



- **Capital Investment Plan Quarterly Report for period ending December 2019**

## Summary

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The attached report provides a summary of actions and accomplishments on the Capital Investment Plan (CIP) during fiscal years 2018/19 and 2019/20. 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 2019, the second quarter of fiscal year 2019/20.

## Purpose

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

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

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

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

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

## Attachments

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Capital Investment Plan quarterly report for period ending December 2019



# CAPITAL INVESTMENT PLAN

Quarterly Report

October – December 2019



## THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

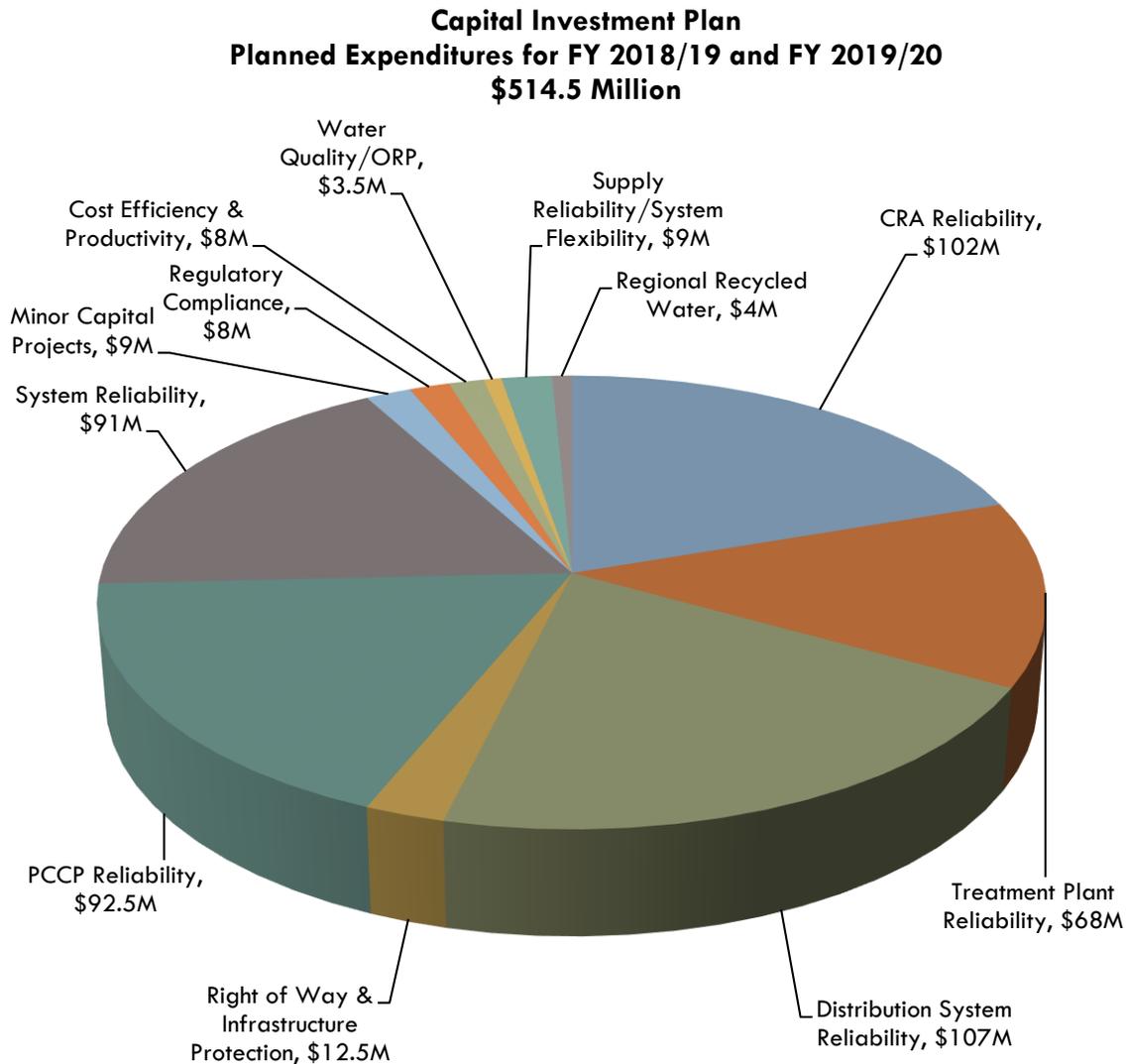
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## CAPITAL INVESTMENT PLAN FOR FISCAL YEARS 2018/19 & 2019/20

Metropolitan’s total Capital Investment Plan (CIP) planned expenditures for FYs 2018/19 and 2019/20 are \$514.5 million, and are shown in Figure 1 below in relation to their associated programs. The capital budget for the same period is \$400 million. This two-year capital budget is based on the historical variance between the annual actual expenditures and the annual planned expenditures. Based on the most recent five-year historical average, actual fiscal year CIP expenditures are approximately 80% of the annual planned expenditures.

