



● **Capital Investment Plan Quarterly Report for period ending December 2022**

Summary

The attached report provides a summary of actions and accomplishments on the Capital Investment Plan (CIP) during the second quarter of fiscal year 2022/23. 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 October to December 2022, the second quarter of fiscal year 2022/23, and the second quarter of the fiscal years 2022/23 and 2023/24 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 December 2022



The Metropolitan Water District of Southern California

Capital Investment Plan Quarterly Report

October - December 2022



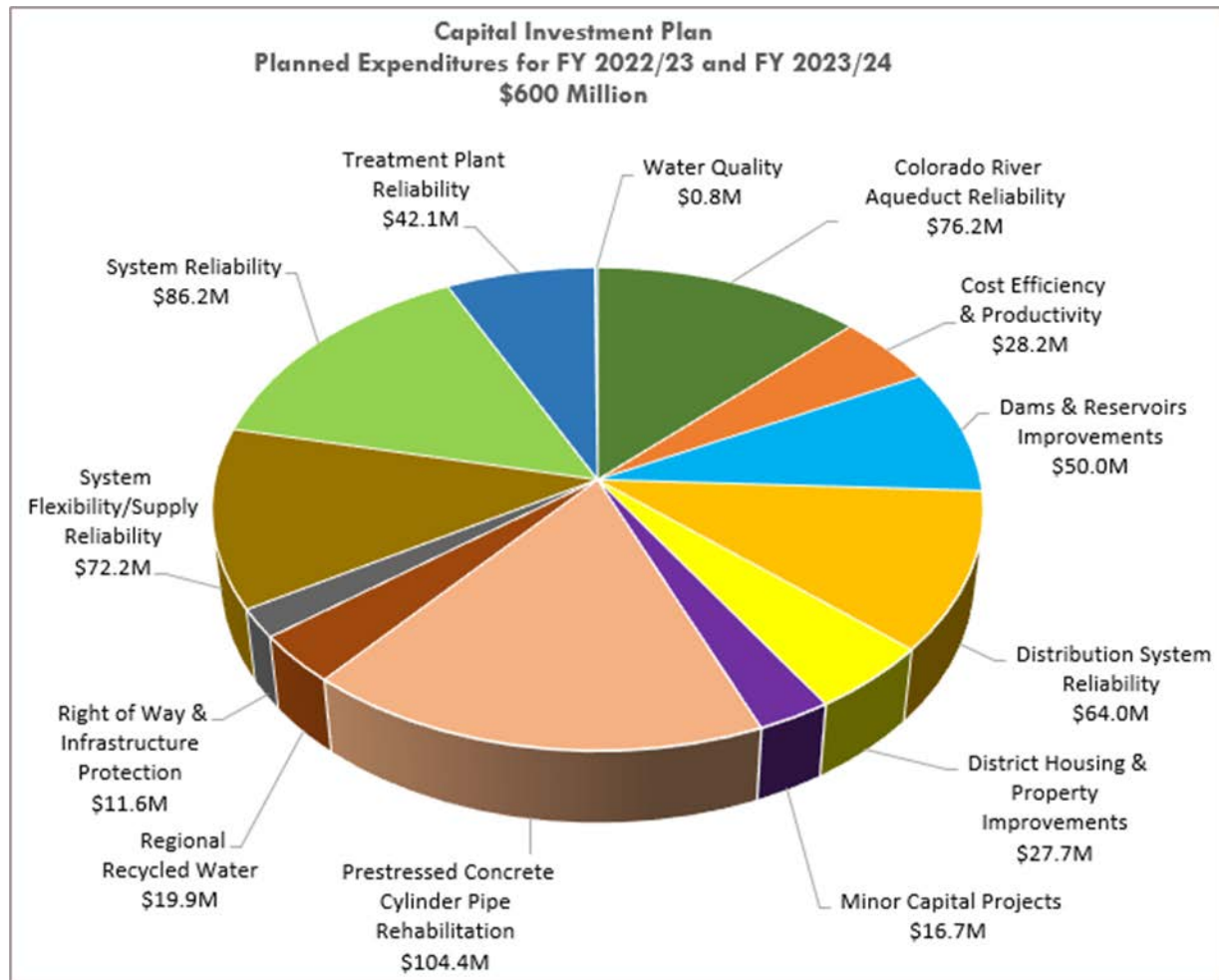
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Capital Investment Plan for Fiscal Years 2022/23 & 2023/24

Metropolitan's total planned capital expenditures for Fiscal Years (FYs) 2022/23 and 2023/24 are \$600 million. Figure 1 below shows the planned expenditures by program. In April 2022, the Board appropriated \$600 million and 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 Capital Investment Plan (CIP) for FYs 2022/23 and 2023/24.

Figure 1: CIP for FY 2022/23 and FY 2023/24 by Program



[Cover photos: (left to right; top to bottom): *Lake Mathews PCCP Rehabilitation Valve Storage Building* – aerial view of concrete placement for building slab; *Etiwanda Pipeline North Relining – Stage 3* – mortar lining demolition; *Weymouth Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation* – installation of new 30-inch flow control valve inside Filter Building No. 2]

Executive Summary

This report provides a summary of the Capital Investment Plan (CIP) activities and accomplishments during the 2nd Quarter of Fiscal Year (FY) 2022/23, which ended in December 2022. CIP expenditures through the 2nd Quarter totaled \$93.8 million and the expenditures are projected to stay at or under the planned expenditures through the end of the biennium. The CIP funds allocated during the quarter totaled \$510.1 million, leaving approximately \$89.9 million available to be allocated during the remainder of the current biennium. Approximately \$410 million of the \$510.1 million was for work, such as on-going construction projects, authorized in the prior biennium.

During the quarter, six project-specific board actions and one action to accept \$50 million in state funding for drought mitigation projects were heard in open sessions. Two construction contracts and one procurement contract were awarded and one emergency construction contract, which completed replacement of damaged Upper Feeder Expansion Joint, was ratified by the Board during the reporting period with a total contract amount of approximately \$5.1 million. During the same time, three construction contracts and three procurement contracts were completed with a total of approximately \$29.1 million in contract payments authorized, reflecting construction progress on projects such as Colorado River Aqueduct Pumping Plants Overhead Crane Replacement, Colorado River Aqueduct Replacement of Casa Loma Siphon Barrel No. 1, Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement, Etiwanda Pipeline North Relining – Stage 3, La Verne Shops Building Completion – Stage 5, MWD HQ Building Fire Alarm & Smoke Control Improvements, Orange County Feeder Relining – Reach 3, and Weymouth Basins 5-8 & Filter Building No. 2 Rehabilitation.

Board Action Summary

During the 2nd Quarter, board actions heard in open session included six project-specific actions and one action on accepting state funding for drought mitigation projects are summarized in Table 1 below. These actions awarded four contracts totaling approximately \$5.1 million, authorized one new procurement agreement in an amount not-to-exceed approximately \$0.9 million, authorized one new professional/technical services agreement in an amount not-to-exceed approximately \$1.0 million, and authorized an increase to one existing agreement in an amount not-to-exceed approximately \$0.3 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: 2nd Quarter Board Actions

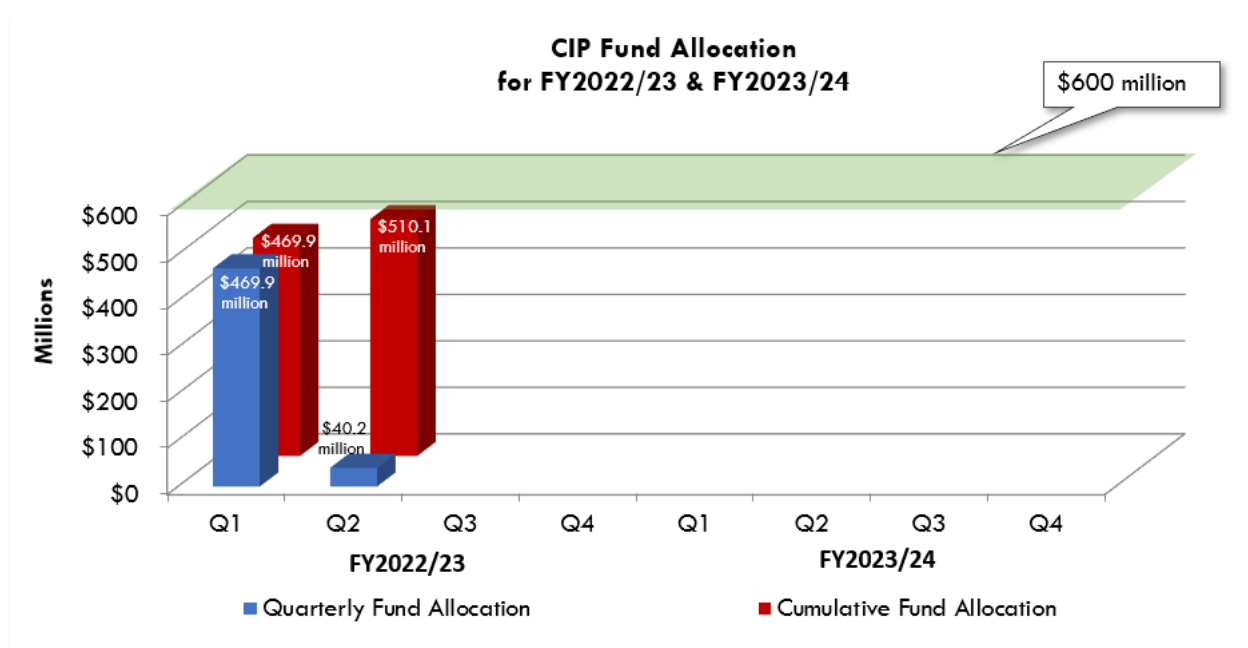
Month	Board Letter Item No.	Project	Action taken
October	7-1	New La Verne Warehouse	Authorized an agreement not-to-exceed \$990,000
November	7-2	Upper Feeder Expansion Joint Replacement	Ratified \$855,623.78 emergency construction contract
November	7-3	Rainbow Tunnel Concrete Liner Rehabilitation	Awarded \$1,228,607.10 construction contract
November	7-6	San Jacinto Diversion Structure Slide Gates V-01, V-02, & V-03 Rehabilitation	Awarded \$820,852.53 procurement contract
December	7-4	Metropolitan Headquarters Physical Security Improvements - Stage 3	Awarded \$2,165,000 construction contract and authorized an increase of \$250,000 to an existing agreement

Month	Board Letter Item No.	Project	Action taken
December	7-6	Drought Mitigation Projects	Adopted a resolution to accept \$50 million in state funding for drought mitigation projects
December	7-10	Automatic Meter Reading Radio System Upgrade	Authorized an agreement not-to-exceed \$860,000 for procurement

The previously referenced April 2022 board action appropriated \$600 million to perform work on planned CIP 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. During the 2nd Quarter, no unplanned CIP projects were authorized by the board.

Figure 2 shows the allocation of the funds from Appropriation No. 15525 for this quarter and total for the current biennium through the quarter, which is approximately \$510.1 million, leaving approximately \$89.9 million available to be allocated during the remainder of the current biennium. This amount includes allocation of \$10 million to the Minor Capital Projects Program, approximately \$40.7 million for work authorized during the 2nd Quarter, and approximately \$0.4 million reallocated back to the CIP Appropriation 15525. Details of the allocations for work authorized during the reporting quarter and from the prior biennium can be found in the **Project Actions** section.

Figure 2: CIP Fund Allocation from Appropriation No. 15525 – FY 2022/23 and FY 2023/24



*Numbers may not sum due to rounding

Information on construction and procurement contracts activities for the 2nd Quarter of FY 2022/23 is presented in the **Construction and Procurement Contracts** section of this report. Progress payments for these contracts in the 2nd Quarter totaled approximately \$29.1 million and primarily reflect construction progress on Colorado River Aqueduct Pumping Plants Overhead Crane Replacement, Colorado River Aqueduct Replacement of Casa Loma Siphon Barrel No. 1, Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement, Etiwanda Pipeline North Relining – Stage 3, La Verne Shops Building Completion – Stage 5, MWD HQ Building Fire Alarm & Smoke Control Improvements, Orange County Feeder Relining – Reach 3, and Weymouth Basins 5-8 & Filter Building No. 2 Rehabilitation.

