THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Report

Engineering Services Group

- **Capital Investment Plan Quarterly Report for period ending September 30, 2021**

Summary

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 July to September 2021, the first quarter of fiscal year 2021/22, and the fifth quarter of the fiscal years 2020/21 and 2021/22 biennium.

Purpose

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.

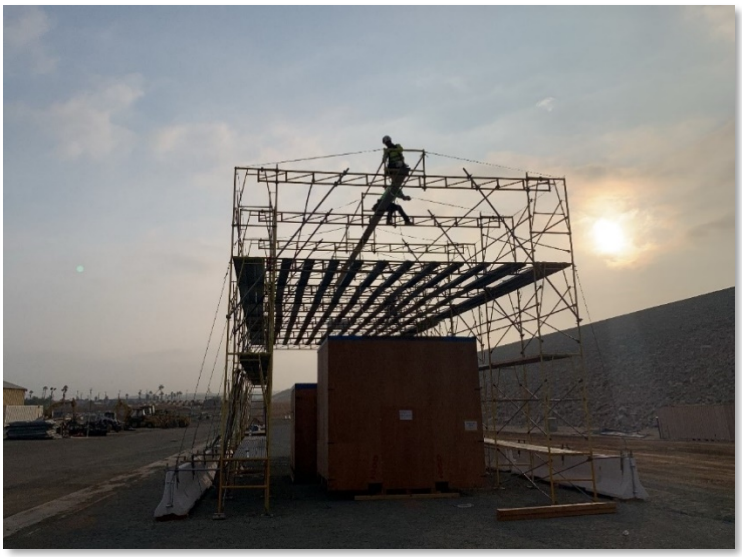
Attachments

Capital Investment Plan quarterly report for period ending September 2021

Date of Report: 12/14/2021

CAPITAL INVESTMENT PLAN

Quarterly Report | July – September 2021



THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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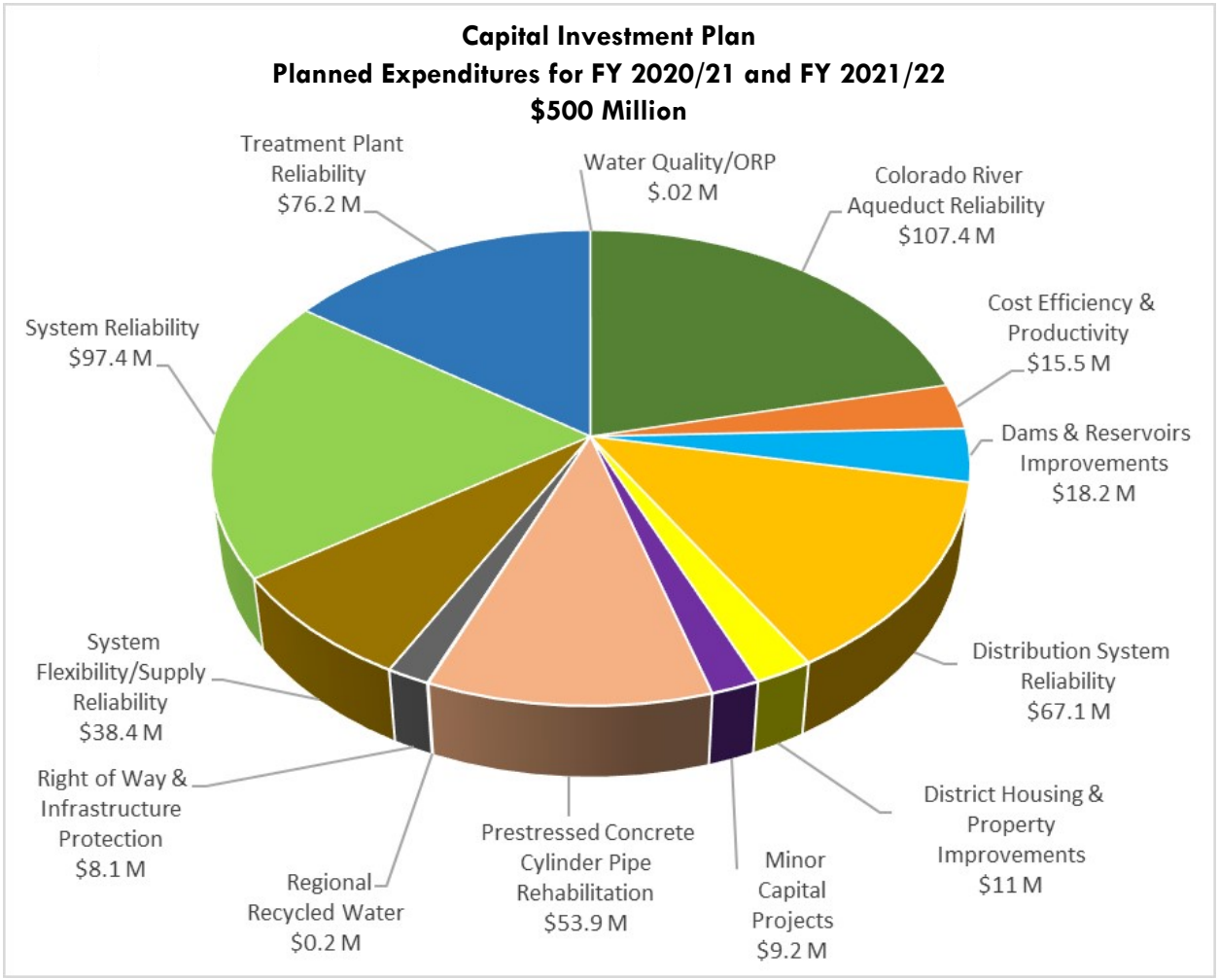
CAPITAL INVESTMENT PLAN FOR FISCAL YEARS 2020/21 & 2021/22

Metropolitan's total Capital Investment Plan (CIP) planned expenditures for Fiscal Years (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): *Headquarters Building Physical Security Improvements - dust control for rotunda modifications; Lake Mathews Facility – Second Lower Feeder PCCP conical plug valve temporary storage canopy installation]*

FIRST QUARTER SUMMARY

Biennial expenditures through September 2021 totaled $297.8 million (details shown in Table 15), and expenditures for the 1st Quarter of Fiscal Year 2021/22, July through September 2021, totaled $36.2 million for all capital programs.

During the 1st Quarter, board actions heard in open session included six project-specific actions summarized in Table 1 below. These actions awarded two contracts totaling approximately $12.1 million, authorized four new professional/technical services agreements totaling a not-to-exceed amount of approximately $6.6 million, and authorized an increase to three existing agreements totaling a not-to-exceed amount of $3.8 million. 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: 1st Quarter Board Actions

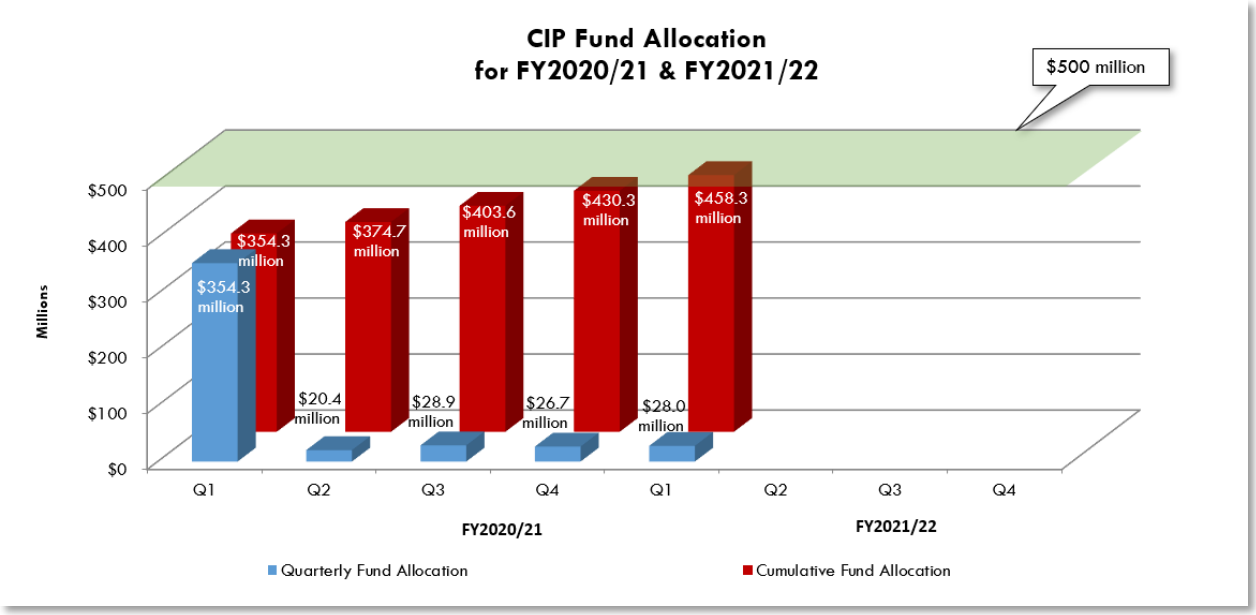
Month	Board Letter Item No.	Project	Action taken
July	7-3	Desert Wide Area Network Upgrade	Authorized an agreement not-to-exceed $5,297,000; authorized an increase of $250,000 to an existing agreement
July	7-3	Gene Communication System Upgrade	Authorized an unplanned project; authorized an agreement not-to-exceed $275,000
July	7-6	District Housing and Property Improvements Program	Authorized an increase of $3,000,000 to an existing agreement
August	7-2	Mills Ozone Control System Upgrades	Awarded $492,440 procurement contract; authorized an agreement not-to-exceed $430,000
September	7-2	Battery Energy Storage Systems at Jensen & Skinner Water Treatment Plants	Awarded $11,604,521 construction contract; authorized an increase of $550,000 to an existing agreement
September	7-3	Black Metal Mountain 2.4 kV Electrical Power Upgrade	Authorized an agreement not-to-exceed $635,000

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 1st Quarter, one unplanned capital project, the Gene Communication System Upgrade, was authorized by the Board.

During the 1st 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 $28.0 million. Details of these management actions which occurred during the 1st 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 $458.3 million, leaving approximately $41.7 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 1st Quarter of FY 2021/22 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 1st Quarter totaled approximately $10.5 million, and primarily reflect construction progress on Joseph Jensen Water Treatment Plant Electrical Upgrade - Stage 2, CRA Pumping Plants – Sump Rehabilitation, Headquarters Building Physical Security Improvements, Gene Wash Reservoir Discharge Valve Replacement, and Headquarters Building Fire Alarm & Smoke Control Improvements.

