



## ● **Capital Investment Plan Quarterly Report for period ending June 30, 2021**

### **Summary**

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The attached report provides a summary of actions and accomplishments on the Capital Investment Plan (CIP) during fiscal years 2020/21 and 2021/22. It also provides updates on the status of capital projects and capital expenditures to date, and information regarding service connections and relocations authorized by the General Manager during the reporting period of April to June 2021, the fourth quarter of fiscal year 2020/21, and the fourth quarter of the fiscal years 2020/21 and 2021/22 biennium.

### **Purpose**

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Administrative Code Requirement Section 2720(a)(1): General Manager's Quarterly Reports

Section 2720 of Metropolitan's Administrative Code requires the General Manager to report quarterly to the Engineering and Operations Committee on the Capital Investment Plan.

Sections 4700-4708 of Metropolitan's Administrative Code requires the General Manager to report on service connections approved by the General Manager with the estimated cost and approximate location of each.

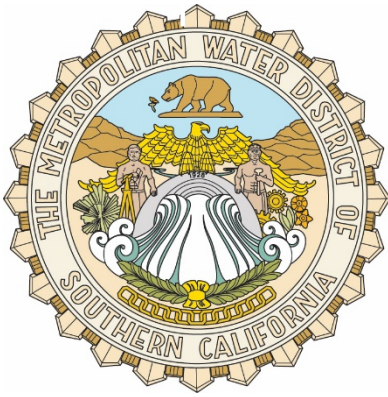
Section 8122(c) of Metropolitan's Administrative Code requires the General Manager to report on the execution of any relocation agreement under the General Manager's authority involving an amount in excess of \$100,000.

Highlights of progress and major milestones on selected projects are presented in the attached report grouped by CIP program.

### **Attachments**

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Capital Investment Plan quarterly report for period ending June 2021



# CAPITAL INVESTMENT PLAN

Quarterly Report

April – June 2021



## THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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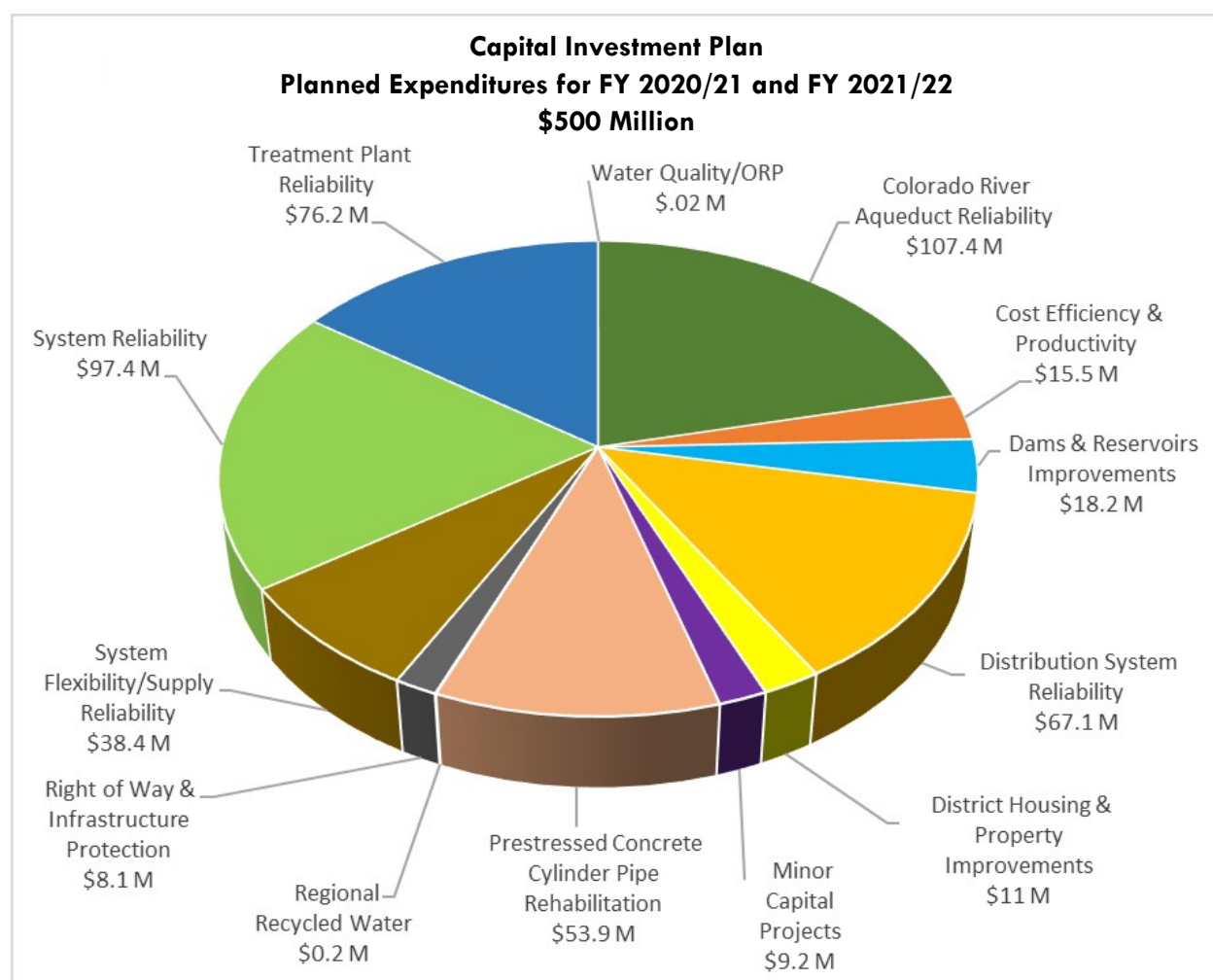
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## **CAPITAL INVESTMENT PLAN FOR FISCAL YEARS 2020/21 & 2021/22**

Metropolitan's total Capital Investment Plan (CIP) planned expenditures for FYs 2020/21 and 2021/22 are \$500 million appropriated by the Board in April 2020, and are shown in Figure 1 below in relation to their associated programs. In the same board meeting, the Board also delegated authority to the General Manager, subject to both CEQA requirements and the General Manager's authority as addressed in Metropolitan's Administrative Code, to initiate or proceed with work on all planned capital projects identified in the CIP for FYs 2020/21 and 2021/22.

*Figure 1: CIP for FY 2020/21 and FY 2021/22 by Program*



[Cover photos: (left to right): Pipe segment being lowered into access pit for Allen-McColloch Pipeline PCCP 2021 Relining; West Valley Feeder No. 1 - De Soto Valve Structure Improvements multi orifice valve assembly]

## FOURTH QUARTER SUMMARY

Biennial expenditures through June 2021 totaled \$261.5 million (details shown in Table 15), and expenditures for the 4<sup>th</sup> Quarter of Fiscal Year 2020/21, April through June 2021, totaled \$70.1 million for all capital programs.

During the 4<sup>th</sup> Quarter, board actions heard in open session included six project-specific actions summarized in Table 1 below. These actions awarded one contract totaling approximately \$2 million, authorized six new professional/technical services agreements totaling a not-to-exceed amount of approximately \$6.2 million, authorized an increase of approximately \$0.4 million for one existing agreement, and authorized an increase of \$0.2 million in change order authority for the Greg Avenue Pump Station Rehabilitation contract. Information on the awarded contracts can be found in Table 10 of this report. The table below excludes information on board items heard in closed session.

Table 1: 4<sup>th</sup> Quarter Board Actions

Month	Board Letter Item No.	Project	Action taken
<b>April</b>	7-4	CRA 69 kV and 230 kV Transformers Replacement	Authorized two agreements not-to-exceed \$1,700,000 and \$360,000
<b>April</b>	7-8	Fuel Management System Upgrade	Authorized an agreement not-to-exceed \$1,104,000
<b>April</b>	7-9	Water Information System	Authorized an agreement not-to-exceed \$2,430,000
<b>May</b>	7-4	Greg Avenue Pump Station Rehabilitation	Authorized \$200,000 increase in change order authority to an existing construction contract; authorized an increase of \$350,000 to an existing agreement
<b>May</b>	7-5	CRA Mile 12 Flow Monitoring Station Upgrades	Awarded \$2,022,000 construction contract
<b>May</b>	7-11	District Housing and Property Improvements Program	Authorized two agreements not-to-exceed \$250,000 and \$350,000

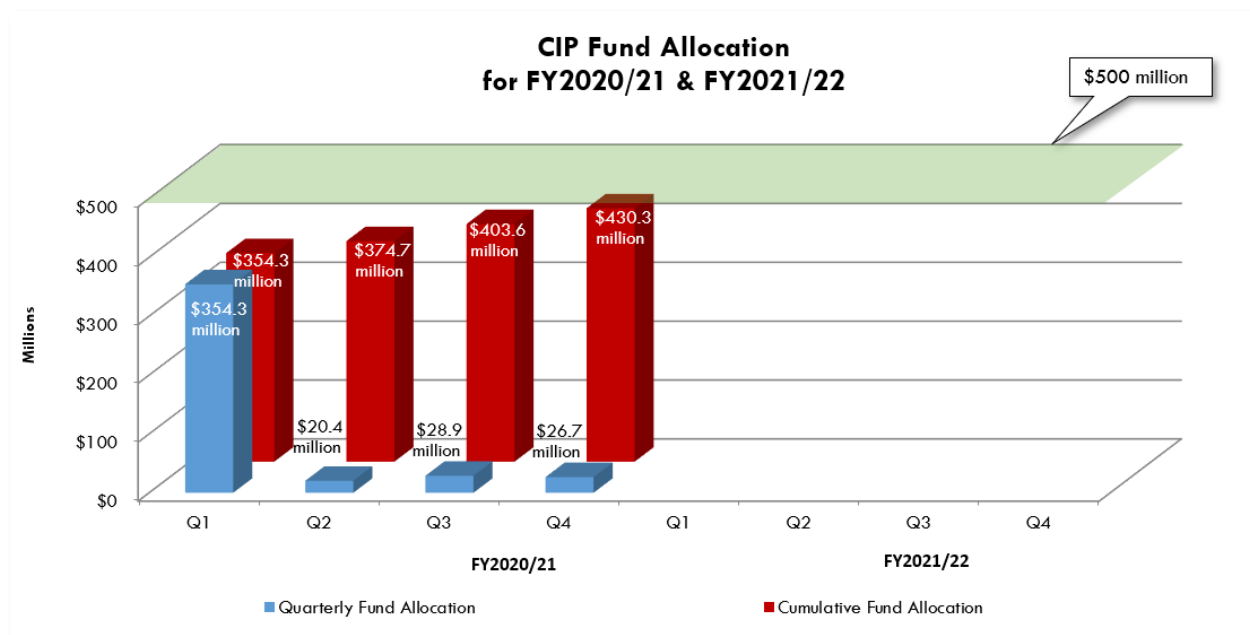
The previously referenced April 2020 board action appropriated \$500 million to perform work on planned capital projects through the current biennium. In order to be considered a planned project, the project must be identified and described in the Capital Investment Plan Appendix for the two-year budget 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. Unplanned projects, those which are not already identified in the CIP Appendix, require a separate board authorization. Upon board approval of an unplanned project, requested funds are then transferred from the \$500 million (Appropriation No. 15517) to the pertinent capital appropriation under which the project is budgeted. During the 4<sup>th</sup> Quarter, no unplanned capital projects were authorized by the Board.



During the 4<sup>th</sup> Quarter, the total amount of Appropriation No. 15517 funds authorized by the General Manager for the current biennium (FYs 2020/21 and 2021/22) through management actions including the funds for the projects shown in Table 1 is approximately \$26.7 million. Details of these management actions which occurred during the 4<sup>th</sup> Quarter can be found in the **Project Actions** section of this report.

Figure 2 shows the allocation of the funds from Appropriation 15517 for this quarter and total for the current biennium through the quarter, which is approximately \$430.3 million, leaving approximately \$69.7 million available to be allocated during the remainder of the current biennium.

Figure 2: CIP Fund Allocation from Appropriation No. 15517 – FY 2020/21 and FY 2021/22



Information on construction and procurement contracts activities for the 4<sup>th</sup> Quarter of FY 2020/21 is summarized in Table 2 on the following page, and presented in further detail in the **Construction and Procurement Contracts** section of this report. Progress payments for these contracts in the 4<sup>th</sup> Quarter totaled approximately \$20.7 million, and primarily reflect construction progress on CRA Pumping Plants – Sump Rehabilitation, Headquarters Building Improvements, Allen-McColloch Pipeline PCCP 2021 Relining, Joseph Jensen Water Treatment Plant Electrical Upgrade - Stage 2, Diemer Water Treatment Plant West Basin and Filter Building Rehabilitation, Headquarters Building Physical Security Improvements, Lakeview Pipeline Improvements, and Headquarters Building Fire Alarm & Smoke Control Improvements.

Table 2: 4<sup>th</sup> Quarter Contract Action

Contract Actions during Q4 for FY 2020/2021, April 2021 through June 2021	
Contracts Awarded	1 construction contract totaling \$2.02 million (Table 10)
Total Payments Authorized	\$20.67 million
Construction Contracts Completed	Notice of Completion was filed for 8 construction contracts (Table 9)
Active Contracts at end of Q3 <sup>1</sup>	15 construction contracts, totaling \$197.59 million (Table 11)
	14 procurement contracts, totaling \$60.49 million (Table 12)
	\$258.08 million total value

## IMPACTS OF COVID-19

In response to the Governor's and General Manager's emergency declarations resulting from the COVID-19 pandemic, all active construction contracts were suspended in late March 2020. Since then all contracts, except on-site work for CRA Pumping Plant Sump Rehabilitation, resumed construction activities. In this reporting quarter, construction activities on the aforementioned CRA Pumping Plant Sump Rehabilitation remained suspended, and construction management staff recommended that the construction contract be converted to an equipment and material procurement contract. This approach will delete all on-site construction activities and will result in a negotiated final settlement with the prime contractor. Currently, it is anticipated that the CRA Pumping Plant Sump Rehabilitation project will be re-advertised in 2022. Equipment and materials procured under the existing contract will be included as Metropolitan-furnished equipment for the next contractor.

