miscellaneous revenue, does not exceed the reasonable and necessary cost of providing Metropolitan’s water service for which the rates and charges are made, or conferring the benefit provided, and is fairly apportioned to each member agency in proportion to the peak day capacity utilized by each member agency.

**Section 5.** That the Capacity Charge shall be a fixed charge as shown in the following table and collected from each member agency monthly, quarterly or semiannually as agreed to by Metropolitan and the member agency.

**Table 1. Calendar Year 2021 Capacity Charge**

<b>Calendar Year 2021 Capacity Charge</b>					
	Peak Day Demand (cfs) (May 1 through September 30)				Rate (\$/cfs): \$10,700
	Calendar Year				
	Member Agency	2017	2018	2019	3-Year Peak
Anaheim	33.0	37.2	37.1	37.2	\$398,040
Beverly Hills	25.7	27.8	23.5	27.8	\$297,460
Burbank	14.0	17.1	17.3	17.3	\$185,110
Calleguas	186.5	184.7	168.9	186.5	\$1,995,550
Central Basin	36.7	39.2	48.6	48.6	\$520,020
Compton	0.1	6.9	2.9	6.9	\$73,830
Eastern	216.6	225.1	223.3	225.1	\$2,408,570
Foothill	18.6	19.9	16.0	19.9	\$212,930
Fullerton	13.0	13.3	13.1	13.3	\$142,310
Glendale	41.4	33.5	32.2	41.4	\$442,980
Inland Empire	140.5	147.8	118.7	147.8	\$1,581,460
Las Virgenes	44.6	45.9	39.4	45.9	\$491,130
Long Beach	55.2	80.4	51.8	80.4	\$860,280
Los Angeles	250.4	284.6	283.2	284.6	\$3,045,220
MWDOC	418.6	442.3	263.2	442.3	\$4,732,610
Pasadena	39.9	43.0	40.0	43.0	\$460,100
San Diego CWA	749.7	855.5	672.0	855.5	\$9,153,850
San Fernando	0.0	0.0	0.0	0.0	\$0
San Marino	7.5	4.5	2.3	7.5	\$80,250
Santa Ana	19.9	19.3	19.4	19.9	\$212,930
Santa Monica	16.6	16.7	20.7	20.7	\$221,490
Three Valleys	126.4	142.9	128.1	142.9	\$1,529,030
Torrance	34.0	32.6	27.8	34.0	\$363,800
Upper San Gabriel	12.1	23.3	29.1	29.1	\$311,370
West Basin	201.7	202.4	211.8	211.8	\$2,266,260
Western MWD	175.2	194.7	170.5	194.7	\$2,083,290
<b>Total</b>	<b>2,877.9</b>	<b>3,140.6</b>	<b>2,660.9</b>	<b>3,184.1</b>	<b>\$34,069,870</b>

**Section 6.** That the Capacity Charge for each member agency, the method of its calculation, cost allocations and other data used in its determination are as specified in the adopted rates and charges to be effective January 1, 2021, which forms the basis of the Capacity Charge, and the corresponding 2020 Cost of Service Report. The adopted rates and charges and cost of service reports are on file and available for review by interested parties at Metropolitan's headquarters.

**Section 7.** That the General Manager and the General Counsel are hereby authorized to do all things necessary and desirable to accomplish the purposes of this Resolution, including, without limitation, the commencement or defense of litigation.

**Section 8.** That if any provision of this Resolution or the application to any member agency, property or person whatsoever is held invalid, that invalidity shall not affect other provisions or applications of this Resolution which can be given effect without the invalid portion or application, and to that end the provisions of this Resolution are severable.

**Section 9.** That the General Manager is hereby authorized and directed to take all necessary action to satisfy relevant statutes requiring notice by publication.

**Section 10.** That the Board Executive Secretary is hereby directed to transmit a certified copy of this Resolution to the presiding officer of the governing body of each member agency.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a Resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on April 14, 2020.