Table 2: 1st Quarter Contract Action

Contract Actions during Q1 for FY 2021/2022, July 2021 through September 2021	
Contracts Awarded	1 construction contract totaling $11.60 million (Table 10)
Total Payments Authorized	$10.48 million
Construction Contracts Completed	Notice of Completion was filed for 2 construction contracts (Table 9)
Active Contracts at end of Q1[1]	14 construction contracts, totaling $159.53 million (Table 11) 15 procurement contracts, totaling $61.23 million (Table 12) $220.76 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. Staff and the contractor have negotiated a resolution to the aforementioned CRA Pumping Plant Sump Rehabilitation contract. Metropolitan will take possession of key equipment and will receive a credit for the deleted equipment installation work and equipment not provided. 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.

[1] Active contracts at the end of the 1st Quarter are those that are ongoing at the end of September 2021. In other words, contracts completed during the reporting quarter are excluded.

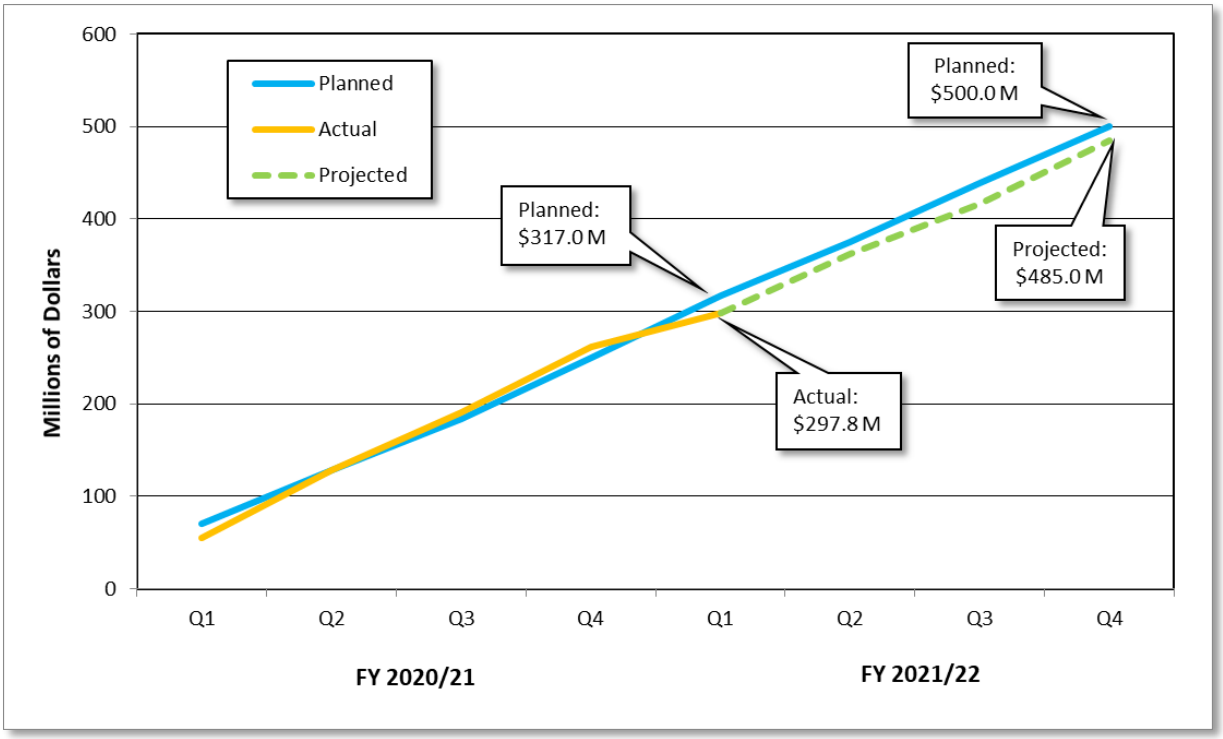
PLANNED EXPENDITURE AND BUDGET

Table 3 and Figure 3 below show planned and actual expenditures for the biennium through the end of the 1st Quarter of FY 2021/22, and the forecast of expenditures through the end of the current biennium, against planned expenditures for the same time interval. Actual expenditures through the 1st Quarter of FY 2021/22 were approximately 94% 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
Q2	$58.5	$72.2
Q3	$55.0	$63.6
Q4	$66.1	$70.2
FY 2021/22 Q1	$67.0	$36.2
Totals	**$317.0**	**$297.8**

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 projected expenditures for the biennium are currently approximately $485.0 million with the actual expenditures lower than the planned expenditures during the 1st Quarter of FY 2021/22 and are projected to stay under the planned expenditures through the end of the biennium.

This negative variance below the planned expenditures starting in the reporting quarter is due to several factors including delays in awarding some construction and procurement contracts due to the difficulties in obtaining permits within the planned timeline and securing materials and equipment due to manufacturing and supply chain issues attributed to the COVID-19 pandemic.

MAJOR CAPITAL PROGRAMS OVERVIEW

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

- Program
- Project Group/Appropriation
- Project

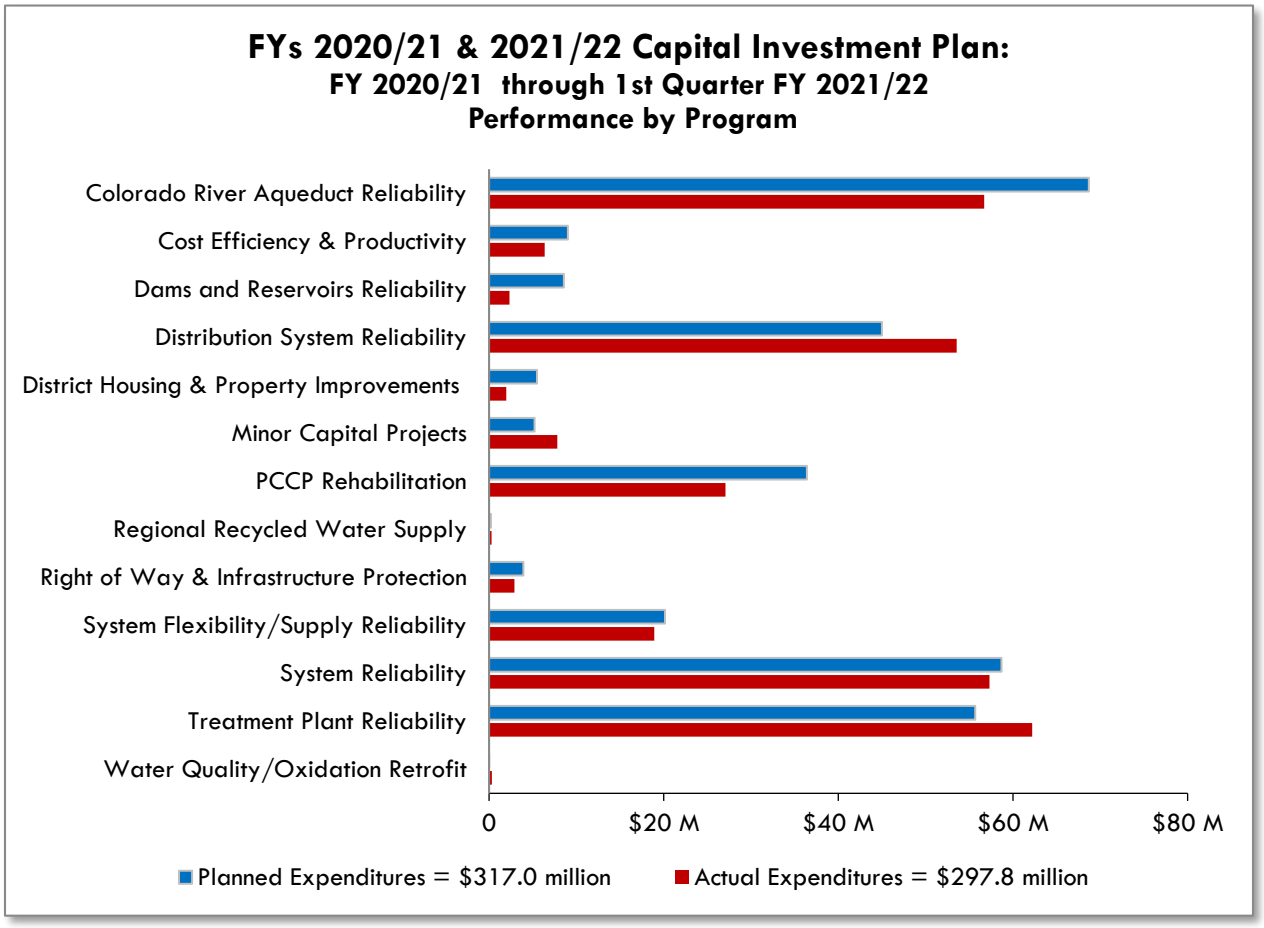
Metropolitan's CIP is comprised of 13 programs, which capture all projects within the CIP. The 13 capital programs are listed below in alphabetical order. Programs are comprised of one or more project groups/appropriations, and project group/appropriations are comprised of one or more projects. The status 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 1st Quarter of FY 2021/22.

Figure 4: Biennium-to-date Expenditures (Actuals vs. Planned) through 1st 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 following information on the top ten capital projects provides 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 1st Quarter of FY 2021/22 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 September 2021 (millions)	Actuals July 2020 to September 2021 (millions)
Headquarters Building Improvements	$31.3	$19.9	$27.2
Casa Loma Siphon Barrel No. 1 Seismic Upgrade	$30.0	$19.1	$16.0
CRA Pump Plant Sump System Rehabilitation	$28.0	$17.8	$7.6
Perris Valley Pipeline - Tunnels	$27.8	$10.3	$1.6
CRA Discharge Line Isolation Coupling Assemblies	$23.0	$20.9	$18.2
Second Lower Feeder PCCP Rehabilitation - Reach 8	$22.0	$10.3	$6.9
Jensen Electrical Upgrades - Stage 2	$15.2	$10.6	$14.1
Diemer West Basin & Filter Building Rehabilitation	$14.2	$14.0	$15.4
Second Lower Feeder PCCP Rehabilitation – Reach 2	$13.0	$13.0	$5.0
Orange County Feeder Relining - Reach 3	$12.5	$7.9	$0.7
Total*	**$217.1**	**$143.8**	**$112.7**

* Numbers may not sum due to rounding.