<sup>1</sup> Active contracts at the end of the 4<sup>th</sup> Quarter are those that are ongoing at the end of June 2021. In other words, contracts completed during the reporting quarter are excluded.

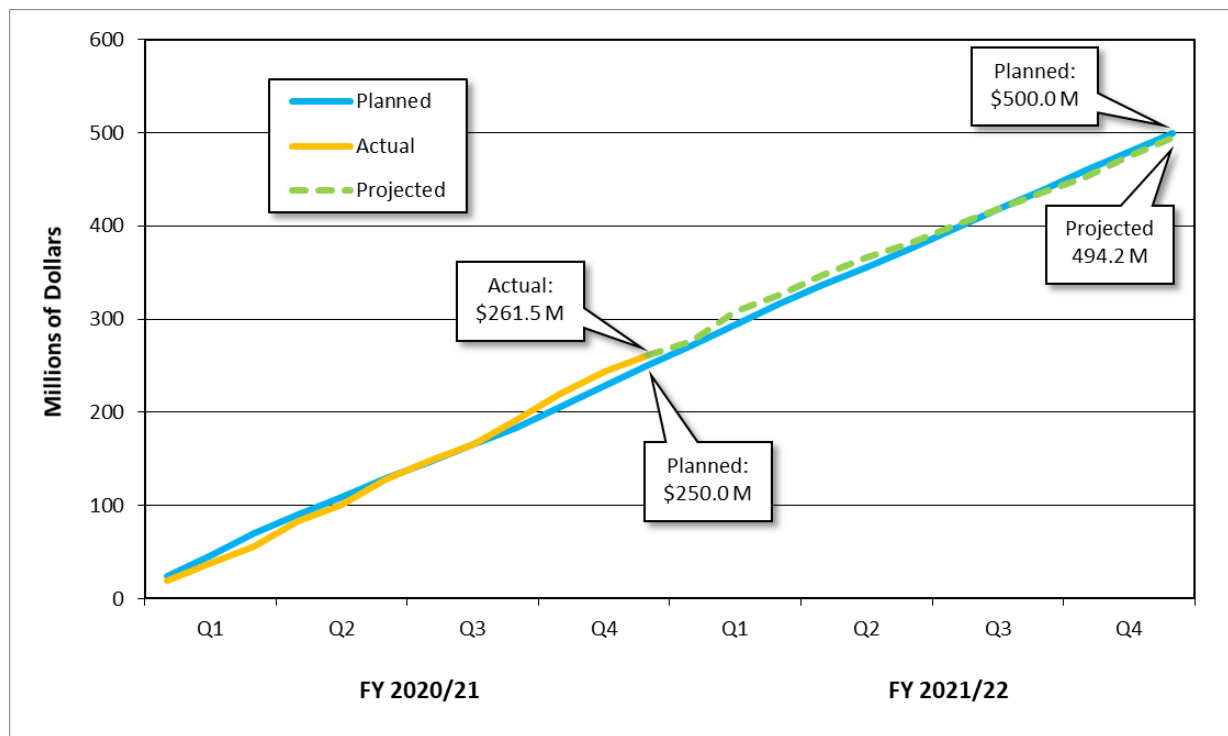
## PLANNED EXPENDITURE AND BUDGET

Table 3 and Figure 3 below show planned and actual expenditures for the biennium through the end of the 4<sup>th</sup> Quarter of FY 2020/21, and the forecast of expenditures through the end of the current biennium, against planned expenditures for the same time interval. Actual expenditures through the 4<sup>th</sup> Quarter of FY 2020/21 were approximately 103% of planned expenditures.

Table 3: Current Biennium: Planned & Actual Expenditures for FYs 2020/21 & 2021/22

Quarter	Planned Expenditures (millions)	Actual Expenditures (millions)
FY 2020/21 Q1	\$70.4	\$55.6
FY 2020/21 Q2	\$58.5	\$72.2
FY 2020/21 Q3	\$55.0	\$63.6
FY 2020/21 Q4	\$66.1	\$70.1
<b>Totals</b>	<b>\$250.0</b>	<b>\$261.5</b>

Figure 3: Current Biennium – Planned, Actual & Forecasted Expenditures



As shown in Figure 3, the total planned expenditures in the current biennium are \$500.0 million. The current projected expenditures for the biennium are currently approximately \$494.2 million with the actual expenditures exceeding the planned expenditures during the 4<sup>th</sup> Quarter of FY 2020/21 and are projected to coming back down under the planned expenditures at the end of the biennium.

This positive variance above the planned expenditures starting in the reporting quarter is due to several factors including prioritization of critical projects to ensure facility reliability and system flexibility, as well as better than anticipated progress by construction contractors.

## **MAJOR CAPITAL PROGRAMS OVERVIEW**

Metropolitan's CIP is structured into three levels. In descending order, they are:

- Program
- Project Group/Appropriation
- Project

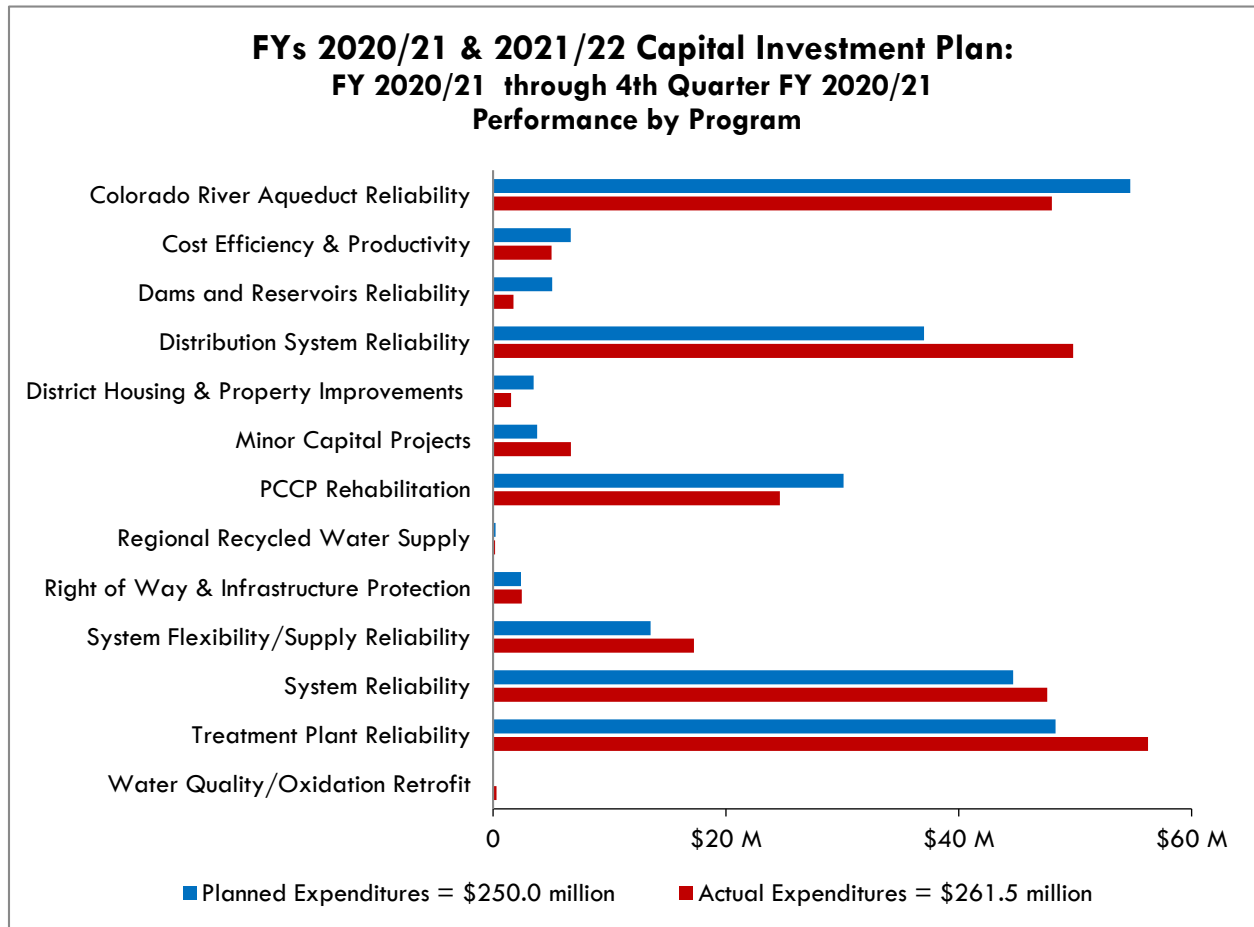
Metropolitan's CIP is comprised of 13 programs, which capture all projects within the CIP. The 13 capital programs are listed below in alphabetical order. Programs are comprised of one or more project groups/appropriations, and project group/appropriations are comprised of one or more projects. The status of each of the programs is provided later in this section of the report.

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

For the current biennium, there are over 37 project groups, 72 planned appropriations, and 435 planned projects (excluding Minor Capital Projects) within the CIP. The list of appropriations that make up each of the programs, along with planned expenditures and actual costs to date for those appropriations, are provided in Table 15 at the end of this report.

Figure 4 below shows actual versus planned expenditures for the 13 capital programs for 4<sup>th</sup> Quarter of FY 2020/21.

Figure 4: Biennium-to-date Expenditures (Actuals vs. Planned) through 4<sup>th</sup> Quarter FY 2021/22



Variances between planned and actual expenditures for each program are primarily due to shifts in spending on current and planned construction work. The top ten capital projects information on the next page provides various examples of activities that contributed to such variances.



The top ten project list in Table 4 below reflects the ten projects in the CIP with the highest level of planned expenditures in the current biennium. The planned versus actual expenditures through the end of the 4<sup>th</sup> Quarter of FY 2020/21 are also shown in this table.

*Table 4: Top Ten Planned Capital Projects  
Planned and Actual Expenditures*

Project	Planned (FY 2020/21 through FY 2021/22) (millions)	Planned July 2020 to June 2021 (millions)	Actuals July 2020 to June 2021 (millions)
Headquarters Building Improvements	\$31.3	\$15.7	\$23.3
Casa Loma Siphon Barrel No. 1 Seismic Upgrade	\$30.0	\$15.0	\$15.9
CRA Pump Plant Sump System Rehabilitation	\$28.0	\$14.1	\$4.9
Perris Valley Pipeline - Tunnels	\$27.8	\$4.0	\$1.3
CRA Discharge Line Isolation Coupling Assemblies	\$23.0	\$20.1	\$18.1
Second Lower Feeder PCCP Rehabilitation - Reach 8	\$22.0	\$6.0	\$6.9
Jensen Electrical Upgrades - Stage 2	\$15.2	\$8.9	\$12.6
Diemer West Basin & Filter Building Rehabilitation	\$14.2	\$13.9	\$14.9
Second Lower Feeder PCCP Rehabilitation – Reach 2	\$13.0	\$13.0	\$4.8
Orange County Feeder Relining - Reach 3	\$12.5	\$6.3	\$0.6
<b>Total*</b>	<b>\$217.1</b>	<b>\$117.0</b>	<b>\$103.2</b>

\* Numbers may not sum due to rounding.

The cumulative expenditure variance for the top ten projects through the 4<sup>th</sup> Quarter reflects a mix of over- and under-spending on projects relative to their planned expenditures. Positive or negative variances do not mean that the projects are over or under budget, it simply reflects variances in timing of expenditures when compared to original budget plans. The following are the variance explanations for the top ten projects where actual expenditures exceeded planned expenditures through the current reporting quarter for the biennium.

- Casa Loma Siphon Barrel No. 1 Seismic Upgrade:** The actual vs. planned variance is due to a shift in timing for delivery of the Earthquake Resistant Ductile Iron Pipe (ERDIP) and the welded steel pipe. The two pipe procurement contracts are currently ongoing. Final design of the construction contract advertisement package for the pipe installation is nearly complete. Advertisement of these plans and specifications was deferred until sufficient CIP budget can be committed for the construction contract in the current biennium. All pipe, except for the steel closure pieces, have been delivered to the Diamond Valley Lake yard and will be stored there until the construction contract is awarded. Delivery of the closure pieces is anticipated in 2023.

- **Headquarters Building Improvements:** The actual expenditures were more than planned because of the following: (1) the approval of additional change orders to complete needed work while the building is lightly occupied due to the COVID-19 pandemic; and (2) the contractor was able to accelerate completion of some work elements as the building has been lightly occupied.
- **Second Lower Feeder PCCP Rehabilitation – Reach 8:** This project involves relining approximately 2,900 feet of PCCP pipeline in the city of Placentia. This work was conducted in the form of a change order to an on-going contract (Reach 2). This approach permitted the rehabilitation of this portion of the pipeline in the most cost-effective and expeditious manner. This portion of the feeder was relined earlier than originally planned to address critical wire breaks that were identified during a recent inspection. This additional work resulted in higher than planned expenditures on this project through the 4<sup>th</sup> Quarter.
- **Jensen Electrical Upgrades - Stage 2:** Project expenditures for the biennium are higher than originally planned through the 4<sup>th</sup> Quarter because the contractor's work activities were expedited after the COVID-19 work suspension to meet the scheduled 2022 shutdown dates.
- **Diemer West Basin & Filter Building Rehabilitation:** Project expenditures for the biennium are higher than originally planned through the 4<sup>th</sup> Quarter because the contractor's work activities were expedited to meet the scheduled basin shutdown dates.