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Secretary of the Board of Directors  
of The Metropolitan Water District  
of Southern California



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_\_

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**RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA**

**FINDING THAT FOR FISCAL YEARS 2020/21 AND 2021/22, THE AD VALOREM  
PROPERTY TAX RATE LIMITATION IN SECTION 124.5 OF THE METROPOLITAN  
WATER DISTRICT ACT IS NOT APPLICABLE BECAUSE IT IS ESSENTIAL TO  
METROPOLITAN'S FISCAL INTEGRITY TO COLLECT AD VALOREM PROPERTY  
TAXES IN EXCESS OF THAT LIMITATION**

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The Board of Directors of The Metropolitan Water District of Southern California (the "Board") hereby finds that:

1. The Metropolitan Water District of Southern California ("Metropolitan"), pursuant to Section 124 of the Metropolitan Water District Act (the "Act"), is authorized to levy and collect taxes on all property within the district for the purposes of carrying on the operations and paying the obligations of the district; and
2. Pursuant to Section 307 of the Act, the Board of Directors ("Board") determines the amount of money necessary to be raised by taxation for district purposes each fiscal year and fixes rates of taxation upon the assessed valuation of property taxable by the district to be levied accordingly; and
3. Since its inception Metropolitan has levied and collected property taxes; and
4. The Board, pursuant to sections 133 and 134 of the Act, is authorized to fix the rate or rates at which water shall be sold. Such rates, so far as practicable, shall result in revenue which, together with revenue from fixed charges or assessments, will pay Metropolitan's operating expenses, capital costs, debt service and other expenses and obligations; and
5. Before 1942, all revenues to pay for operations, construction of the Colorado River Aqueduct, other facilities, and other Metropolitan obligations came from ad valorem property taxes. After deliveries of Metropolitan water began in fiscal year 1941/42, water sales were an additional source of revenues, but not until 1974 did revenues from water sales equal revenues from ad valorem taxes; and

6. On November 4, 1960, Metropolitan entered into its contract with the California Department of Water Resources (the "State Water Contract") for water service from the State Water Project. Metropolitan's was the first contract executed and the prototype for the 28 state water contracts that followed; its terms were validated by the California Supreme Court in *Metropolitan Water Dist. v. Marquardt* (1963) 59 Cal.2d 159; and

7. Under the State Water Contract, Metropolitan is obligated to pay allocable portions of the cost of construction and replacement of the State Water Project system, as well as ongoing operating and maintenance costs, regardless of quantities of water delivered to Metropolitan and regardless of the amounts of water Metropolitan delivers to its member agencies. Approximately 70 percent of Metropolitan's State Water Contract obligations are fixed, or unrelated to the quantity of water delivered; and

8. Metropolitan's authority to levy a tax or assessment to satisfy State Water Contract obligations was a condition to entering into the State Water Contract, and the California Department of Water Resources only executed state water contracts with agencies that have taxing power; and

9. The State Water Contract expressly provides that, if other available funds are not sufficient, Metropolitan must levy a tax or assessment to satisfy its State Water Contract obligations; and

10. Metropolitan's outstanding general obligation bonds and State Water Contract obligations are indebtedness approved by the California voters before Article XIII A of the California Constitution (Proposition 13) was adopted; and

11. Metropolitan's revenues from water transactions and deliveries vary with the quantity of water delivered and water deliveries fluctuate significantly with drought, weather conditions, availability of local supplies, economic conditions and other factors affecting regional demands. During the period from fiscal year 2008/09 through fiscal year 2018/19, Metropolitan's annual deliveries ranged from 1.4 million acre-feet to 2.2 million acre-feet; and

12. When fixing taxes and setting rates, the Board and Metropolitan's member agencies evaluate the appropriate mix of property taxes and water rates and charges to promote Metropolitan's fiscal stability and ensure its ability to satisfy the region's long-term water supply needs while reasonably and fairly allocating the cost of providing service to its member agencies and complying with legal requirements; and