The cumulative expenditure variance for the top ten projects through the 1st Quarter of FY 2021/22 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.

- **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.
- **Jensen Electrical Upgrades - Stage 2:** Project expenditures for the biennium are higher than originally planned through the 1st 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 1st Quarter because the contractor's work activities were expedited to meet the the scheduled completion date.

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

- **Casa Loma Siphon Barrel No. 1 Seismic Upgrade:** The actual vs. planned variance is due to a shift in timing of the pipe installation contract award. Final design of the pipe installation is complete and construction bid package advertised. The construction contract is anticipated to be awarded in December 2021. All pipes, except for the steel closure pieces, have been delivered to the Diamond Valley Lake (DVL) yard as a part of the two pipe procurement contracts, which are still underway. The pipes will be stored at the DVL yard until the construction contract is awarded. Delivery of the closure pieces is anticipated in 2022.
- **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.
- **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 and under budget 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.
- **Second Lower Feeder PCCP Rehabilitation – Reach 8:** This project involved relining approximately 2,900 feet of PCCP pipeline in the City of Placentia, which is a portion of the original length of the Reach 8 project. Construction work was completed in September 2020. The planned expenditures for this biennium were based on relining 17,000 feet of PCCP but during design the scope was reduced to prioritize the most at-risk, 2,900-foot portion of the feeder. The remaining 14,100 feet of PCCP will be included in a future PCCP rehabilitation contract.
- **Orange County Feeder Relining - Reach 3:** The actual vs. planned expenditure variance is due to postponing the start of construction from September 2020 to April 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 January 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 1st 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 1st Quarter of FY 2021/22, or are scheduled to achieve major milestones in the next quarter.

Program	Project
Colorado River Aqueduct (CRA) Reliability	Gene Wash Reservoir Discharge Valve Rehabilitation
Cost Efficiency & Productivity	Battery Energy Storage System
Dams and Reservoirs Improvements	Garvey Reservoir Rehabilitation
Distribution System Reliability	Casa Loma Siphon No. 1 Seismic Upgrades
District Housing & Property Improvements	Program highlights only
Prestressed Concrete Cylinder Pipe (PCCP) Reliability	Second Lower Feeder PCCP Rehabilitation – Reach 3
Regional Recycled Water Supply	Program highlights only
Right-of-Way & Infrastructure Protection	Right of Way & Infrastructure Protection Imrpovements of the Western San Bernardino County Region – Stage 1
System Flexibility/Supply Reliability	Perris Valley Pipeline – Tunnels (I-215 Crossing)
System Reliablity	Headquarters Building Improvements
Treatment Plant Reliability	Weymouth Basins 5-8 Rehabilitation
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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$68.70 million	$56.70 million

PROGRAM HIGHLIGHTS (1st Quarter)

Status

Expenditures for this program are less than planned through September 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 as well as various drought-related initiatives.

Accomplishments

- Completed construction of CRA Radial Gates Replacement in August 2021
- Continued construction activities for the following contract:
    - Gene Wash Reservoir Discharge Valve Structure Rehabilitation
        i. Completed installation of an underwater isolation device at the base of the dam and coating of the valve house interior walls
        ii. Began installation of reinforcing steel and formwork for the electrical equipment concrete pad at the crest of the dam
        iii. Continued lining the valve house sluiceway, and installation of electrical equipment and panels at the crest of the dam
- Continued submittals for the CRA Pumping Plants Overhead Cranes Rehabilitation
- Continued submittals for the CRA Mile 12 Flow Meter Upgrades
- 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
- Continued final design of Domestic Water Treatment Systems Replacement at all five CRA pumping plants
- 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
    - Continued fabrication of new pumps, piping, and other materials that are to be furnished
    - Delivery of new pumps began in September 2021
- 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.
- Continued final design of CRA Storage Building Replacement at Hinds, Eagle Mountain, and Iron Maintain
- Continued preliminary design of CRA Desert Region Security Improvements

- Continued preliminary design of Hinds Pumping Plant Discharge Valve Platform Replacement
- Continued preliminary design and preparation of procurement package for the CRA Main Transformer Replacement
- Completed study and began preliminary design of Black Metal Mountain 2.4 kV Electrical Power Upgrades
- Began final design of Gene Communication Reliability Upgrades
- Continued the CRA main pump rehabilitation efforts at all five pumping plants
- Began project, completed design and advertised the construction package of CRA Cholla Wash Conduit Protection & Lining
- Continued 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
  - 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 Maintain
- Award construction contract and issue Notice to Proceed for CRA Cholla Wash Conduit Protection & Lining
- Award construction contract and issue Notice to Proceed for Domestic Water Treatment Systems Replacement at all five CRA pumping plants
- Continue final design of Gene Communication Reliability Upgrades
- Continue preliminary design of Black Metal Mountain 2.4 kV Electrical Power Upgrades
- Continue study of CRA 2.3 kV Switchrack Rehabilitation at all five CRA pumping plants
- 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:
November 2021

Total Project Estimate:
$11.7 million

Current Phase Estimate:
$9.8 million

Cost to Date for Current Phase:
$5.8 million

CRA Reliability Program: Gene Wash Reservoir Discharge Valve Rehabilitation

The project scope includes replacement of the existing discharge valve and actuator with Metropolitan-furnished equipment; refurbishment of the existing slide gate valve, discharge pipeline interior, and valve house at the base of the dam; upgrades of associated electrical systems; and design, fabrication, and installation of a temporary underwater device to isolate the reservoir from the discharge structure to allow the rehabilitation work.

Phase	Construction & Closeout
% Complete for Construction	73%
Construction Contract Awarded	December 2019
Appropriation Number	15373
Contract Number	1878

The contractor installed isolation device, completed coating of the gate valve and the valve house interior, and began installation of discharge valve and electrical equipment in the valve house. In the upcoming quarter, the contractor plans to complete installation work and begin testing.

Diver prepares for underwater work to finalize the installation of the isolation device and perform the final seal adjustments

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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$9.02 million	$6.36 million

PROGRAM HIGHLIGHTS (1st Quarter)

Status

Biennium expenditures for this program are less than planned through September 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

- Awarded contract to construct battery energy storage systems at the Jensen and Skinner plants
- Continued final design of battery energy storage system at the Weymouth plant
- Went live with the main homepage site of mwdh2o.com
- Went live with the Budget System Replacement System
- Completed file migrations associated with Water System Operations as part of Enterprise Content Management Phase 1

Upcoming Activities

Upcoming work for the next quarter will include:

- Begin construction of battery energy storage systems at the Jensen and Skinner plants
- Continue final design of battery energy storage system at the Weymouth plant
- Continue Real Property Group Business System Replacement
- Continue WINS Water Billing System Upgrade
- Award agreement and begin Services Procurement & iSupplier Portal
- Complete file migrations associated with Chief Financial Office as part of Enterprise Content Management Phase 1

Final Design Completion Date for Weymouth site:
November 2021

Total Project Estimate:
$25.6 million

Final Design Phase Estimate:
$1.0 million

Cost to Date for Final Design Phase:
$0.9 million

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	85%
Final Design Authorized	October 2020
Appropriation Number	15521

A construction contract for the Jensen and Skinner plants was awarded in September 2021. In the upcoming quarter, construction will begin at the Jensen and Skinner plants. Also, final design will be completed and the construction contract advertised for the Weymouth plant.

Proposed BESS site location at the Skinner plant

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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$8.57 million	$2.34 million

PROGRAM HIGHLIGHTS (1st Quarter)

Status

Biennium expenditures for this program are less than planned through September 2021 due to schedule variances associated with the Dam Monitoring System Upgrades Projects.

Accomplishments

- Diamond Valley Lake Dam Monitoring System Upgrades
  - Conducted workshop for vendors to present their solutions for 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
  - Prepared an RFP for detailed structural analysis of the outlet tower
- 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 Rehabilitaition
  - Continue preliminary design
- Lake Skinner Outlet Tower Seismic Upgrade
  - Prepare interim dewatering plans
  - Issue RFP for detailed seismic analyses of the outlet tower

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.

Estimated Preliminary Design Completion Date:
June 2022

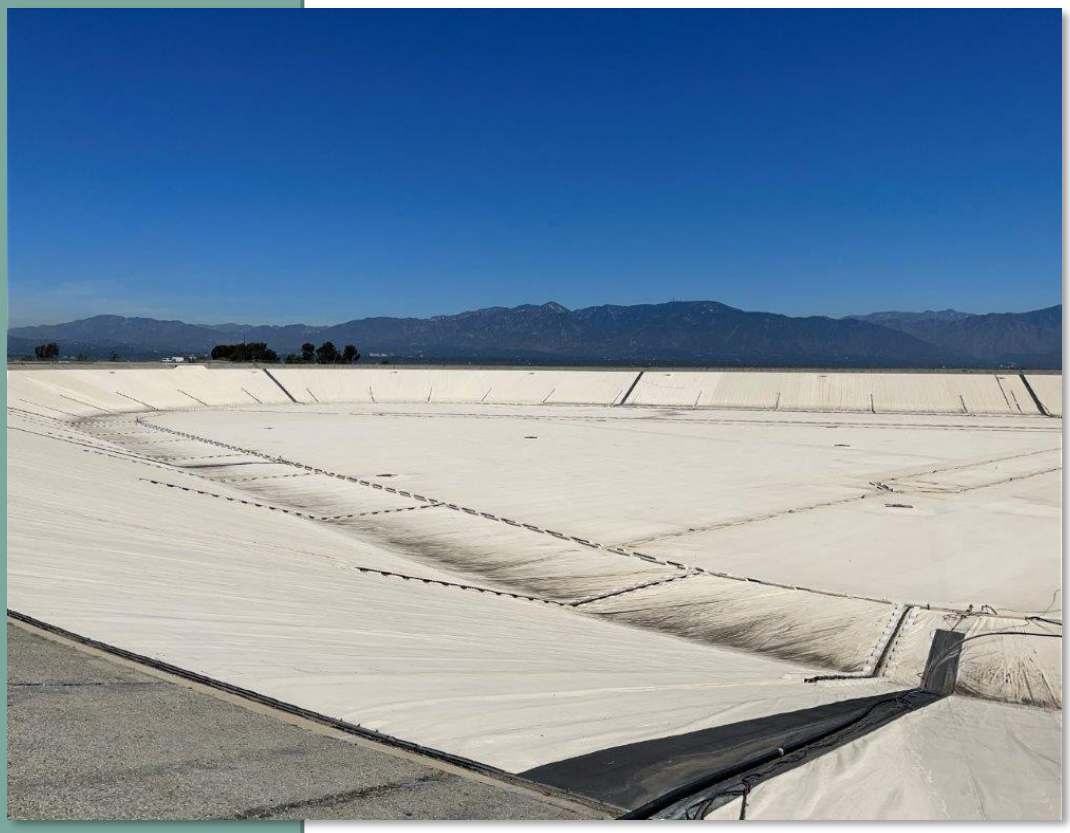
Total Project Estimate:
$68.5 million

Current Phase Estimate:
$3.9 million

Cost to Date for Current Phase:
$0.3 million

Phase	Preliminary Design
% Complete for Current Phase	20%
Preliminary Design Authorized	March 2021
Appropriation Number	15417

MWD staff and consultant conducted preliminary design, which will continue in the upcoming quarter.