Figure 1: CIP for FY 2018/19 and FY 2019/20 by Program



[Cover photos: Second Lower Feeder PCCP Rehabilitation: placement of steel liner into access portal; circumferential welding of steel liner pipe joint]

In October 2018, the Board appropriated \$290 million, the estimated additional funds needed to perform the planned capital work for the rest of the biennium. The Board also delegated authority to the General Manager to initiate or proceed with the work, through a series of Management Actions, on all planned capital projects identified in the CIP for FYs 2018/19 and 2019/20, and delegated to the General Manager the authority to determine whether a project is exempt from the California Environmental Quality Act (CEQA).

## **SECOND QUARTER SUMMARY**

Biennial expenditures through December 2019 totaled \$354.0 million (details shown in Table 18), and expenditures for the 2<sup>nd</sup> Quarter of Fiscal Year 2019/20, October through December 2019, totaled \$81.2 million for all capital programs.

During the 2<sup>nd</sup> Quarter, there were eight project-specific Board actions heard in open session, summarized in Table 1 below. These actions awarded five contracts totaling approximately \$21.76 million, authorized two new professional/technical services agreements totaling \$0.67 million, and authorized an increase of \$1 million to two existing professional/technical services agreements. 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: 2<sup>nd</sup> Quarter Board Actions*

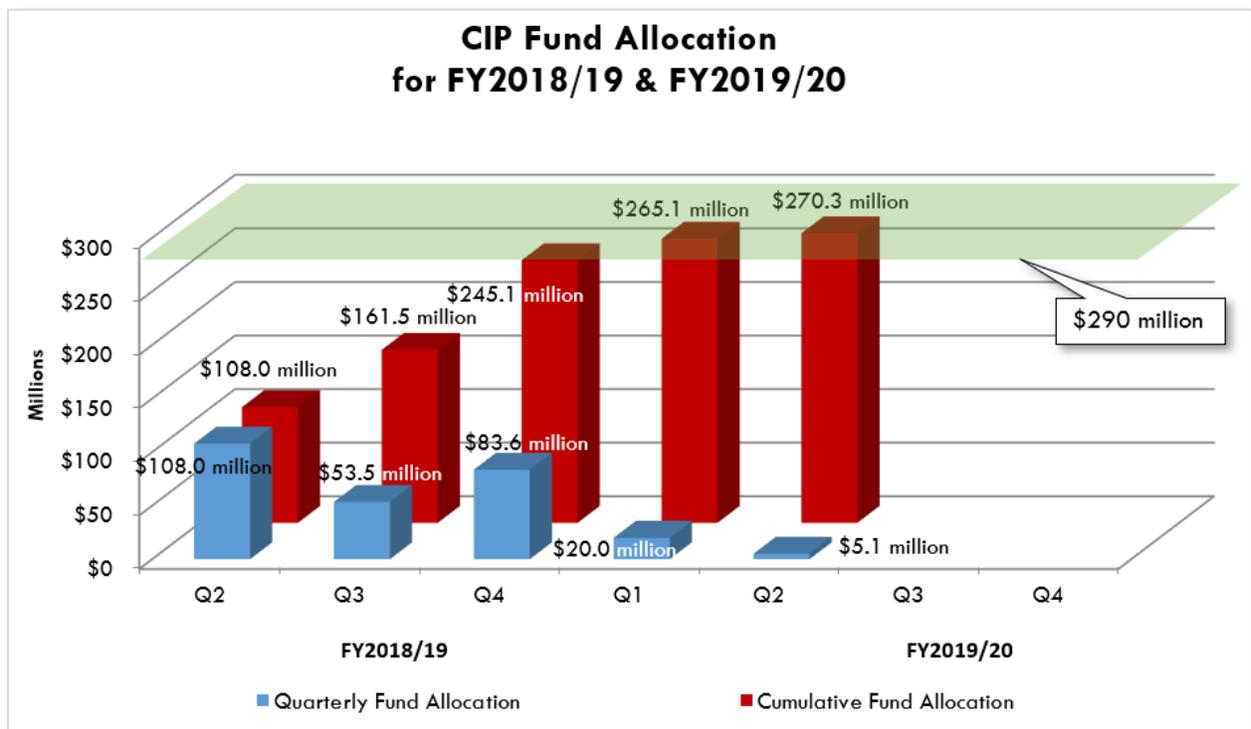
| Month    | Board Letter Item No. | Project   | Action taken  |
|----------|-----------------------|---|---|
| October  | 7-1                   | Service Connection A-06 Rehabilitation  | Awarded \$594,480 construction contract   |
| October  | 8-2                   | Metropolitan's Headquarters Building Audio/Visual Systems and Building Automation System Upgrades | Authorized an increase of \$700,000 to an existing agreement  |
| November | 7-1                   | Lake Perris Bypass Pipeline Relining  | Authorized design of unplanned project  |
| November | 7-2                   | Skinner Ozone Control System Upgrades   | Awarded \$476,000 equipment procurement contract; authorized \$320,000 agreement  |
| November | 7-3                   | Wadsworth Pumping Plant Sleeve Valves Refurbishment   | Authorized design, fabrication, and installation of an unplanned project  |
| December | 7-1                   | CRA Main Pump Reliability – Main Motor Condition Assessment                                       | Authorized \$350,000 agreement  |
| December | 8-3                   | Gene Wash Reservoir Discharge Structure Rehabilitation  | Awarded \$5,316,900 construction contract   |
| December | 8-4                   | Casa Loma Siphon Barrel No. 1 Seismic Upgrade   | Awarded two pipe procurement contracts totaling \$15,371,989.50; authorized an increase of \$300,000 to an existing agreement |