The following are the variance explanations for the top ten projects with negative variances (under-spending projects).

- **CRA Discharge Line Isolation Coupling Assemblies:** The actual expenditures were less than planned due to the contractor completing more work than planned during the 2020 shutdown during the 3<sup>rd</sup> Quarter.
- **CRA Pump Plant Sump System Rehabilitation:** The actual vs. planned variance is due to the suspension of the on-site work due to the COVID-19 pandemic starting in March 2020, which led to cancellation of the construction portion of the contract. Resolution of outstanding submittal comments has also caused a delay in the delivery of equipment and materials to the site.
- **Perris Valley Pipeline – Tunnels:** The actual vs. planned expenditure variance is due to postponing the start of construction from November 2020 to early 2022 due to the discovery of contaminants at the work site that requires additional field and laboratory investigations, which resulted in the modification of the specifications to account for the contaminants. Additionally, complex right-of-way issues needed to be resolved prior to the advertisement of this project for construction bids.
- **Second Lower Feeder PCCP Rehabilitation – Reach 2:** The actual vs. planned variance is due to shifts in the timing of construction completion, which was completed approximately five months earlier than planned leaving less work for the current biennium. Early completion of this work can be attributed to extensive preconstruction planning and permitting, successful community outreach efforts, and better than expected relining production by the contractor.
- **Orange County Feeder Relining - Reach 3:** The actual vs. planned expenditure variance is due to postponing the start of construction from September 2020 to July 2022 in order to reduce expenditures in this biennium. The final contract, for Reach 3, is now planned to be advertised for construction bids in March 2022 to ensure that there is sufficient capacity in the current CIP budget to accommodate expenditures from this project in the biennium.

## MAJOR CAPITAL PROGRAMS – HIGHLIGHTS

The section that follows provides 4<sup>th</sup> Quarter highlights for the 12 Major Capital Programs; the Minor Capital Program is highlighted in its own section of this report. Status is provided for selected projects within each Major Capital Program. The selected projects typically achieved major milestones during the 4<sup>th</sup> Quarter of FY 2020/21, or are scheduled to achieve major milestones in the next quarter.

Program	Project
Colorado River Aqueduct (CRA) Reliability	CRA Discharge Line Isolation Coupling Assemblies
	CRA Radial Gates Replacement
Cost Efficiency & Productivity	Battery Energy Storage System
	DVL Wave Attenuator Rehabilitation
Dams and Reservoirs Improvements	Diamond Valley Lake Dam Monitoring System Upgrades
	Garvey Reservoir Rehabilitation
Distribution System Reliability	Lake Perris Bypass Pipeline Relining
	Lakeview Pipeline Improvements
District Housing & Property Improvements	Program highlights only
Prestressed Concrete Cylinder Pipe (PCCP) Reliability	Allen-McColloch Pipeline PCCP 2021 Relining
	Second Lower Feeder PCCP Rehabilitation – Reach 2
Regional Recycled Water Supply	Program highlights only
Right-of-Way & Infrastructure Protection	Erosion-Control Improvements for Six Sites in Orange County Region
System Flexibility/Supply Reliability	Greg Avenue Pump Station Rehabilitation
System Reliability	Headquarters Building Improvements
	Security Operations Center
Treatment Plant Reliability	Diemer West Basin & Filter Building Rehabilitation
	Weymouth Chlorination System Upgrades
Water Quality/Oxidation Retrofit	Program highlights only

## Colorado River Aqueduct (CRA) Reliability Program

**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 to Southern California.

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$54.72 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$47.99 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

#### Status

Expenditures for this program are less than planned through June 2021 due to schedule adjustments in order to optimize the construction activities of multiple contracts within the same CRA shutdown and to accommodate delays of site work activities and suspension of construction contracts under Metropolitan's response to COVID-19.

#### Accomplishments

- Completed construction of CRA Discharge Line Isolation Coupling Assemblies in May 2021, about two months earlier than the contractual completion date
- Continued construction activities for the following contracts:
  - CRA Radial Gates Replacement
    - i. Completed most of the punch list contract work, including fabrication and delivery of reinforcing steel for transformer concrete containment pads
    - ii. Began and continued installation of the transformer pad and transformers
    - iii. Began supervisory control and data acquisition (SCADA) related work by Metropolitan forces including installation of ductbanks and tie in to control panels
  - Gene Wash Reservoir Discharge Valve Structure Rehabilitation
    - i. Continued submittals for review and installation of the underground electrical duct bank
    - ii. Began and completed setup of a barge hoist and dive equipment
    - iii. Began and completed delivery, assembly and functional testing of a knife gate valve isolation device; installation of the electrical panels and equipment racks at the crest of the dam; and installation of new exterior lighting at the valve house
- Continued submittals for the CRA Pumping Plants Overhead Cranes Rehabilitation
- Continued submittals for the water treatment equipment procurement for domestic water treatment systems at all CRA pumping plants, estimated first delivery in June 2022 to coincide with the Domestic Water Treatment Systems Replacement construction schedule
- Under Metropolitan's response to COVID-19, suspended on-site construction for the CRA Pumping Plant Sump System Rehabilitation and continued submittals and fabrication activities
  - Completed valve fabrications and deliveries to all five pumping plants

- Continued fabrication of new pumps, piping, and other materials that are to be furnished
- Delivery of new pumps is expected to begin in August/September 2021
- Awarded construction contract and issued the Notice to Proceed for CRA Mile 12 Flow Meter Upgrade and began review of submittals
- Continued evaluating and establishing the course of action and construction repackaging options of the remaining outstanding contract work items for CRA 6.9 kV Power Cable Replacement.
  - Completed a pilot project to re-terminate cables for one unit at each plant by Metropolitan forces
- Continued final design of CRA Storage Building Replacement at Hinds, Eagle Mountain, and Iron Mountain
- Continued preliminary design of CRA Desert Region Security Improvements
- Continued preliminary design of Hinds Pumping Plant Discharge Valve Platform Replacement
- Began preliminary design and preparation of procurement package for the CRA Main Transformer Replacement
- Continued study of Black Metal Mountain 2.4 kV Electrical Power Upgrades
- Continued final design of Domestic Water Treatment Systems Replacement at all five CRA pumping plants
- Continued the CRA main pump rehabilitation efforts at all five pumping plants:
  - Completed as-is documentation efforts for Hinds and Iron Mountain Pumping Plants
  - Completed hydraulic analysis for Hinds Pumping Plant
- Initiated feasibility study to install variable frequency drive pumps at Gene and Intake Pumping Plants

#### Upcoming Activities

Upcoming work for the next quarter will include:

- Continue construction activities planned for the following contracts:
  - CRA Pumping Plants Overhead Crane Replacement
  - CRA Radial Gates Replacement
  - Gene Wash Reservoir Discharge Valve Structure Rehabilitation
  - Mile 12 Flow Meter Upgrade
- Continue fabrication activities for CRA Pumping Plant Sump System Rehabilitation and begin final design of the sump system installation contract
- Continue the CRA main pump rehabilitation efforts at all five pumping plants
- Continue preliminary design of CRA Desert Region Security Improvements
- Continue final design of CRA Storage Building Replacement at Hinds, Eagle Mountain and Iron Mountain
- Complete final design and advertise Domestic Water Treatment Systems Replacement at all five CRA pumping plants
- Complete study and begin preliminary design of Black Metal Mountain 2.4 kV Electrical Power Upgrades
- Continue preliminary design and preparation of procurement package for the CRA Main Transformer Replacement
- Continue preliminary design of Hinds Pumping Plant Discharge Valve Platform Replacement



**Construction Completion Date:**  
May 2021

**Total Project Estimate:**  
\$44.4 million

**Current Phase Estimate:**  
\$38.8 million

**Cost to Date for Current Phase:**  
\$35.7 million

### **CRA Reliability Program: CRA Discharge Line Isolation Coupling Assemblies**

This project will fabricate and install 44 isolation coupling assemblies with flow-through removal spool pieces; fabricate 10 removable bulkheads; and reline 6-foot discharge pipes with mortar lining.

Phase	Construction & Closeout
% Complete for Construction	100%
Construction Contract Awarded	August 2019
Appropriation Number	15481
Contract Number	1923

The contractor completed the contract work and demobilized. In the upcoming quarter, work will begin on the record drawings.



Completed concrete pipe supports, stairs, and handrailing at Intake Pumping Plant

### CRA Reliability Program: CRA Radial Gates Replacement

This project will improve the reliability of the Colorado River Aqueduct by replacing seven radial gates along the aqueduct. The work includes installation of new radial gates and actuators, upgrade of electrical equipment, and rehabilitation and expansion of the gate operating platforms.

Phase	Construction & Closeout
% Complete for Current Phase	94%
Construction Contract Awarded	August 2019
Appropriation Number	15438
Contract Number	1920

The contractor completed all contract work and began change order work which includes installing secondary containment for oil filled transformers at the Hinds and Iron Mountain Pumping Plants. In the upcoming quarter, the contractor will install the new transformers at the Iron Mountain and Hinds Pumping Plants.

*Estimated Construction*

*Completion Date:*

*August 2021*

*Total Project Estimate:*

*\$19.1 million*

*Current Phase Estimate:*

*\$15.0 million*

*Cost to Date for Current*

*Phase:*

*\$13.6 million*



Construction of concrete transformer pad for radial gate at  
Iron Mountain Wasteway

## Cost Efficiency and Productivity Program

**Program Information:** The Cost Efficiency and Productivity Program is composed 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.

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$6.67 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$5.02 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

#### Status

Biennium expenditures for this program are less than planned through June 2021 due to shifts in timing of the work, with expenditures offset by schedule delays of several other projects in the remaining appropriations within this program.

#### Accomplishments

- Completed construction to rehabilitate the Diamond Valley Lake wave attenuator system
- Completed final design of battery storage systems at the Jensen and Skinner Water Treatment Plants
- Continued Real Property Group Business System Replacement
- Continued WINS Water Billing System Upgrade project

#### Upcoming Activities

Upcoming work for the next quarter will include:

- Go live with the Budget System Replacement System during the 2<sup>nd</sup> quarter of FY2021/22
- Go live with the main site of mwdh2o.com during the 2<sup>nd</sup> quarter of FY2021/22
- Continue file migrations associated with Water System Operations and Chief Financial Office as part of Enterprise Content Management Phase 1
- Award contract for construction of battery storage systems at the Jensen and Skinner Water Treatment Plants



## Cost Efficiency & Productivity Program Battery Energy Storage System

This project will install battery energy storage systems (BESS) at the following three locations: (1) one-megawatt (MW) BESS at the Jensen plant, (2) one-MW BESS at the Skinner plant, and (3) one-MW BESS at the Weymouth plant. The project is eligible for participation in the Self-Generation Incentive Program (SGIP).

Phase	Final Design
% Complete for Current Phase	67%
Final Design Authorized	October 2020
Appropriation Number	15521

The final design was completed for the Jensen and Skinner sites. Construction bid package for the two sites were advertised for construction. In the upcoming quarter, final design will begin for Weymouth and construction contracts will be awarded for the Jensen and Skinner sites.

*Final Design Completion Date  
for Weymouth site:  
November 2021*

*Total Project Estimate:  
\$25.6 million*

*Current Phase Estimate:  
\$1.0 million*

*Cost to Date for Current  
Phase:  
\$0.8 million*



Proposed BESS site location at the Jensen plant

**Estimated Construction****Completion Date:****May 2021****Total Project Estimate:****\$615,000****Current Phase Estimate:****\$400,000****Cost to Date for Current Phase:****\$400,000****Cost Efficiency & Productivity Program  
DVL Wave Attenuator Rehabilitation**

This project will rehabilitate the floating wave attenuator system at Diamond Valley Lake (DVL) by replacing post-tensioned cable tendons that link the reinforced concrete box segments; replacing the polyurethane float spacers that separate and buffer the reinforced box segments; and repair damaged concrete.

Phase	Construction & Closeout
% Complete for Current Phase	100%
Construction Contract Awarded	October 2020
Appropriation Number	15515
Contract Number	1979

The contractor completed construction including alignment of the floating wave attenuator; installation of new post-tensioned cable tendons; and the project was closed out.



Completed wave attenuator with post-tension tendons installed



## Dams and Reservoirs Improvements Program

**Program Information:** The Dams and Reservoirs Improvements Program is composed of projects to upgrade or refurbish Metropolitan's dams, reservoirs, and appurtenant facilities in order to reliably meet water storage needs and regulatory compliance.

**Planned Biennium-to-date Expenditures**  
(July 2020 through June 2021)

\$5.07 million

**Actual Biennium-to-date Expenditures**  
(July 2020 through June 2021)

\$1.75 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

#### Status

Biennium expenditures for this program are less than planned through June 2021 due to differences between the planned and actual start of design.