Floating cover 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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$44.99 million	$53.55 million

PROGRAM HIGHLIGHTS (1st Quarter)

Status

Biennium expenditures for this program are more than the planned expenditures through September 2021 due to differences in timing between planned and actual payments for projects such as the Orange County Region Service Center, Middle Feeder Relocation, Lake Perris Bypass Pipeline Relining, West Valley Feeder No.1 De Soto Valve Replacement, Lakeview Pipeline Relining – Stage 2, and Lakeview Pipeline Improvements.

Accomplishments

- Completed design for the Casa Loma Siphon Barrel No. 1 Seismic Upgrades
- Continued construction of the Garvey Reservoir Drainage and Erosion Control Improvements – Zones 6 to 8, 10, & 11
- Continued construction of the Garvey Sodium Hypochlorite Feed System Upgrades

Upcoming Activities

Upcoming work for the next quarter will include:

- Award a construction contract for the Lake Mathews Wastewater System Replacement
- Award a pipe procurement contract for the Etiwanda Pipeline Relining – Stage 3
- Award a construction contract for the Casa Loma Siphon Barrel No. 1 Seismic Upgrades

Estimated WSP Delivery Completion Date:
December 2022

Total Project Estimate:
$35 million

Current Phase Estimate:
$17.5 million

Cost to Date for Current Phase:
$15.0 million

Distribution System Reliability Program: Casa Loma Siphon No. 1 Seismic Upgrades

This project will retrofit the Casa Loma Siphon Barrel No. 1 with earthquake resistant ductile iron pipe (ERDIP) for the estimated Casa Loma Fault seismic displacement, and non-tectonic ground subsidence.

Phase	Pipe Procurement
% Complete for Current Phase	88%
Pipe Procurement Authorized	December 2019
Appropriation Number	15480
ERDIP Contract Number	1968
WSP Contract Number	1978

The ERDIP and welded steel pipe (WSP), except for the WSP closure pieces, were delivered and stored at the DVL yard. A pipe protection program is in place to protect the pipe. In the upcoming quarter, a construction contract will be awarded in December 2021 to install these pipes.

ERDIP and WSP at Diamond Valley Lake storage yard

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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$5.48 million	$1.98 million

PROGRAM HIGHLIGHTS (1st Quarter)	
Status	Biennium expenditures for this program are less than planned through September 2021 as as additional underground utilities verification was necessary within the four villages prior to proceeding with the geotechnical field investigations.
Accomplishments	• Board authorized to extend an agreement for preliminary design in support of this program • Completed development of a relocation study for housing improvements • Initiated topographic surveys in support of the preliminary design activities.
Upcoming Activities	Upcoming work for the next quarter will include: • Initiate geotechnical work and preparation of environmental documentation for preliminary design activities in support of this program • Complete topographic surveys and geotechnical work at all four villages.

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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$36.40 million	$27.08 million

PROGRAM HIGHLIGHTS (1st Quarter)	
Status	Biennium expenditures for this program are less than the planned expenditures through September 2021 due to a due to a delay in permitting and subsequent rescheduling of construction contract award for Second Lower Feeder Reach 3.
Accomplishments	• Second Lower Feeder Reach 3 – Continued design and work to obtain permit approvals from local agencies for approximately 4.8 miles of Second Lower Feeder from the intertie with Sepulveda Feeder south to the Palos Verdes Reservoir, through the cities of Torrance, Lomita, Los Angeles, and Rolling Hills Estates • Allen-McColloch Pipeline – Continued preliminary design for rehabilitation, including identification of proposed pipe access excavation pits for approximately 9 miles of PCCP • Sepulveda Feeder Preliminary Design – Continued evaluations of proposed sectionalizing valve sizes, utility potholing, and steel liner thickness design for the southern portion of Sepulveda Feeder from the Venice Pressure Control Station to the intertie with Second Lower Feeder • Sepulveda Feeder Reach 1 – Initiated final design to rehabilitate approximately 3 miles of Sepulveda Feeder from just north of the Inglewood Lateral south to the West Coast Feeder, through the cities of Inglewood and Hawthorne, and unincorporated Los Angeles County. Work includes preparation of final design drawings, traffic control plans, and permitting. • Sepulveda Feeder Reach 2 – Initiated final design to rehabilitate approximately 3.8 miles of Sepulveda Feeder from the Dominguez Gap Channel crossing south to the intertie with Second Lower Feeder, through the cities of Torrance and Los Angeles. Work includes preparation of final design drawings, traffic control plans, and permitting. • Second Lower Feeder Valve Procurement – Received the first two of thirteen large-diameter conical plug valves with actuators • Lake Mathews PCCP Valve Storage Building – Initiated design of a new valve storage building at Lake Mathews to safely store large-diameter valves and actuators to support the PCCP Reliability Program

Upcoming Activities

Upcoming work for the next quarter will include:

- Second Lower Feeder Reach 3 – Continue final design and continue seeking construction permit approvals
- Sepulveda Feeder Reaches 1 and 2 – Continue developing final designs and initiate permitting process for long-lead permits
- Second Lower Feeder Isolation Valve Procurement – Continue inspection of valve fabrication process and receipt of the third large-diameter conical plug valves
- Lake Mathews PCCP Valve Storage Building – Complete design and advertise for bids
- Allen-McColloch Pipeline – Solicit input from member agencies on shutdown durations and sequencing. Incorporate inputs into the final preliminary design documents.
- Calabasas Feeder Preliminary Design – Solicit proposals for preliminary design services from Metropolitan's pool of pre-qualified conveyance and distribution system design consultants

Estimated Reach 3A Final Design Completion Date:
January 2022

Estimated Reach 3B Final Design Completion Date:
August 2022

Total Project Estimate:
$90.0 million

Current Phase Estimate:
$7.5 million

Cost to Date for Current Phase:
$6.6 million

PCCP Reliability Program: Second Lower Feeder PCCP Rehabilitation – Reach 3

This project will rehabilitate approximately 4.8 miles of PCCP segments of the Second Lower Feeder with steel liner and replace three existing 48-inch diameter sectionalizing valves in two stages. The first stage will reline Reach 3A, which stretches approximately 1.2 miles at the southern end of the Reach 3. The second stage will reline Reach 3B, which is approximately 3.6 miles of northern portion of the Reach 3.

Phase	Final Design
% Complete for Final Design Phase – Reach 3A	97%
% Complete for Final Design Phase – Reach 3B	90%
Design Phase Authorized	January 2015
Appropriation Number	15497

Final design continued. In the upcoming quarter, permits will be acquired for Reach 3A.

Aerial map of Second Lower Feeder Reach 3

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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$0.21 million	$0.28 million

PROGRAM HIGHLIGHTS (1st Quarter)	
Status	Biennium expenditures for this program are consistent with the planned expenditures through September 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 • Continued record drawing preparation of the AWT Demonstration Facility • Completed O&M and standard operating procedure manuals • Selected 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 • Authorize an agreement for testing services and coordinate with the new consulting firm to 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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$3.92 million	$2.91 million

PROGRAM HIGHLIGHTS (1st Quarter)	
Status	Biennium expenditures for this program are consistent with the planned expenditures through September 2021.
Accomplishments	• Continued Western San Bernardino County Region - Stage 1 final design • Reviewed sites for Los Angeles County Region and shortlisted Stage 1 sites for final design
Upcoming Activities	Upcoming work for the next quarter will include: • Complete final design and advertise Western San Bernardino County Region - Stage 1 bid documents • Begin final design for Western San Bernardino County Region - Stage 2 • Finalize preliminary design report for Los Angeles County Region – Stage 1 and begin final design

Right-Of-Way and Infrastructure Protection Program: Right of Way & Intrastructure Protection Improvements of the Western San Bernardino County Region – Stage 1

This project will address access and right-of-way issues throughtout the distribution system and protect facilities from erosion. The project also includes reconstructing accessways, clearing vegetation, and installing security fencing. The first stage consists of three project sites.

Phase	Final Design
% Complete for Current Phase	99%
Final Design Authorized	August 2014
Appropriation Number	15474

Completed 99% final design. In the upcoming quarter, the design package will be completed and the construction contract will be advertised.

Estimated Final Design Completion Date:
October 2021

Total Project Estimate:
$5.8 million

Current Phase Estimate:
$0.9 million

Cost to Date for Current Phase:
$0.8 million

Site along Inland Feeder to be cleared of debris, graded, and have erosion measures installed

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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$20.15 million	$18.92 million

PROGRAM HIGHLIGHTS (1st Quarter)	
Status	Biennium expenditures for this program are less than the planned expenditures though September 2021 due to differences between the planned and actual start of construction for the Perris Valley Pipeline Tunnels.
Accomplishments	• Continued record surveys of properties associated with the Verbena Land Acquisition
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: Perris Valley Pipeline - Tunnels (I-215 Crossing)

This project will connect northern and soutern reaches of Perris Valley Pipeline by micro-tuneling and installing approximately 3,000 feet of steel pipe.