13. On May 8, 1984, the Board approved recommendations to amend the Act, set forth in Board Letter 6-2 dated April 30, 1984; and

14. Such amendments were incorporated into Assembly Bill 1445, which was approved by the Legislature and filed with the California Secretary of State on July 3, 1984, and added to the Act as Section 124.5; and

15. Section 124.5 provides that Metropolitan must limit the ad valorem property tax to collect no more than the amount required to pay for a fraction of voter-approved debt, specifically, the composite amount required to pay (1) the principal and interest on general obligation bonded indebtedness of the district and (2) that portion of the district's payment obligation under a water service contract with the state which is reasonably allocable, as determined by Metropolitan, to the payment by the state of principal and interest on bonds issued pursuant to the California Water Resources Development Bond Act as of the effective date of this section and used to finance construction of facilities for the benefit of the district; and

16. Section 124.5 further provides that its restrictions do not apply "if the board of directors of the district, following a hearing held to consider that issue, finds that a tax in excess of these restrictions is essential to the fiscal integrity of the district, and written notice of the hearing is filed with the offices of the Speaker of the Assembly and the President pro Tempore of the Senate at least 10 days prior to that date of the hearing;" and

17. Section 124.5's rate restriction became effective in fiscal year 1990/91; and

18. In fiscal years 1990/91 through 1999/2000, the Board maintained Metropolitan's tax levy rate at .0089 percent, a rate that was below the rate then permitted under the restriction clause of Section 124.5; and

19. Metropolitan's tax levy rate has declined from .0089 percent in fiscal year 1999/2000 to .0035 percent in fiscal year 2012/13, and the Board has made the necessary finding since fiscal year 2013/14 that it is essential to fiscal integrity to collect more property taxes than the limits set forth in Section 124.5; and

20. On January 31, 2020, the General Manager presented to the Board a proposed biennial budget for fiscal years 2020/21 and 2021/22, proposed rates for calendar years 2021 and 2022, and proposed charges for 2021, that were based on the proposal that Metropolitan maintain its current ad valorem property tax rate of 0.0035 to maintain fiscal integrity; and

21. On March 6, 2020, the General Manager provided an information letter to the Board reviewing the applicability of Section 124.5 for fiscal years 2020/21 and 2021/22; and

22. On March 10, 2020, the Board held a public hearing with advance notice as required by Section 124.5, to consider the recommendation to suspend the tax restriction clause of Section 124.5 for to give interested parties the opportunity to present their views regarding the recommendation that it is essential to fiscal integrity to collect more property taxes in fiscal years 2020/21 and 2021/22 than the limits of Section 124.5; and

23. Metropolitan currently utilizes tax revenues solely to pay debt service on its general obligation bonds, approved by the voters in 1966 and presently outstanding in the amount of \$48,050,000 as of December 31, 2019, and a portion of its State Water Contract obligations capital costs; and

24. Metropolitan provides, sells and delivers a reliable water supply at wholesale to its member agencies throughout a broad service area, and its integrated water system is able to deliver water throughout its service area; and

25. Metropolitan's participation in the State Water Project under the State Water Contract is fundamental to Metropolitan's ability to consistently provide a reliable water supply and delivery at wholesale to its service area and, thus, satisfaction of its State Water Contract obligations is essential to Metropolitan's mission; and

26. The State Water Project facilities are over 50 years old and Metropolitan's State Water Contract obligations include increasing costs for repair and replacement of existing facilities that are needed to both maintain the storage and conveyance capacity of the State Water Project facilities and assure continued availability and delivery of supplies from the State Water Project and other sources. These costs and obligations were not foreseen by the Legislature when, in 1984, it established the Section 124.5 tax rate restriction and nothing suggests that the Legislature intended to prohibit the Board from considering such circumstances when deciding whether collecting more than the limitation in that Section is essential to Metropolitan's fiscal integrity; and