#### Accomplishments

- Diamond Valley Lake Dam Monitoring System Upgrades
  - Continued to work on Request for Proposals (RFP) for vendors/consultants to install dam real-time monitoring and communications for early warning signs of dam distress
- Lake Mathews and Lake Skinner Dam Monitoring System Upgrades
  - Continued to identify area of need and prioritize instrumentation replacement at both reservoirs
- Lake Skinner Outlet Tower Seismic Upgrade
  - Completed value engineering plan for outlet tower upgrade concepts
- Garvey Reservoir Rehabilitation
  - Continued preliminary design

#### Upcoming Activities

Upcoming work for the next quarter will include:

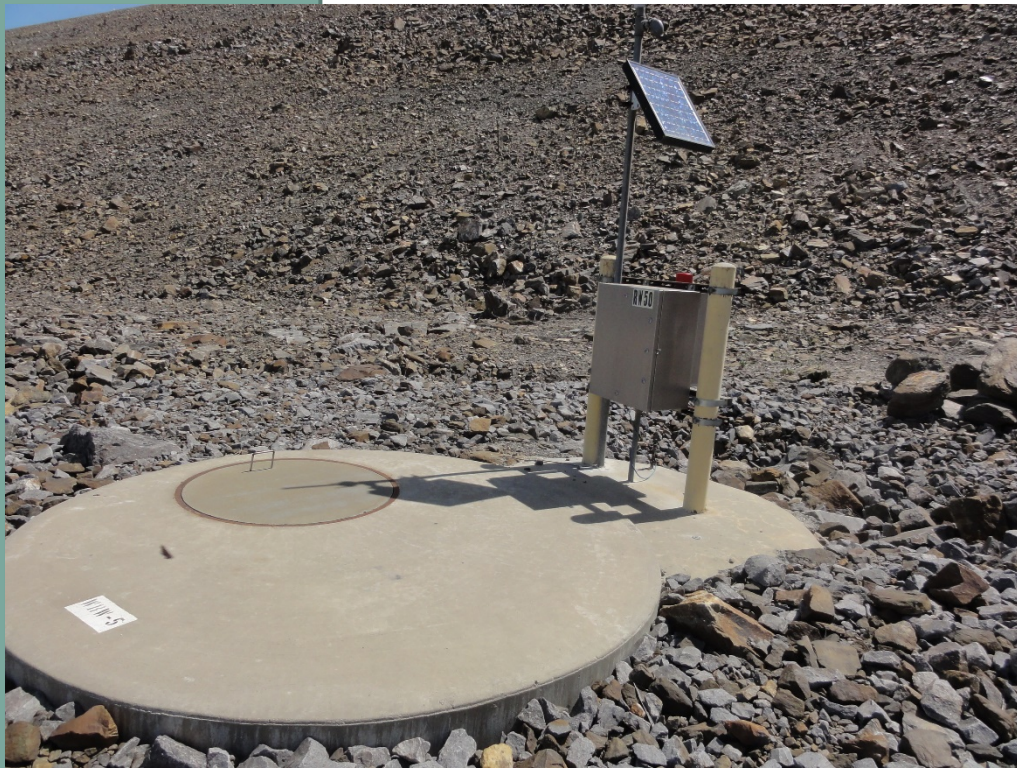
- Diamond Valley Lake Dam Monitoring System Upgrades
  - Issue an RFP for vendors/consultants of the dam real-time monitoring system
- Garvey Reservoir Rehabilitation
  - Continue preliminary design
- Lake Skinner Outlet Tower Seismic Upgrade
  - Prepare interim dewatering plans
  - Prepare detailed seismic analyses of the outlet tower

**Estimated Study Completion****Date:****March 2022****Total Project Estimate:****\$9.0 million****Current Phase Estimate:****\$2.7 million****Cost to Date for Current Phase:****\$1.8 million****Dams & Reservoirs Improvements Program:  
Diamond Valley Lake Dam Monitoring System  
Upgrades**

This project will replace the obsolete, increasingly unreliable dam monitoring systems at Diamond Valley Lake (DVL)

Phase	Study
% Complete for Current Phase	70%
Study Authorized	July 2016
Appropriation Number	15419

Criteria were developed and a list of candidate companies was prepared to solicit bids for preliminary design. In the upcoming quarter, comparative analysis of the companies will be performed and workshops will be coordinated with the candidate companies.



Existing Diamond Valley Lake dam monitoring station

## Dams & Reservoirs Improvements Program: Garvey Reservoir Rehabilitation

This project will refurbish aging facilities at the Garvey Reservoir site and restore them to reliable operating condition.

Phase	Preliminary Design
% Complete for Current Phase	10%
Preliminary Design Authorized	March 2021
Appropriation Number	15417

Began and continued preliminary design. In the upcoming quarter, the consultants will complete preliminary design and environmental documentation.

**Estimated Preliminary Design  
Completion Date:**  
**June 2022**

**Total Project Estimate:**  
**\$68.5 million**

**Current Phase Estimate:**  
**\$3.9 million**

**Cost to Date for Current  
Phase:**  
**\$0.2 million\***

\*\$0.4 million reported last  
quarter was for the study phase



Bridge to inlet tower at Garvey reservoir

## Distribution System Reliability Program

**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.

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$37.01 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$49.82 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

Status	Biennium expenditures for this program are more than the planned expenditures through June 2021 due to differences in timing between planned and actual payments for projects such as the Garvey Reservoir Sodium Hypochlorite Feed System Rehabilitation, Orange County Region Service Center, Middle Feeder Relocation, Sepulveda Feeder/East Valley Feeder Interconnection Electrical Upgrades, Orange County Feeder Relining, and Lakeview Pipeline Relining.
Accomplishments	<ul style="list-style-type: none"> <li>Completed construction of the West Valley Feeder No. 1 De Soto Valve Replacement</li> <li>Completed construction of the Lake Perris Bypass Pipeline Relining</li> <li>Completed construction of Lakeview Pipeline Relining</li> <li>Completed delivery of welded steel pipe for Casa Loma Siphon Barrel No. 1 Seismic Upgrade. Procurement contract will remain open for the fittings which will be manufactured to meet field measurements.</li> </ul>
Upcoming Activities	<p>Upcoming work for the next quarter will include:</p> <ul style="list-style-type: none"> <li>Completed design for the Casa Loma Siphon Barrel No. 1 Seismic Upgrades</li> </ul>



## Distribution System Reliability Program: Lake Perris Bypass Pipeline Relining

This project will reline 1,500 feet of the Lake Perris Bypass Pipeline to support additional load imposed by construction of a levee by Department of Water Resources that will cross over the pipeline.

Phase	Construction & Closeout
% Complete for Construction	100%
Construction Contract Awarded	July 2020
Appropriation Number	15503
Contract Number	1972

The contractor completed relining 1,500 feet of pipeline and placed the pipeline back into service. Activities planned for the upcoming quarter include performing record drawings and project closeout.

**Construction Completion Date:**  
May 2021

**Total Project Estimate:**  
\$6.5 million\*

**Current Phase Estimate:**  
\$6.15 million\*

**Cost to Date for Current Phase:**  
\$6.11 million

\* In May, the total project estimate was revised from \$7.6 million to \$6.5 million and the current phase estimate was revised from \$7.0 million to \$6.11 as anticipated change order issues were resolved.



Closure piece with manway installation on Lake Perris Bypass Pipeline



**Construction Completion Date:**  
May 2021

**Total Project Estimate:**  
\$5.0 million

**Current Phase Estimate:**  
\$4.6 million

**Cost to Date for Current Phase:**  
\$4.3 million

### Distribution System Reliability Program: Lakeview Pipeline Improvements

This project will replace the 60-inch pipe tee-fitting at the Lake Perris Control Facility, and reline a portion of the Lakeview Pipeline at the east portal of the Bernasconi Tunnel.

Phase	Construction & Closeout
% Complete for Construction	100%
Construction Contract Authorized	July 2020
Appropriation Number	15480
Contract Number	1977

Construction was completed and the pipeline was returned to service delivering water from DVL to the Mills plant. Activities planned for the upcoming quarter include performing record drawings and project closeout.



Welding of 133-inch bulkhead on Lakeview Pipeline

## District Housing & Property Improvements Program

**Program Information:** The District Housing & Property Improvements Program is composed of projects to refurbish or upgrade workforce housing at Metropolitan to enhance living conditions to attract and retain skilled employees

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$3.48 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$1.55 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

#### Status

Biennium expenditures for this program are less than planned through June 2021 as additional final site verifications were performed with multiple stakeholders after the conceptual master plan layouts were finalized for all four villages.

#### Accomplishments

- Completed employee village enhancement master planning study for Iron Mountain and Gene Pumping Plants
- Completed conceptual study for kitchen and lodge improvements at Eagle Mountain and Iron Mountain Pumping Plants

#### Upcoming Activities

Upcoming work for the next quarter will include:

- Board authorization to extend an agreement for preliminary design in support of this program
- Initiate geotechnical work and preparation of environmental documentation for preliminary design activities in support of this program
- Complete development of relocation study for housing improvements

## Prestressed Concrete Cylinder Pipe (PCCP) Reliability Program

**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.

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$30.11 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$24.63 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

#### Status

Biennium expenditures for this program are less than the planned expenditures through June 2021 due to a delay in permitting and subsequent rescheduling of construction contract award for Second Lower Feeder Reach 3 to a time when sufficient CIP budget can be committed.

#### Accomplishments

- Second Lower Feeder Reach 3 - Continued design and obtaining preliminary permitting approvals from local agencies; continue shutdown coordination with member agencies
- Second Lower Feeder Reach 2 – Completed manway modifications and demobilization
- Allen-McColloch Pipeline PCCP 2021 Relining – Completed construction
- Sepulveda Feeder Reach 1 - Continued final design and environmental documentation to rehabilitate Sepulveda Feeder Reach 1
- Sepulveda Feeder, Rialto Feeder, Calabasas Feeder and Allen-McColloch Pipeline Preliminary Design - Continued system hydraulic analyses, access portal optimizations, and valve replacement studies

#### Upcoming Activities

Upcoming work for the next quarter will include:

- Second Lower Feeder Reach 2 - Prepare record drawings and project closeout
- Sepulveda Feeder Reach 1 - Continue final design and coordination with local agencies for permit approvals; continue shutdown coordination with member agencies
- Sepulveda Feeder Reach 2 - Begin final design and environmental documentation to rehabilitate Sepulveda Feeder Reach 2
- Second Lower Feeder Isolation Valve Procurement - This procurement contract provides 13 conical plug isolation valves. The first three 48-inch conical valves are scheduled to be delivered by August 2021.

### PCCP Reliability Program: Allen-McColloch Pipeline PCCP 2021 Relining

This project will reline approximately 1,200 feet of PCCP segment on Allen McColloch Pipeline (AMP) located in the city of Irvine. This section of the AMP was prioritized for relining when segments of pipe were identified to have new pre-stressed wire breaks. The section of pipeline in question will be rehabilitated with a new steel liner during a planned shutdown of the pipeline in April 2021.

Phase	Construction & Closeout
% Complete for Construction	100%
Construction Contract Awarded	November 2020
Appropriation Number	15502
Contract Number	1988

The pipeline was shutdown; construction began; and was completed. The pipeline was placed back into service and the contractor demobilized. In the upcoming quarter, record drawings will be prepared and re-seeding efforts will be planned for Q1 of FY2021/22.

**Construction Completion Date:**  
June 2021

**Total Project Estimate:**  
\$5.2 million\*

**Current Phase Estimate:**  
\$4.8 million\*

**Cost to Date for Current Phase:**  
\$4.1 million

\* In June, the total project estimate was revised from \$4.3 million to \$5.2 million and the current phase estimate was revised from \$3.6 million to \$4.8 million for additional labor and fabrication costs incurred during shutdown.



Pipe segment being welded on Allen-McColloch Pipeline



**Construction Completion Date:**  
**June 2021**

**Total Project Estimate:**  
**\$65 million**

**Current Phase Estimate:**  
**\$48.6 million\***

**Cost to Date for Current Phase:**  
**\$48.5 million**

\* \$61.8 million reported last quarter was for the final design, procurement, and construction phases

### **PCCP Reliability Program: Second Lower Feeder PCCP Rehabilitation – Reach 2**

This project will rehabilitate approximately 4.5 miles of PCCP segments of the Second Lower Feeder - Reach 2 with steel liner.

Phase	Construction & Closeout
% Complete for Construction	100%
Pipe Procurement Contract Awarded	November 2018
Construction Contract Awarded	May 2019
Appropriation Number	15497
Pipe Procurement Contract Number	1925
Construction Contract Number	1902

The contractor completed manway modifications and demobilized. Upcoming activities for the next quarter include preparation of record drawings and project closeout.



Completed manway restoration on Second Lower Feeder Reach 2



## Regional Recycled Water Supply Program

**Program Information:** The Regional Recycled Water Supply 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.

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$0.21 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$0.18 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

#### Status

Biennium expenditures for this program are consistent with the planned expenditures through June 2021.

#### Accomplishments

- Continued membrane challenge testing which involves cutting the membrane fibers of the membrane bioreactor unit to “challenge” the system, and collecting test results accordingly
- Continued warranty repairs on equipment and post-contract system improvements to enhance safety and operational reliability
- Submitted additional information requested by the State Water Resources Control Board for an invoice to reimburse construction costs as part of the grant funding
- Continued record drawing preparation of the AWT Demonstration Facility
- Issued Request for Proposal and evaluated proposals for selection of an engineering consulting firm to provide services to operate, test, and monitor demonstration facility for next testing phase

#### Upcoming Activities

Upcoming work for the next quarter will include:

- Complete membrane challenge testing for Phase 1 Testing, which includes validating the effectiveness of membranes and combined ultra-violet/Advance Oxidation Process (UV/AOP) to achieve regulatory requirements and reliable operation
- Continue system configuration and site improvements along with engineering support to enhance safety and reliability; optimize on-going testing process; and prepare for next testing phase
- Prepare quarterly report on demonstration testing for State Water Resources Control Board as part of the grant funding requirements
- Finalize record drawings of the AWT Demonstration Facility

## Right-Of-Way and Infrastructure Protection Program

**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.

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$2.40 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$2.47 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

#### Status

Biennium expenditures for this program are consistent with the planned expenditures through June 2021.