Phase	Final Design
% Complete for Current Phase	99%
Current Phase Authorized	January 2010
Appropriation Number	15425

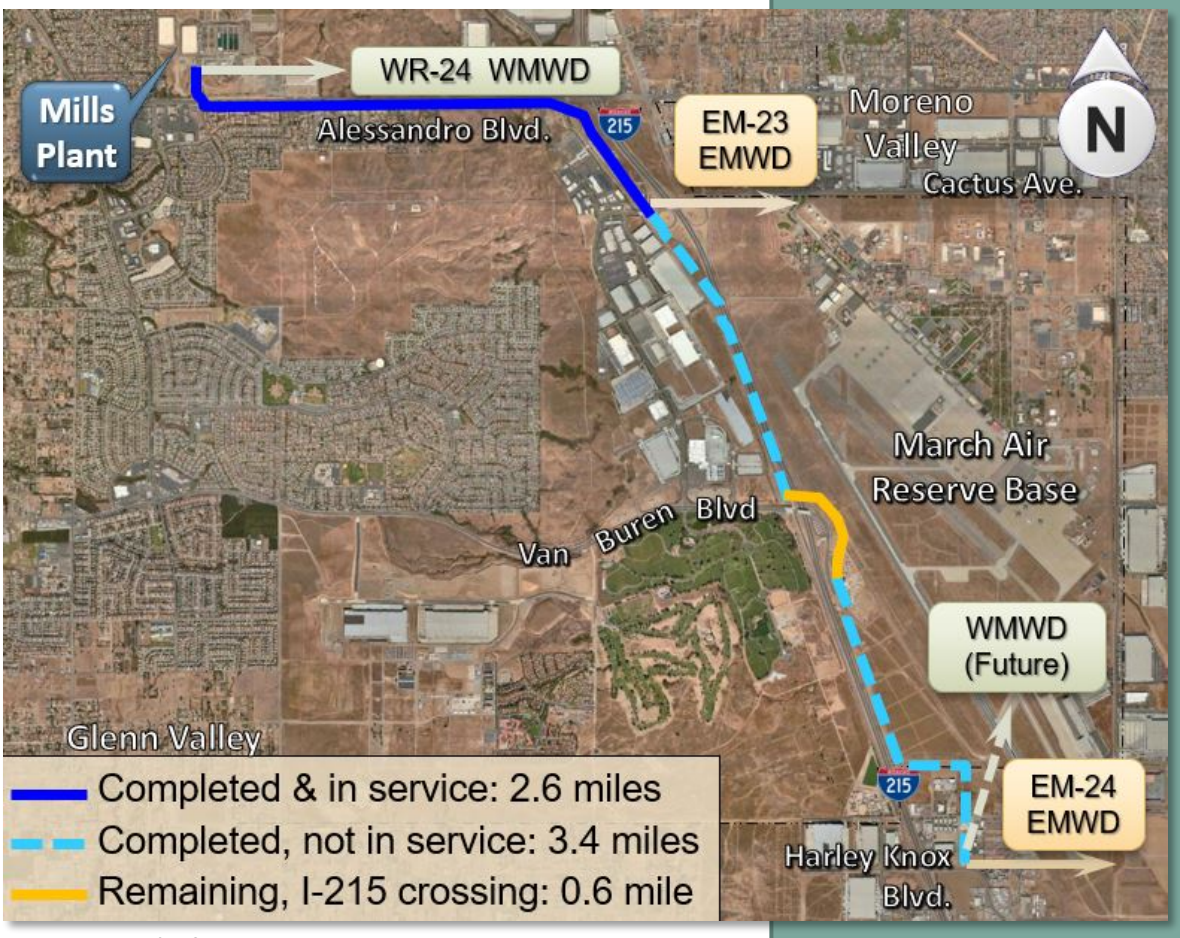
Work was performed towards obtaining the necessary easments and permits. In the upcoming quarter, design will be completed.

Estimated Final Design Completion Date:
December 2021

Total Project Estimate:
$66.0 million

Current Phase Estimate:
$5.6 million

Cost to Date for Current Phase:
$5.4 million



Aerial view of I-215 crossing area next to March Air Reserve Base

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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$58.68 million	$57.31 million

PROGRAM HIGHLIGHTS (1st Quarter)

Status

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

Accomplishments

- Skinner Facility Area Paving – completed final design in September 2021
- Maximo Upgrade – went live in August 2021
- Datacenter Modernization Upgrade – initiated primary site server installation
- Headquarters Building Improvements and Boardroom Technology Upgrade – completed final systems integration testing and inspections of committee room installations
- MWD Cyber Security Upgrade
  - Yubikey, identity USB hardware key – distribution to all MWD employees completed
- Lake Mathews IT Disaster Recovery Upgrade – project close-out completed
- WiFi Upgrade – La Verne facility design initiated

Upcoming Activities

Upcoming work for the next quarter will include:

- Skinner Facility Area Paving – advertise for bids
- Headquarters Building Improvements and Boardroom Technology Upgrade – initiate and complete user acceptance testing and signoff
- WiFi Upgrade – advertise for bids for Union Station headquarters building
- MWD Cyber Security Upgrade
  - Deploy secure web gateway software to MWD-owned workstations and laptops
  - Deploy privileged access management software to MWD-owned workstations, laptops, and servers

System Flexibility/Supply 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 Construction	95%
Construction Contract Authorized	November 2018
Appropriation Number	15473
Contract Number	1905

The contractor began installing power door assist mechanisms at exit doors. In the upcoming quarter, the contractor will complete installation of power door assist mechanisms at all remaining exit doors.

Installation of power door assist mechanisms

Esimated Construction Completion Date:
July 2022

Total Project Estimate:
$78.5 million

Current Phase Estimate:
$67.2 million

Cost to Date for Current Phase:
$57.0 million

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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$55.67 million	$62.19 million

PROGRAM HIGHLIGHTS (1st Quarter)

Status

Biennial expenditures for this program are more than planned through September 2021 due to shifts in timing of the work.

Accomplishments

- Completed construction of Diemer West Basin & Filter Building Rehabilitation
- Completed final design of:
  - Jensen Ozone PSU Replacement
  - Mills Electrical Upgrades - Stage 2
- Continued construction of:
  - Diemer Water Sampling System Improvements
  - Jensen Electrical Upgrades - Stage 2
  - Weymouth Chlorine System Upgrade
  - Weymouth Water Quality Instrumentation Improvements
  - Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades
- Continued procurement of power supply units (PSU) and dielectrics for Jensen ozone generators
- Continued final design of Weymouth Basins 5-8 Rehabilitation

Upcoming Activities

Upcoming work for the next quarter will include:

- Complete construction of:
  - Diemer Water Sampling System Improvements
  - Weymouth Chlorine System Upgrade
  - Weymouth Water Quality Instrumentation Improvements
- Complete final design of:
  - Weymouth Basins 5-8 Rehabilitation
- Continue procurement of power supply units and dielectrics for Jensen ozone generators
- Continue construction of:
  - Jensen Electrical Upgrades - Stage 2
  - Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades

Treatment Plant Reliability Program: Weymouth Basins 5-8 Rehabilitation

This project will rehabilitate and replace the Weymouth Water Treatment Plant's Basins 5-8 mechanical equipment and auxiliary systems, along with seismic upgrades to the basin inlet channels and needed improvements. The project will also replace basin inlet gates for Basins 1-8.

Phase	Final Design
% Complete for Current Phase	85%
Current Phase Authorized	August 2020
Appropriation Number	15440

Performed value engineering and constructability review workshop. In the upcoming quarter, final design will be completed.

Estimated Final Design Completion Date:
December 2021

Total Project Estimate:
$61.0 million

Current Phase Estimate:
$3.5 million

Cost to Date for Current Phase:
$3.0 million

Example of major mechanical equipment to be replaced including rotating circular rake at Basin 5 of the 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 September 2021)	Actual Biennium-to-date Expenditures (July 2020 through September 2021)
$0.02 million	$0.33 million

PROGRAM HIGHLIGHTS (1st Quarter)	
Status	Biennial expenditures and progress are consistent with the plan for this program
Accomplishments	• Weymouth Enhanced Bromate Control Facilities – Completed record drawings and project closeout
Upcoming Activities	Upcoming work for the next quarter will include: • Continue final design of Mills Enhance Bromate Control Facilities

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. $15 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	$15M	$40.5M
Expenditures (through September 2021)	$7.2M	$10.2M	$2.8M	$20.2M
Number of Projects Approved	41	49	35	125
Number of Projects Completed (through September 2021)	40	23	0	63
Percent of Work Complete	99%	75%	27%	N/A
Number of Projects with Durations of Over 3 Years	1	2	0	0

Through September 2021, 63 of the 125 projects have been completed, and three active projects have exceeded three years in duration, as described below.

- The Gene Pool Refurbishment has experienced delays due to shortage of local contractors for this type of work due to increased construction activity in the region. Staff will continue reaching out to contractors to complete the remaining work by December 2021.
- Upgrades to the emergency generator underground storage tanks at the Diemer plant and Metropolitan Headquarters were completed in July 2021, but additional time was required to process permit fees and to complete record drawings. These projects are scheduled to be completed by November 2021.

Planned biennium expenditures to date (July 2020 through September 2021) for the Minor Capital Projects Program were $5.22 million, while actual biennium expenditures for the same period were $7.81 million.

Minor Cap Projects, 1st Quarter

Authorized Projects

Six projects were authorized under the Minor Cap Program during the 1st Quarter of fiscal year 2021/22 (July through September 2021):

- CRA Lakeview Siphon Leak Repair – This project will procure and install internal pipe seals to repair a leak discovered in the first barrel of the CRA Lakeview Siphon. The project budget is $366,000.
- District UVC & Air Disinfection HVAC Upgrade – This project will install high-efficient particulate air (HEPA) filtration and Ultravoilet-C (UVC) disinfection technology at approximately 100 locations throughout the district, consistent with Cal/OSHA recommendations to improve indoor air quality enhance worker safety from COVID-19. The project budget is $392,000.
- Jensen WWRP No. 2 Flocculator Rehabilitation – This project will rehabilitate components of the flocculation basins at the Jensen plant's Washwater Reclamation Plant No. 2, including bearings, stuffing box, flocculator paddles, and baffle walls. The project budget is $386,000.
- Ramona PCS Rehabilitation – This project will improve electrical, mechanical, and security systems at the Ramona Pressure Control Structure by replacing four electrical motor actuators and controls, upgrading an operator control panel in the control room, and extending the existing fence to encompass all individual structures. The project budget is $387,000.
- Service Connection CA-01 Isolation Gate – This project will modify the existing east portal structure and add second isolation slide gate at Calleguas MWD Santa Susana Tunnel. The second slide gate will ensure complete isolation of Metropolitan's system at this service connection to ensure safe working conditions during system maintenance. The project budget is $375,000.
- West OC Feeder Drain Line – This project will rehabilitate an 18-inch corrugated metal drain pipe at a blowoff structure on the West Orange County Feeder located in the city of Buena Park. The project budget is $170,000.