27. Metropolitan's State Water Contract obligations also include substantial construction, replacement, operation, and maintenance costs for endangered species protection and conservation measures, consistent with state and federal mandates. These obligations must be undertaken to ensure the reliability of the State Water Project, to address ecosystem needs, and to secure long-term operating permits consistent with the federal and state endangered species acts. These costs and obligations were not foreseen or considered by the Legislature when, in 1984, it established the Section 124.5 rate restriction and nothing suggests that the Legislature intended to prohibit the Board from considering such circumstances when deciding whether collecting more than the limitation in that Section is essential to Metropolitan's fiscal integrity; and

28. Consideration of, and providing for, current and anticipated State Water Contract obligations is essential to Metropolitan's fiscal stability and integrity; and

29. Availability of diverse financial resources to satisfy Metropolitan's State Water Contract obligations is essential to Metropolitan's fiscal stability and integrity; and

30. An appropriate balance of fixed costs and fixed revenue is essential to Metropolitan's long-term fiscal health; and

31. The ad valorem tax is essential to the appropriate balance of fixed costs and fixed revenue under current circumstances; and

32. Continuing an ad valorem property tax rate at the current rate will allow the Board flexibility to fund Metropolitan's State Water Contract obligations fully and fairly in fiscal year 2020/21 and 2021/22 and for the foreseeable future; and

33. When it enacted Section 124.5, the Legislature recognized the importance of robust fixed revenue sources. At the same time that it established the rate restriction and safety valve to make the restriction inapplicable, it authorized alternative fixed revenue sources in the form of benefit assessments and standby charges. To the extent such assessments or charges would be new assessments or charges, they would likely be governed by additional requirements not in place or contemplated when the Legislature enacted Section 124.5. In the Board's judgment, adoption of such new or additional assessments or charges is not practical and they are not practical fixed revenue sources at this time, especially because those assessments and charges would be collected from property owners already paying the ad valorem property taxes; and

34. In FY 2020/21, approximately 84 percent of Metropolitan's estimated costs are fixed, while approximately 17 percent of Metropolitan's revenues are from fixed sources, including ad valorem property taxes, readiness-to-serve and capacity charges; in FY 2021/22, approximately 83 percent of Metropolitan's estimated costs are fixed, while approximately 17 percent of Metropolitan's revenues are from fixed sources, including ad valorem property taxes, readiness-to-serve and capacity charges. Collecting more than the Section 124.5 rate limitation will allow Metropolitan to sustain ad valorem property tax revenues at 8 percent of overall revenues in fiscal year 2020/21 and 8 percent in fiscal year 2021/22 and at an estimated 6 percent of overall revenues in fiscal year 2029/30. If Section 124.5 limitations were applied, it is anticipated that, in fiscal years 2020/21 and 2021/22, ad valorem property tax revenue would drop to approximately 0.8 percent and 0.6 percent of overall revenue and, by fiscal year 2029/30, it would be only 0.1 percent of overall revenue; and

35. Absent maintenance of the tax rate or other changes, fiscal years 2020/21 and 2021/22 fixed revenues as a percentage of total revenues will decline from 17 percent to 10 percent; fixed revenues as a percentage of total revenues will decline from 15 percent to 9 percent in fiscal year 2029/30; and this trend will continue; and

36. In light of Metropolitan's significant fixed costs and fluctuating volumetric revenues, robust and diverse fixed revenues are essential to Metropolitan's fiscal well-being for the additional reason that they help Metropolitan maintain creditworthiness. Positive credit ratings are central to fiscal integrity because they reduce the cost of borrowing and provide flexibility by increasing access to credit markets. Access to credit markets is especially important whenever Metropolitan faces supply or demand uncertainties. As set forth above, collecting more tax revenue than the tax rate restriction will allow Metropolitan to retain important fixed revenues; and