#### Accomplishments

- Completed construction at remaining three of the first six sites in the Orange County Region. The initial construction contract for six sites in the Orange County Region is now complete.
- Continued negotiations for rights-of-way for seven additional project sites requiring rights-of-way in the Orange County Region
- Continued negotiations of environmental permits for the Orange County Region project sites that require permits

#### Upcoming Activities

Upcoming work for the next quarter will include:

- Orange County Region – continue final design for the second group of project sites
- Western San Bernardino Region – continue with final design of the first group of project sites

## Right-Of-Way and Infrastructure Protection Program: Erosion-Control Improvements for Six Sites in Orange County Region

This project will construct erosion-control improvements for six sites in the Orange County region.

Phase	Construction & Closeout
% Complete for Construction	100%
Construction Contract Awarded	June 2020
Appropriation Number	15474
Contract Number	1924

Construction was completed at the three remaining project sites. Construction is now complete for all six sites. In the upcoming quarter, record drawings will be prepared and the project will be closed out.



Completed water crossing at Santiago Lateral at Sta. 325+00

**Construction Completion Date:**  
**May 2021**

**Total Project Estimate:**  
**\$1.4 million**

**Current Phase Estimate:**  
**\$1.1 million**

**Cost to Date for Current Phase:** **\$1.0 million**

## System Flexibility/Supply Reliability Program

**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.

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$13.53 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$17.25 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

#### Status

Biennium expenditures for this program are more than the planned expenditures through June 2021 due to differences between the planned and actual start of construction for the Perris Valley Pipeline Tunnels and extra work on the Greg Avenue Pump Station Rehabilitation.

#### Accomplishments

- Completed construction of the Greg Avenue Pump Station Rehabilitation, including the following items:
  - Startup and testing of the pumps
  - Resolution of pressure surge issues discovered during startup and testing

#### Upcoming Activities

Upcoming work for the next quarter will include:

- Continue design of the Perris Valley Pipeline Tunnels
- Continue record surveys of properties associated with the Verbena Land Acquisition



### System Flexibility/Supply Reliability Program: Greg Avenue Pump Station Rehabilitation

This project will improve the reliability of the Greg Avenue Pump Station by replacing the existing pumps, surge tanks, and valves; upgrading key electrical, mechanical, and control equipment; and adding a new electrical control building with electrical equipment at the facility.

Phase	Construction & Closeout
% Complete for Construction	99%
Construction Contract Awarded	February 2019
Appropriation Number	15488
Contract Number	1911

The contractor completed pump testing, completed construction, and demobilized. In the upcoming quarter, preparation of the record drawings will begin.

**Construction Completion Date:**  
June 2021

**Total Project Estimate:**  
\$40.2 million\*

**Current Phase Estimate:**  
\$35.2 million\*

**Cost to Date for Current Phase:**  
\$34.7 million

\* In May, the total project estimate was revised from \$37.0 million to \$40.2 million and the current phase estimate was revised from \$29.7 million to \$35.2 million for increased labor, professional & technical services, and material costs to resolve issues identified during construction and pump start up.



Operational pumps and ancillary equipment at  
Greg Avenue Pump Station



## System Reliability Program

**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.

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$44.68 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$47.60 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

#### Status

Biennium expenditures for this program are more than the planned expenditures through June 2021 due to accelerated scheduling of the Headquarters Building Improvement Project as the contractor was able to complete construction activities in an expedited manner to take advantage of the lightly occupied building.

#### Accomplishments

- Datacenter Modernization Upgrade – began primary site datacenter telecommunications equipment installation
- Headquarters Building Improvements and Boardroom Technology Upgrade – audiovisual equipment installed and voting system configured
- MWD Cyber Security Upgrade
  - Yubikey, identity usb hardware key – started roll out to all MWD employees
- Lake Mathews IT Disaster Recovery Upgrade – implementation complete
- WiFi Upgrade – completed design for headquarters

#### Upcoming Activities

Upcoming work for the next quarter will include:

- Datacenter Modernization Upgrade – initiate primary site server installation and systems migration
- Headquarters Building Improvements and Boardroom Technology Upgrade – final systems integration testing and acceptance
- Desert Microwave Tower Sites Upgrade Stage 1 – procurement and final design phase scheduled to start by September 2021
- MWD Cyber Security Upgrade - begin implementation of security operational processes
- WiFi Upgrade – La Verne facility design scheduled to begin by August 2021
- Maximo Upgrade – scheduled to go live by September 2021
- Control System Upgrade – receive proposals for Mills site from prime consultant respondents in July 2021
- Initiate final design of Gene Communications System Upgrades

## System Reliability Program: Headquarters Building Improvements

This project will provide seismic strengthening of Metropolitan's Headquarters building, as well as making other necessary upgrades to this 20-year old building.

Phase	Construction & Closeout
% Complete for Current Phase	93%
Construction Contract Authorized	November 2018
Appropriation Number	15473
Contract Number	1905

The contractor completed construction of floors 10 through 12; completed installation of rain screen and kitchen remodel; and removed exterior scaffolding from the building. In the upcoming quarter, the contractor plans to install power door assist at all the exit doors.

*Estimated Construction  
Completion Date:  
July 2022*

*Total Project Estimate:  
\$78.5 million*

*Current Phase Estimate:  
\$67.2 million*

*Cost to Date for Current  
Phase:  
\$54.3 million*



Completed exterior of the headquarters building

**Estimated Yubikey  
Deployment Completion Date:  
September 2021**

**Total Project Estimate:  
\$249,999**

**Current Phase Estimate:  
\$220,000**

**Cost to Date for Current  
Phase:  
\$178,280**

### System Reliability Program: Security Operations Center

This project will improve the overall cybersecurity posture of MWD, by implementing a smart card feature to authentication.

Phase	Yubikey Deployment
% Complete for Current Phase	50%
Design and Implementation Authorized	March 2021
Appropriation Number	15378

The office of cybersecurity has implemented security policy changes to prepare for two-factor authentication enforcement. Yubikeys will provide this function and have been delivered to human resources, legal, admin services, ethics, and audit. In the upcoming quarter, an instructional video will be created and all yubikeys will be delivered to the remaining personnel.

- YubiKey plugs into USB
- Login to Computer
  - YubiKey and PIN to authenticate
- User Guide will be provided



Yubikey operating instructions

## Treatment Plant Reliability Program

**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.

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$48.31 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$56.26 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

Status	Biennial expenditures for this program are more than planned through June 2021 due to shifts in timing of the work.
Accomplishments	<ul style="list-style-type: none"> <li>• Continued construction of:               <ul style="list-style-type: none"> <li>○ Diemer West Basin &amp; Filter Building Rehabilitation</li> <li>○ Diemer Water Sampling System Improvements</li> <li>○ Jensen Electrical Upgrades - Stage 2</li> <li>○ Weymouth Chlorine System Upgrade</li> <li>○ Weymouth Water Quality Instrumentation Improvements</li> <li>○ Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades</li> </ul> </li> <li>• Continued procurement of power supply units (PSU) and dielectrics for Jensen ozone generators</li> <li>• Continued final design of:               <ul style="list-style-type: none"> <li>○ Weymouth Basins 5-8 Rehabilitation</li> <li>○ Mills Electrical Upgrades - Stage 2</li> <li>○ Jensen Ozone PSU Replacement</li> </ul> </li> </ul>
Upcoming Activities	<ul style="list-style-type: none"> <li>• Continue construction of:               <ul style="list-style-type: none"> <li>○ Weymouth Chlorine System Upgrade</li> <li>○ Weymouth Water Quality Instrumentation Improvements</li> </ul> </li> <li>• Continue procurement of power supply units and dielectrics for Jensen ozone generators</li> <li>• Complete final design of:               <ul style="list-style-type: none"> <li>○ Jensen Ozone PSU Replacement</li> <li>○ Mills Electrical Upgrades - Stage 2</li> </ul> </li> <li>• Continue construction of:               <ul style="list-style-type: none"> <li>○ Diemer Water Sampling System Improvements</li> <li>○ Jensen Electrical Upgrades - Stage 2</li> <li>○ Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades</li> </ul> </li> <li>• Continue final design of Weymouth Basins 5-8 Rehabilitation</li> </ul>



### Treatment Plant Reliability Program: Diemer West Basin & Filter Building Rehabilitation

This project will rehabilitate the Diemer Water Treatment Plant's west flocculation/sedimentation basins and filter building. The work includes the replacement of treatment basin equipment, and filter valves, abatement of hazardous materials, and seismic strengthening of the filter building.

Phase	Construction & Closeout
% Complete for Construction	99%
Construction Contract Awarded	October 2018
Appropriation Number	15380
Contract Number	1900

The contractor completed installation, commissioning and testing of all basin equipment, filter valves, and actuators in the west side of the Diemer plant. In the upcoming quarter, the Notice of Completion (NOC) will be filed, record drawings will be prepared and the project will be closed out.



Rehabilitated Diemer west basin returned to service

**Construction Completion Date:**  
July 2021

**Total Project Estimate:**  
\$56.6 million

**Current Phase Estimate:**  
\$44.2 million

**Cost to Date for Current Phase:**  
\$42.3 million



**Construction Completion Date:**  
**October 2021**

**Total Project Estimate:**  
**\$15.6 million**

**Current Phase Estimate:**  
**\$12.8 million**

**Cost to Date for Current Phase:**  
**\$12.1 million**

### **Treatment Plant Reliability Program: Weymouth Chlorination System Upgrades**

This project will upgrade chlorination system for maximum chlorine dosage demand with ozone system operation at maximum plant flow.

Phase	Construction & Closeout
% Complete for Current Phase	92%
Construction Contract Awarded	December 2018
Appropriation Number	15477
Contract Number	1883

The contractor completed installation of all liquid and gas chlorine piping and associated equipments, performed chlorine detector programmable logic controller testing, and completed all other equipment precommissioning activities. In the upcoming quarter, the contractor plans to perform testing and commissioning for the new and existing chlorine systems.



New evaporator and liquid chlorine piping at Weymouth Plant

## Water Quality/Oxidation Retrofit Program

**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.

### Planned Biennium-to-date Expenditures (July 2020 through June 2021)

\$0.02 million

### Actual Biennium-to-date Expenditures (July 2020 through June 2021)

\$0.30 million

### PROGRAM HIGHLIGHTS (4<sup>th</sup> Quarter)

Status	Biennial expenditures and progress are consistent with the plan for this program
Accomplishments	<ul style="list-style-type: none"> <li>Weymouth Enhanced Bromate Control Facilities – Continued with preparation of record drawings</li> </ul>
Upcoming Activities	<p>Upcoming work for the next quarter will include:</p> <ul style="list-style-type: none"> <li>Weymouth Enhanced Bromate Control Facilities – Complete record drawings and project closeout</li> </ul>

## MINOR CAPITAL PROGRAM

The Minor Capital Projects (Minor Cap) Program is authorized biennially to enable staff to expedite small capital projects. At the commencement of each biennium, the Board had appropriated the entire two-year budget for the program. For the current biennium, the minor cap budget was included in the CIP appropriation. In order to be considered for inclusion in the Minor Cap Program, a project must have a planned budget of less than \$400,000. The \$400,000 project budget cap was first established by the June 2018 board action Item 8-3 and the same cap is applied for the new minor caps that are approved for the current biennium. Prior to that action, the budget cap for minor cap projects was \$250,000.

The duration of minor capital projects typically ranges from a few months to three years. Since many of these projects 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.

For the past two bienniums, the two-year budgets for the Minor Cap Program have been \$10 million, and \$15.5 million respectively. In April 2020, the Board appropriated funds for the projects identified in the CIP appendix for the current biennium, FYs 2020/21–2021/22, including the Minor Cap Program. \$10 million has currently been allocated for the current biennium.

### Minor Cap Program Historical Summary

The following table provides the overall status of the Minor Cap appropriations for the fiscal years 2016/17-2017/18 through 2020/21–2021/22.

	Fiscal Year			Totals
	2016/17– 2017/18	2018/19– 2019/20	2020/21– 2021/22	
Amount Appropriated	\$10M	\$15.5M	\$10M	\$35.5M
Expenditures (through June 2021)	\$7.2M	\$9.7M	\$2.2M	\$19.1M
Number of Projects Approved	42	49	29	120
Number of Projects Completed (through June 2021)	38	19	0	57
Percent of Work Complete	97%	74%	26%	N/A
Number of Projects with Durations of Over 3 Years	4	0	0	0

Through June 2021, 57 of the 121 projects have been completed, and four active projects have exceeded three years in duration, as described below.

- Construction schedules of two projects, including the Security Upgrades at Washington Street PCS and Dominguez Pressure Relief Structure project and the Eagle Rock Security Fencing & Lighting project, have been impacted due to delays in permit processing and contractor personnel availability resulting from COVID-19 restrictions. Contractors have been scheduled to complete work by September 2021.
- The Gene Pool Refurbishment has experienced delays due to shortage of local contractors for this type of work due to surge in construction. Staff will continue reaching out to contractors to complete the remaining work by December 2021.
- Recent inspections of the San Diego Canal revealed that the concrete liner repairs required for the canal will require more work which exceed the scope authorized under a minor capital project. The San Diego Canal repairs are now scheduled to be addressed within a major capital project.

Planned biennium expenditures to date (July 2020 through June 2021) for the Minor Capital Projects Program were \$3.78 million, while actual biennium expenditures for the same period were \$6.69 million.

## Minor Cap Projects, 4<sup>th</sup> Quarter

### Authorized Projects

Six projects were authorized under the Minor Cap Program during the 4<sup>th</sup> Quarter of fiscal year 2020/21 (April through June 2021):

- DVL Inlet/Outlet Tower UPS Replacement – This project will replace the existing uninterruptable power supply unit for the DVL Inlet/Outlet Tower electrical system, which has deteriorated beyond repair. The project budget is \$190,000.
- Jensen Chlorine Railcar Scale – This project will procure one set of railcar scales and install it at the Jensen plant's chlorine railcar storage bays to increase operational reliability of the chlorine system and provide more accurate chlorine inventory readings. The project budget is \$380,000.
- Live Oak Reservoir Liner Rehabilitation – This project will remove and replace 6,000 square feet of deteriorated asphalt liner on the floor of the Live Oak Reservoir. The project budget is \$340,000.
- OC-88 Surge Tank Recirculation System Upgrade – This project will modify surge tank manifolds and install a recirculation pump to increase the frequency of water turnover in the tanks at the OC-88 pump station. This modification will allow the water in the tanks to be returned to the distribution system rather than manually drained and discharged. The project budget is \$195,000.