The previously referenced October 2018 board action appropriated \$290 million to perform work on planned capital projects through the current biennium. In order to be considered a planned project, the project must be included and described in the Capital Investment Plan Appendix for the two-year budget cycle. Consistent with this action, all requests to allocate funds and proceed with planned capital projects are reviewed and approved by the Chief Engineer acting under the General Manager’s authority. Unplanned projects require board authorization. Upon approval, such requested funds are then transferred from the \$290 million (Appropriation No. 15509) to the pertinent capital appropriation under which the project is budgeted. These transfers are based on both board actions and/or management decisions to initiate capital projects or proceed to the next phase of planned work. During the 2<sup>nd</sup> Quarter, one unplanned capital project was authorized by the Board.

During the 2<sup>nd</sup> Quarter, the total amount of Appropriation No. 15509 funds authorized by the General Manager for the current biennium (FYs 2018/19 and 2019/20) through Management Actions, including the funds for the projects shown in Table 1, is approximately \$10.1 million. Also during the quarter, \$5 million was taken back from “Remaining Budgets” in previously authorized projects and returned to Appropriation No. 15509. The net result of these actions was a disbursement of \$5.1 million from Appropriation No. 15509, as shown in Figure 2 below. Details of the eleven Management Actions which occurred during the 2<sup>nd</sup> Quarter can be found in Table 5 in the **Project Actions** section of this report.

Figure 2 below shows the allocation of the funds for each of the quarters and total through each of the quarters for the current biennium. With the reallocation described above, the total funds allocation from Appropriation No. 15509 through the 2<sup>nd</sup> Quarter is approximately \$270.3 million, leaving \$19.7 million available to be allocated during the remainder of the current biennium.

Figure 2: CIP Fund Allocation from Appropriation No. 15509 – FY 2018/19 and FY 2019/20



Information on construction and procurement contracts activities for the 2<sup>nd</sup> Quarter of FY 2019/20 is summarized in Table 2 below, and presented in further detail in the **Construction and Procurement Contracts** section of this report. Progress payments for these contracts in the second quarter totaled \$62.19 million, and primarily reflect construction progress on the Metropolitan Headquarters Building Improvements, Reaches 2 and 4 of the Second Lower Feeder Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation, Diemer West Basin and Filter Rehabilitation, Weymouth Chlorination Systems Upgrade, Greg Avenue Pump Station Improvements, and the Colorado River Aqueduct Pumping Plants 6.9 kV Power Cable Replacement.

