



- **Capital Investment Plan Quarterly Report for period ending December 31, 2021**

Summary

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

Purpose

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

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

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

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

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

Attachments

Capital Investment Plan quarterly report for period ending December 2021



CAPITAL INVESTMENT PLAN

Quarterly Report

October – December 2021



THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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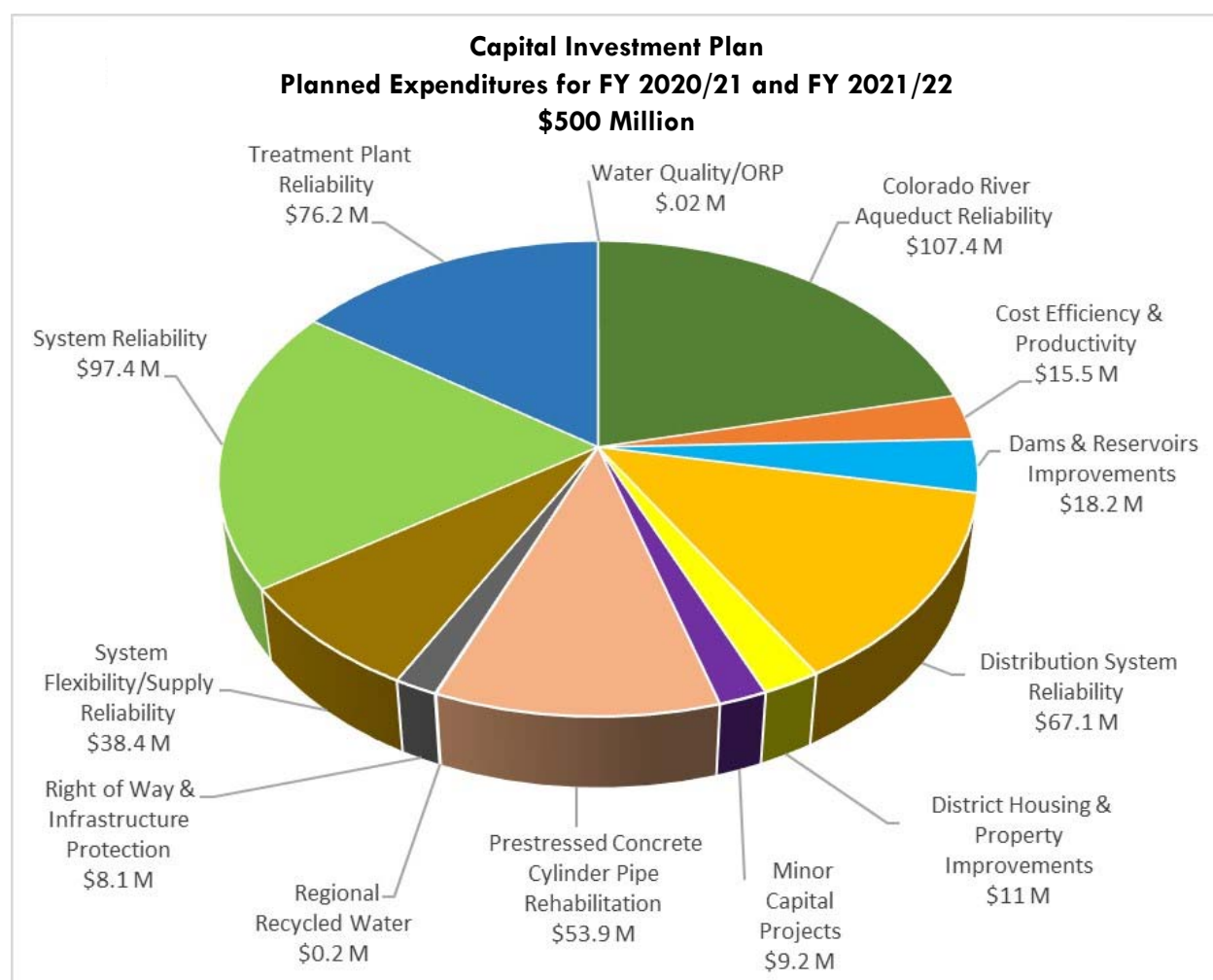
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CAPITAL INVESTMENT PLAN FOR FISCAL YEARS 2020/21 & 2021/22

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

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



[Cover photos: (left to right): Gene Wash Reservoir Discharge Valve Structure Rehabilitation - completed discharge valve installation; Lake Mathews Sodium Hypochlorite Tanks - final inspection and hydrostatic testing of the fiber-reinforced plastic tanks]

SECOND QUARTER SUMMARY

Biennial expenditures through December 2021 totaled \$340.3 million (details shown in Table 15), and expenditures for the 2nd Quarter of Fiscal Year 2021/22, October through December 2021, totaled \$42.4 million for all capital programs.

During the 2nd Quarter, board actions heard in open session included eleven project-specific actions summarized in Table 1 below. These actions awarded eight contracts totaling approximately \$68.4 million, authorized three new professional/technical services agreements totaling a not-to-exceed amount of approximately \$10.1 million, of which \$2.6 million is for capital work, and authorized an increase to three existing agreements totaling a not-to-exceed amount of \$2.9 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	7-2	Lake Mathews Site Wastewater System Replacement	Awarded \$3,815,000 construction contract
October	7-3	Advanced Water Treatment Plant Demonstration Plant – Modification for Direct Potable Reuse Testing	Authorized two agreements not-to-exceed \$2,800,000 and \$6,500,000 ¹
October	7-4	Jensen Vehicle Maintenance and Warehouse Building Roof Replacement	Awarded \$282,390 construction contract
November	7-2	Jensen Ozone PSUs Replacement ²	Awarded \$1,477,000 construction contract; authorized an agreement not-to-exceed \$800,000
November	7-3	Mills Electrical Upgrades, Stage 2	Awarded \$9,200,000 construction contract; authorized an increase of \$830,000 to an existing agreement
November	7-4	Etiwanda Pipeline Relining, Stage 3	Awarded \$6,044,896.76 procurement contract
November	7-5	CRA Cholla Wash Cut-and-Cover Conduit Lining	Awarded \$3,280,920 construction contract

¹ \$1.8 million of the \$6.5 million agreement is for capital work and the remaining agreement capacities are for O&M work.

² After contract award, Metropolitan was notified by the State of California Department of Industrial Relations that the contractor was debarred from bidding or being awarded a public works contract in California, for the period including 9/27/2021 to 9/26/2022. A Notice to Proceed was not sent to the contractor and Metropolitan has opted to terminate the contract and readvertise the work for this project at a later date.

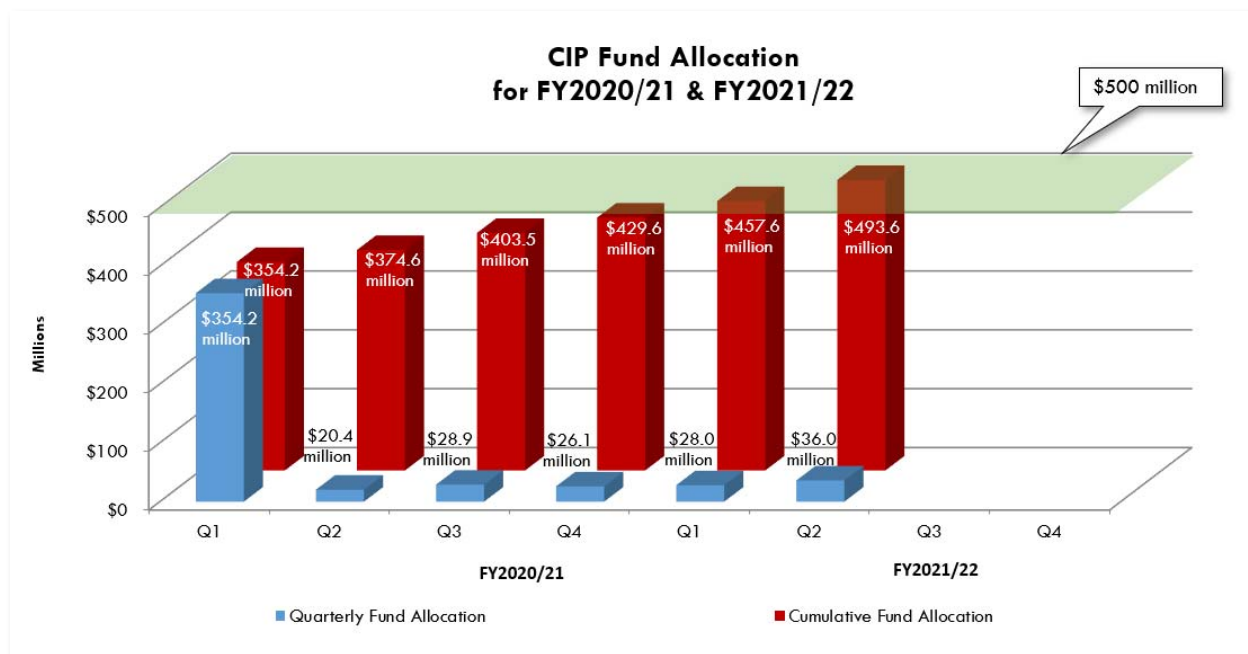
Month	Board Letter Item No.	Project	Action taken
November	7-14	Datacenter Modernization Relocation	Authorized an increase of \$985,000 to an existing agreement
December	7-1	Rialto Pipeline Water Supply Reliability Improvements: Wadsworth Pumping Plant Bypass Pipeline, Inland Feeder/Rialto Pipeline Intertie, Inland Feeder/SBVMWD Pump Station Intertie	Authorized three unplanned projects
December	7-2	Casa Loma Siphon Barrel No. 1 Seismic Upgrade	Awarded \$11,499,000 construction contract; authorized an increase of \$1,100,000 to an existing agreement
December	7-3	CRA Domestic Water Treatment System Upgrades	Awarded \$32,824,000 construction contract

The previously referenced April 2020 board action appropriated \$500 million to perform work on planned capital projects through the current biennium. In order to be considered a planned project, the project must be identified and described in the Capital Investment Plan Appendix for the two-year budget cycle. Consistent with this action, all requests to allocate funds and proceed with planned capital projects are reviewed and approved by the Chief Engineer acting under the General Manager's authority. Unplanned projects, those which are not already identified in the CIP Appendix, require a separate board authorization. Upon board approval of an unplanned project, requested funds are then transferred from the \$500 million (Appropriation No. 15517) to the pertinent capital appropriation under which the project is budgeted. During the 2nd Quarter, the Board amended the CIP to include capital projects to improve water supply reliability in the Rialto Pipeline Service area. These projects will enhance water delivery capabilities to member agencies that can only receive State Project Water.

During the 2nd Quarter, the total amount of Appropriation No. 15517 funds authorized by the General Manager for the current biennium (FYs 2020/21 and 2021/22) through management actions including the funds for the projects shown in Table 1 is approximately \$36.0 million. Details of these management actions which occurred during the 2nd Quarter can be found in the **Project Actions** section of this report.

Figure 2 shows the allocation of the funds from Appropriation 15517 for this quarter and total for the current biennium through the quarter³, which is approximately \$493.6 million, leaving approximately \$6.4 million available to be allocated during the remainder of the current biennium.

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



Information on construction and procurement contracts activities for the 2nd Quarter of FY 2021/22 is summarized in Table 2 on the following page, and presented in further detail in the **Construction and Procurement Contracts** section of this report. Progress payments for these contracts in the 2nd Quarter totaled approximately \$11.37 million, and primarily reflect construction progress on CRA Pumping Plants – Sump Rehabilitation, MWD HQ Bldg. Physical Security Improvements, MWD HQ Building Fire Alarm & Smoke Control Improvements, Joseph Jensen Water Treatment Plant Electrical Upgrade - Stage 2, Gene Wash Reservoir Discharge Valve Replacement, and Garvey Reservoir Sodium Hypochlorite Feed System Upgrades.

³ The CIP Quarterly Report for the 1st Quarter of FY 2020/21 reported the CIP allocation for Q1 to be \$354.3 million, which is being amended to \$354.2 million in this quarter's report. This change is necessary to reflect the correction of the amount authorized for the current biennium for Jensen Control Room Wildfire Smoke Mitigation, from \$371,400 to \$345,000 and Skinner Survey Roof Replacement, from \$186,500 to \$161,500. Also, the CIP Quarterly Report for the 4th Quarter of FY 2020/21 reported the CIP allocation for Q4 to be \$26.7 million, which is being amended to \$26.1 million in this quarter's report. This change is necessary to reflect the addition of \$170,000 authorized for the Arc Flash Model Development, which was not reported, and correction of Fuel Management System Upgrade, from \$2,205,480 to \$1,365,000 for the current biennium.