- San Diego Canal Dewatering Sump Upgrade – This project will install a 3-foot-long by 4-foot-deep pre-cast concrete sump in the San Diego Canal near radial gate V-06 to enhance dewatering efficiency during shutdowns. The project budget is \$135,000.
- Skinner Emergency Eyewash Shower Station Improvements – This project will replace deteriorated pressure reducing valves for 14 emergency eyewash and shower stations in the chemical tank farms at the Skinner plant. The project budget is \$148,000.

**Completed Projects**

Six projects were completed under the Minor Cap Program during the 4<sup>th</sup> Quarter of fiscal year 2020/21 (April through June 2021):

- Eagle Mountain Pool Refurbishment
- Intake Bank 2 Phase C Transformer Rehabilitation
- Iron Mountain 230kV Facility Physical Security Controls
- Mills Electrical Building 3 & 4 Air Conditioning System Improvements
- OC-13A & WR-34 Flowmeter Replacement
- Sedalia Property Grading & Drainage Improvements

**Cancelled Projects**

None



## PROJECT ACTIONS

Table 5 lists capital project actions authorized by the Board and the General Manager along with funding allocation amounts during the 4<sup>th</sup> Quarter of FY 2020/21, through the authority delegated by the Board in April 2020. The total funding amount authorized by the General Manager during the 4<sup>th</sup> Quarter is \$26,750,480, through thirty management actions. In some cases listed below, the Total Amount Authorized may differ from the Amount Authorized for Current Biennium when the work authorized is scheduled to extend beyond the current biennium. In these cases, it is anticipated that staff will request sufficient funds to be allocated from the CIP Appropriation for the next biennium to cover the planned remaining future-year costs of the project. When the Amount Authorized for Current Biennium is equal to the Total Amount Authorized, the authorized work is planned to be completed within the current biennium. Table 5 excludes any board items heard in closed session.

*Table 5: Capital Projects Funded by General Manager Authorization*

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Appian Way Valve Replacement	Study	\$50,000	\$50,000
CRA Main Pump Rehabilitation (Stage 1) - Preliminary Investigations	Initiation of Building Information Modeling	\$130,000	\$130,000
CRA Main Transformer Refurbishment	Preliminary Design	\$5,300,000	\$5,300,000
CRA Mile 12 Flow Monitoring Station Upgrades	Construction	\$3,900,000	\$3,900,000
Desert Housing Improvements	Geotechnical Investigation & Environmental Documentation	\$2,550,000	\$2,850,000
Diemer Power and Distribution Panel Upgrades	Final Design	\$170,000	\$170,000
East Lake Skinner Bypass and Bypass No. 2 Screening Structure Upgrade	Preliminary Design	\$290,000	\$290,000
Fuel Management System Upgrade	Design, Development, & Deployment	\$840,480	\$1,450,000
Hydroelectric Plant Rehabilitation	Study	\$875,000	\$875,000
Mills Maintenance Building Roof Replacement	Preliminary Design & Final Design	\$118,000	\$118,000
Mills Ozone Generator PLC Control & Communication Equipment Upgrade	Final Design & Communication Equipment Procurement	\$538,000	\$538,000

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
New Jensen Caustic Soda Tank Farm at the Combined Filter Effluent	Study	\$190,000	\$190,000
San Diego and Auld Valley Canals Concrete Liner Repair	Preliminary Design	\$650,000	\$650,000
San Diego Pipelines 3 and 5 Vacuum Valve Replacement	Construction	\$465,000	\$465,000
Seven Minor Capital Projects	Design & Construction	\$1,754,000	\$1,754,000
Water Information System	Design, Development, & Deployment	\$3,000,000	\$4,175,000
Weymouth Hazardous Waste and Containment	Final Design	\$420,000	\$420,000
	<b>Total</b>	<b>\$21,240,480</b>	<b>\$23,325,000</b>

Table 6 lists projects that received additional funds for change orders from the CIP Appropriation for Fiscal Years 2020/21 and 2021/22, Appropriation No. 15517, during the 4<sup>th</sup> Quarter to complete authorized work. Reasons for these allocations include: comprehensive study, revisions to the final design package, additional workshops and design review, and upgrades that were necessary to accommodate the new equipment and enclosure requirement; additional evaluation of options needed to establish project requirements; increased construction cost due to COVID-19 delays; unexpected construction changes as a result of pump movement at the flexible coupling; additional costs to develop and implement enhancements to service catalog of ServiceNow; additional storage funding for delay in installation of pre-purchased equipment; and increased cost due to delays in final design.

Table 6: General Manager Actions for Change Orders to Allocate Funds from Appropriation 15517

Project	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
108th Street Pressure Control Structure Valve Replacement	Study	\$375,000	\$375,000
CRA Domestic Water Treatment System Replacement	Final Design	\$1,100,000	\$1,100,000
CRA Pumping Plant Wastewater System Replacement	Study	\$265,000	\$265,000
Greg Avenue Pump Station Rehabilitation	Construction	\$3,250,000	\$3,250,000
IT Service Management System	Design, Development, & Deployment	\$100,000	\$100,000
La Verne Machine and Fabrication Shop Equipment Design and Procurement	Procurement	\$250,000	\$337,600
La Verne Shops - Stage 4 Buildings Completion & Equipment Procurement	Final Design	\$170,000	\$250,000
<b>Total:</b>		<b>\$5,510,000</b>	<b>\$5,677,600</b>

## **CEQA DETERMINATIONS**

Consistent with CEQA, the Board delegated this authority to the General Manager in April 2020. Adoption of Negative Declarations and Mitigated Negative Declarations, and certification of Environmental Impact Reports will continue to require action by Metropolitan's Board. Other than those capital projects that were presented to the Board, no CEQA exemption determinations were made by the General Manager during the 4<sup>th</sup> Quarter. This excludes information on board items heard in closed session.

## CONSTRUCTION AND PROCUREMENT CONTRACTS

The table below summarizes the status of all active construction and procurement contracts that were awarded by the Board during the reporting quarter. Total contract earnings for the 4<sup>th</sup> Quarter were approximately \$20,672,643.

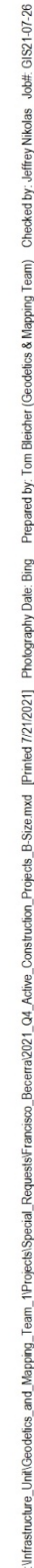
*Table 7: Summary of Construction and Procurement Contracts during 4<sup>th</sup> Quarter  
(April through June 2021)*

Summary	Construction	Procurement
Number of Contracts Active during this Quarter <sup>2</sup>	23	14
Total Contract Amount of Active Contracts	\$323,363,259	\$60,491,942
Number of Contracts Completed this Quarter <sup>3</sup>	8	0
Number of Contracts Awarded this Quarter	1	0
Total Contract Amount of Contracts Awarded this Quarter	\$2,022,000	\$0
Contract Earnings <sup>4, 5, 6</sup> this Quarter	\$20,202,332	\$470,311

The figures on the next two pages show the locations of the twenty-four active construction contracts during the 4<sup>th</sup> quarter.

- 
- <sup>2</sup> Number of Contracts Active during this Quarter includes those that were underway as well as those that were completed during the 4<sup>th</sup> Quarter.
- <sup>3</sup> Completed construction contracts are those which Metropolitan has accepted as physically complete and has filed Notice of Completion during the 4<sup>th</sup> Quarter. Completed procurement contracts are those which Metropolitan has received complete delivery and use of field services during the 4<sup>th</sup> Quarter. No procurement contracts have been completed during the 4<sup>th</sup> Quarter.
- <sup>4</sup> Contract earnings reflected in this report represent the value of the work performed by the contractor by the 25<sup>th</sup> day of the month. Contract earnings include contract retention and other similar deductions for the amounts earned by the contractor, but otherwise required to be withheld by Metropolitan by law or by contract.
- <sup>5</sup> Contract payments are typically made by Metropolitan in the month following performance of the work.
- <sup>6</sup> For the reasons listed above in the preceding two footnotes, contract payments in Metropolitan's financial system may be less than the earnings until the final payment has been made to the contractor.





Service Layer Credits: Sources: Esri, HERE, Garmin, OpenMap,   
 Increment P Corp., GEBCO, USGS, FAO, NGS, NRC, NRI,   
 GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,   
 METI, Esri China (Hong Kong), Swisstopo, Mapbox Labs,   
 and the GIS User Community



A scale bar labeled 'Miles' with markings at 0, 2.5, 5, and 10. To the right of the scale bar is a north arrow pointing upwards.



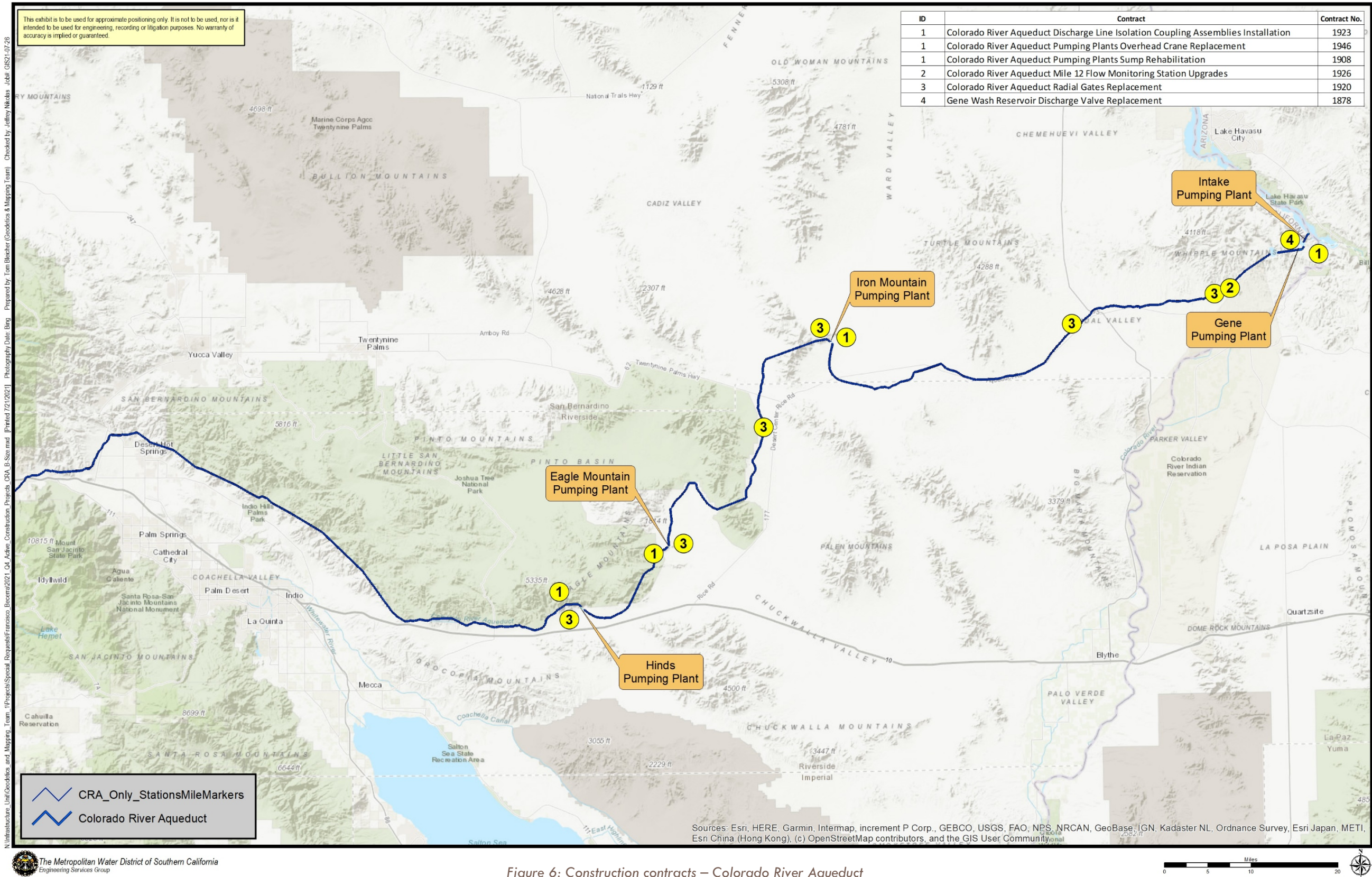


Figure 6: Construction contracts – Colorado River Aqueduct



Metropolitan's Administrative Code authorizes the General Manager to execute change orders on construction contracts in an aggregate amount not to exceed five percent of the original amount of the contract or \$250,000, whichever is greater. If changes occur on a construction contract that will exceed this total, additional authorization from the Board is required. In addition, the General Manager is authorized to execute change orders on procurement contracts in an amount not to exceed \$250,000. In the 4<sup>th</sup> Quarter, the Board authorized an increase of \$200,000 in change order authority for the construction contract to rehabilitate the Greg Avenue Pump Station.

#### **Notices of Completion during 4<sup>th</sup> Quarter:**

The following table shows the eight contracts for which Metropolitan accepted the contract as completed during the 4<sup>th</sup> Quarter of FY 2020/21 and filed a Notice of Completion (NOC) with the county where the work was performed. In accordance with Section 9204 of the Civil Code of the State of California, an NOC is filed within 15 days of acceptance by Metropolitan of completion of construction by the contractor.