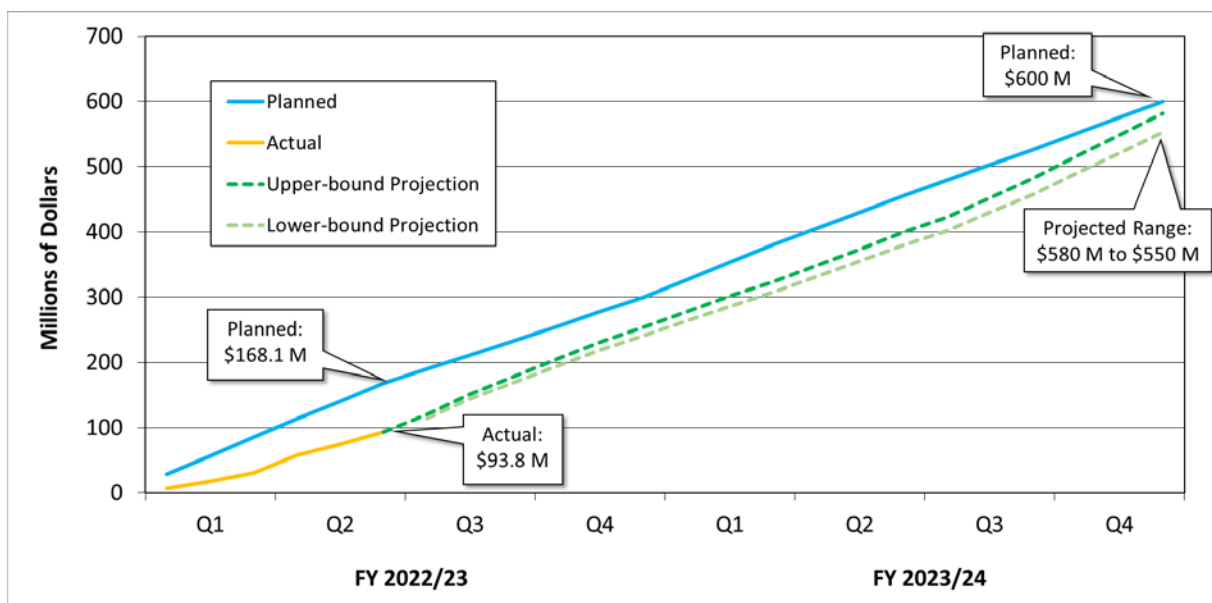
Planned Expenditure and Budget

Table 2 and Figure 3 below show planned and actual expenditures for the biennium through the end of the 2nd Quarter of FY 2022/23, and the forecast of expenditures through the end of the current biennium, against planned expenditures for the same time interval. Actual expenditures through the 2nd Quarter of FY 2022/23 were approximately 56% of planned expenditures.

Table 2: Planned & Actual Expenditures for FYs 2022/23 & 2023/24

Quarter	Planned Expenditures (millions)	Actual Expenditures (millions)
FY 2022/23, Q1	\$85.3	\$30.4
FY 2022/23, Q2	\$82.8	\$63.4
Totals	\$168.1	\$93.8

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



As shown in Figure 3, the total planned expenditures in the current biennium are \$600 million. The projected expenditures for the biennium are currently projected to be between \$550 million and \$580 million with the actual expenditures lower than the planned expenditures during the 2nd Quarter of FY 2022/23. This negative variance below the planned expenditures for the first two quarters is mainly due to a concerted effort during the last quarter to accelerate the work that was planned for the 1st Quarter of FY 2022/23, including the work on the drought projects; staff redeployment to work on non-CIP projects such as Pure Water Southern California; and shift in the timing of the contract awards and delays in completing some construction and procurement contracts due to difficulties in obtaining permits within the planned timeline, equipment/materials delivery delays due to manufacturing and supply chain issues, and other factors that add time to awarding and completing contracts.

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) Rehabilitation
- Regional Recycled Water Supply
- Right-of-Way and Infrastructure Protection
- System Flexibility/Supply Reliability
- System Reliability
- Treatment Plant Reliability
- Water Quality

For the current biennium, the CIP includes over 37 project groups, 60 planned appropriations, and 447 planned projects (excluding Minor Capital Projects). 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 17 at the end of this report.

Figure 4 below shows actual expenditures for the 13 capital programs for 2nd Quarter of FY 2022/23.

Figure 4: Biennium-to-date Actual Expenditures through 2nd Quarter FY 2022/23



Major Capital Project Programs – Highlights

This section provides 2nd Quarter highlights for the 12 Major Capital Projects Programs; the Minor Capital Projects Program is highlighted in its own section of this report. Status is provided for selected projects within each Major Capital Projects Program. The selected projects typically achieved major milestones during the 2nd Quarter of FY 2022/23 or are scheduled to achieve major milestones in the next quarter.

Table 3: Major Capital Projects Programs

Program	Project
Colorado River Aqueduct (CRA) Reliability	CRA Domestic Water Treatment System Replacement
Cost Efficiency & Productivity	Diamond Valley Lake Floating Wave Attenuator System Improvements – Stage 2
Dams and Reservoirs Improvements	Diamond Valley Lake Dam Monitoring System Upgrades
Distribution System Reliability	Orange County Feeder Relining – Stage 3
District Housing & Property Improvements	Program highlights only
Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation	PCCP Valve Storage Building at Lake Mathews
Regional Recycled Water Supply	Program highlights only
Right-of-Way & Infrastructure Protection	Program highlights only
System Flexibility/Supply Reliability	Wadsworth Pumping Plant Bypass Pipeline
System Reliability	La Verne Shops Building Completion – Stage 5
Treatment Plant Reliability	Weymouth Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation
Water Quality	Program highlights only

Colorado River Aqueduct (CRA) Reliability Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$16.03 million

Program Information: The CRA Reliability Program is composed of projects to replace or refurbish facilities and components of the CRA system in order to reliably convey water to Southern California.

Program Highlights (2nd Quarter)

Accomplishments

- Continued construction activities for the following contracts:
 - CRA Domestic Water Treatment System Upgrades at all five pumping plants
 - i) Continued installation of electrical conduits and pull boxes at Intake Pumping Plant
 - ii) Initiated installation of electrical conduits and pull boxes at Iron Mountain Pumping Plant
 - iii) Continued submittals for the water treatment equipment procurement with expected deliveries in two shipments, in late 2022 and early 2024, to coincide with the Domestic Water Treatment System Upgrades construction schedule
 - CRA Mile 12 Flow Meter Upgrades
 - i) Continued installation of above ground electrical conduits and junction boxes
 - ii) Continued installation of security system, solar panel array equipment, and control panels
 - CRA Pumping Plants Overhead Cranes Replacement
 - i) Completed installation of the crane assembly at Gene Pumping Plant
 - ii) Completed fabrication of the crane assembly and delivered it to Eagle Mountain Pumping Plant
 - iii) Initiated fabrication of the crane assembly for Iron Mountain Pumping Plant
 - CRA Pumping Plant Sump System Rehabilitation
 - i) Under Metropolitan's response to COVID-19, suspended on-site construction and continued submittals and fabrication activities
 - ii) Continued fabrication of remaining pumps, piping, and other materials to be furnished for Hinds Pumping Plant
- Continued final design of:
 - Copper Basin Reservoir Discharge Valve Structure Rehabilitation
 - CRA Conduits Structural Protection upgrades
 - CRA Conveyance System Flow Level Sensor Installation
 - CRA Pumping Plant Sump System Equipment Installation
 - CRA Pumping Plant Village Utility Replacement
 - Eagle Mountain Pumping Plant Village Paving Replacement
 - Gene Communication Reliability Upgrades
- Continued preliminary design of:
 - Black Metal Mountain 2.4 kV Electrical Power Upgrades
 - CRA Desert Region Security Improvements
 - CRA Main Transformer Replacement
 - Hinds Pumping Plant Discharge Valve Platform Replacement
- CRA 6.9 kV Power Cable Replacement
 - Continued to evaluate and establish the course of action and construction repackaging options of the remaining outstanding contract work items
- CRA Main Pump Motor Rehabilitation
 - Continued the study to install variable frequency drive pumps at Gene and Intake Pumping Plants
 - Continued design of recirculation line up to the connection point at Eagle Mountain Pumping Plant

- Continued preparation of procurement package for the pilot exciter system installation at Gene Pumping Plant
- CRA Main Transformer Replacement
 - Continued preliminary design and preparation of procurement package
- CRA Storage Building Replacement at Hinds, Eagle Mountain, and Iron Mountain
 - Initiated changes to final design construction bid package that incorporate value engineering workshop recommendations
- Hinds Pumping Plant Village Paving Replacement
 - Completed final design and advertised the construction bid package

Upcoming Activities

- Upcoming work for the next quarter will include:
- Continue construction activities planned for the following contracts:
 - CRA Domestic Water Treatment System Upgrades at all five CRA pumping plants
 - CRA Mile 12 Flow Meter Upgrades
 - CRA Pumping Plants Overhead Crane Replacement
- Continue final design of:
 - Copper Basin Reservoir Discharge Valve Structure Rehabilitation
 - CRA Conduits Structural Protection Upgrades
 - CRA Conveyance System Flow Level Sensor Installation
 - CRA Pumping Plant Sump System Equipment Installation
 - Gene Communication Reliability Upgrades
- Continue preliminary design of:
 - Black Metal Mountain 2.4 kV Electrical Power Upgrades
 - CRA Desert Region Security Improvements
 - CRA Main Transformer Replacement
 - Hinds Pumping Plant Discharge Valve Platform Replacement
- CRA Main Pump Motor Rehabilitation
 - Continue the study to install variable frequency drive pumps at Gene and Intake Pumping Plants
 - Continue design of recirculation line up to the connection point at Eagle Mountain Pumping Plant
 - Complete preparation of a procurement package for the pilot exciter system installation at Gene Pumping Plant
- CRA Main Transformer Replacement
 - Continue preliminary design and preparation of a procurement package
- CRA Pumping Plants 2.3 kV Switchrack Rehabilitation
 - Continue study for four CRA pumping plants
 - Continue preliminary design of a pilot project at Iron Mountain Pumping Plant
- CRA Pumping Plant Sump System Rehabilitation
 - Continue fabrication activities and receive final equipment deliveries for Hinds Pumping Plant
- CRA Storage Building Replacement at Hinds, Eagle Mountain, and Iron Mountain
 - Continue final design to incorporate Value Engineering recommendations to the construction bid package
- Eagle Mountain Pumping Plant Village Paving Replacement
 - Advertise construction bid package

CRA Reliability Program:
CRA Domestic Water Treatment System Replacement

Total Project Estimate:
 \$47.8 million

Total Project Cost to Date:
 \$12.1 million

This project will upgrade the domestic water treatment systems at the five Colorado River Aqueduct pumping plants.

Phase	Construction
% Complete for Construction	16%
Construction Contract Awarded	December 2021
Estimated Construction Completion Date	March 2025
Contract Number	1949

The contractor completed installation of the new aboveground electrical raceways and aboveground conduits for the domestic water tank lighting at Intake Pumping Plant. In the upcoming quarter, the contractor plans to begin installation of a temporary skid mounted treatment system at Intake Pumping Plant.



Contractor installing electrical conduits at Intake Pumping Plant

Cost Efficiency and Productivity Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$3.01 million

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.

Program Highlights (2nd Quarter)

Accomplishments

- Payroll-Timekeeping Reimplementation
 - Received and evaluated bids for the request for proposal (RFP)

Upcoming Activities

Upcoming work for the next quarter will include:

- Battery Energy Storage Systems at Jensen, Weymouth, and Skinner Plants
 - Continue construction
- Enterprise Content Management Phase II
 - Advertise an RFP
- Oracle Database Upgrade
 - Execute migration plan
- Payroll-Timekeeping Reimplementation
 - Authorize an agreement to begin design
- Real Property Group Business System Replacement
 - Continue system replacement
- WINS Water Billing System Upgrade
 - Continue system upgrade

Cost Efficiency & Productivity Program: Diamond Valley Lake Floating Wave Attenuator System Improvements – Stage 2

Total Project Estimate:
\$10.5 million

Total Project Cost to Date:
\$0.4 million

This project will improve the wave attenuator system at Diamond Valley Lake by moving the existing attenuator to a new location where the existing attenuator is better suited and add a new 1,100 feet long wave attenuator in its place to improve the protection of the marina from wind generated waves.