Table 2: 2nd Quarter Contract Action

Contract Actions during Q2 for FY 2021/2022, October 2021 through December 2021	
Contracts Awarded by Board	7 construction contracts totaling \$62.38 million (Table 10) 1 procurement contract totaling \$6.04 million (Table 10)
Total Payments Authorized	\$11.37 million
Construction Contracts Completed	Notice of Completion was filed for 2 construction contracts (Table 9)
Active Contracts at end of Q2 ⁴	19 construction contracts, totaling \$209.12 million (Table 11) 16 procurement contracts, totaling \$67.32 million (Table 12) \$276.44 million total value

IMPACTS OF COVID-19

In response to the Governor's and General Manager's emergency declarations resulting from the COVID-19 pandemic, all active construction contracts were suspended in late March 2020. Since then all contracts, except on-site work for CRA Pumping Plant Sump Rehabilitation, resumed construction activities. Staff and the contractor have negotiated a resolution to the aforementioned CRA Pumping Plant Sump Rehabilitation contract. Metropolitan will take possession of key equipment and will receive a credit for the deleted equipment installation work and equipment not provided. Currently, it is anticipated that the existing contract will be completed by summer of 2022 and the CRA Pumping Plant Sump Rehabilitation project will be re-advertised in the second half of Fiscal Year 2022/23 to install the equipment and materials procured under the existing contract as Metropolitan-furnished equipment. Supply chain issues, especially delivery delays for electrical, control, and computer equipment, has been reported on several construction contracts and IT projects.

⁴ Active contracts at the end of the 2nd Quarter are those that are ongoing at the end of December 2021. In other words, contracts completed during the reporting quarter are excluded.

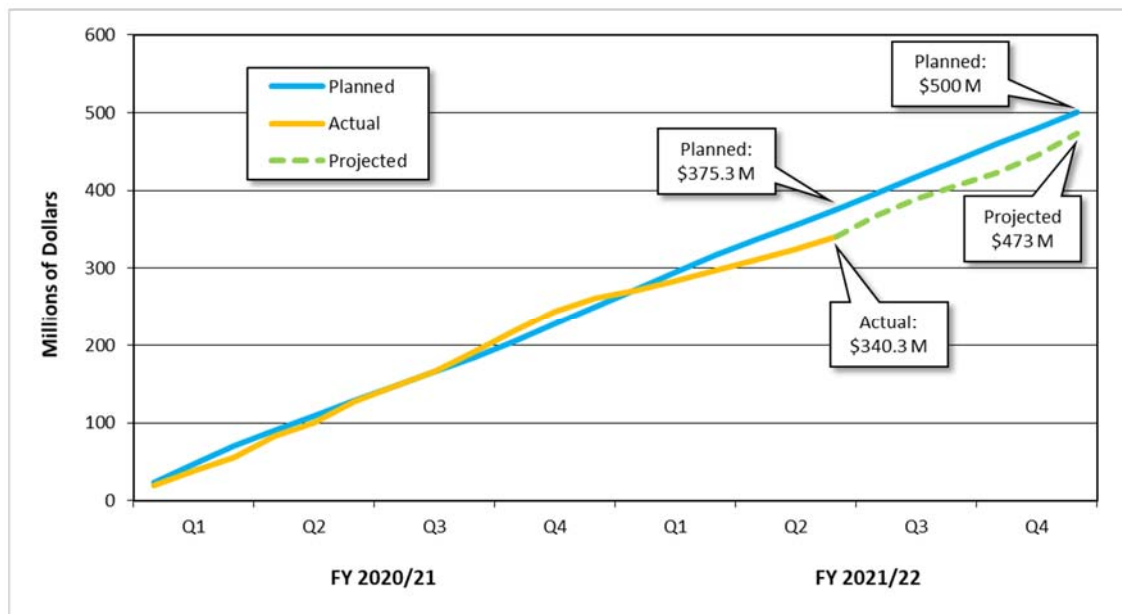
PLANNED EXPENDITURE AND BUDGET

Table 3 and Figure 3 below show planned and actual expenditures for the biennium through the end of the 2nd Quarter of FY 2021/22, and the forecast of expenditures through the end of the current biennium, against planned expenditures for the same time interval. Actual expenditures through the 2nd Quarter of FY 2021/22 were approximately 91% of planned expenditures.

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

Quarter	Planned Expenditures (millions)	Actual Expenditures (millions)
FY 2020/21 Q1	\$70.4	\$55.6
Q2	\$58.5	\$72.2
Q3	\$55.0	\$63.6
Q4 ⁵	\$66.1	\$70.3
FY 2021/22 Q1	\$67.0	\$36.2
Q2	\$58.3	\$42.4
Totals	\$375.3	\$340.3

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



As shown in Figure 3, the total planned expenditures in the current biennium are \$500 million. The projected expenditures for the biennium are currently approximately \$473 million with the actual expenditures lower than the planned expenditures during the 2nd Quarter of FY 2021/22 and are projected to stay under the planned expenditures through the end of the biennium.

Expenditures are less than planned in the reporting quarter due to several factors including delays in awarding some construction and procurement contracts due to the difficulties in obtaining permits within the planned timeline, the cancellation of construction portion of one construction contract due to the COVID-19 pandemic leaving only materials and equipment procurement portion, and equipment/materials delivery delays due to manufacturing and supply chain issues attributed to the COVID-19 pandemic.

⁵ Adjusted from \$70.2 million as reported in Q4 of FY 2020/21 to \$70.3 million to reverse \$107K credit from the sale of surplus DVL properties.

MAJOR CAPITAL PROGRAMS OVERVIEW

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

- Program
- Project Group/Appropriation
- Project

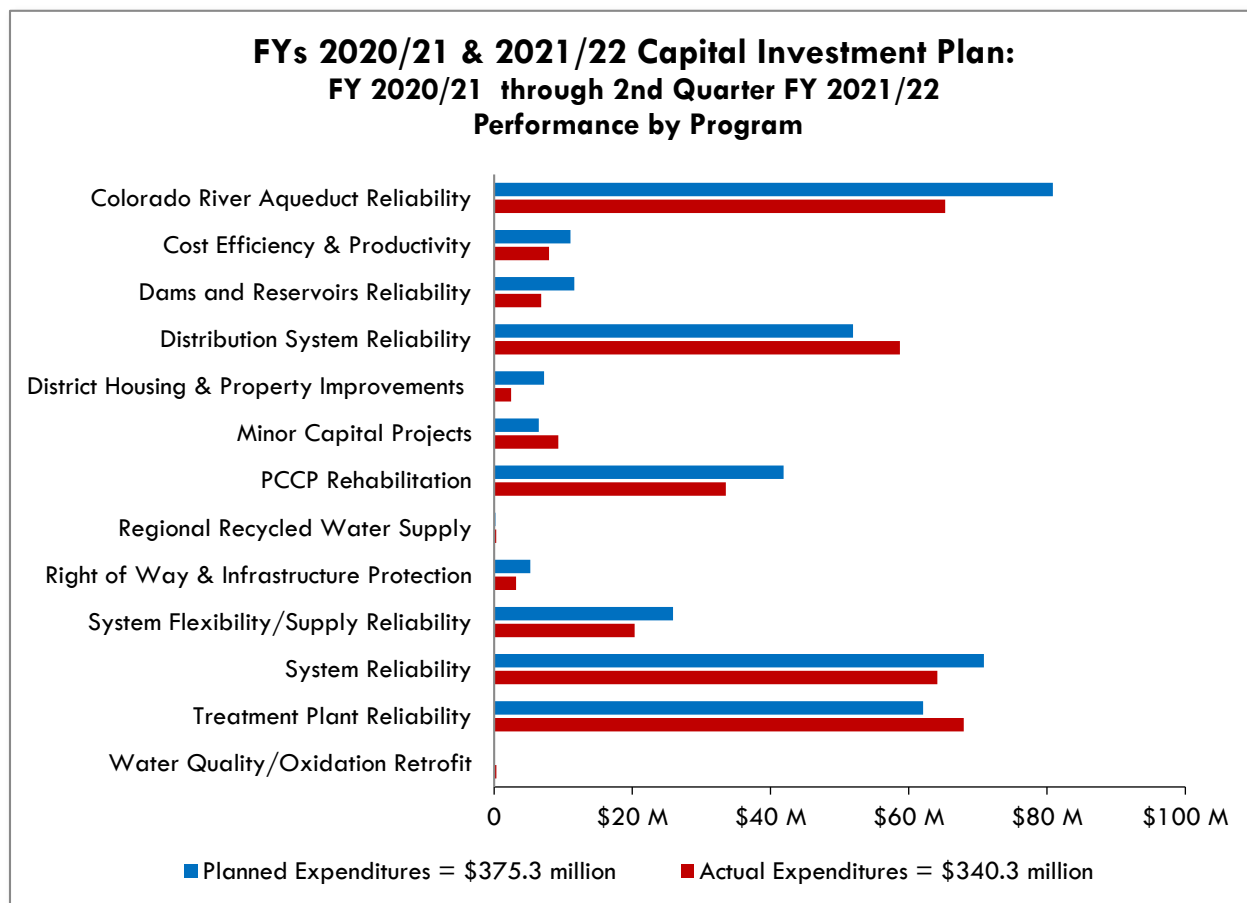
Metropolitan's CIP is comprised of 13 programs, which capture all projects within the CIP. The 13 capital programs are listed below in alphabetical order. Programs are comprised of one or more project groups/appropriations, and project group/appropriations are comprised of one or more projects. The status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

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

Figure 4 below shows actual versus planned expenditures for the 13 capital programs for 2nd Quarter of FY 2021/22.

Figure 4: Biennium-to-date Expenditures (Actuals vs. Planned) through 2nd Quarter FY 2021/22



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

The list of projects in Table 4 below reflects the ten projects in the CIP with the highest level of planned expenditures in the current biennium. The planned versus actual expenditures through the end of the 2nd Quarter of FY 2021/22 are also shown in this table.

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

Project	Planned (FY 2020/21 through FY 2021/22) (millions)	Planned July 2020 to December 2021 (millions)	Actuals July 2020 to December 2021 (millions)
Headquarters Building Improvements	\$31.3	\$23.5	\$29.5
Casa Loma Siphon Barrel No. 1 Seismic Upgrade	\$30.0	\$22.6	\$16.2
CRA Pump Plant Sump System Rehabilitation	\$28.0	\$21.1	\$10.4
Perris Valley Pipeline - Tunnels	\$27.8	\$15.9	\$2.1
CRA Discharge Line Isolation Coupling Assemblies	\$23.0	\$21.6	\$18.2
Second Lower Feeder PCCP Rehabilitation - Reach 8	\$22.0	\$14.0	\$6.9
Jensen Electrical Upgrades - Stage 2	\$15.2	\$12.1	\$15.3
Diemer West Basin & Filter Building Rehabilitation	\$14.2	\$14.1	\$15.6
Second Lower Feeder PCCP Rehabilitation – Reach 2	\$13.0	\$13.0	\$5.4
Orange County Feeder Relining - Reach 3	\$12.5	\$9.4	\$0.8
Total*	\$217.1	\$167.2	\$120.4

* Numbers may not sum due to rounding.

The cumulative expenditure variance for the top ten projects through the 2nd Quarter of FY 2021/22 reflects a mix of over- and under-spending on projects relative to their planned expenditures. Positive or negative variances do not mean that the projects are over or under budget, it simply reflects variances in timing of expenditures when compared to original budget plans. The following are the variance explanations for the top ten projects where actual expenditures exceeded planned expenditures through the current reporting quarter for the biennium.

- **Headquarters Building Improvements:** The actual expenditures were more than planned because of the following: (1) the approval of additional change orders to complete needed work while the building is lightly occupied due to the COVID-19 pandemic; and (2) the contractor was able to accelerate completion of some work elements as the building has been lightly occupied.
- **Jensen Electrical Upgrades - Stage 2:** Project expenditures for the biennium are higher than originally planned through the 2nd Quarter because the contractor's work activities were expedited after the COVID-19 work suspension was lifted in order to meet the scheduled 2022 shutdown dates.

- **Diemer West Basin & Filter Building Rehabilitation:** Project expenditures for the biennium are higher than originally planned through the 2nd Quarter because the contractor's work activities were expedited to meet the scheduled completion date.

The following are the variance explanations for the top ten projects with actual expenditures less than planned expenditures through the current reporting quarter for the biennium).