Completed Projects

Six projects were completed under the Minor Cap Program during the 1st Quarter of fiscal year 2021/22 (July through September 2021):

- Eagle Mountain & Iron Mountain Switch House Doors Replacment
- Eagle Rock Security Fencing and Lighting
- Iron Mountain Equipment Parking Canopy
- Security Upgrades at Washington Street PCS and Dominguez Pressure Relief Structure
- Service Connection Flowmeter Replacement
- Skinner Ammonia Analyzers Replacement

Cancelled Projects

One project was cancelled under the Minor Cap Program during the 1st Quarter of fiscal year 2021/22 (July through September 2021):

- The San Diego Canal Panel Repairs – This project was orginially initiated in the FYs 2016/17 and 2017/18 minor cap appropriation, and has been canceled to be addressed by the San Diego and Auld Valley Canals Concrete Liner Repair project, which is scheduled to be completed by June 2022.

PROJECT ACTIONS

Table 5 lists capital project actions authorized by the Board and the General Manager along with funding allocation amounts during the 1st 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 1st Quarter is $28,017,011, through twenty six 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
Applications-Servers Upgrade from Old Windows Operating Systems	Design, Deveopment, & Deployment	$550,000	$3,590,609
Battery Energy Storage System (BESS) at Jensen & Skinner Water Treatment Plants	Ductbank Construction at Skinner Plant	$275,000	$275,000
Battery Energy Storage System (BESS) at Jensen & Skinner Water Treatment Plants	Construction	$6,801,479	$16,400,000
Black Metal Mountain 2.4 kV Power Upgrade	Construction	$1,167,000	$1,700,000
Desert Housing Improvements	Preliminary Design	$2,350,000	$2,350,000
Desert Microwave Tower Sites Upgrades (Phase 1 of 2)[2]	Final Design & Procurement	$0	$5,120,818
Eagle Lift and Eagle West Siphons Seismic Improvement	Initial Study	$125,000	$125,000
Eagle Mountain 230 kV Physical and Cyber Security Upgrades	Final Design & Construction	$248,000	$248,000
Employee Village Enhancement	Preliminary Design	$2,650,000	$2,650,000
Flow Meter Asset Management and Replacement	Preliminary Design	$1,410,000	$1,410,000
Fuel Management System Upgrade	Design, Development, & Deployment	$1,365,000	$1,365,000

[2] Since the Board authorization of agreements for equipment procurement and design support in July 2021, the need for additional funds are not necessary at this time due to postponement of issuing the procurement and design support agreements as a result of manufacturing and supply chain issues due to COVID-19 effect. This project has sufficient funds that were previously authorized to perform work through the end of this biennium.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Gene Communication System Upgrade	Preliminary Destign & Final Design	$665,000	$665,000
Headquarters HVAC System Equipment Upgrades – Phase 1	Final Design & Construction	$1,040,000	$1,040,000
Jensen Control Room Wildfire Smoke Mitigation System	Preliminary Design	$371,400	$371,400
Mills Ozone Generator PLC Control & Communication Equipment Upgrade	Final Design, Procurement, & Installation	$2,093,000	$2,093,000
Rio Hondo Pressure Control Structure Valve Replacement	Study	$25,000	$25,000
Sepulveda Feeder PCCP Rehabilitation - Reach 2	Final Design	$2,055,132	$3,400,000
Six minor cap projects	Design & Construction	$2,076,000	$2,076,000
Skinner Dry Polymer Building Roof Replacement	Construction	$290,000	$290,000
	Total	**$25,557,011**	**$45,194,827**

Table 6 lists a project that received additional funds for change orders from the CIP Appropriation for Fiscal Years 2020/21 and 2021/22, Appropriation No. 15517, during the 1st Quarter to complete authorized work. Additional funds were authorized to revise the design document to address new contract changes and to rebid the construction package.

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
CRA Pumping Plants Sump Rehabilitation	Final Design	$2,460,000	$2,460,000
	Total:	**$2,460,000**	**$2,460,000**

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 1st 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 1st Quarter were approximately $10,481,619.

Table 7: Summary of Construction and Procurement Contracts during 1st Quarter (July through September 2021)

Summary	Construction	Procurement
Number of Contracts Active during this Quarter[3]	16	15
Total Contract Amount of Active Contracts	$210,142,704	$61,226,195
Number of Contracts Completed this Quarter[4]	2	0
Number of Contracts Awarded this Quarter	1	1
Total Contract Amount of Contracts Awarded this Quarter	$11,604,521	$492,440
Contract Earnings[5, 6, 7] this Quarter	$9,643,002	$838,617

The figures on the next two pages show the locations of the sixteen active construction contracts during the 1st quarter.

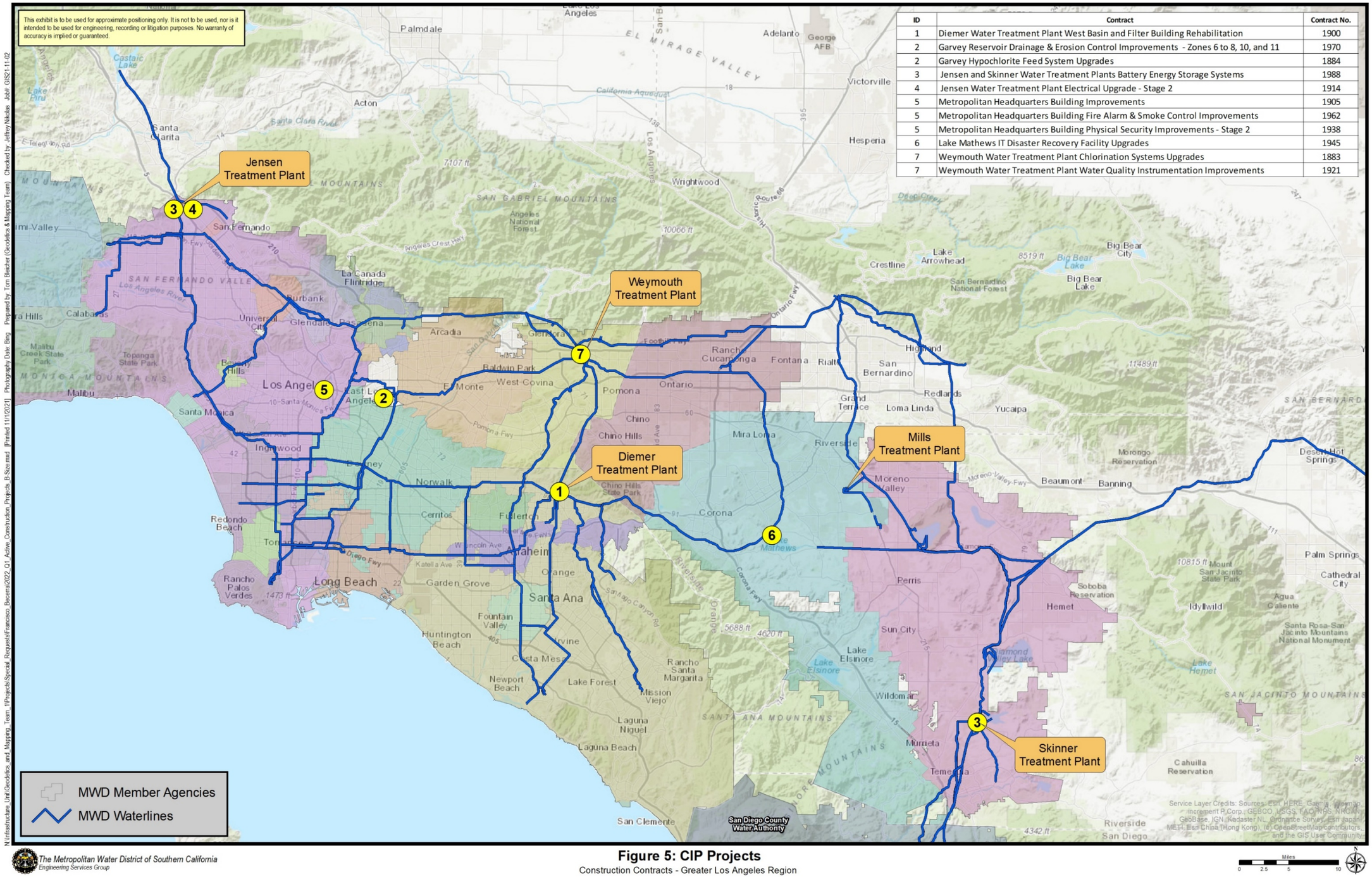
[3] Number of Contracts Active during this Quarter includes those that were underway as well as those that were completed during the 1st Quarter.

[4] Completed construction contracts are those which Metropolitan has accepted as physically complete and has filed Notice of Completion during the 1st Quarter. Completed procurement contracts are those which Metropolitan has received complete delivery and use of field services during the 1st Quarter. No procurement contracts have been completed during the 1st Quarter.

[5] Contract earnings reflected in this report represent the value of the work performed by the contractor by the 25th 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.

[6] Contract payments are typically made by Metropolitan in the month following performance of the work.