Phase	Final Design
% Complete for Current Phase	75%
Current Phase Authorized	March 2021
Estimated Final Design Completion Date	April 2023

Final design continued, a constructability review was performed, and the anchor system of the existing wave attenuator was inspected. In the upcoming quarter, the final design will continue. The final design package will be completed, and the project will be advertised for construction bids during the 4th Quarter of the fiscal year.



Aerial view of proposed floating wave attenuator (FWA) system at Diamond Valley Lake

Dams and Reservoirs Improvements Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$0.96 million

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.

Program Highlights (2nd Quarter)

Accomplishments

- Diamond Valley Lake Dam Monitoring System Upgrades
 - Selected a consultant from a prequalified list to design and implement the dam monitoring system upgrades
- Garvey Reservoir Rehabilitation
 - Substantially completed preliminary design of the reservoir rehabilitation project
 - Selected a consultant from a prequalified list to design and implement the dam monitoring system upgrades
- Lake Skinner Outlet Tower Seismic Upgrade
 - Completed evaluation of the structural analysis approach and methodologies proposed by the consultant to perform the structural analysis of the outlet tower

Upcoming Activities

Upcoming work for the next quarter will include:

- Diamond Valley Lake Dam Monitoring System Upgrades
 - Authorize a professional services agreement for implementation of dam monitoring system upgrades
- Garvey Reservoir Rehabilitation
 - Complete preliminary design
 - Authorize a professional services agreement for final design
 - Authorize a professional services agreement for implementation of dam monitoring system upgrades
- Lake Mathews and Lake Skinner Dam Monitoring System Upgrades
 - Initiate task orders with consultants to begin preliminary design
- Lake Skinner Outlet Tower Seismic Upgrade
 - Authorize a professional services agreement to perform the detailed structural analysis of the outlet tower

Dams and Reservoirs Improvements Program: Diamond Valley Lake Dam Monitoring System Upgrades

Total Project Estimate:
\$9.0 million

Total Project Cost to Date:
\$2.7 million

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

Phase	Study
% Complete for Current Phase	100%
Current Phase Authorized	July 2016
Study Completion Date	September 2022

A scope of work statement for the project was developed, a request for qualification (RFQ) was advertised, and a consultant was selected. In the upcoming quarter, staff will negotiate the consultant's cost proposal for designing and upgrading the dam monitoring system at DVL and prepare an April 2023 board action to authorize the agreement.



Example of dam monitoring data dashboard and mobile application systems

Distribution System Reliability Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$22.96 million

Program Information: The Distribution System Reliability Program is comprised of projects to replace or refurbish existing facilities within Metropolitan's distribution system, including reservoirs, pressure control structures, hydroelectric power plants, and pipelines, in order to reliably meet water demands.

Program Highlights (2nd Quarter)

Accomplishments

- Awarded construction contract for:
 - San Diego Pipeline No. 1 Rainbow Tunnel Concrete Liner Rehabilitation
- Awarded procurement contract for:
 - San Jacinto Diversion Structure Slide Gates V-01, V-02, & V-03 Rehabilitation
- Ratified an emergency construction contract for:
 - Upper Feeder Expansion Joint Replacement at the Santa Ana River Crossing

Upcoming Activities

Upcoming work for the next quarter will include:

- Casa Loma Siphon No. 1 Seismic Upgrade
 - Complete tie-in of the new earthquake-resistant ductile iron pipe during the planned CRA shutdown
- Continue construction activities for:
 - Etiwanda Pipeline North Relining – Stage 3
 - La Verne Shops Building Completion – Stage 5
 - Lake Mathews Wastewater System Replacement
 - Orange County Feeder Relining – Stage 3
 - Sepulveda, West Valley, and East Valley Feeders Interconnection Electrical Upgrades

Distribution System Reliability Program: Orange County Feeder Relining – Stage 3

Total Project Estimate:
\$23.8 million

Total Project Cost to Date:
\$6.8 million

This project will replace approximately 4 miles of the deteriorated internal coal-tar enamel liner with cement mortar lining, weld all joints, and construct new accessways on the Orange County Feeder Extension within the cities of Costa Mesa and Newport Beach.

Phase	Construction
% Complete for Construction	20%
Contract Awarded	April 2022
Estimated Construction Completion Date	September 2023
Contract Number	1961

The contractor worked at nine of the seventeen sites along the Orange County Feeder to advance construction. Activities at the sites included completion of shoring and excavation, construction of pipe access cutouts, buttstrap installation, removal of existing lining, and installation of new mortar lining. In the upcoming quarter, the contractor will continue to advance rehabilitation work to fifteen of the seventeen sites.



Excavation and shoring completed in preparation for pipe access cutout at one of the Orange County Feeder Relining sites

District Housing & Property Improvements Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$1.40 million

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.

Program Highlights (2nd Quarter)

Accomplishments

- Initiated an amendment to an existing professional services agreement to perform final design of the housing, village enhancements, and the kitchen and lodging improvements at four CRA pumping plants – Hinds, Eagle Mountain, Iron Mountain and Gene Pumping Plants

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue preparation of the environmental documentation in support of the housing and property improvements program
- Initiate evaluation of supplementary housing alternatives in support of the housing and property improvements program
- Initiate final design of the housing, village enhancements, and the kitchen and lodging improvements at Hinds and Eagle Mountain Pumping Plants

Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$9.79 million

Program Information: The PCCP Rehabilitation Program is composed of projects to refurbish or upgrade Metropolitan's PCCP feeders to maintain water deliveries without unplanned shutdowns.

Program Highlights (2nd Quarter)

Accomplishments

- Allen-McColloch Pipeline:
 - Continued preliminary design for rehabilitation of 8.9 miles of PCCP pipeline, including identification of proposed pipe access excavation pits
 - Continued evaluating a member agency partnership proposal that may facilitate rehabilitation work
- Calabasas Feeder:
 - Began validating assumptions on pipeline hydraulic capacity necessary to start preliminary design. This project will reline the entire length of approximately nine-mile-long Calabasas Feeder PCCP pipeline.
- PCCP Rehabilitation Valve and Equipment Storage Building:
 - Completed site grading, installation of drainage structures, construction of concrete foundation and fabrication of the pre-engineered metal building. This building will safely store large-diameter isolation valves and actuators to support the PCCP Rehabilitation Program.
- Second Lower Feeder:
 - Reach 3A – Completed mobilization activities for the construction contract that will reline approximately 1.2 miles of Second Lower Feeder PCCP pipeline from Oak Street Pressure Control Structure south through City of Rolling Hills Estates to the Palos Verdes Reservoir
 - Reach 3B – Received construction bids to reline approximately 3.6 miles of Second Lower Feeder PCCP pipeline from the intertie with Sepulveda Feeder south to Oak Street PCS, through the cities of Torrance, Los Angeles, and Lomita, and will replace three 48-inch diameter sectionalizing valves at the intertie with Sepulveda Feeder
 - Isolation Valve Procurement – Received the first two of ten 54-inch diameter conical plug valves. Continued fabrication of the remaining 54-inch valves. To date, Metropolitan has received five of thirteen large-diameter conical plug valves and actuators, including three 48-inch and the two aforementioned 54-inch valves.
- Sepulveda Feeder:
 - Reach 1 – Continued final design to rehabilitate approximately three miles of Sepulveda Feeder PCCP pipeline, 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
 - Reach 2 – Continued final design to rehabilitate approximately 3.8 miles of Sepulveda Feeder PCCP pipeline, from the Dominguez Gap Channel south to the intertie with Second Lower Feeder, through the cities of Torrance and Los Angeles
 - North Reach – Initiated preliminary design of the northern 20-mile portion of the Sepulveda Feeder, including both steel and PCCP portions of the pipeline and appurtenances

Upcoming Activities

Upcoming work for the next quarter will include:

- Allen-McColloch Pipeline:
 - Complete preliminary design
- Calabasas Feeder:
 - Complete validation of pipeline hydraulic capacity assumptions and initiate preliminary design
- PCCP Rehabilitation Valve and Equipment Storage Building:
 - Erect the pre-engineered metal building at the Lake Mathews site including all framing, roofing, and wall panels. Begin installation of fire sprinkler systems.
- Second Lower Feeder:
 - Reach 3A – Install temporary traffic controls, excavate for pipe access shafts, and begin installation of new steel liner sections along the southern portion of the Second Lower Feeder
 - Reach 3B – Award a construction contract
 - Isolation Valve Procurement – Receive delivery of the third of ten 54-inch conical plug valves and continue fabrication of the remaining valves
- Sepulveda Feeder:
 - Reaches 1 and 2 – Continue developing final designs and initiate permitting process for long-lead permits from Caltrans, City of Los Angeles, and City of Torrance
 - North Reach – Continue preliminary design

PCCP Rehabilitation Program:
PCCP Valve Storage Building at Lake Mathews

Total Project Estimate:
 \$8.1 million

Total Project Cost to Date:
 \$4.3 million

This project will construct a valve and equipment storage building at the Lake Mathews Reservoir site to support the PCCP Rehabilitation Program.

Phase	Construction
% Complete for Current Phase	60%
Current Phase Authorized	March 2022
Construction Completion Date	September 2023
Contract Number	2013

The contractor completed placement of the Valve Storage Building concrete pad, completed installation of the underground electrical duct bank, and continued to excavate for the new 10-inch water pipe and tie-in location. The coating for the pre-engineered metal building has been completed and passed inspection. In the upcoming quarter, the structural steel will be delivered to Lake Mathews and the building erection will begin January 2023.



Contractor placing concrete for Lake Mathews PCCP Valve Storage Building pad

Regional Recycled Water Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$0.05 million

Program Information: The Regional Recycled Water Program includes the design and construction of the Advanced Water Treatment (AWT) Demonstration Plant, which represents the initial step in development of a potential regional recycled water system for recharge of groundwater basins within Southern California.

Program Highlights (2nd Quarter)

Accomplishments

- Advanced Water Treatment Demonstration Facility
 - Initiated baseline testing and monitoring of the secondary membrane bioreactor (MBR)
 - Continued with site improvements to support the secondary MBR testing
 - Issued tertiary MBR draft testing report for internal review and approval
- Direct Potable Reuse (DPR) Demonstration Facility
 - Conducted DPR Workshop No. 3 to identify potential DPR processes, studies, and testing strategy
 - Initiated literature review on potential DPR technologies

Upcoming Activities

Upcoming work for the next quarter will include:

- Advanced Water Treatment Demonstration Facility
 - Continue baseline testing and monitoring of the secondary MBR system
 - Submit tertiary MBR testing draft report to the Division of Drinking Water (DDW) for review
 - Meet with the Independent Scientific Advisory Panel (ISAP) to discuss tertiary MBR testing results
 - Submit tertiary MBR testing draft report to the State Water Resource Control Board as part of the grant funding agreement for final reimbursement
 - Develop post-secondary MBR testing strategy to close data gap and facilitate full-scale implementation of the Pure Water Southern California program
- Direct Potable Reuse (DPR) Demonstration Facility
 - Continue post-construction contract improvements to support the secondary MBR testing
 - Complete literature review of potential DPR technologies
 - Develop bench testing plan for DPR
 - Present the proposed DPR testing strategy to ISAP for feedback
 - Continue study and prepare framework to modify the AWT Demonstration Facility to allow testing of future DPR processes

Right-Of-Way and Infrastructure Protection Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$0.87 million

Program Information: The Right of Way Infrastructure Protection Program (RWIPP) is comprised of projects to refurbish or upgrade above-ground facilities and right-of-way along Metropolitan's pipelines in order to address access limitations, erosion-related issues, and security needs.

Program Highlights (2nd Quarter)

Accomplishments

- Western San Bernardino County – Stage 1
 - Completed construction

Upcoming Activities

Upcoming work for the next quarter will include:

- Western San Bernardino County Region – Stage 2
 - Complete Final Design
- Riverside and San Diego County Region – Stage 1
 - Final design for two urgent repair sites along San Diego Pipelines 4 & 5 will be reviewed by Construction Services Unit

System Flexibility/Supply Reliability Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$6.50 million

Program Information: The System Flexibility / Supply Reliability Program is comprised of projects to increase the capacity and flexibility of Metropolitan's water supply and delivery infrastructure to meet service demands. Projects under this program address climate change affecting water supply, regional drought, and alternative water sources for areas dependent on State Project Water.