- **Casa Loma Siphon Barrel No. 1 Seismic Upgrade:** The actual vs. planned variance is due to a shift in timing of the award of the pipe installation contract from earlier in the biennium to December 2021 to ensure sufficient capacity in the current CIP budget to accommodate expenditures from this project in the biennium.
- **CRA Discharge Line Isolation Coupling Assemblies:** The actual expenditures were less than planned due to the contractor completing more work than planned during the 2020 shutdown.
- **CRA Pump Plant Sump System Rehabilitation:** The actual vs. planned variance is due to the suspension of the on-site work due to the COVID-19 pandemic starting in March 2020, which led to cancellation of the construction portion of the contract. Resolution of outstanding submittal comments and supply chain issues have also caused a delay in the delivery of equipment and materials to the site.
- **Perris Valley Pipeline – Tunnels:** The actual vs. planned expenditure variance is due to postponing the start of construction from November 2020 to early 2022 due to the discovery of contaminants at the work site that requires additional field and laboratory investigations, which resulted in the modification of the specifications to account for the contaminants. Additionally, complex right-of-way issues needed to be resolved prior to the advertisement of this project for construction bids.
- **Second Lower Feeder PCCP Rehabilitation – Reach 2:** The actual vs. planned variance is due to shifts in the timing of construction completion, which was completed approximately five months earlier than planned and under budget leaving less work for the current biennium. Early completion of this work can be attributed to extensive preconstruction planning and permitting, successful community outreach efforts, and better than expected relining production by the contractor.
- **Second Lower Feeder PCCP Rehabilitation – Reach 8:** This project involved relining approximately 2,900 feet of PCCP pipeline in the City of Placentia, which is a portion of the original length of the Reach 8 project. Construction work was completed in September 2020. The planned expenditures for this biennium were based on relining 17,000 feet of PCCP but during design the scope was reduced to prioritize the most at-risk, 2,900-foot portion of the feeder. The remaining 14,100 feet of PCCP will be included in a future PCCP rehabilitation contract.
- **Orange County Feeder Relining - Reach 3:** The actual vs. planned expenditure variance is due to postponing the start of construction from September 2020 to April 2022 in order to reduce expenditures in this biennium. The final contract, for Reach 3, was advertised for construction bids in January 2022 to ensure that there is sufficient capacity in the current CIP budget to accommodate expenditures from this project in the biennium.

MAJOR CAPITAL PROGRAMS – HIGHLIGHTS

The section that follows provides 2nd Quarter highlights for the 12 Major Capital Programs; the Minor Capital Program is highlighted in its own section of this report. Status is provided for selected projects within each Major Capital Program. The selected projects typically achieved major milestones during the 2nd Quarter of FY 2021/22, or are scheduled to achieve major milestones in the next quarter.

Program	Project
Colorado River Aqueduct (CRA) Reliability	Gene Wash Reservoir Discharge Valve Rehabilitation
Cost Efficiency & Productivity	mwdh2o.com Redesign
Dams and Reservoirs Improvements	Diamond Valley Lake Dam Monitoring System Upgrades
Distribution System Reliability	Etiwanda Pipeline Lining - 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	Headquarters Building Improvements
Treatment Plant Reliability	Jensen Electrical Upgrades - Stage 2
Water Quality/Oxidation Retrofit	Program highlights only

Colorado River Aqueduct (CRA) Reliability Program

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

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

\$80.85 million

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

\$65.26 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status

Expenditures for this program are less than planned through December 2021 due to schedule adjustments in order to optimize the construction activities of multiple contracts within the same CRA shutdown and to accommodate delays of site work activities, recent supply chain disruption, and suspension of construction contracts under Metropolitan's response to COVID-19 and various drought-related initiatives.

Accomplishments

- Continued construction activities for the following contracts:
 - CRA Mile 12 Flow Meter Upgrades
 - i. Continued submittals for review
 - ii. Began and completed mobilizing the field offices and construction equipment to the work site
 - iii. Began excavation to construct footings for the walls of the new building
 - CRA Pumping Plants Overhead Cranes Rehabilitation
 - i. Continued submittals for review
 - ii. Began and completed crane rail alignment at the Intake Pumping Plant
 - iii. Began crane rail alignment at the Iron Mountain Pumping Plant
 - Gene Wash Reservoir Discharge Valve Structure Rehabilitation
 - i. Completed installation of reinforcing steel and formwork for the electrical equipment concrete pad at the crest of the dam
 - ii. Completed the valve house refurbishment and the sluiceway pipe relining and completed installation of the discharge valve and actuator
 - iii. Began removal and demolition of the existing steel grating and framework within the valve house; and continued site work for the new concrete catwalk footings and concrete ladder landing at the valve house
 - iv. Continued installation of the electrical equipment and panels inside the valve house; began and completed energizing the new power distribution panels; and began electrical start-up and commissioning
- Continued submittals for the water treatment equipment procurement for domestic water treatment systems at all CRA pumping plants with expected deliveries in two shipments, in mid-2022 and early 2024, to coincide with the Domestic Water Treatment System Upgrades construction schedule
- Completed final design and awarded the construction contract of Domestic Water Treatment System Upgrades at all five CRA pumping plants
- Awarded construction contract and issued Notice to Proceed of CRA Cholla Wash Cut-and Cover Conduit Lining. Contractor began submittals for review and approval for the contract work activities to take place during the February 2022 CRA shutdown

- Under Metropolitan's response to COVID-19, suspended on-site construction for the CRA Pumping Plant Sump System Rehabilitation and continued submittals and fabrication activities
 - Continued fabrication of new pumps, piping, and other materials that are to be furnished
 - Continued delivery of new pumps
 - Completed delivery of the vertical turbine pumps and spare parts to the Iron Mountain Pumping Plant
- Continued evaluating and establishing the course of action and construction repackaging options of the remaining outstanding contract work items for CRA 6.9 kV Power Cable Replacement
- Continued final design of CRA Storage Building Replacement at Hinds, Eagle Mountain, and Iron Mountain
- Continued preliminary design of CRA Desert Region Security Improvements
- Continued preliminary design of Hinds Pumping Plant Discharge Valve Platform Replacement
- Continued preliminary design and preparation of procurement package for the CRA Main Transformer Replacement
- Continued preliminary design of Black Metal Mountain 2.4 kV Electrical Power Upgrades
- Continued final design of Gene Communication Reliability Upgrades
- Continued the CRA main pump rehabilitation efforts at all five pumping plants and feasibility study to install variable frequency drive pumps at Gene and Intake Pumping Plants

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue construction activities planned for the following contracts:
 - CRA Cholla Wash Conduit Protection & Lining
 - CRA Mile 12 Flow Meter Upgrades
 - CRA Pumping Plants Overhead Crane Replacement
 - Gene Wash Reservoir Discharge Valve Structure Rehabilitation
- Issue Notice to Proceed and begin construction activities for Domestic Water Treatment System Upgrades at all five CRA pumping plants
- Continue fabrication activities for CRA Pumping Plant Sump System Rehabilitation and begin final design of the sump system installation contract
- Continue final design and advertise the construction package of CRA Storage Building Replacement at Hinds, Eagle Mountain, and Iron Mountain
- Continue preliminary design of CRA Desert Region Security Improvements
- Continue preliminary design of Hinds Pumping Plant Discharge Valve Platform Replacement
- Continue preliminary design and preparation of procurement package for the CRA Main Transformer Replacement
- Continue preliminary design of Black Metal Mountain 2.4 kV Electrical Power Upgrades
- Continue final design of Gene Communication Reliability Upgrades
- Continue the CRA main pump rehabilitation efforts at all five pumping plants, complete feasibility study to install variable frequency drive pumps at Gene and Intake Pumping Plants, and fabricate modifications to the headgates at Hinds and Iron Mountain Pumping Plants and installation of recirculation line connections at Eagle Mountain Pumping plant
- Continue study of CRA 2.3 kV Switchrack Rehabilitation at four CRA pumping plants and begin preliminary design of a pilot Switchrack Rehabilitation project at Iron Mountain Pumping Plant

CRA Reliability Program: Gene Wash Reservoirs Discharge Valve Rehabilitation

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

Phase	Construction & Closeout
% Complete for Construction	87%
Construction Contract Awarded	December 2019
Appropriation Number	15373
Contract Number	1878

The contractor completed installation of the discharge valve and electrical equipment in the valve house; and completed dry functional testing of the new gate. In the upcoming quarter, the contractor plans to complete functional testing of the discharge valve and electrical equipment; and remove the isolation device from the dam.



New fixed cone discharge valve being transported to the Gene Wash Dam Valve House

Estimated Construction

Completion Date:

April 2022

Total Project Estimate:

\$11.7 million

Current Phase Estimate:

\$9.8 million

Cost to Date for Current

Phase:

\$7.1 million

Cost Efficiency and Productivity Program

Program Information: The Cost Efficiency and Productivity Program is composed of projects to upgrade, replace, or provide new facilities, software applications, or technology, which will provide economic savings that outweigh project costs through enhanced business and operating processes.

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

\$11.06 million

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

\$7.95 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status

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

Accomplishments

- Continued construction of battery energy storage systems at the Jensen and Skinner plants
- Continued final design of battery energy storage system at the Weymouth plant
- Completed file migrations associated with Water Resource Management and Bay Delta Initiatives groups as part of Enterprise Content Management Phase 1
- Continued WINS Water Billing System Upgrade
- Continued Real Property Group Business System Replacement

Upcoming Activities

Upcoming work for the next quarter will include:

- Initiate Services Procurement Implementation design
- Continue construction of battery energy storage systems at the Jensen and Skinner plants
- Complete final design and advertise construction contract for battery energy storage system at the Weymouth plant
- Complete file migrations associated with Executive Offices and General Counsel Department as part of Enterprise Content Management Phase 1
- Continue WINS Water Billing System Upgrade
- Continue Real Property Group Business System Replacement

Cost Efficiency & Productivity Program: mwdh2o.com Redesign

This project will redesign the current mwdh2o.com website and incorporate the implementation of a content management system for this website. This project will also move the website to be hosted in cloud for increased security.

Phase	Develop
% Complete for Current Phase	85%
Current Phase Authorized	April 2019
Appropriation Number	15484

Continued upgrading the content management for the website. In the upcoming quarter, the mwdinnovates.com, socialwaterdialogue.org, and bewaterwise.com sites will be moved to the cloud platform.

Estimated Develop

Completion Date:

April 2022

Total Project Estimate:

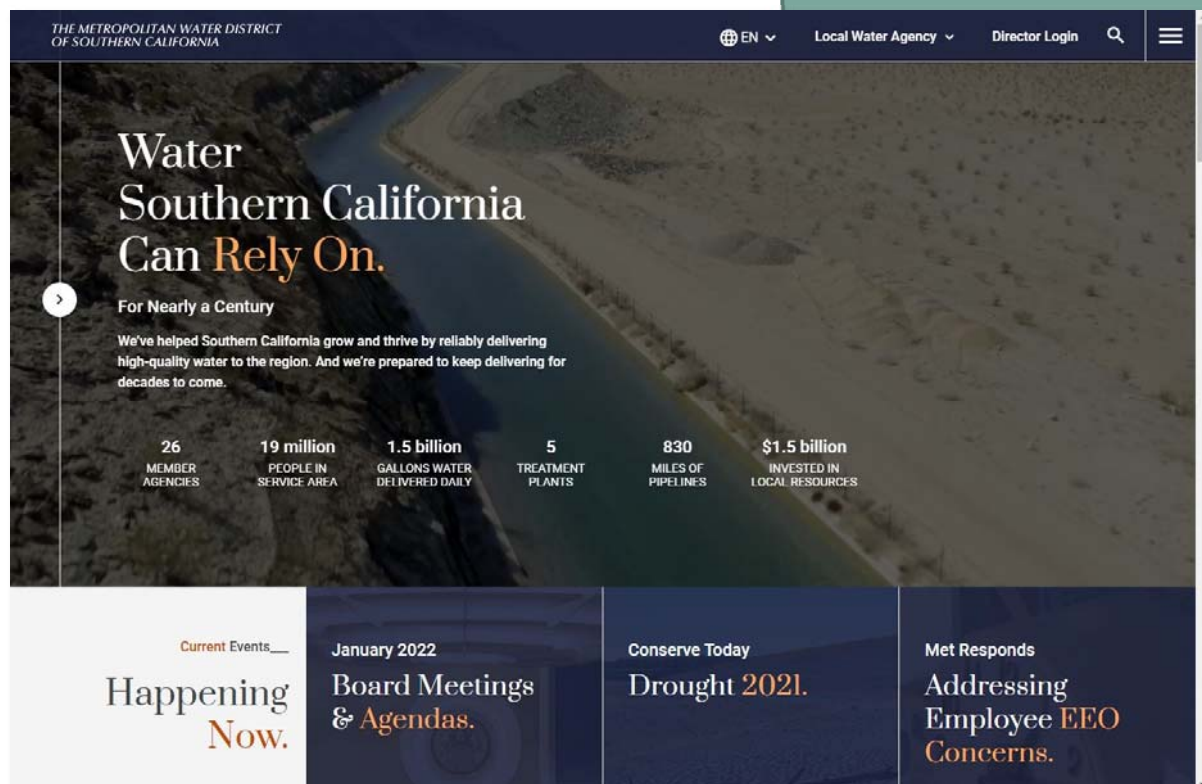
\$2.0 million

Current Phase Estimate:

\$0.55 million

*Cost to Date for Current
Phase:*

\$0.44 million



Redesigned mwdh2o.com homepage

Dams and Reservoirs Improvements Program

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

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

\$11.61 million

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

\$6.83 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status

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

Accomplishments

- Diamond Valley Lake Dam Monitoring System Upgrades
 - Developed shortlist of consultant and conducted an additional workshop with Metropolitan staff
 - Continued to develop RFP for dam real-time monitoring system
- Garvey Reservoir Rehabilitation
 - Continued preliminary design
- Lake Mathews and Lake Skinner Dam Monitoring System Upgrades
 - Continued to investigate monitoring needs and prioritize instrumentation replacement at both reservoirs
- Lake Skinner Outlet Tower Seismic Upgrade
 - Continued to prepare an RFP for detailed structural analysis of the outlet tower

Upcoming Activities

Upcoming work for the next quarter will include:

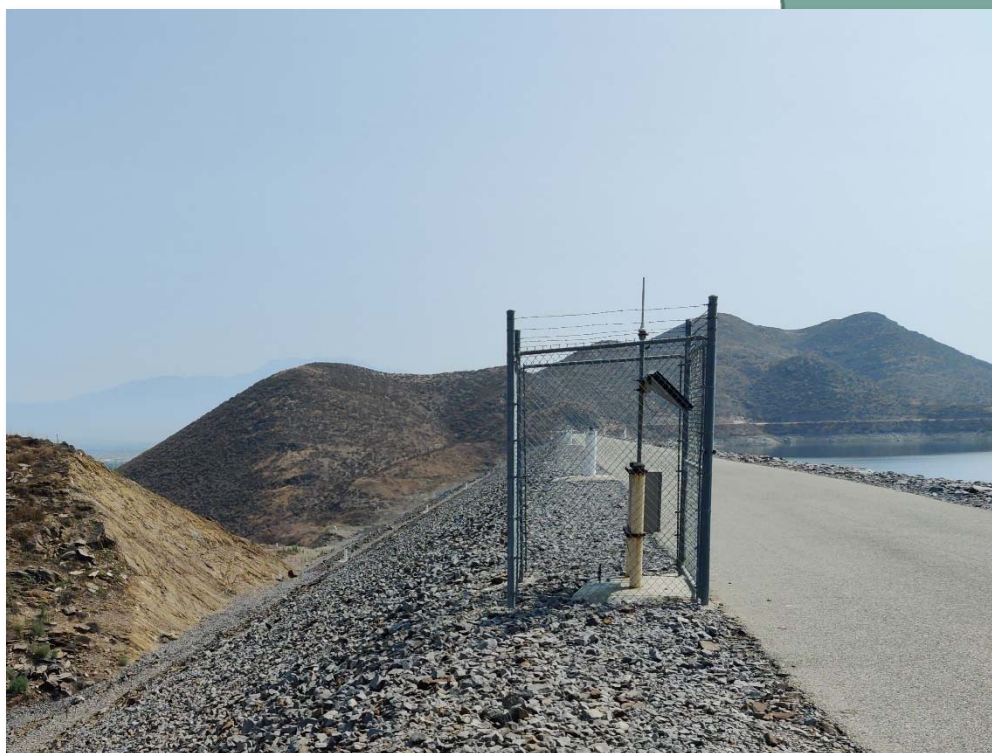
- Diamond Valley Lake Dam Monitoring System Upgrades
 - Continue to develop RFP and conduct internal workshops of the dam real-time monitoring system
- Garvey Reservoir Rehabilitation
 - Continue preliminary design
- Lake Skinner Outlet Tower Seismic Upgrade
 - Prepare interim dewatering plans
 - Issue RFP for detailed seismic analyses of the outlet tower

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

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

Phase	Study
% Complete for Current Phase	85%
Study Authorized	July 2016
Appropriation Number	15419

Developed a shortlist of consultants, conducted an additional internal workshop, and continued preparation of a request for proposals (RFP). In the upcoming quarter, the RFP preparation will continue for the monitoring system upgrade.



Existing Diamond Valley Lake dam monitoring station

Estimate Study Completion

Date:

June 2022

Total Project Estimate:

\$9.0 million

Current Phase Estimate:

\$2.7 million

Cost to Date for Current

Phase:

\$2.1 million

Distribution System Reliability Program

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

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

\$51.93 million

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

\$58.71 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status

Biennium expenditures for this program are more than the planned expenditures through December 2021 due to differences in timing between planned and actual payments for projects such as the Lakeview Pipeline Improvements and Middle Feeder Relocation for SCE Mesa Substation.

Accomplishments

- Awarded a contract for construction of the Casa Loma Siphon Barrel No. 1 Seismic Upgrade
- Awarded a pipe procurement contract for the Etiwanda Pipeline Relining – Stage 3 and issued Notice to Proceed
- Issued Notice to Proceed for construction of the Lake Mathews Site Wastewater System Replacement
- Continued construction of the Garvey Reservoir Sodium Hypochlorite Feed System Upgrades

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue construction of Garvey Reservoir Drainage and Erosion Improvements – Areas 6 to 8, 10, and 11
- Substantially complete construction of the Lake Mathews IT Disaster Recovery Facility Upgrades
- Continue construction and begin testing of the Garvey Reservoir Sodium Hypochlorite Feed System Upgrades

Distribution System Reliability Program: Etiwanda Pipeline Relining – Stage 3

This project will replace approximately 2.5 miles of the deteriorated internal mortar lining with a flexible polyurethane lining that could better withstand the significant changes in pressures experienced by the pipeline when operating the Etiwanda Hydroelectric Plant. This project will also reline approximately 1,300 feet of pipe with steel liner.

Phase	Final Design
% Complete for Current Phase	90%
Final Design Authorized	June 2015
Appropriation Number	15441

Final design work continued and a contract for the procurement of steel liner pipe was awarded. In the upcoming quarter, final design work will continue.

Estimated Final Design

Completion Date:

May 2022

Total Project Estimate:

\$30.0 million

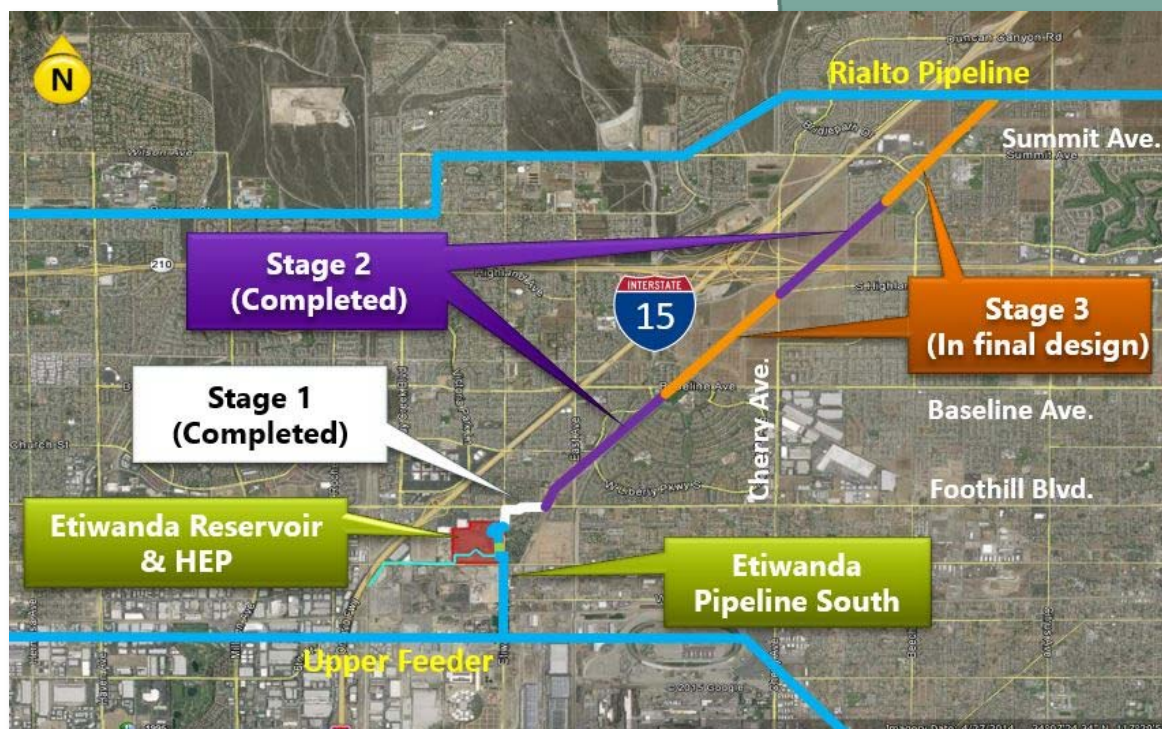
Current Phase Estimate:

\$0.50 million

Cost to Date for Current

Phase:

\$0.42 million



Project location in the cities of Fontana and
Rancho Cucamonga

District Housing & Property Improvements Program

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

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

\$7.22 million

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

\$2.46 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status

Biennium expenditures for this program are less than planned through December 2021 as additional underground utilities verification was necessary within the four villages prior to proceeding with the geotechnical field investigations. Furthermore, additional fire testing was necessary prior to completion of the preliminary design packages.

Accomplishments

- Initiated and completed topographic surveys in support of the preliminary design activities
- Completed geotechnical work in support of the preliminary design activities
- Completed preliminary design of the housing, village enhancements, and the kitchen and lodging improvements at the for Hinds and Eagle Mountain Pumping Plants

Upcoming Activities

Upcoming work for the next quarter will include:

- Perform value engineering of the housing, village enhancements, and the kitchen and lodging improvements at the Hinds and Eagle Mountain Pumping Plants
- Begin preparation of preliminary design of the housing, village enhancements, and the kitchen and lodging improvements at the for Gene and Iron Mountain Pumping Plants
- Continue preparation of the environmental documentation in support of the housing and property improvements program

Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation Program

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.

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

\$41.88 million

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

\$33.53 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status

Biennium expenditures for this program are less than the planned expenditures through December 2021 due to a delay in permitting and subsequent rescheduling of construction contract award for Second Lower Feeder Reach 3.

Accomplishments

- Second Lower Feeder Reach 3:
 - Completed design of Reach 3A, which will reline approximately 1.2 miles of pipeline from Oak Street Pressure Control Structure south through City of Rolling Hills Estates to the Palos Verdes Reservoir
 - Continued design and permits acquisition of Reach 3B, which will reline approximately 3.6 miles of 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
- Allen-McColloch Pipeline:
 - Continued preliminary design for rehabilitation, including identification of proposed pipe access excavation pits for approximately 9 miles of PCCP
 - Solicited input from Member Agencies on proposed shutdown scenarios
- Sepulveda Feeder Reach 1 – Continued final design to rehabilitate approximately 3 miles of Sepulveda Feeder from just north of the Inglewood Lateral south to the West Coast Feeder, through the cities of Inglewood and Hawthorne, and unincorporated Los Angeles County. Work includes preparation of final design drawings, traffic control plans, and permitting.
- Sepulveda Feeder Reach 2 – Continued final design to rehabilitate approximately 3.8 miles of Sepulveda Feeder from the Dominguez Gap Channel crossing south to the intertie with Second Lower Feeder, through the cities of Torrance and Los Angeles. Work includes preparation of final design drawings, traffic control plans, and permitting.
- Second Lower Feeder Valve Procurement – Received three of the thirteen large-diameter conical plug valves with actuators to date

- Lake Mathews PCCP Valve Storage Building – Completed design of a new valve storage building at Lake Mathews to safely store large-diameter valves and actuators to support the PCCP Rehabilitation Program

Upcoming Activities

Upcoming work for the next quarter will include:

- Second Lower Feeder Reach 3A – Advertise specifications and solicit bids
- Second Lower Feeder Reach 3B – Continue final design and seek construction permit approvals
- Sepulveda Feeder Reaches 1 and 2 – Continue developing final designs and initiate permitting process for long-lead permit(s)
- Second Lower Feeder Isolation Valve Procurement – Continue inspection of valve fabrication process and receipt of the fourth of thirteen large-diameter conical plug valves
- Lake Mathews PCCP Valve Storage Building – Award construction contract
- Allen-McColloch Pipeline – Continue preliminary design. Continue soliciting input from member agencies on shutdown durations and sequencing.
- Calabasas Feeder Preliminary Design – Solicit proposals for preliminary design services from Metropolitan's pool of pre-qualified conveyance and distribution system design consultants

PCCP Rehabilitation Program: PCCP Valve Storage Building at Lake Mathews

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

Phase	Final Design
% Complete for Current Phase	100%
Final Design Authorized	October 2021
Appropriation Number	15497

Completed final design and advertised the construction package for bid. In the upcoming quarter, a construction contract will be awarded.