*Table 8: Notices of Completion Filed This Quarter*

Contract No.	Contract	Notice of Completion	Original Bid Amount	Final Contract Costs	Change Order	Change Order %
1923	Colorado River Aqueduct Discharge Line Isolation Couplings and Bulkheads Installation	May 2021	\$32,946,000	\$32,946,000	\$0	0%
1924	OC Region Pipelines - ROW Infrastructure Protection Program Phase I	May 2021	\$429,295	\$570,908	\$141,613	33.0%
1972	Lake Perris Bypass Pipeline Relining	May 2021	\$5,410,000	\$5,410,000	\$0	0%
1977	Lakeview Pipeline Improvements	May 2021	\$3,270,000	\$3,486,674	\$216,674	6.6%
1979	Diamond Valley Lake Floating Wave Attenuator Repair	May 2021	\$276,373	*	*	*
1988	Allen-McColloch Pipeline PCCP 2021 Relining	May 2021	\$2,435,000	\$2,452,375	\$17,375	0.7%
1902 <sup>7</sup>	Second Lower Feeder PCCP Rehabilitation - Reach 2	June 2021	\$53,273,196	\$58,063,181	\$4,789,985	9.0%
1911	Greg Avenue Pressure Control Structure - Pump Modification and New Control Building	June 2021	\$20,975,000	*	*	*
<b>Totals:</b>			<b>\$119,014,864</b>			

<sup>7</sup> Total change order amount for Contract 1902 of 4,789,985 includes \$5,797,691 for the construction of Second Lower Feeder PCCP Rehabilitation - Reach 8 and net credit of \$1,007,706 for the Reach 2 portion.

For the 4<sup>th</sup> Quarter, the total amount of completed contracts was approximately \$119 million. For the Contract Numbers 1979 and 1911, although a Notice of Completion were filed during the reporting quarter, the final contract cost and change order amount are unknown due to outstanding pending issues. Final contract costs shown represent actual earnings as of the end of the quarter and may be refined based on resolution of pending issues subsequent to the completion date.

The final contract costs can differ from the original bid amount due to change orders and actual costs incurred on unit price or other various bid items. The rolling average of change orders on completed contracts during the preceding 12-month period (July 2020 through June 2021) is 1.12 percent<sup>8</sup>. Contract work on Second Lower Feeder PCCP Rehabilitation - Reach 8 was performed as an owner directed change to the Reach 2 contract and was excluded from the rolling average calculation.

#### **Contracts Awarded during 4<sup>th</sup> Quarter:**

During the period of April through June 2021, one construction contract totaling \$2,022,000 was awarded by the Board.

*Table 9: Construction Contracts Awarded This Quarter*

<b>Construction Contracts</b>	
<b>CRA Mile 12 Flow Monitoring Station Upgrades</b>	
Contract Number	1926
Contractor	R2Build Engineering dba R2Build
Amount	\$2,022,000

<sup>8</sup> Original amount of contracts completed (July 2020 through June 2021)	=	\$160,554,359
Change orders for completed contracts (July 2020 through June 2021)	=	\$1,795,324
Change order percentage for (July 2020 through June 2021)	=	1.12%

The table on this page lists the 15 ongoing construction contracts through the end of the 4<sup>th</sup> Quarter. Metropolitan is negotiating a settlement with the contractor on Construction Contract No. 1908 to remove the remaining construction portion of the contract, which was suspended due to Metropolitan's response to COVID-19. As part of the settlement, Metropolitan is procuring materials and equipment from the contractor for a future construction contract.

*Table 10: Active Construction Contracts at the End of 4<sup>th</sup> Quarter*

	Cont. No.	Contract Title	Contractor	Contract Amount <sup>9</sup>	Earnings Through June 2021	Start Date	Est. Completion Date	Est. Percent Complete
1	1884	Garvey Reservoir Sodium Hypochlorite Feed System Upgrades	Metro Builders & Engineers Group, Ltd.	\$2,418,149	\$61,250	4/9/21	7/22	3%
2	1878	Gene Wash Reservoir Discharge Valve Replacement	Gracon, LLC	\$5,319,066	\$2,302,659	1/21/20	11/21	43%
3	1883	F. E. Weymouth Water Treatment Plant Chlorination Systems Upgrades	J.F. Shea Construction, Inc.	\$8,726,530	\$8,180,099	1/28/19	10/21	93%
4	1900	Diemer Water Treatment Plant West Basin and Filter Building Rehabilitation	Environmental Construction, Inc.	\$39,878,691	\$39,818,691	11/13/18	7/21	99%
5	1905	Metropolitan Headquarters Building Improvements	Bernards Bros. Inc.	\$48,732,099	\$48,524,905	1/14/19	7/22	93%
6	1908	CRA Pumping Plants – Sump Rehabilitation	Michels Corp dba Michels Pipeline Construction	\$26,921,840	\$5,388,610	1/24/19	7/22	20%
7	1914	Joseph Jensen Water Treatment Plant Electrical Upgrade - Stage 2	Helix Electric, Inc.	\$15,087,406	\$12,483,886	8/14/19	8/22	83%
8	1920	Colorado River Aqueduct - Installation of Radial Gates at Seven Facilities	McMillen, LLC dba McMillen Jacobs Associates	\$10,501,211	\$10,456,211	9/18/19	8/21	99%
9	1921	F. E. Weymouth Water Treatment Plant Water Quality Instrumentation Improvements	Mehta Mechanical Company, Inc. dba MMC, Inc.	\$2,973,077	\$2,873,402	9/16/19	8/21	97%
10	1926	CRA Mile 12 Flow Monitoring Station Upgrades	R2 Engineering dba R2Build	\$2,022,000	\$0	6/16/21	7/22	0%

<sup>9</sup> The Contract Amount may differ from the original bid amount due to periodic change orders approved by the General Manager or, if required, by the Board.



	Conf. No.	Contract Title	Contractor	Contract Amount <sup>9</sup>	Earnings Through June 2021	Start Date	Est. Completion Date	Est. Percent Complete
11	1938	MWD HQ Bldg. Physical Security Improvements	Bernards Bros. Inc.	\$5,843,525	\$2,277,501	9/22/20	7/22	39%
12	1945	Lake Mathews IT Disaster Recovery Facility Upgrades	MCL Constructors, Inc.	\$448,900	\$179,140	2/10/21	10/21	40%
13	1946	Colorado River Aqueduct Pumping Plants - Overhead Crane Replacement	J.F. Shea Construction, Inc.	\$13,419,000	\$347,300	10/14/20	9/23	3%
14	1962	MWD HQ Building Fire Alarm & Smoke Control Improvements	Bernards Bros. Inc.	\$13,999,000	\$2,018,650	9/24/20	3/22	14%
15	1970	Garvey Reservoir Drainage and Erosion Improvements - Areas 6, 7, 8, 10, and 11	Kaveh Engineering & Construction, Inc	\$1,294,800	\$774,830	11/20/20	11/21	60%
Total contract value for active construction contracts:				\$197,585,294				

The following table lists the 14 ongoing procurement contracts through the end of the 4<sup>th</sup> Quarter.

*Table 11: Active Procurement Contracts at the End of 4<sup>th</sup> Quarter*

Cont. No.	Contract	Contractor	Contract Amount <sup>10</sup>	Earnings Through June 2021	Start Date	Est. Delivery Completion Date	Est. Percent Complete <sup>11</sup>
1 1851	Furnishing Horizontal Axially Split Centrifugal Pumps for the Greg Avenue Pump Station	Xylem Water Solutions U.S.A., Inc.	\$1,492,290	\$1,255,332	5/16/17	D <sup>12</sup>	87%
2 1861	Furnishing Lubricated Plug Valves for Second Lower Feeder	Southwest Valve & Equipment, Inc.	\$2,380,909	\$2,362,968	9/11/17	D <sup>12</sup>	99%
3 1867 <sup>13</sup>	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 1	Crispin Valve, LLC	\$5,016,067	\$200,857	12/18/17	12/22	4%
4 1868	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 2	DeZurick, Inc.	\$771,984	\$760,384	12/18/17	1/22	98%
5 1873	Furnishing One Hydraulic Shear System for the La Verne Maintenance Shops	Landmark Solutions, LLC	\$151,870	\$146,970	3/21/18	D <sup>12</sup>	97%
6 1912	Furnishing Large-Diameter Conical Plug Valves	Ebara Corporation	\$23,750,060	\$4,529,186	12/24/18	6/23	19%
7 1922	Furnishing One Double Column Vertical Machining Center for the La Verne Maintenance Shops	Gosiger Machine Tools, LLC (Gosiger West)	\$2,193,356	\$2,072,295	9/17/18	D <sup>12</sup>	94%
8 1948	Refurbishing Valve Actuators for the Diemer Water Treatment Plant	Flowserve Limatorque	\$3,532,700	\$1,446,889	2/16/19	9/21	41%
9 1955	Furnishing Membrane Filtration Systems for the CRA Domestic Water Treatment Systems	Wigen Water Technologies	\$1,206,535	\$0	5/28/20	7/25	0%
10 1965	Furnishing Equipment for the Jensen Ozone Power Supply Units Upgrades	Suez Treatment Solutions, Inc.	\$4,100,000	\$354,309	3/30/20	3/22	9%

<sup>10</sup> The Contract Amount may differ from the original bid amount due to periodic change orders approved by the General Manager or, if required, by the Board.

<sup>11</sup> Estimated Percent Complete is based on contract payments and may not reflect actual progress of fabrication. The contract will be 100% complete upon delivery of fabricated items and field services.

<sup>12</sup> All items were delivered but contract remains open pending use of manufacturer field services.

<sup>13</sup> Contract 1867 includes tariff and work on Furnishing Butterfly Valves for the Weymouth Water Treatment Plant - Schedule 1 per extra work directed in the November 2020 Board Letter, Item 7-1.

	Cont. No.	Contract	Contractor	Contract Amount <sup>10</sup>	Earnings Through June 2021	Start Date	Est. Delivery Com- pletion Date	Est. Percent Complete <sup>11</sup>
11	1968	Furnishing Earthquake-Resistant Ductile Iron Pipe for the Casa Loma Siphon Barrel No. 1	Kubota Corporation	\$9,237,782	\$9,021,862	2/12/20	D <sup>12</sup>	98%
12	1969	Furnishing Inlet Valve Gearboxes for Skinner Module No. 7	R&B Automation, Inc.	\$192,185	\$0	4/29/20	9/21	0%
13	1978	Furnishing Steel Pipe for the Casa Loma Siphon Barrel No. 1	Northwest Pipe Company	\$6,134,208	\$5,365,992	1/16/20	12/23	87%
14	PO 188 876	Furnish Two Sodium Hypochlorite Storage Tanks to Replace Existing Tanks at Lake Mathews	Pacific Mechanical Supply	\$331,996	\$0	5/20/19	8/21	0%
Total contract value for active procurement contracts:				\$60,491,942				

## **PERFORMANCE METRICS**

In order to measure project performance efficiency and to identify areas for continuous improvements, Metropolitan's Engineering Services Group has established two primary performance metrics for projects that will result in construction activities. These metrics serve as performance targets for Metropolitan staff for both final design and inspection activities. The inspection metric includes fabrication and construction inspection, as well as construction management services.

Separate performance targets have been established for two categories of project size; those with projected construction costs greater than \$3 million, and those with projected construction costs less than \$3 million.

Metropolitan's **performance metric targets** for the two categories of construction projects are listed below:

Project Category	Final Design, % of Construction	Inspection % of Construction
Projects with Construction Costs > \$3 Million	9% to 12%	9% to 12%
Projects with Construction Costs < \$3 Million	9% to 15%	9% to 15%

Prior to proceeding with final design or construction, budgets are established for design and inspection that best provide a quality and timely product. Efforts are made to optimize staff and consultant hours based on project complexity and location. The calculated values for the design and inspection costs, as a percentage of total construction costs, in almost all cases lie within or below the metric target ranges. In rare cases, the calculated values may exceed the metric target ranges.

Once a project phase is complete, either final design or construction, staff's performance against these metrics is then calculated and compared to the target metrics. Table 13 and Table 14 on the following page summarize the comparison between the target metrics and the actual performance metrics for each project category for the current reporting period. In cases where the actual performance exceeded the target metric, explanations for the variance are provided. Actual performance for in-house construction projects and minor capital projects are not reported in this section, since the efforts required for final design and inspection are different.

Table 12: Performance Metric Actuals, Projects &gt; \$3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Allen-McColloch Pipeline PCCP 2021 Relining	Inspection	\$249,000	\$4,100,000	9-12%	6.1%
Colorado River Aqueduct Mile 12 Flow Monitoring Station Upgrades	Final Design	\$627,339	\$2,964,000	9-12%	21.2% <sup>14</sup>
CRA Discharge Line Isolation Couplings Assemblies	Inspection	\$1,297,889	\$33,572,690	9-12%	3.9%
Greg Avenue Pump Station Rehabilitation	Inspection	\$3,187,818	\$24,833,506	9-12%	12.8% <sup>15</sup>
Lake Perris Bypass Pipeline Relining	Inspection	\$185,470	\$5,412,489	9-12%	3.4%
Lakeview Pipeline Improvements	Inspection	\$288,169	\$3,666,413	9-12%	7.9%
Second Lower Feeder PCCP Rehabilitation Reach 2	Inspection	\$2,416,675	\$54,726,947	9-12%	4.4%

<sup>14</sup> Final design costs for CRA Mile 12 Flow Monitoring Station Upgrades were higher than the target range due to repackaging the design from in-house construction to construction by contractor and re-advertising the bid package after rejecting all bids. Late stage design changes such as adding enhanced security features and control system upgrades impacted design efforts as well. In addition, the favorable bid came in significantly lower than the engineer's estimate, which increased the actual percentage.