Table 2: 2<sup>nd</sup> Quarter Contract Actions

| Contract Actions during Q2 for FY 2019/2020, October 2019 through December 2019 |  |
|---|--|
| Contracts Awarded   | 2 construction contracts totaling \$5.91 million (Table 10)<br>3 procurement contracts totaling \$15.85 million (Table 10)                                       |
| Contract Payments Authorized  | \$62.19 million  |
| Construction Contracts Completed  | Notice of Completion was filed for 4 construction contracts (Table 9)  |
| Active Contracts at end of Q2 <sup>1</sup>                                      | 25 construction contracts, totaling \$319.59 million (Table 11)<br>13 procurement contracts, totaling \$68.29 million (Table 12)<br>\$387.88 million total value |

<sup>1</sup> Active contracts at the end of the 2<sup>nd</sup> Quarter are those that are ongoing at the end of December 2019. In other words, contracts that had been active but were completed during the reporting quarter are excluded.

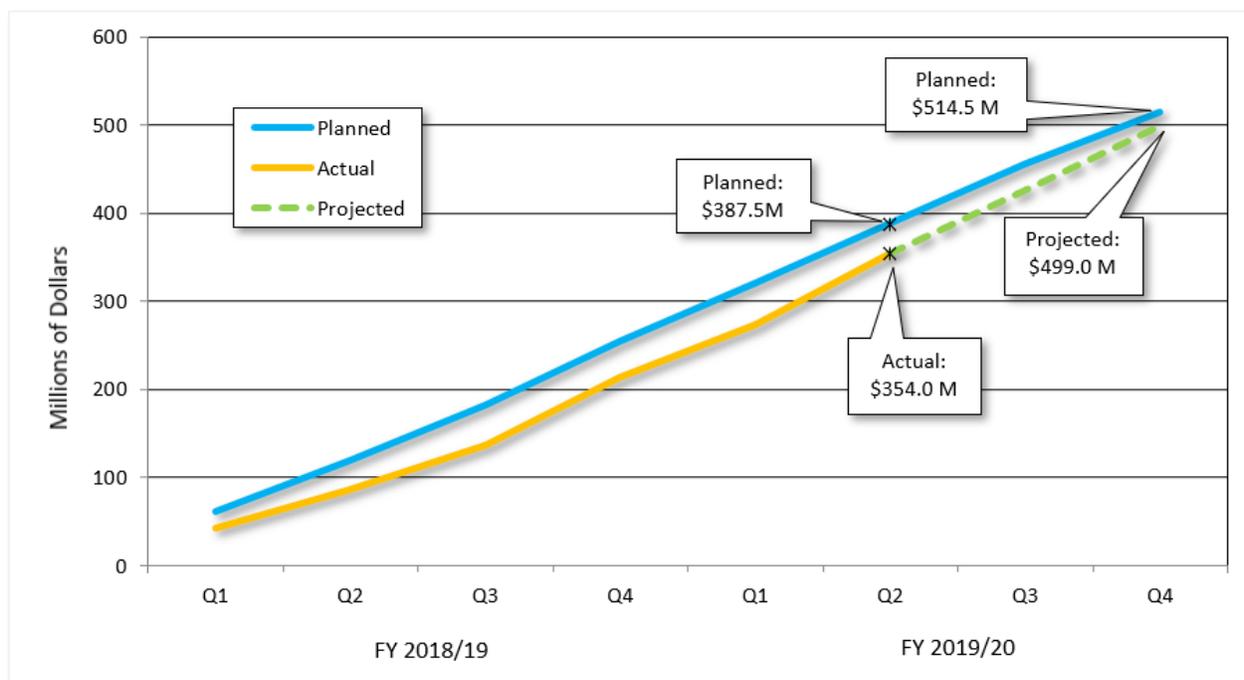
## PLANNED EXPENDITURE AND BUDGET

Table 3 and Figure 3 below show planned and actual expenditures for the biennium through the end of the 2<sup>nd</sup> Quarter of FY 2019/20, and the forecast of expenditures through the end of the current biennium, against planned expenditures for the same time interval. Actual expenditures through the 2<sup>nd</sup> Quarter of FY 2019/20 were approximately 91% of planned expenditures.

Table 3: Current Biennium: Planned & Actual Expenditures for FYs 2018/19 & 2019/20

| Quarter              | Planned Expenditures (millions) | Actual Expenditures (millions) |
|----------------------|---------------------------------|--------------------------------|
| <b>FY 2018/19 Q1</b> | \$60.8                          | \$42.9                         |
| <b>Q2</b>            | \$58.1                          | \$42.8                         |
| <b>Q3</b>            | \$63.8                          | \$51.8                         |
| <b>Q4</b>            | \$72.0                          | \$75.7                         |
| <b>FY 2019/20 Q1</b> | \$66.3                          | \$59.6                         |
| <b>Q2</b>            | \$66.5                          | \$81.2                         |
| <b>Totals</b>        | <b>\$387.5</b>                  | <b>\$354.0</b>                 |

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



As shown in Figure 3, the total planned expenditures in the current biennium are \$514.5 million. The projected expenditures for the biennium are currently \$499 million. The projected expenditure is updated quarterly to reflect shifts in the timing of planned construction contract awards and revised

construction contract forecasts for awarded contracts based on updated project schedules and contractor work plans.