Final Design Completion Date:
October 2021

Total Project Estimate:
\$8.1 million

Current Phase Estimate:
\$0.86 million

Cost to Date for Current Phase:
\$0.86 million



Map of project area at Lake Mathews site

Regional Recycled Water Supply Program

Program Information: The Regional Recycled Water Supply 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.

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

\$0.21 million

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

\$0.32 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status	Biennium expenditures for this program are consistent with the planned expenditures through December 2021.
Accomplishments	<ul style="list-style-type: none"> Continued warranty repairs on equipment and post-contract system improvements to enhance safety and operational reliability of the AWT Completed record drawing preparation of the AWT Demonstration Facility Submitted quarterly progress reports to the State Water Resources Control Board and received reimbursement of \$900,000 of the total \$1,000,000 towards the AWT Demonstration Facility construction effort as part of the grant funding agreement
Upcoming Activities	<p>Upcoming work for the next quarter will include:</p> <ul style="list-style-type: none"> Coordinate with the State Water Resources Control Board to submit final reimbursement invoice as part of the grant funding requirements Continue post-construction contract improvements to enhance safety and operational reliability Initiate design modifications to the AWT Demonstration Facility to allow testing of future direct potable reuse processes

Right-Of-Way and Infrastructure Protection Program

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

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

\$5.25 million

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

\$3.19 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status

Biennium expenditures for this program are less than the planned expenditures through December 2021 due to design resources being diverted to work on urgent drought related projects.

Accomplishments

- Completed Western San Bernardino County Region - Stage 1 final design and advertised contract documents
- Finalized project sites for Western San Bernardino County Region – Stage 2 final design
- Finalized project sites for Los Angeles County Region – Stage 1 final design
- Began final design for two urgent repair sites along San Diego Pipelines 4 & 5

Upcoming Activities

Upcoming work for the next quarter will include:

- Award construction contract for Western San Bernardino County Region - Stage 1
- Begin final design for Western San Bernardino County Region - Stage 2
- Complete preliminary design for Los Angeles County Region – Stage 1 and begin final design

System Flexibility/Supply Reliability Program

Program Information: The System Flexibility/Supply Reliability Program is comprised of projects to increase the capacity and flexibility of Metropolitan’s water supply and delivery infrastructure to meet service demands.

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

\$25.90 million

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

\$20.34 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status

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

Accomplishments

- Initiated the Rialto Pipeline Water Supply Reliability Improvements to address certain State Project Water dependent areas. This effort consists of the following individual projects:
 - Wadsworth Pumping Plant Bypass Pipeline – began design
 - Inland Feeder/Rialto Pipeline Intertie – began design
 - Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Pump Station Intertie – began preliminary investigation
- Continued record surveys of properties associated with the Verbena Land Acquisition

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue design of the Perris Valley Pipeline Tunnels
- Continue design and advertise valve procurement contract for Wadsworth Pumping Plant Bypass Pipeline
- Continue design and advertise pipe and valve procurement contract for Inland Feeder/Rialto Pipeline Intertie
- Continue preliminary investigation of Inland Feeder/SBVMWD Pump Station Intertie
- Continue record surveys of properties associated with the Verbena Land Acquisition

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

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	30%
Current Phase Authorized	December 2021
Appropriation Number	15488

Final design was initiated for the bypass pipeline. In the upcoming quarter, final design will continue and a procurement contract will be advertised to procure pipe materials and a large diameter valve.

Estimated Final Design

Completion Date:

July 2022

Total Project Estimate:

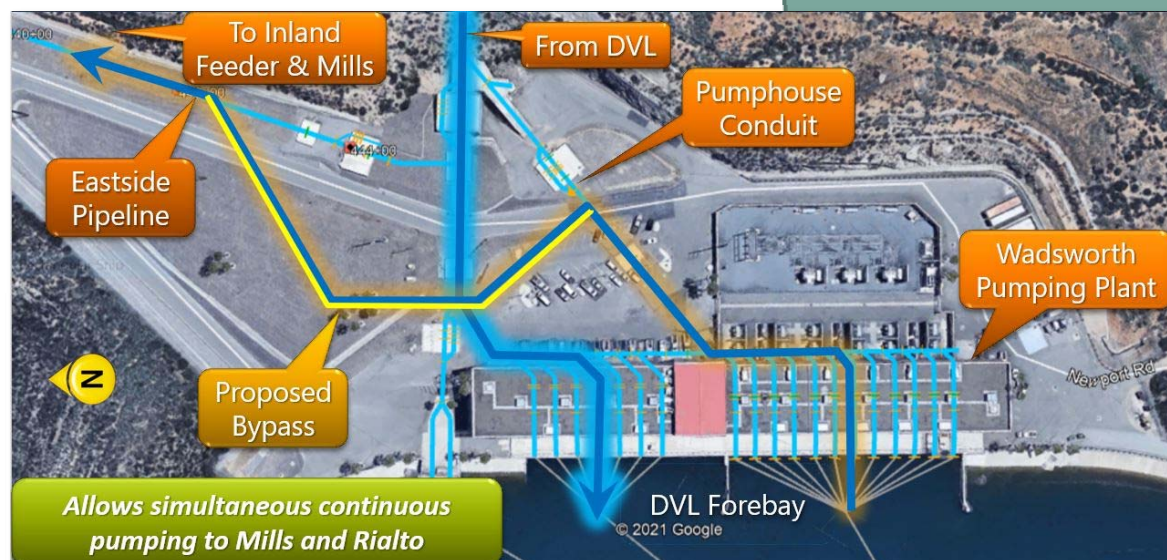
\$14.5 million

Current Phase Estimate:

\$1.7 million

Cost to Date for Current Phase:

\$0.4 million



Aerial view of proposed bypass pipeline
at Wadsworth Pumping Plant

System Reliability Program

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

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

\$70.86 million

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

\$64.13 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status

Biennium expenditures for this program are less than the planned expenditures through December 2021 due to shift in timing of the work and supply chain disruption.

Accomplishments

- Skinner Facility Area Paving – advertised construction bid package and opened bids
- Datacenter Modernization Upgrade – continued primary site server installation
- Headquarters Building Improvements and Boardroom Technology Upgrade – initiated and completed user acceptance testing and signoff
- Headquarters Fire Alarm Upgrade – continued upgrading the building fire and life safety systems
- Headquarters Security Upgrade – completed cutover from old to new security system and continued work on installation of new building security features
- WiFi Upgrade:
 - La Verne facility design completed
 - Headquarters building access point equipment procurement bid package advertised and awarded

Upcoming Activities

Upcoming work for the next quarter will include:

- Fuel Management System Upgrade - Pilot installation of first fuel management unit
- Desert Microwave Site Tower Upgrades – begin site visits
- Skinner Facility Area Paving – award construction contract
- Headquarters Fire Alarm Upgrade – continue upgrading the building fire and life safety systems
- Headquarters Security Upgrade – continue installation of new building security features
- MWD Cyber Security Upgrade:
 - Deploy secure web gateway software to MWD-owned workstations and laptops
 - Deploy privileged access management software to MWD-owned workstations, laptops, and servers

System Reliability Program: Headquarters Building Improvements

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

Phase	Construction & Closeout
% Complete for Construction	98%
Construction Contract Awarded	November 2018
Appropriation Number	15473
Contract Number	1905

The contractor completed installation of power door assist mechanisms at all remaining exit doors. In the upcoming quarter, the contractor will calibrate and test power door assist, install heat pump in 3rd floor electrical room of the tower, and replace the mechanical air unit on the 6th floor of the wing.



Completed power door assist mechanism

Estimated Construction

Completion Date:

July 2022

Total Project Estimate:

\$78.5 million

Current Phase Estimate:

\$67.2 million

Cost to Date for Current

Phase:

\$59.9 million

Treatment Plant Reliability Program

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

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

\$62.08 million

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

\$67.96 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status	Biennial expenditures for this program are more than planned through December 2021 due to shifts in timing of the work.
Accomplishments	<ul style="list-style-type: none"> Completed construction of: <ul style="list-style-type: none"> Weymouth Chlorine Systems Upgrades Weymouth Water Quality Instrumentation Improvements Continued construction of: <ul style="list-style-type: none"> Diemer Water Sampling System Improvements Jensen Electrical Upgrades - Stage 2 Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades Continued procurement of power supply units (PSU) and dielectrics for Jensen ozone generators Continued final design of Weymouth Basins 5-8 Rehabilitation Awarded Mills Electrical Upgrades - Stage 2 construction contract and began construction
Upcoming Activities	<p>Upcoming work for the next quarter will include:</p> <ul style="list-style-type: none"> Complete construction of Diemer Water Sampling System Improvements Complete final design of Weymouth Basins 5-8 Rehabilitation Complete procurement of Jensen ozone PSUs and dielectrics and begin construction of PSU replacement Continue construction of: <ul style="list-style-type: none"> Jensen Electrical Upgrades - Stage 2 Mills Electrical Upgrades - Stage 2 Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades

Treatment Plant Reliability Program: Jensen Plant Electrical Upgrade - Stage 2

The Stage 2 improvements will upgrade two unit power centers and their associated motor control centers and provide needed redundancy for critical components of the plant's electrical system.

Phase	Construction & Closeout
% Complete for Construction	93%
Construction Contract Awarded	July 2019
Appropriation Number	15442
Contract Number	1914

Completed commissioning of the service water and washwater pumps, continued work on Building 12, and cutover of motor control centers (MCC). In the upcoming quarter, the contractor plans to complete the remaining MCC cutovers and irrigation pump installation during a scheduled Jensen plant shutdown.

Estimated Construction

Completion Date:

August 2022

Total Project Estimate:

\$52.5 million

Current Phase Estimate:

\$23.5 million

Cost to Date for Current

Phase:

\$19.3 million



Completed unit substations at the Jensen plant

Water Quality/Oxidation Retrofit Program

Program Information: The Water Quality/Oxidation Retrofit Program (ORP) is comprised of projects to add new facilities to ensure compliance with water quality regulations for treated water, located at Metropolitan’s treatment plants and throughout the distribution system.

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

\$0.02 million

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

\$0.33 million

PROGRAM HIGHLIGHTS (2nd Quarter)

Status	Biennial expenditures and progress are consistent with the plan for this program
Accomplishments	<ul style="list-style-type: none"> • Mills Enhance Bromate Control Facilities <ul style="list-style-type: none"> ○ Continued final design
Upcoming Activities	<p>Upcoming work for the next quarter will include:</p> <ul style="list-style-type: none"> • Continue final design of Mills Enhance Bromate Control Facilities

MINOR CAPITAL PROGRAM

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

The duration of minor capital projects typically ranges from a few months to three years. Since many of these projects require rapid response to address unanticipated failures, safety or regulatory compliance concerns, or to take advantage of shutdown opportunities, the Minor Cap Program authorizes the General Manager to execute projects that meet defined criteria without seeking additional board approval.

For the past two bienniums, the two-year budgets for the Minor Cap Program have been \$10 million, and \$15.5 million respectively. In April 2020, the Board appropriated funds for the projects identified in the CIP appendix for the current biennium, FYs 2020/21–2021/22, including the Minor Cap Program. \$15 million has currently been allocated for the current biennium.

Minor Cap Program Historical Summary

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

	Fiscal Year			Totals
	2016/17– 2017/18	2018/19– 2019/20	2020/21– 2021/22	
Amount Appropriated	\$10M	\$15.5M	\$15M	\$40.5M
Expenditures (through December 2021)	\$7.2M	\$10.8M	\$3.9M	\$21.9M
Number of Projects Approved	41	48	41	130
Number of Projects Completed (through December 2021)	40	27	0	67
Percent of Work Complete	99%	77%	32%	N/A
Number of Projects with Durations of Over 3 Years	1	1	0	0

Through December 2021, 67 of the 130 projects have been completed, and two active projects have exceeded three years in duration, as described below.

- The Gene Pool Refurbishment has experienced delays due to shortage of local contractors for this type of work due to increased construction activity in the region. Staff will continue reaching out to contractors to complete the remaining work by June 2022.
- The 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. As a result, delivery of the new tank has been rescheduled and is now expected by June 2022. Metropolitan force construction will complete tank installation by December 2022.

Planned biennium expenditures to date (July 2020 through December 2021) for the Minor Capital Projects Program were \$6.47 million, while actual biennium expenditures for the same period were \$9.31 million.