Program Highlights (2nd Quarter)

Accomplishments

- Opened bids for Perris Valley Pipeline Tunnels
- Opened bids for the Wadsworth Pumping Plant Bypass Pipeline
- Continued evaluation of supply reliability actions consisting of the following individual projects:
 - West Area Supply and Delivery Alternatives: Currently evaluating potential surface storage options
- Sepulveda Feeder Pump Stations
 - Initiated owner's advisor services to assist with the preparation of a progressive design-build contract
- Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Pump Station Intertie
 - SBVMWD Board took action to approve terms for potential joint operating agreement for the Foothill Pump Station

Upcoming Activities

Upcoming work for the next quarter will include:

- Perris Valley Pipeline Tunnels
 - Award of a construction contract planned for January 2023
- Continue progress on four individual projects comprising the Rialto Pipeline Water Supply Reliability Improvements:
 - Inland Feeder/Rialto Pipeline Intertie:
 - i) Complete final design and advertise Inland Feeder/Rialto Pipeline Intertie
 - ii) Complete final design and advertise Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Pump Station Intertie
 - iii) Advertise a valve procurement contract
 - Wadsworth Pumping Plant Bypass Pipeline: Award of a construction contract planned for January 2023
 - Wadsworth Pumping Plant Stage 2 – Badlands Tunnel Surge Tank Facility: Complete final design and advertise

System Flexibility/Supply Reliability Program: Wadsworth Pumping Plant Bypass Pipeline

Total Project Estimate:
\$22.8 million

Total Project Cost to Date:
\$3.0 million

This project will construct a bypass pipeline between the Wadsworth Pumphouse Conduit and the Eastside Pipeline to allow continuous pumping of water from DVL Forebay into the Eastside Pipeline while filling the forebay with water from DVL at the same time. This project is part of the Rialto Pipeline Water Supply Reliability Improvements, a series of drought response projects.

Phase	Final Design
% Complete for Current Phase	100%
Current Phase Authorized	March 2022
Construction Contract Award Date	January 2023

The construction bid package was advertised and bids opened. In the upcoming quarter, the construction contract will be awarded and submittal review will begin.



Wadsworth Pumping Plant Bypass Pipeline project site
[Looking northward toward the plant entrance gate showing electrical switch gear, which will be relocated]

System Reliability Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$15.79 million

Program Information: The System Reliability Program is comprised of projects to improve or modify facilities located throughout Metropolitan's service area in order to utilize new processes and/or technologies, and improve facility safety and overall reliability. These include projects related to Metropolitan's Supervisory Control and Data Acquisition (SCADA) system and other Information Technology projects.

Program Highlights (2nd Quarter)

Accomplishments

- Control System Upgrade – Phase 3
 - Initiated pilot project at Mills Water Treatment Plant
- Datacenter Backup Infrastructure Upgrade
 - Extended submittal deadline for request for proposal (RFP)
- Datacenter Modernization Upgrade
 - Completed project
- Desert Microwave Site Tower Upgrades
 - Continued preparation of design
- Headquarters Fire Alarm & Smoke Control Upgrades
 - Began work on the smoke control portion of the project
- Headquarters Security Upgrade Stage 2
 - Completed installation of new interior building security features and filed notice of completion
- Headquarters Security Upgrade Stage 3
 - Awarded construction contract
- Replacement of Network Switches at MWD HQ
 - Advertised a request for bid (RFB)

Upcoming Activities

Upcoming work for the next quarter will include:

- Applications-Servers Upgrade
 - Continue to migrate and upgrade applications in batches
- Headquarters Fire Alarm & Smoke Control Upgrades
 - Continue work on the smoke control portion of the project
- Headquarters Security Upgrade Stage 3
 - Issue notice to proceed for exterior building security upgrade construction
- Maximo Mobile Upgrade
 - Continue deployment of devices to field staff
- MWD Cyber Security Upgrade
 - Continue deployment of secure web gateway software to MWD-owned workstations and laptops
 - Continue deployment of privileged access management software to MWD-owned workstations, laptops, and servers
- MWD HQ Network Switch Replacement
 - Authorize an agreement to begin design

System Reliability Program: La Verne Shops Building Completion – Stage 5

Total Project Estimate:
\$27.9 million

Total Project Cost to Date:
\$5.8 million

This project will procure and install new fabrication and machine shop equipment, including a hydraulic shear, hydraulic press brake, waterjet cutting system, horizontal band saw, and vertical milling center and complete building and utility improvements for several shop buildings on the grounds of the Weymouth plant.

Phase	Construction
% Complete for Current Phase	16%
Construction Contract Awarded	May 2022
Estimated Construction Completion Date	May 2024
Contract Number	1885

The contractor continued submittals for review and completed construction of the temporary protective containment walls that will protect the machines during construction. Refurbishment of the machine shop's exterior concrete walls began including sandblasting and chipping out of damaged concrete. Construction of foundations for the shear and brake equipment was completed. In the upcoming quarter, the contractor will complete refurbishment of the exterior machine shop concrete walls and complete excavation for the foundation of the large mill in the new machine shop.



Contractor installing rebar for press brake foundation at La Verne Shop

Treatment Plant Reliability Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$14.35 million

Program Information: The Treatment Plant Reliability Program is comprised of projects to replace or refurbish facilities and components of Metropolitan's five water treatment plants in order to continue to reliably meet treated water demands.

Program Highlights (2nd Quarter)

Accomplishments

- Continued preliminary design of:
 - Diemer Filter Rehabilitation
 - Jensen Reservoir Bypass Gate Replacement
 - Water Quality Laboratory Upgrades
- Continued construction of:
 - Jensen Ozone PSU Replacement – Stage 1
 - Mills Electrical Upgrades – Stage 2
 - Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades
 - Weymouth Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation
- Diemer Power and Distribution Panel Upgrade
 - Continued equipment procurement
- Mills Ozone PLC Control and Communication Equipment Upgrade
 - Prepared site-specific software for PLC controller
- Weymouth Administration Building Upgrades
 - Began final design and field investigation

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue preliminary design of:
 - Diemer Filter Rehabilitation
 - Jensen Reservoir Bypass Gate Replacement
 - Mills Perimeter Security & Erosion Control Improvements
 - Water Quality Laboratory Upgrades
- Continue final design and field investigation of Weymouth Building Administration Upgrades
- Continue construction of:
 - Jensen Ozone PSU Replacement – Stage 1
 - Mills Electrical Upgrades – Stage 2
 - Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades
 - Weymouth Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation
- Diemer Power and Distribution Panel Upgrade
 - Continue equipment procurement
- Diemer Washwater Reclamation Plant Improvements
 - Begin preliminary design to stabilize the slope next to the existing washwater reclamation plant
- Mills Ozone PLC Control and Communication Equipment Upgrade
 - Complete installation, check out, and start up

Treatment Plant Reliability Program:
Weymouth Basins Nos. 5-8 & Filter Building No. 2
Rehabilitation

Total Project Estimate:
 \$117.0 million

Total Project Cost to Date:
 \$19.0 million

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

Phase	Construction & Closeout
% Complete for Construction	15%
Construction Contract Awarded	May 2022
Construction Completion Date	May 2025
Contract Number	1982

During the first partial plant shutdown, the contractor demolished six header valves in Filter Building No. 2. In the upcoming quarter, the contractor plans to complete replacement of valves and installation of temporary remote terminal units (RTUs) for Basins 5 & 6. Also, the second partial plant shutdown will begin to accommodate Accessway No. A48 relocation.



Weymouth Basin 7 dewatered for the first partial plant shutdown

Water Quality Program

Actual Biennium Expenditures
(Jul. 2022 through Dec. 2022)
\$0.00 million

Program Information: The Water Quality Program 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.

Program Highlights (2nd Quarter)

Accomplishments

- Mills Enhanced Bromate Control Facilities
 - Continued final design

Upcoming Activities

Upcoming work for the next quarter will include:

- Mills Enhanced Bromate Control Facilities
 - Continue final design

Minor Capital Projects 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 and the last bienniums, 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 three bienniums, the two-year budgets for the Minor Cap Program have been \$10 million, \$15.5 million, and \$20 million respectively. In April 2022, the Board appropriated funds for the projects identified in the CIP appendix for the current biennium, FYs 2022/23–2023/24, including the Minor Cap Program. \$10 million has been allocated for the current biennium to date.

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 fiscal years 2022/23–2023/24.

Table 4: Minor Capital Projects Program

	Fiscal Year				Totals*
	2016/17– 2017/18	2018/19– 2019/20	2020/21– 2021/22	2022/23– 2023/24	
Amount Appropriated	\$10M	\$15.5M	\$20M	\$10M	\$55.5M
Expenditures (through December 2022)	\$7.2M	\$12.1M	\$7.5M	\$0.5M	\$27.4M
Number of Projects Approved	41	48	54	21	164
Number of Projects Completed (through December 2022)	40	33	4	0	77
Number of Projects with Durations of Over 3 Years	1	7	0	0	8

* Numbers may not sum due to rounding.

Through December 2022, 77 of the 165 projects have been completed, and eight active projects have exceeded three years in duration, as described below.

- The E-Forms Conversion to Adobe Experience Manager project experienced delays due to additional recommended form revisions on the new platform. Metropolitan staff is developing custom applications to serve as their respective replacements. The project is scheduled to be completed by April 2023.
- Garvey Reservoir Sodium Hypochlorite Tank Replacement has experienced delays due to the Texas deep freeze event, which caused power and resin supply chain disruptions in 2021, and delivery of the new tank was delayed. The tank has been installed and it's now in service. Metropolitan force construction is currently fabricating brackets for the installation of tank canopy roof. The project is scheduled to be completed by May 2023.
- Gene Inlet Surge Chamber Access Improvement has experienced delays due to re-scheduling of the installation of a recently fabricated hatch cover, which can only occur when Gene Wash Reservoir water level is lowered. Metropolitan force construction plans to complete the hatch cover installation during the 2023 CRA shutdown and complete the project by June 2023.
- Gene Pool Refurbishment has experienced delays due to a shortage of local contractors for this type of work due to increased construction activity in the region. Metropolitan force construction will complete the work and the project is scheduled to be completed by April 2023.
- Jensen Ozone Diffuser Reliability Upgrades has been completed and the project is scheduled to be closed in January 2023, upon payment of pending invoices and completion of record drawings.
- Lower Feeder Blow-Off Drain Line Replacement experienced delays in obtaining a Caltrans permit for Highway 90. Construction has started and the project is scheduled to be completed by April 2023.
- OC-88 Fire Protection System Upgrades started construction in late 2021, however, the contract was terminated as a result of the contractor's debarment by the State of California's Department of Industrial Relations. A new contract has been awarded, and the project is scheduled to be completed by March 2023.
- San Diego Pipeline No. 2 Access Road Relocation was originally advertised for bids in November 2020 to be constructed by a contractor, but construction did not start in Spring 2021 as planned due to COVID-19 pandemic restrictions and the contract was terminated. Metropolitan forces completed construction in December 2022 and the project will be closed in January 2023.

Actual biennium expenditures to date (October 2022 through December 2022) for the Minor Capital Projects Program were \$2.06 million.

Minor Cap Projects, 2nd Quarter

Authorized Projects

Ten projects were authorized under the Minor Cap Program during the 2nd Quarter of fiscal year 2022/23 (October through December 2022). The total amount authorized for these projects was \$2,648,000:

- CRA Carport Installations at Hinds Pump Plant – This project will install six new carports at the CRA Hinds Pumping Plant village housing facilities. The project budget is \$330,000.
- CRA Carport Installations at Iron Mountain Pump Plant – This project will install 14 new carports at the CRA Iron Mountain Pump Plant village housing facilities. The project budget is \$370,000.
- Diamond Valley Lake Network Security Improvements – This project will replace obsolete network switches, relocate one of two servers to another secure location in the same facility, and install a new uninterruptible power supply unit for the relocated server. The project budget is \$180,000.
- Diemer Helicopter Hydrant Facility – This project will construct an engineered water tank system at the Diemer Water Treatment Plant site, which is approved by the local fire authority, to allow helicopters to draw up water while the helicopter is in the air for the purposes of fire suppression. The project budget is \$380,000.
- Iron Mountain Maintenance Building Office Improvements – This project will renovate the office space within the Iron Mountain Maintenance Building, including replacement of the existing flooring, ceiling, lighting, and painting of walls. The project budget is \$115,000.