Projected expenditures are based on approved work plans that include in-house and consultant labor, construction work currently underway, plus planned contract awards over fiscal year 2019/20. Actual expenditures will depend on a variety of factors, including contractors' work plans, unplanned O&M work, acquisition of permits and right-of-way, timing of facility shutdowns, and availability of labor resources.

Prior to contract award, construction costs are based on engineering estimates. Construction contract earnings are forecasted in Primavera scheduling software using industry standard expenditure forecast curves. Upon award, contractors submit schedules conforming to their anticipated construction plans. Staff subsequently updates the Primavera schedules and contract values based on the new information. One example of a shift in the timing of a construction contract that was planned to be awarded this fiscal year is CRA Water Distribution System Replacement – Hinds & Eagle Mountain, which is being split into two bid packages and construction of Eagle Mountain is planned to start at the end of this fiscal year and Hinds in the next biennium, to better align this project with other CRA pumping plant projects and minimize impacts to plant operations.

## **MAJOR CAPITAL PROGRAMS OVERVIEW**

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

- Program
- Appropriation
- Project

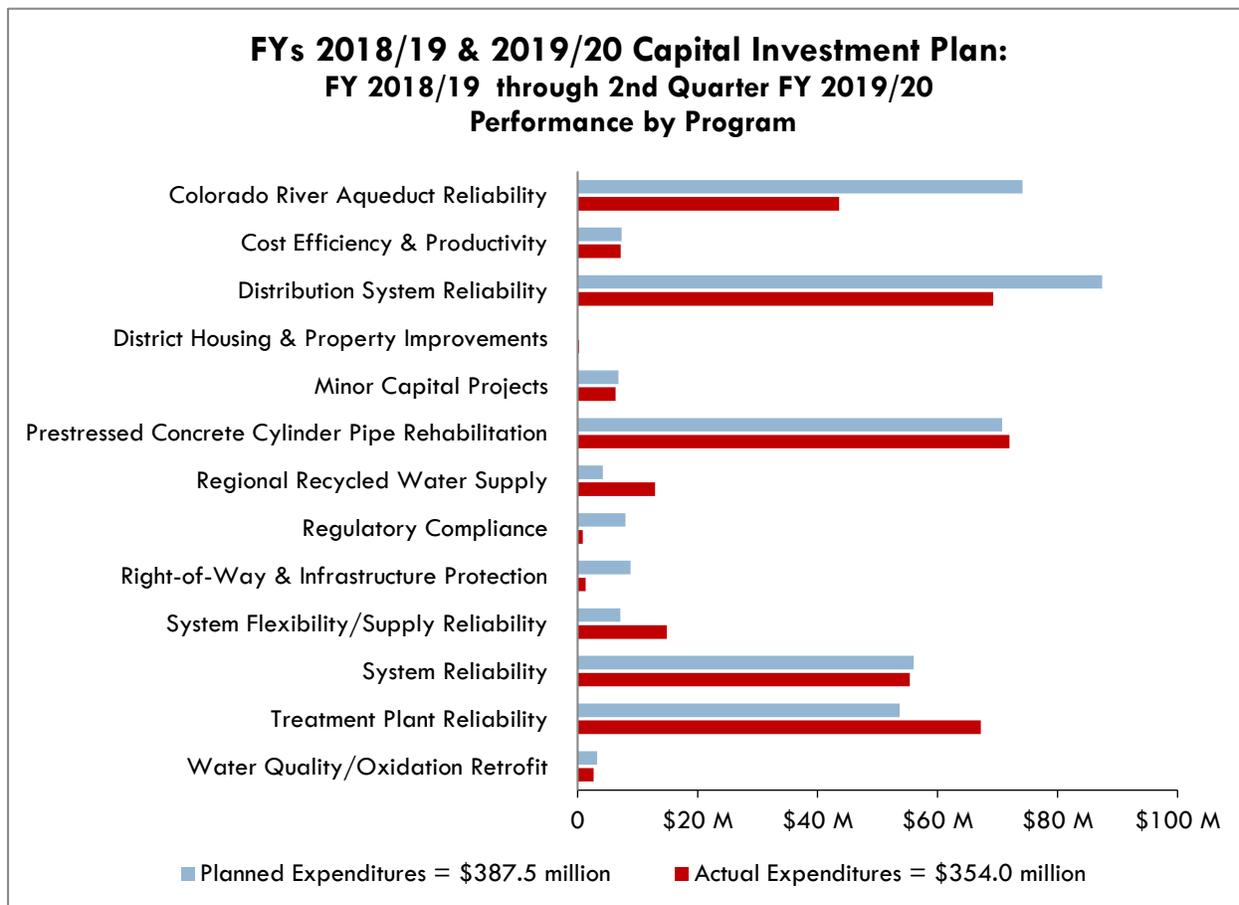
Metropolitan's CIP is comprised of 13 programs, which capture all projects within the CIP. At the time of the current biennium budget was adopted by the Board, the CIP included 12 programs. The new capital program, the District Housing & Property Improvements Program, was added during the 4<sup>th</sup> Quarter of fiscal year 2018/19. The 13 capital programs are listed below in alphabetical order. Programs are comprised of one or more appropriations, and 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
- Distribution System Reliability
- District Housing & Property Improvements
- Minor Capital Projects
- Prestressed Concrete Cylinder Pipe (PCCP) Reliability
- Regional Recycled Water Supply
- Regulatory Compliance
- 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 70 planned appropriations and 345 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 18 at the end of this report.