Minor Cap Projects, 2nd Quarter

Authorized Projects

Seven projects were authorized under the Minor Cap Program during the 2nd Quarter of fiscal year 2021/22 (October through December 2021):

- CRA Pumping Plant Air Conditioner System Replacement – This project will replace the existing air conditioning systems, which have exceeded their service lives, at three pumping plant control rooms (Intake, Iron Mountain, and Hinds) and the Gene Pumping Plant Administration Building, with more energy-efficient systems that comply with R-22 refrigerant standards. The project budget is \$299,000.
- Jensen Administration Building GFRC Panel Repair – This project will replace 22 cracked glass fiber reinforced concrete (GFRC) panels and repair minor cracks on other panels that cover the face of the structural columns at the main entrance of the building. The project budget is \$260,000.
- La Verne Fabrication Shop Arc Quencher Installation – This project will design, install, and test a new arc quenching device for the La Verne Fabrication Shop motor control center (MCC), which can ground energy before an arc flash can develop. The device will provide greater worker and equipment protection. The project budget is \$150,000.
- Lake Matthews Mobile Chlorinator Delivery Line Replacement – This project will replace the deteriorated existing mobile chlorinator delivery line at Lake Mathews. The project budget is \$385,000.
- Skinner Plant 1 Filter Inlet Assemblies Rehabilitation – This project will rehabilitate the deteriorated exterior mortar coatings on the Skinner Plant 1 filter inlet assemblies. Project scope includes sand blasting, cleaning, repair of the corroded steel liners, skim coating of the existing inlet mortar coatings, and replacement of associated materials. The project budget is \$390,000.
- Wadsworth Pumping Plant Lighting Upgrade – This project will Replace 67 lighting fixtures in the Wadsworth Pumping Plant with energy-efficient LED fixtures to substantially reduce energy cost and lighting system maintenance. The project budget is \$105,000.

- Weymouth Rejection Overflow Structure Security Improvements – This project will enhance security of the Weymouth plant's rejection overflow structure to reduce or eliminate trespassing. The project budget is \$200,000.

Completed Projects

Four projects were completed under the Minor Cap Program during the 2nd Quarter of fiscal year 2021/22 (October through December 2021):

- Diemer Emergency Generator Underground Storage Tank Fuel Line Leak Detector Installation
- Garvey Reservoir Storm Drain Pipe Replacement
- Union Station Emergency Generator Underground Storage Tank Upgrade
- Skinner Dry Polymer, Emergency Generator, & Sludge Dewatering Building PLC Upgrades

Cancelled Projects

Two projects were cancelled under the Minor Cap Program during the 2nd Quarter of fiscal year 2021/22 (October through December 2021):

- The Gene Communication Reliability Improvement project was originally initiated in the FYs 2018/19 and 2019/20 minor cap appropriation. The project was canceled to be addressed by the Gene Communication System Upgrade project, which is scheduled to be completed by January 2024.
- The Headquarters UV Air Disinfection System project was originally initiated in the FYs 2020/21 and 2021/22 minor cap appropriation. The project was canceled to be addressed by the overall Headquarters HVAC System Equipment Upgrades, which is scheduled to be completed by November 2022.

PROJECT ACTIONS

Table 5 lists capital project actions authorized by the Board and the General Manager along with funding allocation amounts during the 2nd Quarter of FY 2020/21, through the authority delegated by the Board in April 2020. The total funding amount authorized by the General Manager during the 2nd Quarter is \$36,044,811, through thirty-six management actions. In some cases listed below, the Total Amount Authorized may differ from the Amount Authorized for Current Biennium when the work authorized is scheduled to extend beyond the current biennium. In these cases, it is anticipated that staff will request sufficient funds to be allocated from the CIP Appropriation for the next biennium to cover the planned remaining future-year costs of the project. When the Amount Authorized for Current Biennium is equal to the Total Amount Authorized, the authorized work is planned to be completed within the current biennium. Table 5 excludes any board items heard in closed session.

Table 5: Capital Projects Funded by General Manager Authorization

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Casa Loma Siphon Barrel No. 1 Seismic Upgrade	Construction	\$1,594,000	\$16,200,000
CRA Cholla Wash Cut-and-Cover Conduit Lining	Construction	\$4,500,000	\$4,500,000
CRA Domestic Water Treatment System Upgrades	Construction	\$3,000,000	\$42,300,000
Delta Properties Infrastructure Improvements – Regulatory Compliance	Phase IV – Regulatory Compliance, Procurement, & Installation	\$289,450	\$289,450
Districtwide Near Zero and Zero Emissions Fleet Infrastructure	Study	\$632,000	\$765,000
Enterprise GIS Disaster Recovery	Procurement & Installation	\$330,000	\$330,000
Etiwanda Pipeline Relining, Stage 3	Procurement	\$125,000	\$6,800,000
Hinds Transformer Bank Protection Relays Replacement	Design, Procurement, & Construction	\$1,024,000	\$1,700,000
Inland Feeder/Rialto Pipeline Intertie	Design	\$550,000	\$1,300,000
Inland Feeder/SBVMWD Pump Station Intertie	Preliminary Investigation	\$294,000	\$294,000
Jensen Ozone PSUs Replacement – Stage 1	Construction	\$170,000	\$2,931,000
Jensen Ozone PSUs Replacement – Stage 2	System Evaluation	\$0	\$222,000
Jensen Reservoir Bypass Gate Refurbishment	Initial Study	\$50,000	\$50,000

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Jensen Vehicle Maintenance and Warehouse Building Roof Rehabilitation	Construction	\$460,000	\$460,000
Lake Mathews Wastewater System Replacement	Construction	\$5,280,980	\$5,425,000
Lake Skinner Pipelines Cathodic Protection	Construction	\$555,800	\$630,000
Mills Electrical Upgrades - Stage 2	Construction	\$6,500,000	\$17,200,000
OC-88 Pumping Plant Chiller Replacement	Preliminary & Final Design	\$513,000	\$513,000
Orange County and Riverside/San Diego County Operating Regions Valve Replacement	Stage 1 - Construction	\$506,400	\$1,200,000
PCCP Rehabilitation Valve Storage Building	Preliminary & Final Design	\$740,000	\$740,000
Direct Potable Reuse Demonstration Facility	Preliminary & Final Design	\$300,000	\$2,700,000
Seven Minor Capital Projects	Design & Construction	\$1,789,000	\$1,789,000
Skinner Facility Paving Area	Final Design	\$323,000	\$323,000
Skinner Fluorosilicic Acid Tank Replacement	Study	\$50,000	\$50,000
Wadsworth Pumping Plant Bypass Pipeline	Design	\$1,200,000	\$1,366,000
	Total	\$30,776,630	\$110,077,450⁶

⁶ Total of total amount authorized excludes adjustments of prior authorized amounts for the following projects: (1) Arc Flash Model Development, which was authorized but not previously reported in Q4 of FY 2020/21; (2) \$1,020,818 for Desert Microwave Tower Sites Upgrades, which was over reported in Q1 of FY 2021/22; (3) \$1,450,000 for Fuel Management System Upgrade, which was over reported in Q4 of FY 2020/21; (4) \$26,400 for Jensen Control Room Wildfire Smoke Mitigation, System which was over reported in Q1 of FY2021/22; and (5) \$25,000 for Skinner Dry Polymer Building Roof Replacement, which was over reported in Q1 of FY 2020/21.

Table 6 lists a project that received additional funds for change orders from the CIP Appropriation for Fiscal Years 2020/21 and 2021/22, Appropriation No. 15517, during the 2nd Quarter to complete authorized work. Additional funds were authorized due to delays caused by supply chain issues attributed to the COVID-19 pandemic, increase in equipment costs, and additional cybersecurity requirements; additional funding for electrical generator rentals to support the completion of construction; release of previously authorized funds for new design scope of work and re-advertising the project; and additional funds to compensate owner directed extra work and costs incurred due to acceleration of construction schedule.

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

Project	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Datacenter Modernization Relocation	Design, Development, & Deployment	\$848,181	\$2,015,000
Eagle Mountain 230 kV Local Breaker Failure Backup	Construction	\$700,000	\$700,000
La Verne Shops - Stage 4 Buildings Completion & Equipment Procurement ⁷	Final Design & Advertisement	\$80,000	N/A
Palos Verdes Reservoir Cover Replacement	Construction	\$3,600,000	\$3,600,000
Total:		\$5,228,181	\$6,315,000

⁷ This action only authorized Appropriation 15517 funds for unfunded portion of total amount previously authorized.

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 2020. 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
Diemer Power and Distribution Panel Upgrades
Weymouth Facility Natural Gas System Improvement
Hollywood Tunnel North Portal Equipment Upgrades

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 Tables 9, 11, and 12. Total contract earnings for the 2nd Quarter were approximately \$11,366,178.

*Table 8: Summary of Construction and Procurement Contracts during 2nd Quarter
(October through December 2021)*

Summary	Construction	Procurement
Number of Contracts Active during this Quarter ^{8, 10}	21	16
Total Contract Amount of Active Contracts	\$220,906,674	\$67,322,000
Number of Contracts Completed this Quarter ⁹	2	0
Number of Contracts Awarded this Quarter ¹⁰	7	1
Total Contract Amount of Contracts Awarded this Quarter	\$61,142,243	\$6,044,897
Contract Earnings ^{11, 12, 13} this Quarter	\$7,522,666	\$3,843,512

The figures on the next two pages show the locations of the twenty-one active construction contracts during the 2nd quarter.

⁸ Number of Contracts Active during this Quarter includes those that were underway as well as those that were completed during the 2nd Quarter.

⁹ Completed construction contracts are those which Metropolitan has accepted as physically complete and has filed Notice of Completion during the 2nd Quarter. Completed procurement contracts are those which Metropolitan has received complete delivery and use of field services during the 2nd Quarter. No procurement contracts have been completed during the 2nd Quarter.

¹⁰ Excludes Construction Contract No. 2001 - Joseph Jensen Water Treatment Plant Ozone Power Supply Units Replacement as Metropolitan was notified by the State of California Department of Industrial Relations that the contractor was debarred from bidding or being awarded a public works contract in California, for the period including 9/27/2021 to 9/26/2022. A Notice to Proceed was not sent to the contractor and Metropolitan has opted to terminate the contract. Includes Construction Contract No. 1951 – Skinner Water Treatment Plant Cathodic Protection, which was awarded under the authority of General Manager as addressed in Metropolitan’s Administrative Code.

¹¹ Contract earnings reflected in this report represent the value of the work performed by the contractor by the 25th day of the month. Contract earnings include contract retention and other similar deductions for the amounts earned by the contractor, but otherwise required to be withheld by Metropolitan by law or by contract.

¹² Contract payments are typically made by Metropolitan in the month following performance of the work.

¹³ For the reasons listed above in the preceding two footnotes, contract payments in Metropolitan’s financial system may be less than the earnings until the final payment has been made to the contractor.



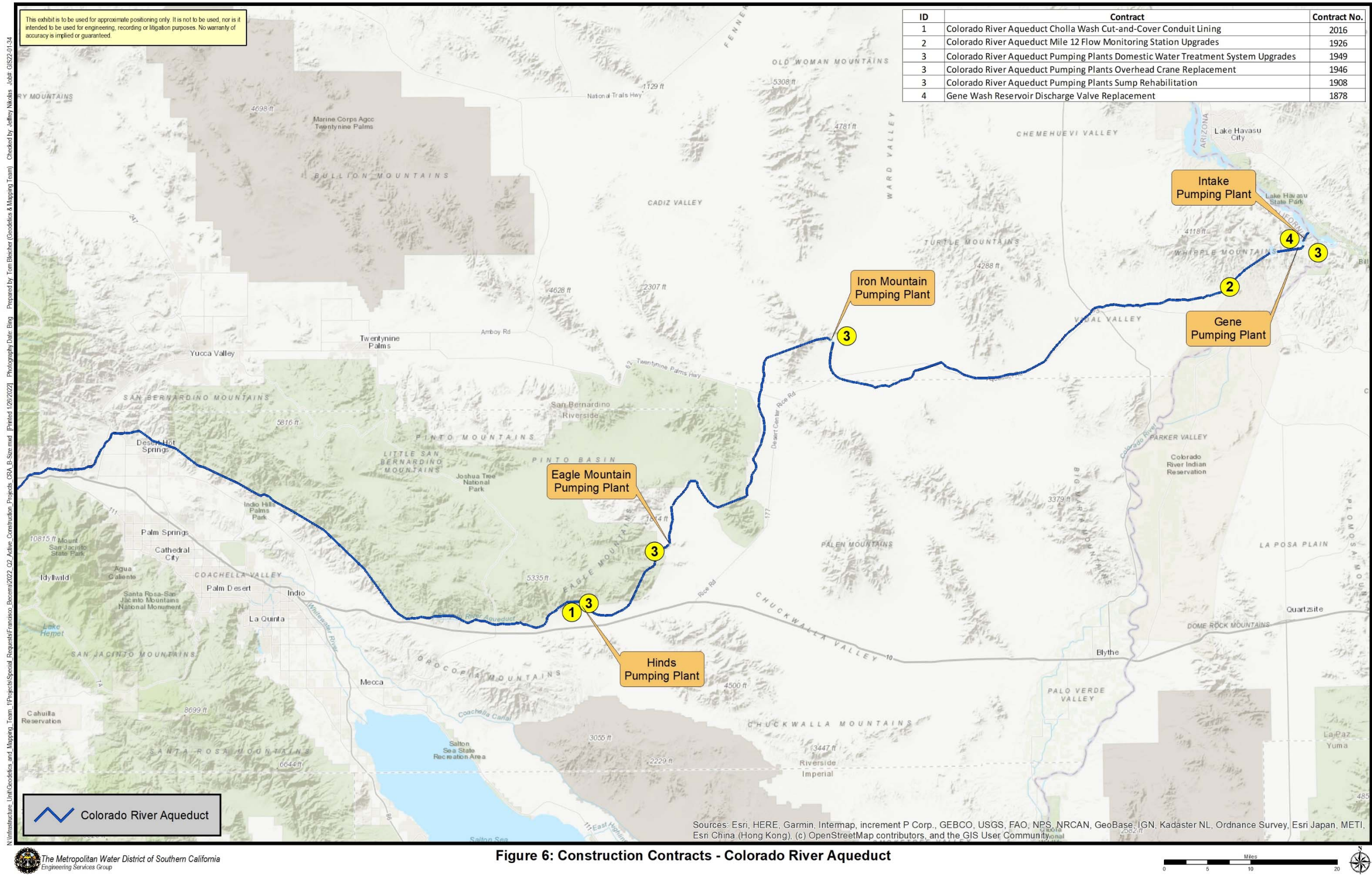


Figure 6: Construction Contracts - Colorado River Aqueduct

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 two contracts for which Metropolitan accepted the contract as completed during the 2nd Quarter of FY 2021/22 and filed a Notice of Completion (NOC) with the county where the work was performed. In accordance with Section 9204 of the Civil Code of the State of California, an NOC is filed within 15 days of acceptance by Metropolitan of completion of construction by the contractor.