- Lake Mathews Overlook Memorial Upgrade – This project will install two new plaques on the Lake Mathews Overlook monument, refurbish the existing plaques, relocate the existing security fence, and plant two new trees. The project budget is \$120,000.
- Lake Mathews Reservoir Aeration System Compressor Replacement – This project will replace the two existing 12-year-old compressors, which have exceeded their useful life, for the Lake Mathews aeration system and provide a cover for the new compressors. The project budget is \$265,000.
- Mills Plant Turbidity Meter Replacement – This project will replace the existing turbidity meters, controllers, and appurtenant equipment at the Mills plant, which have exceeded their useful life. The project budget is \$384,000.
- MSU Shops Lighting Upgrades – This project will upgrade the outdated overhead illumination system at the south section of the Manufacturing Service Unit (MSU) Shops Building in La Verne with an efficient LED system. The project budget is \$108,000.
- Red Mountain V-02 Sleeve Valve Replacement – This project will replace the V-02 sleeve valve, which is no longer operational, at Red Mountain facilities on San Diego Pipeline 5. This project will also install a new bulkhead at V-03 sleeve valve location, which will allow the pipeline back into service. The project budget is \$396,000.

Completed Projects

- No projects were completed under the Minor Cap Program during the 2nd Quarter of fiscal year 2022/23 (October through December 2022).

Cancelled Projects

- None

Project Actions

Table 5 lists capital project actions authorized by the General Manager along with funding allocation amounts during the 2nd Quarter of FY 2022/23, through the authority delegated by the Board in April 2022. The total funding amount authorized during the 2nd Quarter is \$40,650,356 through twenty-five management actions. In some case 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 and minor cap authorizations. Minor cap authorizations can be found in the Minor Capital Projects Program section of this report.

Table 5: Capital Projects Funded in 2nd Quarter

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Casa Loma Siphon Barrel No. 1 and San Jacinto Pipeline Protection	Study	\$55,000	\$55,000
CRA Conveyance System Level Sensor Installation	Preliminary Investigations, Final Design, & Procurement	\$1,300,000	\$1,300,000
Delta Smelt and Native Species Preservation	Design & Permitting	\$530,000	\$530,000
Desert Fiber Installation (Iron-Eagle-Hinds)	Define	\$330,000	\$330,000
Diemer Chemical Tank Farm Improvements	Final Design	\$1,530,000	\$1,530,000
Diemer Washwater Reclamation Facilities Reliability Improvements ¹	Additional Preliminary Design	\$3,250,000	\$3,250,000
District Housing and Property Improvements at Hinds and Eagle Mountain Pumping Plants	Final Design & Overhead Electrical Service Line Relocation	\$5,742,851	\$5,742,851
District Housing and Property Improvements at Iron Mountain and Gene Pumping Plants, and Copper Basin Reservoir	Final Design & Overhead Electrical Service Line Relocation	\$7,557,149	\$7,557,149
Electromagnetic Inspections of PCCP Lines - Fifth Cycle	Study, Inspection, & Assessment	\$2,543,000	\$9,100,000
Headquarters Chiller Plant Upgrade	Initial Study	\$38,000	\$38,000

¹ Additional funds were required to complete the preliminary design that incorporates the use of L-shaped caisson wall to stabilize the fill slope and the new headworks design to allow the independent shutdown of each individual process train to increase the operational reliability and maintenance flexibility.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Headquarters HVAC System Equipment Upgrades	Initial Study	\$38,000	\$38,000
Inland Feeder/SBVMWD Foothill Pump Station Intertie	Final Design	\$2,050,000	\$2,050,000
Jensen Plant Site Security Upgrades	Final Design	\$1,000,000	\$1,329,000
Lake Skinner Dam V-ditch Replacement	Study	\$50,000	\$50,000
Live Oak Reservoir Pipelines Cathodic Protection	Construction	\$430,000	\$430,000
Mills Maintenance Building Roof Replacement	Construction	\$720,000	\$720,000
Mills Perimeter Security and Erosion Control Improvements ²	Additional Preliminary Design	\$770,000	\$770,000
Rainbow Tunnel Concrete Liner Rehabilitation	Construction	\$2,300,000	\$2,300,000
Rialto Pipeline Rehabilitation at STA 2986+30 ³	Final Design & Additional Preliminary Design	\$564,356	\$564,356
Sepulveda Canyon PCS to Venice PCS Valve Replacements	Final Design & Construction	\$530,000	\$530,000
Sepulveda Feeder Pump Stations	Preliminary Design & Owners Advisor	\$1,600,000	\$1,600,000
Upper Feeder Expansion Joint Replacement	Construction	\$2,500,000	\$2,500,000
Wadsworth Pumping Plant Fire Protection System Upgrade	Study	\$72,000	\$72,000
West Area Supply and Delivery Alternatives ⁴	Additional Study	\$350,000	\$350,000

² Additional preliminary design funds were required to develop new erosion control design options to comply with the Mills Plant Expansion No. 2 Environmental Impact Report (EIR) mitigation measures and to incorporate enhanced security requirements.

³ Additional preliminary design funds were required to complete the preliminary design report, which was planned to be completed by an in-house team but was completed by a professional consulting services firm due to the redeployment of staff to work on drought projects. The funds were also required to include additional scope to replace a leaky pipe spool and an isolation valve that exceeded service life at Service Connection CB-11 to perform the replacement during the same shutdown for the pipeline rehabilitation.

⁴ Additional study funds were required to identify and evaluate additional sites for new infrastructures along the western branch of the State Water Project to increase delivery reliability in the west area.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Weymouth Administration Building Upgrades ⁵	Additional Final Design	\$4,800,000	\$4,800,000
	Total	\$40,650,356	\$47,536,356

Due to a correction that resulted in a reduction of authorized funding through December 2022 on the following project, \$428,000 was returned to the CIP Appropriation (Appropriation No. 15525) from the previously authorized project listed in Table 6 below.

Table 6: General Manager Actions to Reallocate Capital Project Funds

Project	Amount Authorized for Reallocation To CIP Appn.	Total Amount from CIP Appn. for Current Biennium
Jensen Ozone PSU Replacement – Stage 1	(\$428,000)	\$3,510,897
Total:	(\$428,000)	

⁵ Additional final design funding was required to address new building code requirements for increased design ground accelerations which resulted in a more complex approach of using micro-piles and larger shear walls to withstand a major earthquake. The funds were also required to address existing utility relocation due to the design change and a new fire protection system that complies with the latest fire code standards.

CEQA Determinations

Table 7 lists CEQA exemption determinations made by the General Manager during the 2nd Quarter. Consistent with CEQA, the Board delegated this authority to the General Manager in April 2022. Adoption of Negative Declarations and Mitigated Negative Declarations, and certification of Environmental Impact Reports will continue to require action by Metropolitan's Board. This table excludes information on board items heard in closed session.

Table 7: CEQA Exemption Determinations

Projects
Black Metal Mountain 2.4 kV Electrical Power Upgrade – Geotech Investigation
CRA Conveyance System Flow Sensor Installation
Cyber Security Operations Center - Weymouth Plant
Eagle Mountain Village Paving Replacement
Jensen Administration Building Entrance Glass Fiber Reinforced Concrete Panel Replacement
Rainbow Tunnel Concrete Liner Rehabilitation – Staging Area
Skinner Plant Ozone Contactors 1 and 2 Influent Channel Concrete Rehabilitation

Construction and Procurement Contracts

The table below summarizes the status of all construction and procurement contracts that were active during the reporting quarter. These contracts are listed in Table 9, Table 11, and Table 12. Total contract earnings for the 2nd Quarter were approximately \$29.08 million. Tables in this section exclude contracts for minor capital projects.

Table 8: 2nd Quarter Contract Action

Contract Actions during Q2 for FY 2022/2023, October 2022 through December 2022	
Contracts Awarded by Board	2 construction contracts totaling \$3.39 million (Table 10) 1 procurement contract totaling \$0.82 million (Table 10)
Total Payments Authorized	\$29.08 million
Construction Contracts Completed	Notice of Completion was filed for 3 construction contracts (Table 9)
Procurement Contracts Delivery Completed	Delivery of all items completed for 3 procurement contracts.
Active Contracts at end of Q2 ⁶	24 construction contracts, totaling \$367.37 million (Table 11) 14 procurement contracts, totaling \$56.15 million (Table 12) \$423.52 million total value*

*Numbers may not sum due to rounding

The figures on the next two pages show the locations of the twenty-four construction contracts that were active through the end of the 2nd Quarter.

⁶ Active contracts at the end of the 2nd Quarter are those that are ongoing at the end of December 2022 and have not filed Notice of Completion with the county where the work was performed.