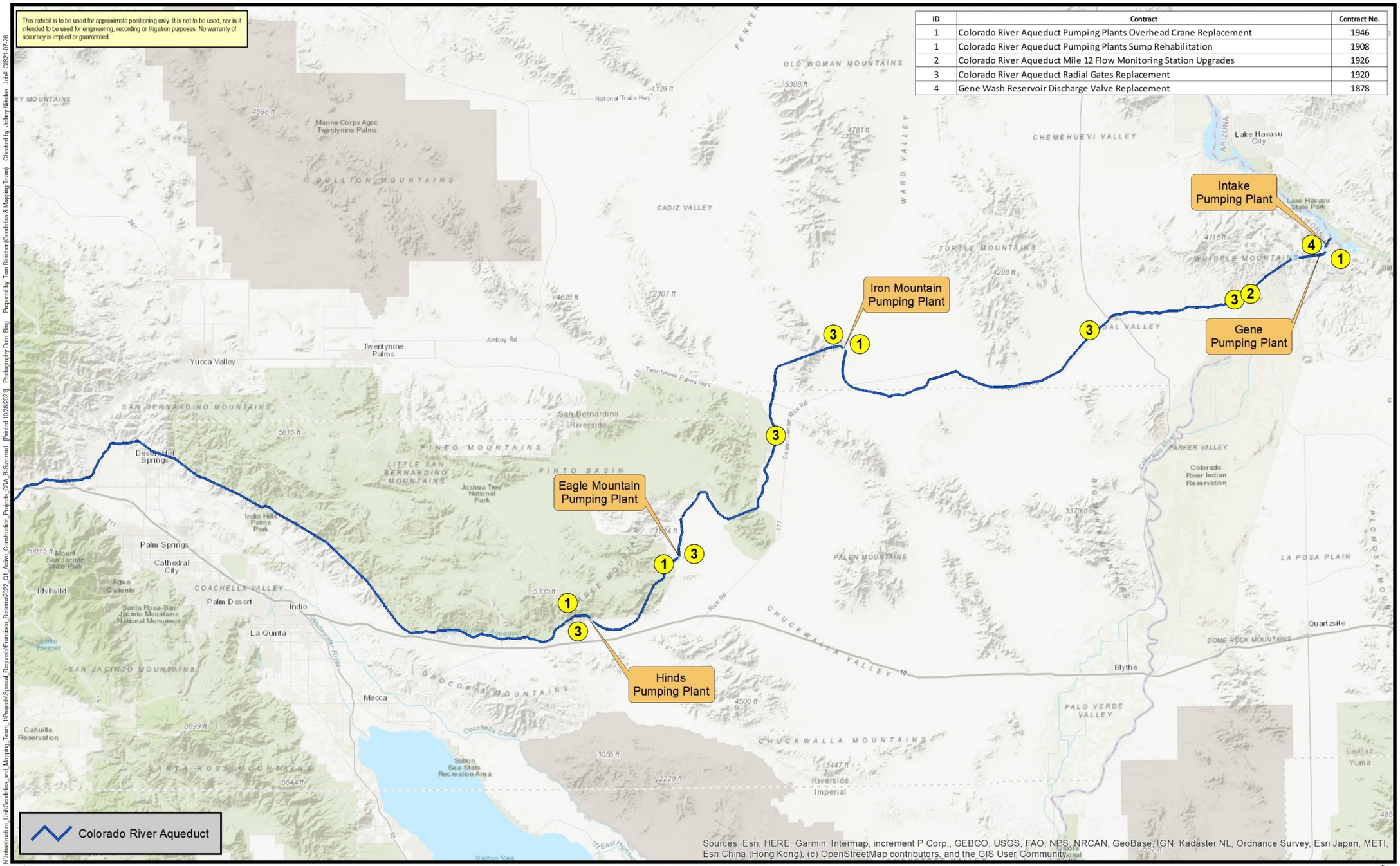
[7] For the reasons listed above in the preceding two footnotes, contract payments in Metropolitan's financial system may be less than the earnings until the final payment has been made to the contractor.



ID	Contract	Contract No.
1	Diemer Water Treatment Plant West Basin and Filter Building Rehabilitation	1900
2	Garvey Reservoir Drainage & Erosion Control Improvements - Zones 6 to 8, 10, and 11	1970
2	Garvey Hypochlorite Feed System Upgrades	1884
3	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems	1988
4	Jensen Water Treatment Plant Electrical Upgrade - Stage 2	1914
5	Metropolitan Headquarters Building Improvements	1905
5	Metropolitan Headquarters Building Fire Alarm & Smoke Control Improvements	1962
5	Metropolitan Headquarters Building Physical Security Improvements - Stage 2	1938
6	Lake Mathews IT Disaster Recovery Facility Upgrades	1945
7	Weymouth Water Treatment Plant Chlorination Systems Upgrades	1883
7	Weymouth Water Treatment Plant Water Quality Instrumentation Improvements	1921

The Metropolitan Water District of Southern California
Engineering Services Group

Figure 5: CIP Projects
Construction Contracts - Greater Los Angeles Region



ID	Contract	Contract No.
1	Colorado River Aqueduct Pumping Plants Overhead Crane Replacement	1946
1	Colorado River Aqueduct Pumping Plants Sump Rehabilitation	1908
2	Colorado River Aqueduct Mile 12 Flow Monitoring Station Upgrades	1926
3	Colorado River Aqueduct Radial Gates Replacement	1920
4	Gene Wash Reservoir Discharge Valve Replacement	1878

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The Metropolitan Water District of Southern California
Engineering Services Group

Figure 6: CIP Projects
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 1st Quarter, the Board did not authorize any increases to the General Manager's change order authority.

Notices of Completion during 1st Quarter:

The following table shows the two contracts for which Metropolitan accepted the contract as completed during the 1st Quarter of FY 2021/22 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 %
1900	Diemer Water Treatment Plant West Basin and Filter Building Rehabilitation	July 2021	$38,539,196	$40,075,700	$1,536,504	4%
1920	Colorado River Aqueduct - Radial Gates at Seven Facilities	August 2021	$10,439,354	$10,534,817	$95,463	1%
		Totals:	**$48,978,550**			

For the 1st Quarter, the total amount of completed contracts was approximately $49 million.

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 (October 2020 through September 2021) is 1.58 percent[8].

[8] Original amount of contracts completed (Oct. 2020 through Sept. 2021) = $206,926,209
Change orders for completed contracts (Oct. 2020 through Sept. 2021) = $3,275,374
Change order percentage for (Oct. 2020 through Sept. 2021) = 1.58%

Contracts Awarded during 1st Quarter:

During the period of July through September 2021, one construction contract totaling $11,604,521 and one procurement contract totaling $492,440, were awarded by the Board.

Table 9: Construction and Procurement Contracts Awarded This Quarter

Construction Contracts	
Joseph P. Jensen & Robert A. Skinner Water Treatment Plants Battery Energy Storage Systems	
Contract Number	1998
Contractor	Ameresco, Inc.
Amount	$11,604,521
Procurement Contracts	
Furnishing Equipment to Upgrade the Ozone Control System at the Henry Mills Water Treatment Plant	
Contract Number	PO TBD
Contractor	Royal Industrial Solutions
Amount	$492,440

The table on this page lists the 14 ongoing construction contracts through the end of the 1st 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 1st Quarter

	Cont. No.	Contract Title	Contractor	Contract Amount[9]	Earnings Through September 2021	Start Date	Est. Com-pletion Date	Est. Percent Complete
1	1878	Gene Wash Reservoir Discharge Valve Replacement	Gracon, LLC	$5,319,066	$3,856,359	1/21/20	11/21	73%
2	1883	F. E. Weymouth Water Treatment Plant Chlorination Systems Upgrades	J.F. Shea Construction, Inc.	$8,756,264	$8,436,219	1/28/19	11/21	96%
3	1884	Garvey Reservoir Sodium Hypochlorite Feed System Upgrades	Metro Builders & Engineers Group, Ltd.	$2,418,149	$424,743	4/9/21	7/22	18%
4	1905	Metropolitan Headquarters Building Improvements	Bernards Bros. Inc.	$49,049,878	$48,988,167	1/14/19	7/22	95%
5	1908	CRA Pumping Plants – Sump Rehabilitation	Michels Corp dba Michels Pipeline Construction	$27,146,814	$7,733,584	1/24/19	7/22	28%
6	1914	Joseph Jensen Water Treatment Plant Electrical Upgrade - Stage 2	Helix Electric, Inc.	$15,099,119	$13,341,117	8/14/19	8/22	88%
7	1921	F. E. Weymouth Water Treatment Plant Water Quality Instrumentation Improvements	Mehta Mechanical Company, Inc. dba MMC, Inc.	$2,980,956	$2,916,281	9/16/19	12/21	98%
8	1926	CRA Mile 12 Flow Monitoring Station Upgrades	R2 Engineering dba R2Build	$2,022,000	$41,952	6/16/21	7/22	2%
9	1938	MWD HQ Bldg. Physical Security Improvements	Bernards Bros. Inc.	$5,843,525	$3,970,369	9/22/20	2/22	58%
10	1945	Lake Mathews IT Disaster Recovery Facility Upgrades	MCL Constructors, Inc.	$448,900	$261,380	2/10/21	4/22	58%

[9] 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.

	Cont. No.	Contract Title	Contractor	Contract Amount[9]	Earnings Through September 2021	Start Date	Est. Com-pletion Date	Est. Percent Complete
11	1946	Colorado River Aqueduct Pumping Plants - Overhead Crane Replacement	J.F. Shea Construction, Inc.	$13,419,000	$404,000	10/14/20	9/23	3%
12	1962	MWD HQ Building Fire Alarm & Smoke Control Improvements	Bernards Bros. Inc.	$14,085,744	$3,526,916	9/24/20	1/23	25%
13	1970	Garvey Reservoir Drainage and Erosion Improvements - Areas 6, 7, 8, 10, and 11	Kaveh Engineering & Construction, Inc	$1,338,252	$853,532	11/20/20	11/21	64%
14	1998	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems	Ameresco, Inc.	$11,604,521	$0	10/7/21	10/22	0%
			Total contract value for active construction contracts:	**$159,532,188**				

The following table lists the 15 ongoing procurement contracts through the end of the 1st Quarter.

Table 11: Active Procurement Contracts at the End of 1st Quarter

	Cont. No.	Contract	Contractor	Contract Amount[10]	Earnings Through September 2021	Start Date	Est. Delivery Com-pletion Date	Est. Percent Complete [11]
1	1851	Furnishing Horizontal Axially Split Centrifugal Pumps for the Greg Avenue Pump Station	Xylem Water Solutions U.S.A., Inc.	$1,734,103	$1,293,982	5/16/17	D[12]	75%
2	1861	Furnishing Lubricated Plug Valves for Second Lower Feeder	Southwest Valve & Equipment, Inc.	$2,380,909	$2,362,968	9/11/17	D[12]	99%
3	1867 [13]	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[12]	97%
6	1912	Furnishing Large-Diameter Conical Plug Valves	Ebara Corporation	$23,750,060	$5,193,406	12/24/18	6/23	22%
7	1922	Furnishing One Double Column Vertical Machining Center for the La Verne Maintenance Shops	Gosiger Machine Tools, LLC (Gosiger West)	$2,193,356	$2,100,295	9/17/18	D[12]	96%
8	1948	Refurbishing Valve Actuators for the Diemer Water Treatment Plant	Flowserve Limitorque	$3,532,700	$1,554,636	2/16/19	9/21	44%
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%

[10] 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.