Table 9: Notices of Completion Filed This Quarter

Contract No.	Contract	Notice of Completion	Original Bid Amount	Final Contract Costs	Change Order	Change Order %
1921	F. E. Weymouth Water Treatment Plant Water Quality Instrumentation Improvements	November 2021	\$2,944,000	\$2,983,582	\$39,582	1.3%
1883	F. E. Weymouth Water Treatment Plant Chlorination Systems Upgrades	December 2021	\$8,487,170	\$8,801,404	\$314,234	3.7%
Totals:			\$11,431,170			

For the 2nd Quarter, the total bid amount of completed contracts was approximately \$11.4 million. The final contract costs can differ from the original bid amount due to change orders and actual costs incurred on unit price or other various bid items. The rolling average of change orders on completed contracts during the preceding 12-month period (January 2021 through December 2021) is 1.64 percent¹⁴.

¹⁴ Original amount of contracts completed (Jan. 2021 through Dec. 2021)	=	\$188,907,064
Change orders for completed contracts (Jan. 2021 through Dec. 2021)	=	\$3,103,323
Change order percentage for (Jan. 2021 through Dec. 2021)	=	1.64%

Contracts Awarded by the Board during 2nd Quarter:

During the period of October through December 2021, seven construction contracts totaling \$62,378,310 and one procurement contract totaling \$6,044,896.76, were awarded by the Board.

Table 10: Construction and Procurement Contracts Awarded This Quarter

Construction Contracts	
Colorado River Aqueduct Cholla Wash Conduit Lining - MM 126.55 to MM 126.74	
Contract Number	2016
Contractor	J. F. Shea Construction, Inc.
Amount	\$3,280,920
Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement	
Contract Number	1949
Contractor	J. F. Shea Construction, Inc.
Amount	\$32,824,000
Colorado River Aqueduct Replacement of Casa Loma Siphon Barrel No. 1	
Contract Number	1958
Contractor	J. F. Shea Construction, Inc.
Amount	\$11,499,000
Henry J. Mills Water Treatment Plant Electrical Upgrades, Stage 2	
Contract Number	1990
Contractor	CSI Electrical Contractors, Inc.
Amount	\$9,200,000
Joseph Jensen Water Treatment Plant Ozone Power Supply Units Replacement¹⁵	
Contract Number	2001
Contractor	Minako America Corporation dba Minco Construction
Amount	\$1,477,000
Joseph Jensen Water Treatment Plant Vehicle Maintenance Building Roof Replacement	
Contract Number	1886
Contractor	AME Builders, Inc. dba AME Roofing
Amount	\$282,390

¹⁵ After contract award, Metropolitan was notified by the State of California Department of Industrial Relations that the contractor was debarred from bidding or being awarded a public works contract in California, for the period including 9/27/2021 to 9/26/2022. A Notice to Proceed was not sent to the contractor and Metropolitan has opted to terminate the contract.

Lake Mathews Reservoir Wastewater System Replacement	
Contract Number	1944
Contractor	Creative Home dba CHI Construction
Amount	\$3,815,000
Procurement Contracts	
Furnishing Steel Pipe for Etiwanda Pipeline North Relining, Stage 3	
Contract Number	2011
Contractor	Northwest Pipe Company
Amount	\$6,044,896.76

The table on this page lists the 19 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.

Table 11¹⁰: Active Construction Contracts at the End of 2nd Quarter

	Cont. No.	Contract Title	Contractor	Contract Amount ¹⁶	Earnings Through December 2021	Start Date	Est. Completion Date	Est. Percent Complete
1	1878	Gene Wash Reservoir Discharge Valve Replacement	Gracon, LLC	\$5,323,103	\$4,632,268	1/21/20	4/22	87%
2	1884	Garvey Reservoir Sodium Hypochlorite Feed System Upgrades	Metro Builders & Engineers Group, Ltd.	\$2,418,149	\$1,149,355	4/9/21	7/22	48%
3	1886	Joseph Jensen Water Treatment Plant Vehicle Maintenance Building Roof Replacement	AME Builders, Inc. dba AME Roofing	\$282,390	\$0	11/1/21	3/22	0%
4	1905	Metropolitan Headquarters Building Improvements	Bernards Bros. Inc.	\$49,049,878	\$48,988,167	1/14/19	7/22	98%
5	1908	CRA Pumping Plants – Sump Rehabilitation	Michels Corp dba Michels Pipeline Construction	\$27,194,587	\$10,152,157	1/24/19	7/22	37%
6	1914	Joseph Jensen Water Treatment Plant Electrical Upgrade - Stage 2	Helix Electric, Inc.	\$15,111,157	\$14,061,007	8/14/19	8/22	93%

¹⁶ The Contract Amount may differ from the original bid amount due to periodic change orders approved by the General Manager or, if required, by the Board.

	Conf. No.	Contract Title	Contractor	Contract Amount ¹⁶	Earnings Through December 2021	Start Date	Est. Completion Date	Est. Percent Complete
7	1926	CRA Mile 12 Flow Monitoring Station Upgrades	R2 Engineering dba R2Build	\$2,022,000	\$181,050	6/16/21	7/22	9%
8	1938	MWD HQ Bldg. Physical Security Improvements	Bernards Bros. Inc.	\$5,843,525	\$5,041,964	9/22/20	2/22	86%
9	1944	Lake Mathews Reservoir Wastewater System Replacement	Creative Home dba CHI Construction	\$3,815,000	\$0	12/13/21	3/23	0%
10	1945	Lake Mathews IT Disaster Recovery Facility Upgrades	MCL Constructors, Inc.	\$448,900	\$371,350	2/10/21	4/22	83%
11	1946	Colorado River Aqueduct Pumping Plants - Overhead Crane Replacement	J.F. Shea Construction, Inc.	\$13,505,020	\$547,720	10/14/20	9/23	4%
12	1949	Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement	J.F. Shea Construction, Inc.	\$32,824,000	\$0	1/20/22	2/25	0%
13	1951	Skinner WTP Cathodic Protection	National Corrosion	\$240,933	\$0	12/13/21	8/22	0%
14	1958	Colorado River Aqueduct Replacement of Casa Loma Siphon Barrel No. 1	J.F. Shea Construction, Inc.	\$11,499,000	\$0	1/20/22	6/23	0%
15	1962	MWD HQ Building Fire Alarm & Smoke Control Improvements	Bernards Bros. Inc.	\$14,085,744	\$4,373,760	9/24/20	1/23	31%
16	1970	Garvey Reservoir Drainage and Erosion Improvements - Areas 6, 7, 8, 10, and 11	Kaveh Engineering & Construction, Inc	\$1,372,861	\$993,501	11/20/20	2/22	72%
17	1990	Henry J. Mills Water Treatment Plant Electrical Upgrades, Stage 2	CSI Electrical Contractors, Inc.	\$9,200,000	\$0	12/13/21	12/24	0%
18	1998	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems	Ameresco, Inc.	\$11,604,521	\$0	10/7/21	10/22	0%
19	2016	Colorado River Aqueduct Cholla Wash Conduit Lining – MM 126.55 to MM 126.74	J. F. Shea Construction, Inc.	\$3,280,920	\$0	12/13/21	6/22	0%
Total contract value for active construction contracts:				\$209,121,688				

The following table lists the 16 ongoing procurement contracts through the end of the 2nd Quarter.

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

Cont. No.		Contract	Contractor	Contract Amount ¹⁷	Earnings Through December 2021	Start Date	Est. Delivery Completion Date	Est. Percent Complete ¹⁸
1	1851	Furnishing Horizontal Axially Split Centrifugal Pumps for the Greg Avenue Pump Station	Xylem Water Solutions U.S.A., Inc.	\$1,734,103	\$1,293,982	5/16/17	D ¹⁹	75%
2	1861	Furnishing Lubricated Plug Valves for Second Lower Feeder	Southwest Valve & Equipment, Inc.	\$2,380,909	\$2,362,968	9/11/17	D ¹⁹ Error! Bookmark not defined. Error! Bookmark not defined.	99%
3	1867 ¹⁹	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 1	Crispin Valve, LLC	\$5,066,975	\$631,874	12/18/17	12/22	12%
4	1868	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 2	DeZurick, Inc.	\$771,984	\$760,384	12/18/17	D ¹⁹	98%
5	1873	Furnishing One Hydraulic Shear System for the La Verne Maintenance Shops	Landmark Solutions, LLC	\$151,870	\$146,970	3/21/18	D ¹⁹	97%
6	1912	Furnishing Large-Diameter Conical Plug Valves	Ebara Corporation	\$23,750,060	\$8,591,901	12/24/18	6/23	36%
7	1922	Furnishing One Double Column Vertical Machining Center for the La Verne Maintenance Shops	Gosiger Machine Tools, LLC (Gosiger West)	\$2,193,356	\$2,114,295	9/17/18	D ¹⁹	96%
8	1948	Refurbishing Valve Actuators for the Diemer Water Treatment Plant	Flowserve Limitorque	\$3,532,700	\$1,554,636	2/16/19	8/22	44%
9	1955	Furnishing Membrane Filtration Systems for the CRA Domestic Water Treatment Systems	Wigen Water Technologies	\$1,206,535	\$0	5/28/20	7/25	0%
10	1965	Furnishing Equipment for the Jensen Ozone Power Supply Units Upgrades	Suez Treatment Solutions, Inc.	\$4,100,000	\$354,309	3/30/20	3/22	9%

¹⁷ 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.

¹⁸ 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.

¹⁹ 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 ¹⁷	Earnings Through December 2021	Start Date	Est. Delivery Completion Date	Est. Percent Complete ¹⁸
11	1968	Furnishing Earthquake-Resistant Ductile Iron Pipe for the Casa Loma Siphon Barrel No. 1	Kubota Corporation	\$9,237,782	\$9,021,862	2/12/20	D ¹⁹	98%
12	1969	Furnishing Inlet Valve Gearboxes for Skinner Module No. 7	R&B Automation, Inc.	\$192,185	\$0	4/29/20	4/22	0%
13	1978	Furnishing Steel Pipe for the Casa Loma Siphon Barrel No. 1	Northwest Pipe Company	\$6,134,208	\$5,365,992	1/16/20	12/23	87%
14	2011	Furnishing Steel Pipe for Etiwanda Pipeline North Relining, Stage 3	Northwest Pipe Company	\$6,044,897	\$0	12/20/21	12/23	0%
15	PO 188 876	Furnish Two Sodium Hypochlorite Storage Tanks to Replace Existing Tanks at Lake Mathews	Pacific Mechanical Supply	\$331,996	\$0	5/20/19	1/22	0%
16	PO 206 047	Furnish Equipment to Upgrade the Ozone Control System at the Mills Water Treatment Plant	Royal Industrial Solutions	\$492,440	\$0	12/6/21	4/22	0%
Total contract value for active procurement contracts:				\$67,322,000				

PERFORMANCE METRICS

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

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

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

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

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

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

Table 13: Performance Metric Actuals, Projects > \$3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Casa Loma Siphon Barrel No. 1 Seismic Upgrades	Final Design	\$2,843,155	\$27,600,000	9-12%	10.3%
CRA Cholla Wash Cut-and-Cover Conduit Lining	Final Design	\$83,417	\$3,480,920	9-12%	2.4%
CRA Pumping Plants Domestic Water Treatment System Replacement	Final Design	\$3,860,036	\$36,303,535	9-12%	10.6%
Lake Mathews Site Wastewater System Replacement	Final Design	\$310,797	\$3,815,000	9-12%	8.2%
Mills Electrical Upgrades, Stage 2	Final Design	\$1,099,118	\$11,720,000	9-12%	9.4%
Weymouth Chlorination Systems Upgrades	Inspection	\$1,428,794	\$10,696,054	9-12%	13.4% ²⁰
Weymouth Water Quality Instrumentation Improvements	Inspection	\$525,000	\$3,874,000	9-12%	13.6% ²¹

Table 14: Performance Metric Actuals, Projects < \$3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Skinner Water Treatment Plant Cathodic Protection	Final Design	\$72,000	\$630,000	9-15%	11.4%
Jensen Vehicle Maintenance and Warehouse Building Roof Rehabilitation	Final Design	\$30,553	\$314,390	9-15%	9.7%

²⁰ Inspection costs for Weymouth Chlorination Systems Upgrades were higher than the target range due to longer than anticipated time to complete construction and additional coordination required to support work with microteams and other COVID-19 protocols. The construction delays were mainly due to contractor-caused delays and temporary contract suspension resulting from the COVID-19 stay-at-home order.