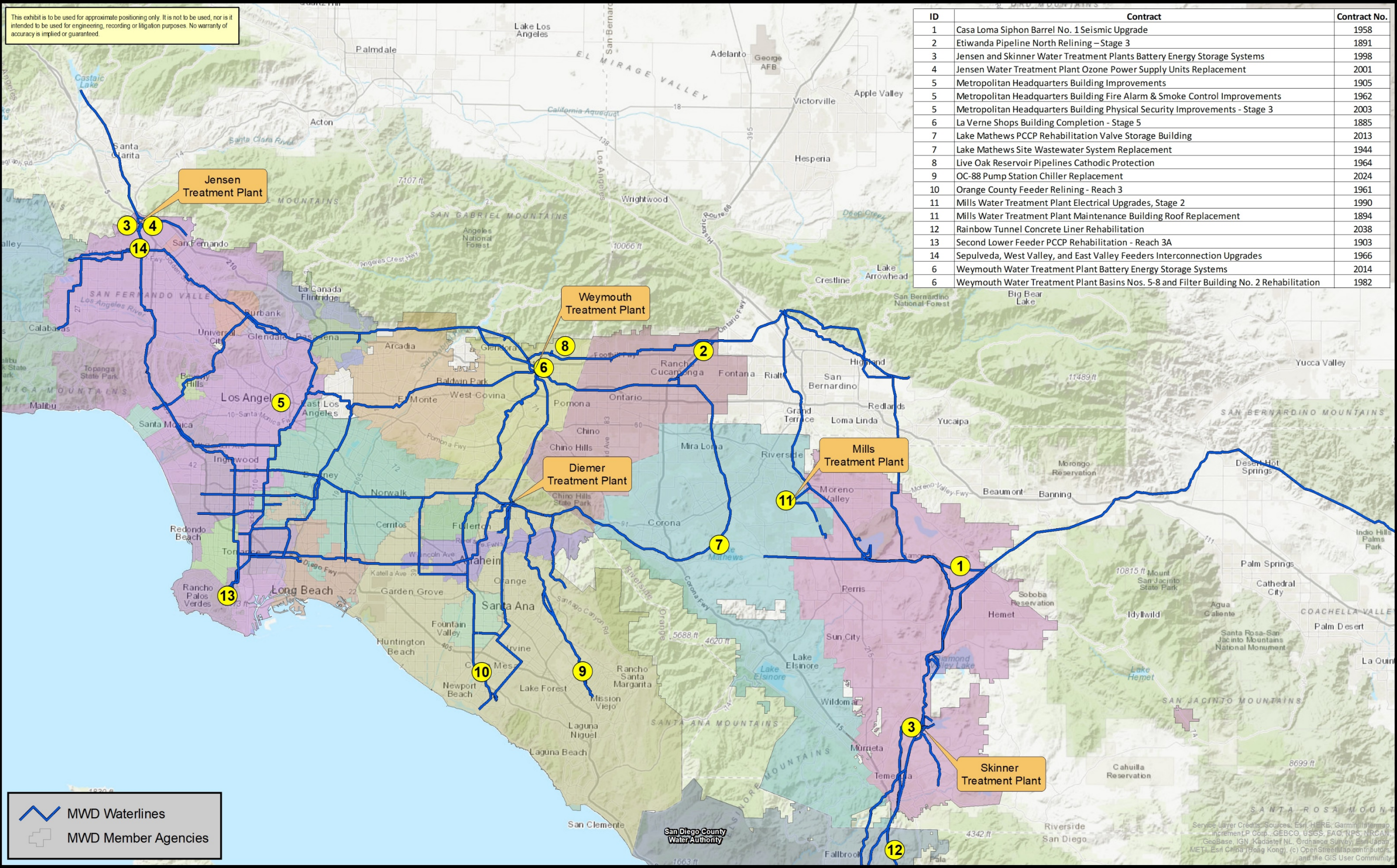


Figure 5: Construction Contracts – Greater Los Angeles Region

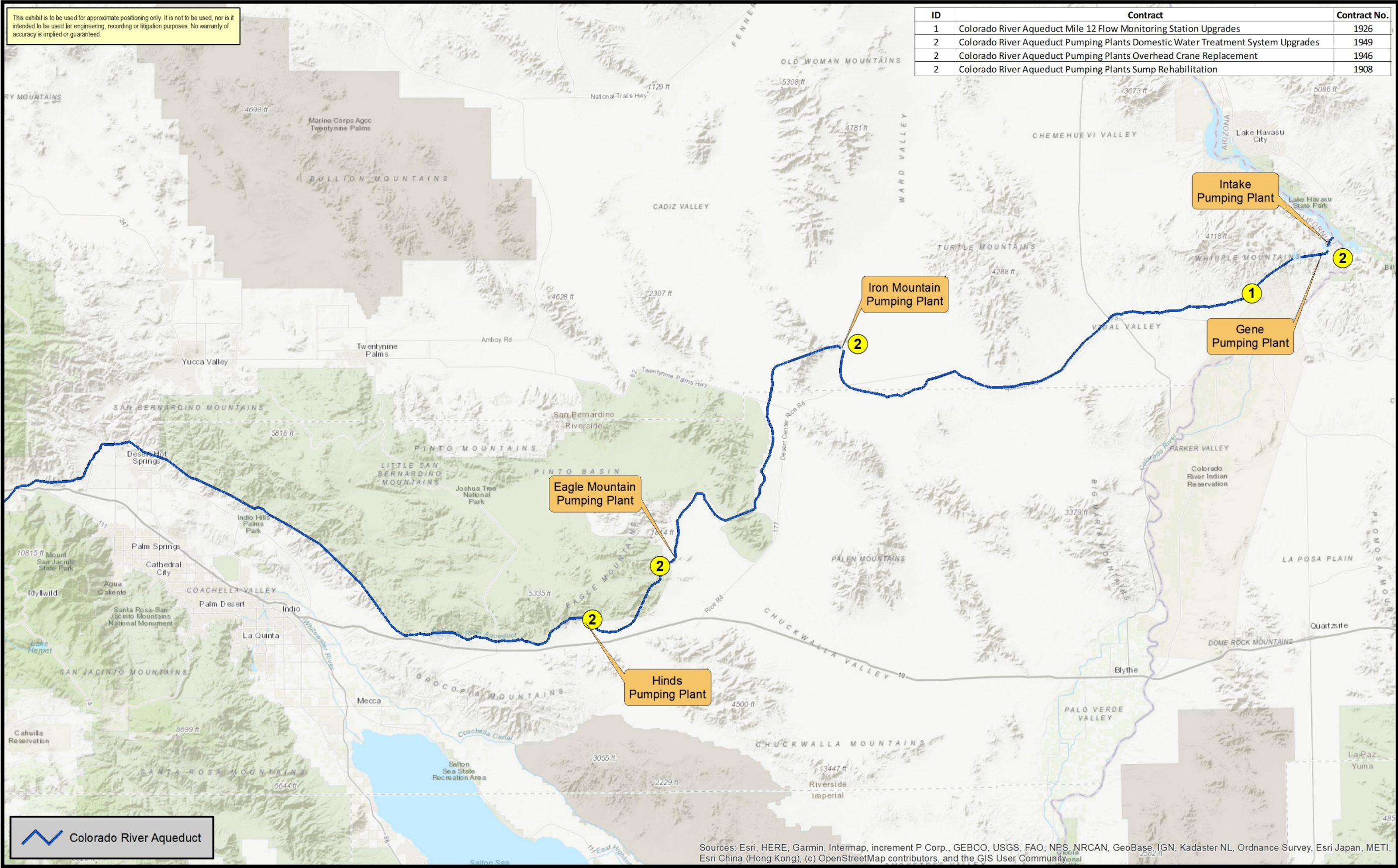


Figure 6: Construction Contracts – Colorado River Aqueduct

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 2nd Quarter, the Board did not authorize any increases to the General Manager's change order authority.

Notices of Completion during 2nd Quarter:

The following table shows the three construction contracts for which Metropolitan accepted the contract as completed during the 2nd Quarter of FY 2022/23 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 9: Notices of Completion Filed This Quarter

Contract No.	Construction Contract	Notice of Completion	Original Bid Amount	Final Contract Costs	Change Order	Change Order %
1886	Joseph Jensen Water Treatment Plant Vehicle Maintenance Building Roof Replacement	October 2022	\$282,390	\$286,890	\$4,500	1.6%
1887	Western San Bernardino County Region Erosion Control Improvements - Stage 1	November 2022	\$677,898	*	*	*
1938	Metropolitan Headquarters Building Physical Security Improvements	November 2022	\$5,822,000	*	*	*
Totals:			\$6,782,288			

For the 2nd Quarter, the total bid amount of the completed construction contracts was approximately \$6.8 million.

For contract 1938, although a Notice of Completion was filed during the reporting quarter, the final contract cost and change order amount are unknown due to outstanding pending issues. As for contract 1887, although NOC was filed, the contractor is required to ensure the hydroseeding establishes growth per environmental permit. The hydroseed work has not been paid out.

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 construction contracts during the preceding 12-month period (January 2022 through December 2022) is 3.95 percent⁷.

⁷ Original amount of construction contracts completed (Jan. 2022 through Dec. 2022) = \$37,359,491
Change orders for completed construction contracts (Jan. 2022 through Dec. 2022) = \$1,475,162
Change order percentage (Jan. 2022 through Dec. 2022) = 3.95%

Contracts Awarded by the Board during 2nd Quarter:

During the period of October through December 2022, two construction contracts totaling \$3,393,607 and one procurement contract totaling \$820,853, were awarded by the Board.

Table 10: Construction and Procurement Contracts Awarded This Quarter

Construction Contracts	
Metropolitan Headquarters Building Exterior Physical Security Improvements	
Contract Number	2003
Contractor	Caltec Corp.
Amount	\$2,165,000
San Diego Pipeline No. 1 Rainbow Tunnel Concrete Rehabilitation	
Contract Number	2038
Contractor	Howard Ridley Company, Inc.
Amount	\$1,228,607
Procurement Contracts	
Furnishing Slide Gates for the San Jacinto Diversion Structure	
Contract Number	2028
Contractor	Whipps, Inc.
Amount	\$820,853

The table on this page lists the 24 ongoing construction contracts through the end of the 2nd Quarter. Also, 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. This list does not contain construction contracts for minor capital projects.

Table 11: Active Construction Contracts at the End of 2nd Quarter

	Cont. No.	Contract Title	Contractor	Contract Amount ⁸	Earnings Through December 2022	Start Date	Est. Completion Date	Est. Percent Complete
1	1885	La Verne Shops Building Completion – Stage 5	Woodcliff Corporation, Inc.	\$18,930,000	\$2,716,370	6/10/22	5/24	14%
2	1891	Etiwanda Pipeline North Relining - Stage 3	Mladen Buntich Construction Co., Inc.	\$25,972,700	\$6,327,089	8/19/22	10/23	24%
3	1894	Mills Plant Maintenance Building Roof Replacement	Bishop, Inc.	\$287,824	\$15,000	10/12/22	6/23	5%
4	1903	Second Lower Feeder PCCP Rehabilitation – Reach 3A	J. F. Shea Construction, Inc.	\$11,884,700	\$3,590,000	6/6/22	6/23	30%
5	1905	Metropolitan Headquarters Building Improvements ⁹	Bernards Bros. Inc.	\$50,689,760	\$50,660,844	1/14/19	2/23	99%
6	1908	CRA Pumping Plants – Sump Rehabilitation ¹⁰	Michels Construction, Inc.	\$27,242,360	\$12,615,770	1/24/19	2/23	46%
7	1926	CRA Mile 12 Flow Monitoring Station Upgrades	R2 Engineering dba R2Build	\$2,053,567	\$1,826,397	6/16/21	4/23	89%
8	1944	Lake Mathews Reservoir Wastewater System Replacement	Creative Home dba CHI Construction	\$3,815,000	\$3,014,300	12/13/21	3/23	79%

⁸ 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.

⁹ All original contract work has been completed and additional working days are being granted as part of change directive.

¹⁰ Contract 1908 and Contract 1998 have exceeded the contract working days and Metropolitan is assessing liquidated damages.

	Cont. No.	Contract Title	Contractor	Contract Amount ⁸	Earnings Through December 2022	Start Date	Est. Completion Date	Est. Percent Complete
9	1946	Colorado River Aqueduct Pumping Plants - Overhead Crane Replacement	J.F. Shea Construction, Inc.	\$13,518,670	\$4,859,015	10/14/20	9/23	36%
10	1949	Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement	J.F. Shea Construction, Inc.	\$32,824,000	\$5,334,155	1/20/22	2/25	16%
11	1958	Colorado River Aqueduct Replacement of Casa Loma Siphon Barrel No. 1	J.F. Shea Construction, Inc.	\$11,521,518	\$9,551,964	1/20/22	6/23	83%
12	1961	Orange County Feeder Relining – Reach 3	Spiniello Infrastructure West, Inc.	\$17,226,250	\$3,378,542	5/11/22	9/23	20%
13	1962	MWD HQ Building Fire Alarm & Smoke Control Improvements	Bernards Bros. Inc.	\$14,165,888	\$10,539,774	9/24/20	9/23	74%
14	1964	Live Oak Reservoir Pipelines Cathodic Protection	Exaro Technologies Corporation	\$182,800	\$0	9/28/22	3/23	0%
15	1966	Sepulveda, West Valley, and East Valley Feeders Interconnection Upgrades	Blois Construction, Inc.	\$3,143,592	\$485,373	7/7/22	8/23	15%
16	1982	Weymouth Water Treatment Plant Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation	J. F. Shea Construction, Inc.	\$93,861,690	\$12,319,954	6/10/22	5/25	13%
17	1990	Henry J. Mills Water Treatment Plant Electrical Upgrades, Stage 2	CSI Electrical Contractors, Inc.	\$9,200,000	\$1,885,767	12/13/21	1/25	21%
18	1998	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems ¹⁰	Ameresco, Inc.	\$11,604,521	\$3,566,107	10/7/21	11/24	31%
19	2001	Jensen Water Treatment Plant Ozone Power Supply Units Replacement	Leed Electric, Inc.	\$2,257,897	\$645,000	7/20/22	12/23	29%
20	2003	Metropolitan Headquarters Building Exterior Physical Security Improvements	Caltec, Corp.	\$2,165,000	\$0	1/12/23	1/24	0%

	Cont. No.	Contract Title	Contractor	Contract Amount ⁸	Earnings Through December 2022	Start Date	Est. Completion Date	Est. Percent Complete
21	2013	Lake Mathews PCCP Rehabilitation Valve Storage Building	Facility Builders & Erectors, Inc.	\$4,766,776	\$2,872,829	3/10/22	8/23	60%
22	2014	Weymouth Plant Battery Energy Storage System	Siemens Industry, Inc.	\$6,176,521	\$168,090	7/18/22	7/23	3%
23	2024	OC-88 Pump Station Chiller Replacement	Mehta Mechanical Co., Inc. dba MMC Inc.	\$2,654,000	\$117,000	6/6/22	6/23	4%
24	2038	San Diego Pipeline No. 1 Rainbow Tunnel Concrete Liner Rehabilitation	Howard Ridley Company, Inc.	\$1,228,607	\$27,818	12/5/22	5/23	2%
Total contract value for active construction contracts:				\$367,373,641				

The following table lists the 14 ongoing procurement contracts at the end of the 2nd Quarter.