Figure 4 below shows actual versus planned expenditures for the 13 capital programs for the biennium to-date, for FY 2018/19 through the end of the second quarter of FY 2019/20.

Figure 4: Biennium-to-date Expenditures (Actuals vs. Planned) through 2<sup>nd</sup> Quarter FY 2019/20



Variances between planned and actual expenditures for each program are primarily due to shifts in spending on current and upcoming construction work. The two largest variances are for the Colorado River Aqueduct (CRA) Reliability Program and the Distribution System Reliability Program.

For the CRA Reliability Program, actual expenditures through December 2019 were less than planned due to: 1) extended design durations due to combining the water and wastewater infrastructure, and paving replacement projects into single contracts at the pumping plant villages, 2) extended review of contractor submittals for the pump plant sump rehabilitation project, and 3) timing of the start of construction work for the main pump power cable replacements, which are scheduled to occur during the low-flow winter season.

Actual expenditures for the Distribution System Reliability Program were also less than planned, due to 1) splitting the final reach of the Orange County Feeder Lining Replacement work into two contracts, the final contract to be awarded later this fiscal year, 2) rescheduling multiple projects at the Sepulveda Canyon Pressure Control Structure/Hydroelectric Power Plant to complete analysis of a bypass and tank sizing, and 3) revising the plan for access and structure improvements on the West Valley Feeder No. 1 to address more urgent valve replacement work elsewhere in the system.

Expenditures on the Second Lower Feeder PCCP Relining project are currently more than planned. The Reach 4 contract was awarded ahead of Reach 3, which is a much larger contract. The pipe liner for Reach 3 is being fabricated under the Reach 4 contract and will be delivered when the Reach 3 construction contract is awarded next fiscal year.

Table 4 lists the actual versus planned expenditures for the top 10 planned capital projects for the current biennium, based on their planned biennial expenditures. The planned versus actual expenditures through the end of the 2<sup>nd</sup> quarter of FY 2019/20 are also shown in this table.

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

| Project   | Planned<br>(FY 2018/19<br>through FY<br>2019/20)<br>(millions) | Planned<br>July 2018 to<br>Dec. 2019<br>(millions) | Actuals<br>July 2018 to<br>Dec. 2019<br>(millions) |
|---|--|--|--|
| Second Lower Feeder PCCP Rehabilitation                     | \$77.6   | \$57.6   | \$61.5   |
| Headquarters Improvements                                   | \$24.3   | \$8.2  | \$26.7   |
| Orange County Feeder Lining Replacement                     | \$19.4   | \$17.1   | \$10.0   |
| Palos Verdes Reservoir Rehabilitation                       | \$15.0   | \$15.0   | \$11.5   |
| CRA 6.9 kV Power Cable Replacement                          | \$14.0   | \$6.1  | \$6.6  |
| CRA Pumping Plant Sump System Rehabilitation                | \$11.0   | \$7.3  | \$1.1  |
| Orange County Service Center                                | \$10.4   | \$9.6  | \$8.8  |
| Wadsworth Pumping Plant Control & Protection Upgrades       | \$9.9  | \$8.6  | \$8.8  |
| CRA Water Distribution System & Roadway Asphalt Replacement | \$9.0  | \$6.5  | \$1.4  |
| Weymouth Filter Valve Replacement                           | \$9.0  | \$5.9  | \$0.5  |
| <b>Total</b>  | <b>\$199.6</b>   | <b>\$141.9</b>                                     | <b>\$136.9</b>                                     |

The total actual expenditures for these 10 projects for this biennium through the end of the 2<sup>nd</sup> quarter are approximately 96% of the planned expenditures.