²¹ Inspection costs for Weymouth Water Quality Instrumentation Improvements were higher than the target range due to longer than anticipated time to complete construction, which required additional inspection. The construction delays were mainly due to differing site conditions and temporary contract suspension resulting from the COVID-19 stay-at-home order.

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 2021).

Relocations

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

PROJECTS EXPENSED TO OVERHEAD

There are no expensed projects to report during the second quarter of fiscal year 2020/21 (October through December 2021).

PROGRAM/APPROPRIATION STATUS

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

Table 15: 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 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
Colorado River Aqueduct Reliability Program	Total	\$482,048	\$405,038	\$81,258	\$65,259
Cabazon Radial Gate Facility Improvements	15320	\$716	\$651	\$0	\$25
White Water Siphon Protection ²²	15341	\$15,585	\$14,545	\$0	\$55
CRA - Conveyance Reliability	15373	\$117,828	\$114,133	\$11,969	\$6,635
CRA Pumping Plant Reliability Program	15374	\$24,467	\$23,992	\$0	\$3
CRA - Electrical/Power Systems Reliability	15384	\$55,765	\$46,597	\$4,956	\$5,758
CRA – Discharge Containment	15385	\$8,129	\$7,972	\$0	\$393
CRA - Reliability for FY2006/07 through FY2011/12	15438	\$150,194	\$115,278	\$29,173	\$20,495
CRA Main Pump Reliability	15481	\$65,730	\$49,860	\$25,804	\$22,238
CRA - Reliability for FY2012/13 through FY2017/18	15483	\$35,727	\$28,535	\$9,345	\$7,407
CRA - Reliability for FY2018/19 through FY2023/24	15507	\$7,907	\$3,475	\$10	\$2,250

²² Approximately \$2.85 million reimbursement from Federal Emergency Management Agency (FEMA) for construction of Whitewater Erosion Protection Structure Rehabilitation was credited in Q4 of FY 2020/21. The credited work was completed prior to the current biennium and has been reversed in this table to account all capital work performed in the current biennium.

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru December 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
Cost Efficiency & Productivity Program	Total	\$226,733	\$178,413	\$11,117	\$7,947
DVL Recreation Facilities ²³	15334	\$87,004	\$63,928	\$1,827	\$7
Power Reliability and Energy Conservation	15391	\$54,795	\$52,842	\$0	\$0
Information Technology System - Business, Finance, and HR	15411	\$22,468	\$22,387	\$667	\$47
Yorba Linda Power Plant Modifications	15446	\$17,125	\$17,083	\$30	\$71
Business Operations Improvement	15484	\$15,396	\$9,320	\$6,745	\$2,634
Project Controls and Reporting System	15490	\$6,440	\$6,290	\$0	\$336
Enterprise Content Management	15500	\$3,600	\$3,227	\$93	\$1,626
DVL Recreation Rehabilitation & Refurbishment	15515	\$1,030	\$778	\$1,754	\$669
Energy Sustainability Improvements	15521	\$18,875	\$2,558	\$0	\$2,558
Dams and Reservoirs Reliability Program	Total	\$76,154	\$68,014	\$11,668	\$6,826
Reservoir Cover and Replacement	15417	\$65,214	\$58,565	\$7,398	\$6,049
Dam Rehabilitation & Safety Improvements	15419	\$10,940	\$9,449	\$4,270	\$777
Distribution System Reliability Program	Total	\$375,615	\$345,298	\$52,192	\$58,708
Conveyance and Distribution System - Rehabilitation	15377	\$102,686	\$98,319	\$12,744	\$4,877
Conveyance and Distribution System - Rehabilitation for FY2006/07 through FY2011/12	15441	\$110,812	\$107,365	\$3,568	\$3,849
Hydroelectric Power Plant Improvements	15458	\$19,378	\$16,840	\$72	\$2,136
Conveyance and Distribution System - Rehabilitation for FY2012/13 through FY2017/18	15480	\$118,669	\$106,538	\$23,790	\$35,657
Pipeline Rehabilitation and Replacement	15482	\$1,143	\$1,029	\$0	\$825

²³ Approximately \$107K was credited in Q4 of FY 2020/21 and \$4.5 million was credited in Q2 of FY 2021/22 from the sales of surplus DVL properties per the November 2005 Board Letter, Item 7-3 and the March 2020 Board Letters, Item 8-2. These credits were reversed in this table to account for all capital work performed in the current biennium.

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru December 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
Conveyance and Distribution System - Rehabilitation for FY2018/19 through FY2023/24	15503	\$22,927	\$15,208	\$12,017	\$11,365
District Housing & Property Improvements Program	Total	\$10,607	\$3,384	\$7,260	\$2,455
Employee Village Enhancement	15513	\$10,607	\$3,384	\$7,260	\$2,455
Minor Capital Projects Program	Total	\$48,500	\$28,374	\$6,507	\$9,306
Capital Program for Projects Costing Less Than \$250,000 for FY2014/15 through FY2015/16	15489	\$8,000	\$6,709	\$0	\$16
Capital Program for Projects Costing Less Than \$250,000 for FY2016/17 through FY2017/18	15498	\$10,000	\$7,172	\$1,262	\$413
Capital Program for Projects Costing Less Than \$400,000 for FY2018/19 through FY2019/20	15504	\$15,500	\$10,690	\$1,712	\$5,075
Capital Program for Projects Costing Less Than \$400,000 for FY2020/21 through FY2021/22	15518	\$15,000	\$3,803	\$3,533	\$3,803
Prestressed Concrete Cylinder Pipe Rehabilitation Program	Total	\$310,527	\$253,779	\$42,093	\$33,529
PCCP Rehabilitation and Replacement	15471	\$24,243	\$21,716	\$1,802	\$1,259
Sepulveda Feeder PCCP Rehabilitation	15496	\$30,525	\$25,930	\$626	\$2,904
Second Lower Feeder PCCP Rehabilitation	15497	\$240,627	\$196,073	\$37,580	\$22,443
Allen-McColloch Pipeline, Calabasas Feeder, and Rialto Pipeline PCCP Rehabilitation	15502	\$15,132	\$10,060	\$2,086	\$6,923
Regional Recycled Water Supply Program	Total	\$22,150	\$21,249	\$210	\$320
Demonstration-Scale Recycled Water Treatment Plant ²⁴	15493	\$22,150	\$21,249	\$210	\$320
Right of Way & Infrastructure Protection Program	Total	\$29,815	\$26,169	\$5,273	\$3,191
Right of Way & Infrastructure Protection	15474	\$29,815	\$26,169	\$5,273	\$3,191

²⁴ \$1 million grant from the California State Water Resources Control Board for the construction of Advanced Water Treatment Demonstration Facility was credited in Q3 of FY 2020/21. The credited work was completed prior to the current biennium and has been reversed in this table to account all capital work performed in the current biennium.

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru December 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
System Flexibility/Supply Reliability Program	Total	\$670,839	\$636,488	\$26,034	\$20,345
Hayfield and Lake Perris Groundwater Recovery	15402	\$1,500	\$1,091	\$0	\$234
Perris Valley Pipeline	15425	\$130,800	\$130,309	\$15,886	\$2,123
Water Delivery System Improvements	15488	\$67,860	\$65,753	\$10,148	\$16,264
Verbena Property Acquisition	15492	\$264,000	\$261,695	\$0	\$1,216
Delta Wetlands Properties (Delta Islands)	15494	\$197,289	\$177,477	\$0	\$346
Cox Family Farms, LLC Acquisition	15524	\$9,390	\$163	\$0	\$163
System Reliability Program	Total	\$370,194	\$289,754	\$71,223	\$64,126
Information Technology System - Infrastructure	15376	\$51,306	\$47,502	\$481	\$1,789
Information Technology System - Security	15378	\$12,351	\$10,368	\$2,469	\$2,136
La Verne Shop Facilities Upgrade	15395	\$46,560	\$46,425	\$7,625	\$935
Water Operation Control	15467	\$51,414	\$41,606	\$2,351	\$2,287
Union Station Headquarters Improvements	15473	\$107,845	\$79,272	\$23,545	\$30,292
IT Infrastructure Reliability	15487	\$47,423	\$33,669	\$18,642	\$16,976
Operations Support Facilities Improvement	15495	\$25,001	\$17,523	\$6,392	\$735
Metropolitan Security System Enhancements	15499	\$15,910	\$9,276	\$4,725	\$6,517
Infrastructure Reliability Information System	15501	\$5,770	\$2,644	\$2,802	\$1,139
System-Wide Paving & Roof Replacements for FY 2020/21 through FY 2021/22	15516	\$1,423	\$848	\$999	\$701
System-Wide Paving & Roof Replacements for FY2020/21 through FY2023/24	15519	\$1,501	\$612	\$0	\$612
Enterprise Data Analytics	18910	\$3,690	\$7	\$1,190	\$7

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru December 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
Treatment Plant Reliability Program	Total	\$943,893	\$891,188	\$62,393	\$67,959
Chlorine Containment and Handling Facilities	15346	\$162,370	\$160,536	\$0	\$89
Weymouth Water Treatment Plant Improvements	15369	\$190,910	\$185,375	\$5,024	\$3,672
Jensen Water Treatment Plant Improvements	15371	\$47,062	\$46,637	\$43	\$53
Diemer Water Treatment Plant Improvements	15380	\$213,657	\$205,640	\$17,249	\$16,488
Mills Water Treatment Plant Improvements	15381	\$5,525	\$5,277	\$0	\$0
Skinner Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15435	\$3,860	\$2,142	\$0	\$33
Diemer Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15436	\$70,939	\$64,115	\$2,113	\$1,821
Weymouth Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15440	\$24,079	\$22,731	\$3,511	\$3,970
Jensen Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15442	\$91,376	\$81,966	\$18,839	\$22,899
Mills Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15452	\$29,152	\$22,506	\$480	\$3,111
Weymouth Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15477	\$76,989	\$76,400	\$6,007	\$10,882
Diemer Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15478	\$1,425	\$1,379	\$0	\$373
Mills Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15479	\$1,094	\$677	\$0	\$223
Skinner Water Treatment Plant Improvements for FY 2012/13 Through FY 2017/18	15485	\$1,990	\$1,729	\$0	\$6
Jensen Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15486	\$8,339	\$7,479	\$0	\$719
Weymouth Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15505	\$685	\$246	\$468	\$22

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount (\$1,000's)	Costs thru December 2021 (\$1,000's)	Biennium to Date Planned Expenditures (\$1,000's)	Biennium Actual Expenditures (\$1,000's)
Jensen Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15508	\$7,185	\$2,394	\$6,738	\$2,071
Diemer Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15510	\$745	\$629	\$995	\$247
Skinner Water Treatment Plant, Improvements For FY 2020/21 Through FY 2023/24	15512	\$3,881	\$3,222	\$495	\$1,169
Mills Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15520	\$2,631	\$109	\$431	\$109
Water Quality/Oxidation Retrofit Program	Total	\$631,914	\$628,233	\$19	\$329
Diemer Water Treatment Plant Oxidation Retrofit	15389	\$370,192	\$370,024	\$0	\$0
Weymouth Water Treatment Plant Oxidation Retrofit	15392	\$251,482	\$248,594	\$19	\$18
Enhanced Bromate Control	15472	\$10,240	\$9,615	\$0	\$312
Total CIP		\$4,198,990	\$3,775,381	\$377,247	\$340,301

Notes on above table:

- Numbers may not sum due to rounding.
- Numbers are based on the general ledger information downloaded on 01/12/2022.
- \$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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