Table 12: Active Procurement Contracts at the End of 2nd Quarter

	Cont. No.	Contract	Contractor	Contract Amount ¹¹	Earnings Through December 2022	Start Date	Est. Delivery Completion Date	Est. Percent Complete ¹²
1	1861	Furnishing Lubricated Plug Valves for Second Lower Feeder	Southwest Valve & Equipment, Inc.	\$2,380,909	\$2,362,968	9/11/17	D ¹³	99%
2	1867 ¹⁴	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 1	Crispin Valve, LLC	\$5,066,975	\$2,674,908	12/18/17	12/23	53%
3	1868	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 2	DeZurick, Inc.	\$771,984	\$760,384	12/18/17	D ¹³	98%
4	1873	Furnishing One Hydraulic Shear System for the La Verne Maintenance Shops	Landmark Solutions, LLC	\$151,870	\$146,970	3/21/18	D ¹³	97%
5	1912	Furnishing Large-Diameter Conical Plug Valves	Ebara Corporation	\$23,750,060	\$17,157,856	12/24/18	6/23	72%
6	1922	Furnishing One Double Column Vertical Machining Center for the La Verne Maintenance Shops	Gosiger Machine Tools, LLC (Gosiger West)	\$2,193,356	\$2,170,295	9/17/18	D ¹³	99%
7	1948	Refurbishing Valve Actuators for the Diemer Water Treatment Plant	Flowserve Limatorque	\$3,370,402	\$2,399,089	2/16/19	9/24	72%
8	1955	Furnishing Membrane Filtration Systems for the CRA Domestic Water Treatment Systems	Wigen Water Technologies	\$1,244,535	\$595,715	5/28/20	7/25	48%

¹¹ 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.

¹² 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.

¹³ All items were delivered prior to this reporting quarter but contract remains open pending use of manufacturer field services.

¹⁴ 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 ¹¹	Earnings Through December 2022	Start Date	Est. Delivery Completion Date	Est. Percent Complete ¹²
9	1965	Furnishing Equipment for the Jensen Ozone Power Supply Units Upgrades	Suez Treatment Solutions, Inc.	\$4,141,194	\$3,229,976	3/30/20	D ¹³	78%
10	1969	Furnishing Inlet Valve Gearboxes for Skinner Module No. 7	R&B Automation, Inc.	\$224,510	\$207,035	4/29/20	2/24	92%
11	1978	Furnishing Steel Pipe for the Casa Loma Siphon Barrel No. 1	Northwest Pipe Company	\$6,134,208	\$5,860,701	1/16/20	12/23	96%
12	2012	Furnishing Electrical Panels for Diemer Treatment Plant	Integrated Power System, LLC	\$247,789	\$0	11/30/22	4/23	0%
13	2022	Furnishing Butterfly Valves for the Wadsworth Bypass Pipeline, Inland Feeder-Rialto Pipeline Intertie, and Badlands Tunnel Isolation Surge Tanks	Sojitz Machinery Corp. of America	\$5,647,405	\$0	10/3/22	9/25	0%
14	2028	Furnishing Slide Gates for the San Jacinto Diversion Structure	Whipps, Inc.	\$820,853	\$0	12/8/22	6/24	0%
Total contract value for active procurement contracts:				\$56,146,050				

Construction Cost Trends and Market Conditions

Construction Cost Trends and Market Conditions

This section provides information on recent trends in construction costs and regional market conditions. Starting from the end of FY 2020/21, higher construction materials and equipment costs were becoming apparent in addition to bids that were coming in at higher than anticipated amounts on Metropolitan's public works solicitations. These trends observed at Metropolitan correlate with the trends in Engineering News Record (ENR) Construction Cost Index (CCI) shown in Table 13 below and Figure 7 on the next page. The CCI remained relatively steady until the late Spring of 2021, where sharp increases were seen both locally and nationally. In addition, Figure 8 shows that the average number of bids Metropolitan received for engineering construction and procurement packages trending down during the last ten years and especially between years 2021 and 2022, indicating that there is less market competition for the type of equipment and construction Metropolitan needs. The most recent market information indicates that inflation and cost escalation trends are beginning to plateau; however, it is unlikely that costs will recede back to pre-pandemic levels. Cost trends can change quickly by various factors including but not limited to changes in the Federal funds rate, geopolitical and pandemic situations, supply chain disruptions, commodity pricing, and market competition. Therefore, it may be too early to predict that spikes in inflationary trends will not return. Metropolitan staff continually monitors current market conditions and uses the information in preparing cost estimates at every stage of the project from project inception to construction.

The ENR tracks construction industry costs for different regions across the country. The CCI is a composite index of labor wages and fringe benefits, and key construction materials like steel, cement, and lumber. Table 13 represents the year-over-year percent change in the CCI for the Los Angeles region.

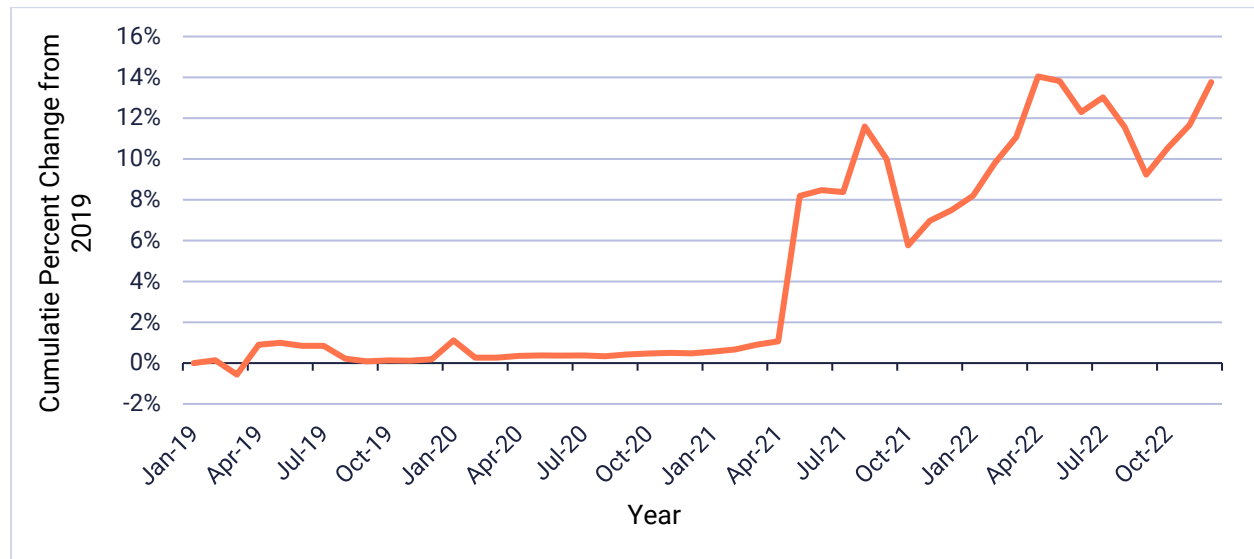
Table 13: Year-Over-Year Percent Change in CCI for the Los Angeles Region

Date Range	Los Angeles Region Annual CCI Change (%)
Jan 2019 – Dec 2019	+0.19%
Jan 2020 – Dec 2020	-0.63%
Jan 2021 – Dec 2021	+6.99%
Jan 2022 – Dec 2022	+5.15%
Total (Jan 2019 to Dec 2022)	+13.77% ¹⁵

¹⁵ The cumulative percent change from Jan 2019 to Dec 2022 is not additive.

Figure 7 below shows the cumulative percent change of CCI from January 2019 to December 2022. The CCI for the Los Angeles region has increased by 13.77% in this four-year time period.

Figure 7: Historical Cumulative Percent Change of CCI from January 2019 for the Los Angeles Region



Cost escalation in construction is attributed to a myriad of factors. Prevailing wages for construction workers has increased slightly over the past few years consistent with the Consumer Price Index (CPI), but an overall shortage of skilled labor has driven up the wages paid by contractors, increasing overall construction labor costs. In addition, ongoing inflation and increases in interest rates tend to increase the costs for contractors to secure financing. Raw material shortages and increased energy and transport costs have caused material and equipment costs to be highly volatile, as well. Additionally, these shortages have resulted in inordinately long delivery schedules for key pieces of materials and equipment, especially on electrical substations, switchgear, control equipment, and transformers. In order to complete the projects on time, Metropolitan looks for alternative material substitutions on upcoming projects, which often times are costlier, in-lieu of materials with long lead times. Likewise, Metropolitan's typical multi-year project durations are causing contractors to factor uncertainties in material and labor costs to their bids. When appropriate, Metropolitan attempts to address both cost and schedule escalation by procuring key equipment with long lead times as Metropolitan Furnished Equipment (MFE) prior to the advertisement of a construction contract where MFE is an integral component of the job.

Current Bidding Data

Table 14 lists bids for construction contract bids that were opened during Q2 of FY2022/23 for major capital projects.

Table 14: Construction Contract Bids Opened During Q2 of FY 2022/23 – Major Capital Projects

Spec No.	Project Name	Number of Bidders	Initial Estimate Range	Engineer's Estimate at Bid Opening	Awarded Contract Amount	Range of Bids
1928	Perris Valley Pipeline Interstate 215 Crossing ¹⁶	2	\$60.0M - \$70.0M	\$74.00M	\$59.49M	\$59.49M - \$67.88M
2020	Wadsworth Pumping Plant Eastside Pipeline Intertie	3	\$12.0M - \$15.0M	\$18.20M	\$14.82M	\$14.82M - \$18.30M
2026	Second Lower Feeder PCCP Rehabilitation – Reach 3B ¹⁷	3	\$56.0M - \$72.0M	\$72.00M	\$68.85M	\$68.85M - \$112.21M
2038	San Diego Pipeline Rainbow Tunnel Concrete Liner Rehabilitation	2	\$0.70M - \$1.0M	\$1.34M	\$1.23M	\$0.79M - \$1.23M

Metropolitan prepares an Engineer's Estimate in accordance with the Association for the Advancement of Cost Engineering's Class 1¹⁸ cost estimating standard once the contract specifications have been advertised and before bids are open. Metropolitan staff utilizes current market prices, including recent bids, as well as current prevailing wage rates to prepare the Engineer's Estimates. These estimates reflect market conditions at that given time, as well as any inflationary changes that may occur during the construction. The range of bids is meant to show how the contracting community is currently bidding on our projects. Due to volatility in the market, cost estimates for recent project awards have been higher than initially anticipated at project inception.

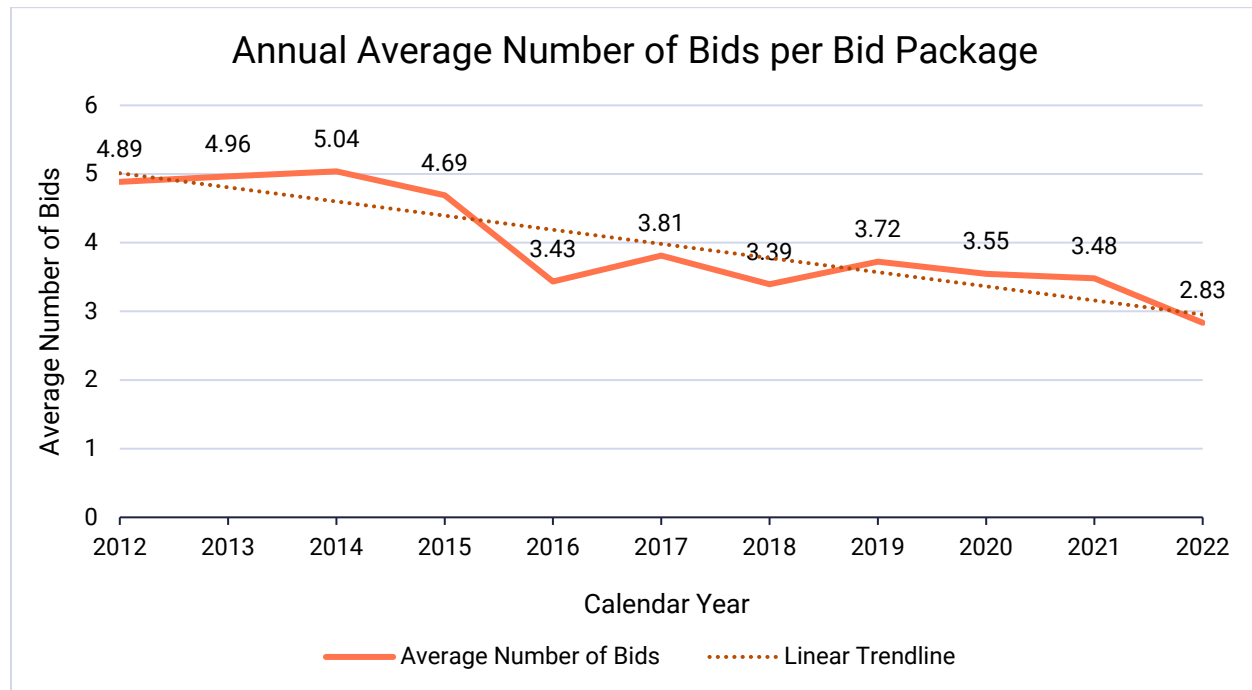
¹⁶ Metropolitan prequalified 13 prime contractors to bid on this project

¹⁷ Metropolitan prequalified four prime contractors to bid on this project

¹⁸ A Class 1 cost estimate has a typical low variation accuracy of -3% to -10% and a typical high variation accuracy of +3% to +15%.