37. Ad valorem taxes are an important component of Metropolitan's fiscal integrity because they help ensure that those for whom costs are incurred help pay those costs. As a wholesale water agency, Metropolitan's customers are its 26 member agencies. Each member agency pays volumetric rates based on the amount of water transactions with Metropolitan; whereas ad valorem taxes are levied directly on residents and businesses that are property owners within Metropolitan's service area. All property owners within Metropolitan's service area benefit from the water system that allows water to be delivered in Southern California. Ad valorem taxes ensure that residences and businesses pay a share of costs of the system; and

38. Maintaining the existing ad valorem tax rate advances fiscal integrity because it takes pressure off Metropolitan's volumetric water rates and readiness-to-serve and capacity charges and assist the Board, in its discretion, in maintaining a fair and appropriate balance between fixed costs and fixed revenues and help ensure that all who benefit from Metropolitan's service pay a fair share of the cost of that service; and

39. Maintaining the existing ad valorem tax rate and preventing the decline in fixed revenues will create a more stable water revenue structure that can better deal with fluctuations in water transactions and support drought response measures; and

40. Metropolitan's reliance on property taxes is significantly lower than most other agencies that entered into state water contracts. Other state water contractors rely on property taxes to cover up to 100 percent of their state water contract obligations. Even if all Metropolitan's property tax revenue were fully allocated to State Water Contract obligations—and it is not, as a portion covers Metropolitan's general obligation debt service—Metropolitan would cover only 23 percent of its fiscal years 2020/21 and 22 percent of its fiscal year 2021/22 State Water Contract obligations. This percentage is at the far low end for state water contractors; and

41. An analysis of fiscal health and stability must consider long-term circumstances, and the full spectrum of facts and circumstances, including the appropriate mix of property taxes and water rates and charges that will best allow Metropolitan to satisfy the region's long-term water supply needs; and

42. Notices of a public hearing were filed with the offices of the Speaker of the Assembly and the President pro Tempore of the Senate on February 24, 2020; and

43. The Board conducted a public hearing at its regular meeting on March 10, 2020, at which interested parties were given the opportunity to present their views regarding the recommendation that it is essential to Metropolitan's fiscal integrity to collect taxes in excess of the Section 124.5 to limitation to maintain the ad valorem tax at current levels for fiscal years 2020/21 and 2021/22; and

44. The Board has carefully considered the comments and evidence and all material factors relevant to the finding, and all such materials were made available at <http://mwdh2o.com/WhoWeAre/Mission/Pages/review-applicability-of-property-tax-limit.aspx>; and

45. The meeting of the Board was conducted in accordance with the Brown Act (commencing at Section 54950 of the Government Code), for which due notice was provided and at which a quorum was present and acting throughout;

NOW, THEREFORE, the Board of Directors of The Metropolitan Water District of Southern California, after receiving, considering, and evaluating public comments and evidence and all material factors pertaining thereto, including the financial and operating information

summarized in Board Letter 9-2 and presented on March 10, 2020, and in recognition of the facts and considerations set forth in this Resolution, hereby:

1. Finds and determines that it is essential to Metropolitan's fiscal integrity to collect ad valorem property taxes in excess of the Section 124.5 limitation on ad valorem property taxes in fiscal years 2020/21 and 2021/22; and
2. Resolves and determines that pursuant to its finding, the tax rate restriction in Section 124.5 of the Act is inapplicable when setting the ad valorem property tax rate for fiscal years 2020/21 and 2021/22, allowing the Board to maintain the current ad valorem property tax rate for those fiscal years (.0035 percent of assessed valuation, excluding annexation levies); and
3. Waives compliance with Section 4301(b) of Metropolitan's Administrative Code for any tax levy that utilizes this finding regarding Section 124.5 of the Act.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a resolution of the Board of Directors of The Metropolitan Water District of Southern California, adopted at its meeting held April 14, 2020.

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Secretary of the Board of Directors  
of The Metropolitan Water District  
of Southern California