[11] 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.

[12] All items were delivered but contract remains open pending use of manufacturer field services.

[13] 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[10]	Earnings Through September 2021	Start Date	Est. Delivery Com-pletion Date	Est. Percent Complete [11]
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[12]	98%
12	1969	Furnishing Inlet Valve Gearboxes for Skinner Module No. 7	R&B Automation, Inc.	$192,185	$0	4/29/20	1/22	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	1/22	0%
15	PO TBD	Furnish Equipment to Upgrade the Ozone Control System at the Mills Water Treatment Plant	Royal Industrial Solutions	$492,440	$0	1/1/22[14]	12/22[14]	0%
			Total contract value for active procurement contracts:	**$61,226,195**				

[14] As of the date of this report, a Notice to Proceed has not been finalized and as such, dates marked with an asterisk are estimates only.

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 > $3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems	Final Design	$903,120	$12,459,521	9-12%	7.2%
Diemer Water Treatment Plant West Basin & Filter Building Rehabilitation	Inspection	$4,496,339	$41,685,528	9-12%	10.8%
Colorado River Aqueduct – Installation of Radial Gates at Seven Facilities	Inspection	$890,705	$10,557,473	9-12%	8.4%

Table 13: Performance Metric Actuals, Projects < $3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Skinner Dry Polymer Building Roof Replacement	Final Design	$27,933	$164,700	9-15%	17.0%[15]

[15] Final design costs for Skinner Dry Polymer Building Roof Replacement were higher than the target range due to the level of effort required to prepare a final design package regardless of the project's size.

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 (July through September 2021).

Relocations

One new relocation agreement involving an amount in excess of $100,000 was approved under the authority of Section 8122(c) during the reporting period.

Agency: City of Carson

Description: The City of Carson is widening 223rd Street, requiring relocation of Metroplitan's vent stack to a new sidewalk location. The vent stack is located near the intersection of 223rd Street and Wilmington Avenue Street and tied to a sectionalizing valve structure on Long Beach Lateral.

Estimated Amount: $73,319

PROJECTS EXPENSED TO OVERHEAD

There are no expensed projects to report during the first quarter of fiscal year 2020/21 (July through September 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 September 2021 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Colorado River Aqueduct Reliability Program	**Total**	**$451,357**	**$372,493**	**$69,043**	**$56,703**
Cabazon Radial Gate Facility Improvements	15320	$716	$646	$0	$20
White Water Siphon Protection[16]	15341	$15,585	$14,541	$0	$51
CRA - Conveyance Reliability	15373	$117,828	$112,793	$9,520	$5,295
CRA - Electrical/Power Systems Reliability	15384	$55,765	$45,581	$3,777	$4,742
CRA – Discharge Containment	15385	$8,129	$7,944	$0	$365
CRA - Reliability for FY2006/07 through FY2011/12	15438	$150,194	$111,542	$24,528	$16,759
CRA Main Pump Reliability	15481	$65,730	$48,756	$24,639	$21,133
CRA - Reliability for FY2012/13 through FY2017/18	15483	$31,227	$27,653	$6,569	$6,525
CRA - Reliability for FY2018/19 through FY2023/24	15507	$6,183	$3,037	$10	$1,812

[16] Approximately $2.85 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 September 2021 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Cost Efficiency & Productivity Program	**Total**	**$226,733**	**$176,828**	**$9,065**	**$6,362**
DVL Recreation Facilities[17]	15334	$87,004	$63,821	$1,408	-$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	$362	$47
Yorba Linda Power Plant Modifications	15446	$17,125	$17,070	$30	$57
Business Operations Improvement	15484	$15,396	$8,647	$6,118	$1,961
Project Controls and Reporting System	15490	$6,440	$6,289	$0	$335
Enterprise Content Management	15500	$3,600	$2,960	$93	$1,359
DVL Recreation Rehabilitation & Refurbishment	15515	$1,030	$755	$1,054	$645
Energy Sustainability Improvements	15521	$18,875	$2,057	$0	$2,057
Dams and Reservoirs Reliability Program	**Total**	**$72,554**	**$63,526**	**$8,613**	**$2,337**
Reservoir Cover and Replacement	15417	$61,614	$54,160	$5,376	$1,645
Dam Rehabilitation & Safety Improvements	15419	$10,940	$9,365	$3,236	$693
Distribution System Reliability Program	**Total**	**$374,040**	**$340,141**	**$45,217**	**$53,551**
Conveyance and Distribution System - Rehabilitation	15377	$102,686	$97,075	$11,219	$3,633
Conveyance and Distribution System - Rehabilitation for FY2006/07 through FY2011/12	15441	$110,299	$106,250	$2,633	$2,733
Hydroelectric Power Plant Improvements	15458	$19,378	$16,571	$72	$1,867
Conveyance and Distribution System - Rehabilitation for FY2012/13 through FY2017/18	15480	$117,607	$104,927	$20,054	$34,047
Pipeline Rehabilitation and Replacement	15482	$1,143	$1,028	$0	$824
Conveyance and Distribution System - Rehabilitation for FY2018/19 through FY2023/24	15503	$22,927	$14,291	$11,239	$10,447

[17] 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 September 2021 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
District Housing & Property Improvements Program	**Total**	**$10,607**	**$2,906**	**$5,511**	**$1,977**
Employee Village Enhancement	15513	$10,607	$2,906	$5,511	$1,977
Minor Capital Projects Program	**Total**	**$48,500**	**$26,880**	**$5,248**	**$7,812**
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	$7,169	$839	$410
Capital Program for Projects Costing Less Than $400,000 for FY2018/19 through FY2019/20	15504	$15,500	$10,178	$1,576	$4,562
Capital Program for Projects Costing Less Than $400,000 for FY2020/21 through FY2021/22	15518	$15,000	$2,824	$2,833	$2,824
Prestressed Concrete Cylinder Pipe Rehabilitation Program	**Total**	**$310,527**	**$247,325**	**$36,588**	**$27,075**
PCCP Rehabilitation and Replacement	15471	$24,243	$21,698	$1,522	$1,241
Sepulveda Feeder PCCP Rehabilitation	15496	$30,525	$25,216	$509	$2,190
Second Lower Feeder PCCP Rehabilitation	15497	$240,627	$190,890	$32,611	$17,260
Allen-McColloch Pipeline, Calabasas Feeder, and Rialto Pipeline PCCP Rehabilitation	15502	$15,132	$9,521	$1,946	$6,383
Regional Recycled Water Supply Program	**Total**	**$22,150**	**$21,212**	**$210**	**$284**
Demonstration-Scale Recycled Water Treatment Plant[18]	15493	$22,150	$21,212	$210	$284
Right of Way & Infrastructure Protection Program	**Total**	**$29,815**	**$25,887**	**$3,943**	**$2,908**
Right of Way & Infrastructure Protection	15474	$29,815	$25,887	$3,943	$2,908

[18] $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 September 2021 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
System Flexibility/Supply Reliability Program	**Total**	**$661,160**	**$635,059**	**$20,250**	**$18,917**
Hayfield and Lake Perris Groundwater Recovery	15402	$1,500	$1,060	$0	$203
Perris Valley Pipeline	15425	$130,800	$129,791	$10,335	$1,605
Water Delivery System Improvements	15488	$67,860	$65,269	$9,915	$15,780
Verbena Property Acquisition	15492	$264,000	$261,526	$0	$1,047
Delta Wetlands Properties (Delta Islands)	15494	$197,000	$177,413	$0	$282
System Reliability Program	**Total**	**$363,088**	**$282,937**	**$58,977**	**$57,308**
Information Technology System - Infrastructure	15376	$51,306	$47,121	$481	$1,408
Information Technology System - Security	15378	$12,351	$10,154	$1,786	$1,922
La Verne Shop Facilities Upgrade	15395	$46,480	$46,098	$6,225	$608
Water Operation Control	15467	$51,414	$41,181	$1,632	$1,861
Union Station Headquarters Improvements	15473	$107,845	$76,888	$19,917	$27,907
IT Infrastructure Reliability	15487	$47,423	$32,887	$15,664	$16,193
Operations Support Facilities Improvement	15495	$19,088	$17,318	$5,227	$529
Metropolitan Security System Enhancements	15499	$15,910	$7,661	$3,805	$4,903
Infrastructure Reliability Information System	15501	$5,440	$2,499	$2,460	$994
System-Wide Paving & Roof Replacements for FY 2020/21 through FY 2021/22	15516	$1,100	$628	$766	$481
System-Wide Paving & Roof Replacements for FY2020/21 through FY2023/24	15519	$1,041	$496	$0	$496
Enterprise Data Analytics	18910	$3,690	$7	$1,014	$7

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru September 2021 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Treatment Plant Reliability Program	**Total**	**$937,266**	**$885,422**	**$55,953**	**$62,193**
Chlorine Containment and Handling Facilities	15346	$162,370	$160,536	$0	$89
Weymouth Water Treatment Plant Improvements	15369	$190,910	$184,495	$4,257	$2,793
Jensen Water Treatment Plant Improvements	15371	$47,062	$46,633	$43	$49
Diemer Water Treatment Plant Improvements	15380	$213,657	$205,386	$16,758	$16,235
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	$63,842	$1,646	$1,547
Weymouth Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15440	$24,079	$21,714	$2,580	$2,953
Jensen Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15442	$91,376	$80,707	$16,571	$21,641
Mills Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15452	$22,652	$21,918	$480	$2,524
Weymouth Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15477	$76,989	$75,563	$5,979	$10,045
Diemer Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15478	$1,425	$1,336	$0	$330
Mills Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15479	$1,094	$595	$0	$141
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	$7,439	$0	$678

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru September 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	$244	$468	$20
Jensen Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15508	$7,109	$2,066	$5,694	$1,744
Diemer Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15510	$745	$549	$764	$167
Skinner Water Treatment Plant, Improvements For FY 2020/21 Through FY 2023/24	15512	$3,831	$3,190	$483	$1,137
Mills Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15520	$2,631	$62	$231	$62
Water Quality/Oxidation Retrofit Program	**Total**	**$631,914**	**$628,233**	**$19**	**$329**
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	$9,615	$0	$312
Total CIP		**$4,139,712**	**$3,708,850**	**$318,637**	**$297,759**

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

LIST OF TABLES

LIST OF FIGURES