Figure 8 shows the average number of bids per engineering construction or procurement advertised for Metropolitan over the past decade.

Figure 8: Annual Average Number of Bids per Engineering Bid Package



The average number of bids per engineering bid package has decreased over the past decade. Factors that may influence the number of bidders on any particular job, which in turn affect the bid amounts, can include, but are not limited to: the use of prequalification as a condition to place a bid, the project location, the size and scope of the project, and the number of trades involved, as well as current market conditions and other competing public works jobs. Metropolitan uses pre-bid conferences to gauge contractor interest on a particular project, and attendance at the pre-bid conference is mandatory for a prime contractor to submit a bid. If attendance is low at the initial pre-bid conference, additional outreach is done to attract potential bidders, and a secondary pre-bid conference is held. Various projects that span multiple locations or a large geographical area, such as projects out on the Colorado River Aqueduct and projects part of the Right of Way Infrastructure Protection Program, use virtual pre-bid conferences.

As a public agency, Metropolitan is not alone in seeing decreased contractor competition (i.e., submitted bids) over the past decade. In general, agencies of similar size and complexity to Metropolitan have also seen less bids on public works projects primarily due to lingering pandemic-related issues (e.g., supply chain/workers) and the increased amount of public agency work across the region.

Metropolitan continually engages the contracting community on upcoming contracting opportunities, through regular updates to Metropolitan's website and outreach events like the MetWorks Program. The MetWorks Program was established in Fall 2021 and is a quarterly networking workshop that showcases upcoming contracting opportunities, changes to our contract standards and procedures, and provides a space for small, local, and disabled veteran-owned businesses, to connect with larger prime contractors. These events provide more visibility to upcoming Metropolitan projects, while also spurring economic development across our region through small business investment.

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 most cases lie within or below the metric target ranges. In select 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 15 and Table 16 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 15: Performance Metric Actuals, Construction Costs > \$3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Metropolitan Headquarters Physical Security Improvements - Stage 2	Inspection	\$648,728	\$7,430,000	9-12%	8.7%
Metropolitan Headquarters Physical Security Improvements - Stage 3	Final Design	\$231,701	\$2,645,000	9-12%	8.8%

Table 16: Performance Metric Actuals, Construction Costs < \$3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Jensen Vehicle Maintenance and Warehouse Building Roof Rehabilitation	Inspection	\$46,239	\$318,890	9-15%	14.5%
Rainbow Tunnel Concrete Liner Rehabilitation	Final Design	\$193,560	\$1,548,607	9-15%	12.5%
Western San Bernardino County Operating Region Erosion Control Improvements - Stage 1	Inspection	\$97,690	\$702,362	9-15%	13.9%

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 (October through December 2022).

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 2nd Quarter of FY 2022/23 (October through December 2022).

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 17: 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 December 2022 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
Colorado River Aqueduct Reliability Program	Total	\$555,777	\$441,571	\$20,930	\$16,034
Cabazon Radial Gate Facility Improvements	15320	\$2,456	\$786	\$0	\$82
White Water Siphon Protection	15341	\$15,585	\$14,497	\$2,650	\$13
CRA - Conveyance Reliability	15373	\$117,828	\$116,772	\$1,010	\$395
CRA Pumping Plant Reliability	15374	\$24,467	\$24,010	\$0	\$7
CRA - Electrical/Power Systems Reliability	15384	\$58,665	\$50,564	\$1,157	\$2,074
CRA – Discharge Containment	15385	\$8,129	\$7,976	\$0	\$1
CRA - Reliability for FY2006/07 through FY2011/12	15438	\$150,194	\$121,277	\$5,150	\$1,805
CRA Main Pump Reliability	15481	\$75,000	\$59,403	\$6,405	\$6,345
CRA - Reliability for FY2012/13 through FY2017/18	15483	\$90,967	\$40,195	\$3,612	\$4,314
CRA - Reliability for FY2018/19 through FY2023/24	15507	\$12,486	\$6,091	\$946	\$997
Cost Efficiency & Productivity Program	Total	\$162,995	\$106,683	\$4,550	\$3,015
DVL Recreation Facilities	15334	\$87,104	\$59,512	\$1,350	\$127
Yorba Linda Power Plant Modifications	15446	\$17,125	\$17,100	\$0	\$8
Business Operations Improvement	15484	\$19,441	\$10,934	\$1,110	\$696

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru December 2022 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
Project Controls and Reporting System	15490	\$6,440	\$6,307	\$0	\$5
Enterprise Content Management	15500	\$3,600	\$3,595	\$1,350	\$0
DVL Recreation Rehabilitation & Refurbishment	15515	\$1,380	\$1,027	\$150	\$115
Energy Sustainability Improvements	15521	\$27,905	\$8,209	\$590	\$2,065
Dams and Reservoirs Reliability Program	Total	\$76,564	\$69,945	\$1,100	\$958
Reservoir Cover and Replacement	15417	\$65,214	\$60,150	\$480	\$782
Dam Rehabilitation & Safety Improvements	15419	\$11,350	\$9,795	\$620	\$176
Distribution System Reliability Program	Total	\$478,083	\$391,083	\$29,470	\$22,955
Conveyance and Distribution System - Rehabilitation	15377	\$125,961	\$105,392	\$6,710	\$3,647
Conveyance and Distribution System - Rehabilitation for FY2006/07 through FY2011/12	15441	\$155,912	\$122,381	\$170	\$6,892
Hydroelectric Power Plant Improvements	15458	\$20,403	\$17,645	\$3,230	\$369
Conveyance and Distribution System - Rehabilitation for FY2012/13 through FY2017/18	15480	\$140,096	\$120,126	\$13,740	\$6,473
Pipeline Rehabilitation and Replacement	15482	\$1,143	\$1,033	\$110	\$0
Conveyance and Distribution System - Rehabilitation for FY2018/19 through FY2023/24	15503	\$34,568	\$24,507	\$5,510	\$5,573

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru December 2022 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
District Housing & Property Improvements Program	Total	\$24,207	\$7,950	\$5,900	\$1,400
Employee Village Enhancement	15513	\$24,207	\$7,950	\$5,900	\$1,400
Minor Capital Projects Program	Total	\$45,500	\$20,183	\$4,500	\$2,056
Capital Program for Projects Costing Less Than \$400,000 for FY2018/19 through FY2019/20	15504	\$15,500	\$12,112	\$1,250	\$687
Capital Program for Projects Costing Less Than \$400,000 for FY2020/21 through FY2021/22	15518	\$20,000	\$7,526	\$2,270	\$823
Capital Program for Projects Costing Less Than \$400,000 for FY2022/23 through FY2023/24	15526	\$10,000	\$545	\$980	\$545
Prestressed Concrete Cylinder Pipe Rehabilitation Program	Total	\$348,888	\$277,462	\$30,950	\$9,794
PCCP Rehabilitation and Replacement	15471	\$26,786	\$22,827	\$500	\$154
Sepulveda Feeder PCCP Rehabilitation	15496	\$39,590	\$28,777	\$1,950	\$854
Second Lower Feeder PCCP Rehabilitation	15497	\$266,827	\$214,197	\$26,800	\$7,832
Allen-McColloch Pipeline, Calabasas Feeder, and Rialto Pipeline PCCP Rehabilitation	15502	\$15,685	\$11,660	\$1,700	\$954
Regional Recycled Water Supply Program	Total	\$24,350	\$20,353	\$2,250	\$53
Demonstration-Scale Recycled Water Treatment Plant	15493	\$24,350	\$20,353	\$2,250	\$53
Right of Way & Infrastructure Protection Program	Total	\$31,715	\$27,928	\$5,000	\$868
Right of Way & Infrastructure Protection	15474	\$31,715	\$27,928	\$5,000	\$868

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru December 2022 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
System Flexibility/Supply Reliability Program	Total	\$679,448	\$648,049	\$14,460	\$6,501
Hayfield and Lake Perris Groundwater Recovery	15402	\$1,500	\$1,119	\$300	\$6
Perris Valley Pipeline	15425	\$133,500	\$132,162	\$7,100	\$1,045
Water Delivery System Improvements	15488	\$82,629	\$74,672	\$5,390	\$5,067
Verbena Property Acquisition	15492	\$264,000	\$262,068	\$1,620	\$121
Delta Wetlands Properties (Delta Islands)	15494	\$197,819	\$178,027	\$50	\$262
System Reliability Program	Total	\$455,962	\$322,725	\$32,190	\$15,794
Information Technology System - Infrastructure	15376	\$51,306	\$47,797	\$20	\$79
Information Technology System - Security	15378	\$12,351	\$11,412	\$0	\$597
La Verne Shop Facilities Upgrade	15395	\$71,348	\$49,492	\$230	\$2,172
Water Operation Control	15467	\$71,359	\$42,606	\$3,430	\$525
Union Station Headquarters Improvements	15473	\$107,921	\$89,766	\$4,810	\$3,540
IT Infrastructure Reliability	15487	\$57,968	\$39,257	\$6,060	\$2,463
Operations Support Facilities Improvement	15495	\$34,358	\$21,791	\$13,500	\$2,249
Metropolitan Security System Enhancements	15499	\$20,110	\$11,451	\$1,875	\$398
Infrastructure Reliability Information System	15501	\$18,300	\$3,748	\$95	\$882
System-Wide Paving & Roof Replacements for FY 2020/21 through FY 2021/22	15516	\$4,791	\$3,962	\$780	\$2,368
System-Wide Paving & Roof Replacements for FY2020/21 through FY2023/24	15519	\$2,461	\$1,388	\$490	\$470

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru December 2022 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
Enterprise Data Analytics	15522	\$3,690	\$55	\$900	\$50
Treatment Plant Reliability Program	Total	\$928,844	\$762,428	\$16,818	\$14,345
Weymouth Water Treatment Plant Improvements	15369	\$195,711	\$188,611	\$1,410	\$470
Jensen Water Treatment Plant Improvements	15371	\$47,062	\$46,644	\$310	\$6
Diemer Water Treatment Plant Improvements	15380	\$216,907	\$207,103	\$2,260	-\$1,227
Mills Water Treatment Plant Improvements	15381	\$5,525	\$5,281	\$0	\$4
Diemer Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15436	\$74,707	\$66,584	\$3,450	\$913
Weymouth Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15440	\$138,079	\$35,176	\$959	\$7,659
Jensen Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15442	\$91,376	\$85,027	\$2,610	\$331
Mills Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15452	\$39,852	\$26,024	\$50	\$1,432
Weymouth Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15477	\$77,539	\$77,129	\$39	\$171
Diemer Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15478	\$2,955	\$1,434	\$120	-\$2
Mills Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15479	\$1,864	\$970	\$0	\$123
Jensen Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15486	\$8,339	\$7,488	\$0	\$4

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru December 2022 (\$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	\$498	\$0	\$196
Jensen Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15508	\$17,895	\$8,353	\$4,310	\$3,147
Diemer Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15510	\$3,758	\$1,223	\$0	\$467
Skinner Water Treatment Plant, Improvements for FY 2020/21 Through FY 2023/24	15512	\$3,961	\$3,832	\$1,300	\$194
Mills Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15520	\$2,631	\$1,053	\$0	\$456
Water Quality Program	Total	\$10,240	\$9,615	\$0	\$0
Enhanced Bromate Control	15472	\$10,240	\$9,615	\$0	\$0
Total CIP		\$3,822,574	\$3,105,977	\$168,118	\$93,774

Notes on above table:

- Numbers may not sum due to rounding.
- Numbers are based on the general ledger information downloaded on 01/14/2023.
- \$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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