<sup>15</sup> Inspection costs for Greg Avenue Pump Station Rehabilitation were higher than the target range due to longer than anticipated time to complete construction, which required additional inspection. The construction delays were mainly due to unanticipated discovery of higher water pressure within the suction and discharge portions of the pipeline during the startup testing of the pumps, which required design, fabrication, and installation of additional valves, pipes, and surge tanks to mitigate the pressure surge.



Table 13: Performance Metric Actuals, Projects &lt; \$3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Erosion-Control Improvements for Six Sites in Orange County Region	Inspection	\$104,842	\$628,663	9-15%	16.7% <sup>16</sup>
Diamond Valley Lake Floating Wave Attenuator	Inspection	\$27,590	\$247,600	9-15%	11.1%

<sup>16</sup> Inspection costs for Erosion-Control Improvements for Six Sites in Orange County Region were higher than the target range due to multiple remote locations that were under construction at the same time and long travel distance between the work sites as disclosed in the June 2020 Board letter, Item 7-5.

## **SERVICE CONNECTIONS AND RELOCATIONS**

### **Service Connections**

No new agreements for service connections were approved by the General Manager pursuant to Sections 4700-4708 during the reporting period (April through June 2021).

### **Relocations**

No new relocation agreements involving an amount in excess of \$100,000 were approved under the authority of Section 8122(c) during the reporting period.

## **PROJECTS EXPENSED TO OVERHEAD**

There are no expensed projects to report during the fourth quarter of fiscal year 2020/21 (April through June 2021).

## PROGRAM/APPROPRIATION STATUS

The following table provides the program and appropriation level budget versus cost-to-date and biennium planned expenditures versus actuals-to-date.

Table 14: Program and Appropriation Budget vs. Cost and Planned Expenditures vs. Actuals

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru June 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
<b>Colorado River Aqueduct Reliability Program</b>	<b>Total</b>	<b>\$447,357</b>	<b>\$363,783</b>	<b>\$55,000</b>	<b>\$47,993</b>
Cabazon Radial Gate Facility Improvements	15320	\$716	\$646	\$0	\$20
White Water Siphon Protection <sup>17</sup>	15341	\$15,585	\$14,490	\$0	\$0
CRA - Conveyance Reliability	15373	\$117,828	\$110,781	\$6,705	\$3,284
CRA - Electrical/Power Systems Reliability	15384	\$55,765	\$44,434	\$2,421	\$3,595
CRA – Discharge Containment	15385	\$8,129	\$7,908	\$0	\$329
CRA - Reliability for FY2006/07 through FY2011/12	15438	\$147,734	\$108,294	\$19,189	\$13,511
CRA Main Pump Reliability	15481	\$65,730	\$48,069	\$23,298	\$20,447
CRA - Reliability for FY2012/13 through FY2017/18	15483	\$31,227	\$26,354	\$3,377	\$5,226
CRA - Reliability for FY2018/19 through FY2023/24	15507	\$4,643	\$2,806	\$10	\$1,581

<sup>17</sup> \$2.8 million reimbursement from Federal Emergency Management Agency (FEMA) for construction of Whitewater Erosion Protection Structure Rehabilitation was credited in Q4 of FY 2020/21. The credited work was completed prior to the current biennium and has been reversed in this table to account all capital work performed in the current biennium.

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru June 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
<b>Cost Efficiency &amp; Productivity Program</b>	<b>Total</b>	<b>\$210,333</b>	<b>\$175,486</b>	<b>\$6,705</b>	<b>\$5,020</b>
DVL Recreation Facilities <sup>18</sup>	15334	\$87,004	\$63,821	\$925	-\$100
Power Reliability and Energy Conservation	15391	\$54,795	\$52,842	\$0	\$0
Information Technology System - Business, Finance, and HR	15411	\$22,468	\$22,387	\$11	\$47
Yorba Linda Power Plant Modifications	15446	\$17,125	\$17,050	\$30	\$37
Business Operations Improvement	15484	\$15,396	\$8,081	\$5,396	\$1,395
Project Controls and Reporting System	15490	\$6,440	\$6,288	\$0	\$334
Enterprise Content Management	15500	\$3,600	\$2,602	\$93	\$1,001
DVL Recreation Rehabilitation & Refurbishment	15515	\$1,030	\$700	\$250	\$591
Energy Sustainability Improvements	15521	\$2,475	\$1,717	\$0	\$1,717
<b>Dams and Reservoirs Reliability Program</b>	<b>Total</b>	<b>\$72,554</b>	<b>\$62,941</b>	<b>\$5,100</b>	<b>\$1,753</b>
Reservoir Cover and Replacement	15417	\$61,614	\$53,816	\$3,052	\$1,300
Dam Rehabilitation & Safety Improvements	15419	\$10,940	\$9,125	\$2,048	\$453
<b>Distribution System Reliability Program</b>	<b>Total</b>	<b>\$372,605</b>	<b>\$336,409</b>	<b>\$37,200</b>	<b>\$49,819</b>
Conveyance and Distribution System - Rehabilitation	15377	\$102,686	\$96,590	\$9,466	\$3,148
Conveyance and Distribution System - Rehabilitation for FY2006/07 through FY2011/12	15441	\$110,299	\$105,361	\$1,558	\$1,845
Hydroelectric Power Plant Improvements	15458	\$19,378	\$16,225	\$72	\$1,521
Conveyance and Distribution System - Rehabilitation for FY2012/13 through FY2017/18	15480	\$117,607	\$103,844	\$15,759	\$32,964
Pipeline Rehabilitation and Replacement	15482	\$1,143	\$1,010	\$0	\$806
Conveyance and Distribution System - Rehabilitation for FY2018/19 through FY2023/24	15503	\$21,492	\$13,377	\$10,344	\$9,534

<sup>18</sup> Approximately \$107K was credited from the sales of DVL properties per the November 2005 Board Letter, Item 7-3 and the March 2020 Board Letters, Item 8-2 in Q4 of FY 2020/21.

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru June 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
<b>District Housing &amp; Property Improvements Program</b>	<b>Total</b>	<b>\$5,607</b>	<b>\$2,478</b>	<b>\$3,500</b>	<b>\$1,549</b>
Employee Village Enhancement	15513	\$5,607	\$2,478	\$3,500	\$1,549
<b>Minor Capital Projects Program</b>	<b>Total</b>	<b>\$43,500</b>	<b>\$25,760</b>	<b>\$3,800</b>	<b>\$6,692</b>
Capital Program for Projects Costing Less Than \$250,000 for FY2014/15 through FY2015/16	15489	\$8,000	\$6,709	\$0	\$16
Capital Program for Projects Costing Less Than \$250,000 for FY2016/17 through FY2017/18	15498	\$10,000	\$7,205	\$353	\$446
Capital Program for Projects Costing Less Than \$400,000 for FY2018/19 through FY2019/20	15504	\$15,500	\$9,696	\$1,419	\$4,080
Capital Program for Projects Costing Less Than \$400,000 for FY2020/21 through FY2021/22	15518	\$10,000	\$2,151	\$2,028	\$2,151
<b>Prestressed Concrete Cylinder Pipe Rehabilitation Program</b>	<b>Total</b>	<b>\$307,732</b>	<b>\$244,881</b>	<b>\$30,260</b>	<b>\$24,631</b>
PCCP Rehabilitation and Replacement	15471	\$24,243	\$21,601	\$1,200	\$1,144
Sepulveda Feeder PCCP Rehabilitation	15496	\$28,470	\$24,819	\$375	\$1,793
Second Lower Feeder PCCP Rehabilitation	15497	\$239,887	\$189,157	\$26,900	\$15,528
Allen-McColloch Pipeline, Calabasas Feeder, and Rialto Pipeline PCCP Rehabilitation	15502	\$15,132	\$9,303	\$1,785	\$6,166
<b>Regional Recycled Water Supply Program</b>	<b>Total</b>	<b>\$22,150</b>	<b>\$21,106</b>	<b>\$210</b>	<b>\$178</b>
Demonstration-Scale Recycled Water Treatment Plant <sup>19</sup>	15493	\$22,150	\$21,106	\$210	\$178
<b>Right of Way &amp; Infrastructure Protection Program</b>	<b>Total</b>	<b>\$29,815</b>	<b>\$25,447</b>	<b>\$2,415</b>	<b>\$2,469</b>
Right of Way & Infrastructure Protection	15474	\$29,815	\$25,447	\$2,415	\$2,469

<sup>19</sup> \$1 million grant from the California State Water Resources Control Board for the construction of Advanced Water Treatment Demonstration Facility was credited in Q3 of FY 2020/21. The credited work was completed prior to the current biennium and has been reversed in this table to account all capital work performed in the current biennium.



Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru June 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
<b>System Flexibility/Supply Reliability Program</b>	<b>Total</b>	<b>\$661,160</b>	<b>\$633,397</b>	<b>\$13,600</b>	<b>\$17,254</b>
Hayfield and Lake Perris Groundwater Recovery	15402	\$1,500	\$1,043	\$0	\$185
Perris Valley Pipeline	15425	\$130,800	\$129,457	\$3,954	\$1,271
Water Delivery System Improvements	15488	\$67,860	\$64,264	\$9,646	\$14,775
Verbena Property Acquisition	15492	\$264,000	\$261,292	\$0	\$814
Delta Wetlands Properties (Delta Islands)	15494	\$197,000	\$177,340	\$0	\$209
<b>System Reliability Program</b>	<b>Total</b>	<b>\$359,674</b>	<b>\$273,228</b>	<b>\$44,900</b>	<b>\$47,599</b>
Information Technology System - Infrastructure	15376	\$51,306	\$46,963	\$481	\$1,249
Information Technology System - Security	15378	\$12,351	\$9,303	\$1,000	\$1,070
La Verne Shop Facilities Upgrade	15395	\$46,480	\$45,960	\$4,615	\$470
Water Operation Control	15467	\$51,414	\$41,003	\$806	\$1,684
Union Station Headquarters Improvements	15473	\$106,805	\$72,841	\$15,746	\$23,860
IT Infrastructure Reliability	15487	\$46,758	\$30,944	\$12,242	\$14,250
Operations Support Facilities Improvement	15495	\$19,088	\$17,069	\$3,887	\$280
Metropolitan Security System Enhancements	15499	\$15,910	\$5,951	\$2,747	\$3,193
Infrastructure Reliability Information System	15501	\$4,075	\$2,271	\$2,066	\$766
System-Wide Paving & Roof Replacements for FY 2020/21 through FY 2021/22	15516	\$756	\$550	\$498	\$403
System-Wide Paving & Roof Replacements for FY2020/21 through FY2023/24	15519	\$1,041	\$372	\$0	\$372
Enterprise Data Analytics	18910	\$3,690	\$2	\$811	\$2

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru June 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
<b>Treatment Plant Reliability Program</b>	<b>Total</b>	<b>\$939,697</b>	<b>\$879,485</b>	<b>\$48,550</b>	<b>\$56,256</b>
Chlorine Containment and Handling Facilities	15346	\$162,370	\$160,508	\$0	\$61
Weymouth Water Treatment Plant Improvements	15369	\$190,910	\$184,297	\$3,376	\$2,594
Jensen Water Treatment Plant Improvements	15371	\$47,062	\$46,624	\$43	\$40
Diemer Water Treatment Plant Improvements	15380	\$213,657	\$204,721	\$16,192	\$15,570
Mills Water Treatment Plant Improvements	15381	\$5,525	\$5,277	\$0	\$0
Skinner Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15435	\$3,860	\$2,142	\$0	\$33
Diemer Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15436	\$70,939	\$63,621	\$1,109	\$1,326
Weymouth Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15440	\$24,079	\$20,835	\$1,509	\$2,074
Jensen Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15442	\$91,376	\$79,141	\$13,964	\$20,075
Mills Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15452	\$22,652	\$21,599	\$480	\$2,205
Weymouth Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15477	\$76,989	\$74,485	\$5,946	\$8,968
Diemer Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15478	\$1,425	\$1,265	\$0	\$259
Mills Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15479	\$1,094	\$549	\$0	\$95
Skinner Water Treatment Plant Improvements for FY 2012/13 Through FY 2017/18	15485	\$1,990	\$1,729	\$0	\$6
Jensen Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15486	\$8,339	\$7,424	\$0	\$663

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru June 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
Weymouth Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15505	\$685	\$240	\$468	\$16
Jensen Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15508	\$6,790	\$1,678	\$4,493	\$1,356
Diemer Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15510	\$745	\$432	\$499	\$49
Skinner Water Treatment Plant, Improvements For FY 2020/21 Through FY 2023/24	15512	\$3,831	\$2,900	\$470	\$847
Mills Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15520	\$5,380	\$18	\$0	\$18
<b>Water Quality/Oxidation Retrofit Program</b>	<b>Total</b>	<b>\$631,914</b>	<b>\$628,200</b>	<b>\$19</b>	<b>\$296</b>
Diemer Water Treatment Plant Oxidation Retrofit	15389	\$370,192	\$370,024	\$0	\$0
Weymouth Water Treatment Plant Oxidation Retrofit	15392	\$251,482	\$248,594	\$19	\$18
Enhanced Bromate Control	15472	\$10,240	\$9,581	\$0	\$278
<b>Total CIP</b>		<b>\$4,104,098</b>	<b>\$3,672,599</b>	<b>\$251,259</b>	<b>\$261,508</b>

Notes on above table:

- Numbers may not sum due to rounding.
- \$0 under **Planned Expenditures** indicate that while no expenditures are planned during the reporting period, expenditures may be planned during upcoming periods
- Negative actual expenditures indicate the result of cost transfers, write-offs, or credits greater than actual costs for this biennium through the reporting quarter

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