This cumulative variance can be attributed to the following:

- **Orange County Feeder Lining Replacement:** The actual vs. planned expenditure variance is due to splitting the final reach of the Orange County Feeder Lining Replacement work into two contracts. The final contract, which is for Reach 3, is planned to be awarded later this fiscal year. The current contract for Reach 2 is 99% complete and will be finished this fiscal year.
- **CRA Pumping Plant Sump System Rehabilitation:** The actual vs. planned variance is due to the construction contract being awarded later than anticipated, and due to the longer than expected contractor submittal approval and equipment procurement work.

- **CRA Water Distribution System & Roadway Asphalt Replacement:** The variance is due to a delay in the award of the first construction contract due to the performance of a comprehensive utility investigation to identify interfering utilities. This work will help construction progress more effectively and will reduce construction change orders.
- **Weymouth Filter Valve Replacement:** The variance is due to the rescheduled delivery of the first set of Metropolitan-furnished valves in order to streamline the inspection and approval of vendor submittals and to better coordinate with the planned installation of the valves.

## **MAJOR CAPITAL PROGRAMS – HIGHLIGHTS**

The section that follows provides 2<sup>nd</sup> Quarter highlights for the 12 Major Capital Programs; the Minor Capital Program is highlighted in its own section of this report. Status is provided for selected projects within each Major Capital Program. The selected projects either achieved major milestones during the 2<sup>nd</sup> Quarter of FY 2019/20, or are scheduled to achieve major milestones in the 3<sup>rd</sup> Quarter of the fiscal year.

| <b>Program</b>   | <b>Project</b>                                     |
|--|--|
| <b>Colorado River Aqueduct (CRA) Reliability</b>             | CRA 6.9 kV Power Cable Replacement                 |
|  | CRA Radial Gates Replacement                       |
| <b>Cost Efficiency &amp; Productivity</b>                    | mwdh2o.com Redesign                                |
| <b>Distribution System Reliability</b>                       | Lake Perris Bypass Pipeline Relining               |
|  | Orange County Feeder Lining Replacement – Reach 2  |
|  | Wadsworth Sleeve Valves Refurbishment              |
| <b>District Housing &amp; Property Improvements</b>          | Program highlights only                            |
| <b>Prestressed Concrete Cylinder Pipe (PCCP) Reliability</b> | Second Lower Feeder PCCP Rehabilitation – Reach 4  |
|  | Second Lower Feeder PCCP Rehabilitation – Reach 2  |
| <b>Regional Recycled Water Supply</b>                        | Program highlights only                            |
| <b>Regulatory Compliance</b>                                 | Program highlights only                            |
| <b>Right-of-Way &amp; Infrastructure Protection</b>          | Program highlights only                            |
| <b>System Flexibility/Supply Reliability</b>                 | Greg Avenue Pump Station Rehabilitation            |
| <b>System Reliability</b>                                    | Enterprise GIS Infrastructure Upgrade              |
| <b>Treatment Plant Reliability</b>                           | Weymouth Chlorination Systems Upgrade              |
|  | Diemer West Basin & Filter Building Rehabilitation |
| <b>Water Quality/Oxidation Retrofit</b>                      | 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 2018 through December 2019)**

\$74.16 million

**Actual Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$43.59 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

Status

Expenditures for this program are less than planned through December 2019 due to schedule adjustments in order to optimize the construction activities of multiple contracts within the same CRA shutdown.

Accomplishments

- Awarded a construction contract for the Gene Wash Reservoir Discharge Structure Rehabilitation
- Authorized an agreement to provide condition assessments for main pump motors at the CRA pumping plants
- Completed construction of the Intake Pumping Plant 2.4 kV Power Line Relocation
- Continued construction of:
  - CRA 6.9 kV Power Cable Replacement
  - CRA Discharge Line Isolation Coupling Assemblies
  - CRA Radial Gates Replacement
  - Whitewater Erosion Protection Structure Rehabilitation

Upcoming Activities

Upcoming work for the next quarter will include:

- Complete construction of the CRA UPS Replacement
- Continue construction of Whitewater Erosion Protection Structure Rehabilitation
- Continue construction and begin/complete 2020 CRA shutdown activities planned for the following contracts:
  - CRA 6.9 kV Power Cable Replacement Project: All plants
  - CRA Discharge Line Isolation Project: All plants
  - CRA Radial Gate Installation
  - Sump Pump Rehabilitation Project: Iron Mountain Pumping Plant

Award a procurement contract during the last quarter of this biennium to replace water treatment systems at all CRA pumping plants

**Estimated Construction**

**Completion Date:**

**July 2020**

**Total Project Estimate:**

**\$26.1 million**

**Current Phase Estimate:**

**\$22,824,000**

**Cost to Date for Current**

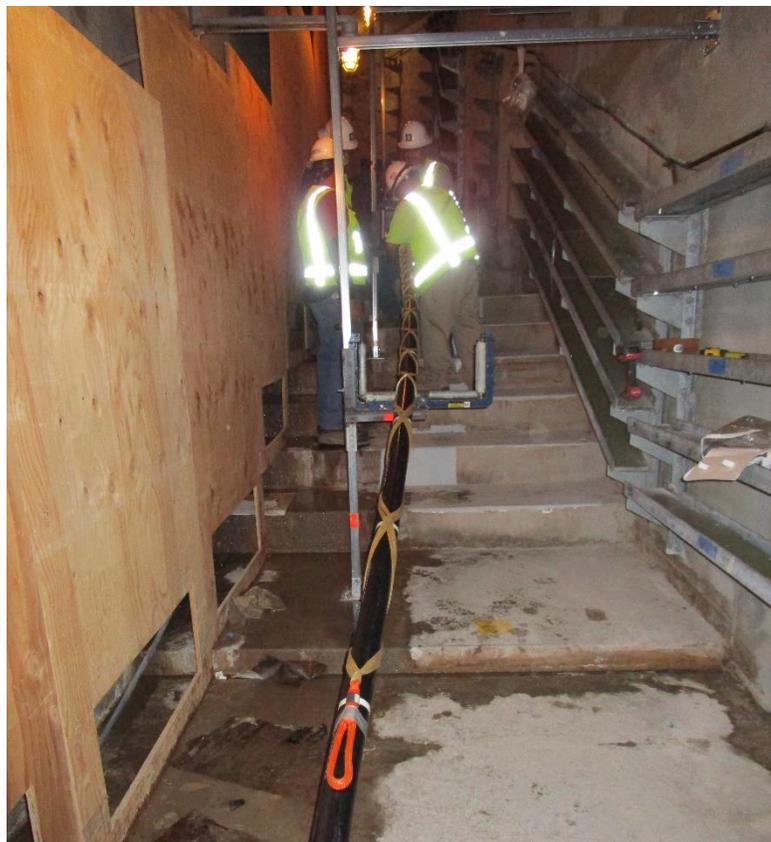
**Phase: \$6,449,404**

**CRA Reliability Program:  
CRA 6.9 kV Power Cable Replacement**

This project will replace deteriorated main power cables at each of the five CRA pumping plants.

|                               |                         |
|-------------------------------|-------------------------|
| Phase                         | Construction & Closeout |
| % Complete for Current Phase  | 38%                     |
| Construction Contract Awarded | February 2019           |
| Appropriation Number          | 15384                   |
| Contract Number               | 1915                    |

For pump units 1 through 5 at all five CRA pumping plants: completed demolition of existing power cables, completed crack repairs, completed hazardous materials abatement, and began installation of new cables. Activities planned for next quarter include completion of installation and testing of cables for pump units 1 through 5, and completion of replacement of the station light and power cables at all five CRA pumping plants.



Intake Pumping Plant: Installation of Yale Grip for Second Phase of Pulling Cable Up To Unit No. 1

**CRA Reliability Program:  
CRA Radial Gates Replacement**

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

|                               |                         |
|-------------------------------|-------------------------|
| Phase                         | Construction & Closeout |
| % Complete for Current Phase  | 5%                      |
| Construction Contract Awarded | August 2019             |
| Appropriation Number          | 15438                   |
| Contract Number               | 1920                    |

The contractor began the submittals process in preparation for the fabrication of temporary bulkheads that will be installed during the 2020 Shutdown. In the upcoming quarter, the contractor plans to install temporary bulkheads, and rehabilitate and expand the concrete operating platforms.

*Estimated Construction  
Completion Date:  
June 2021*

*Total Project Estimate:  
\$19.1 million*

*Current Phase Estimate:  
\$15.0 million*

*Cost to Date for Current Phase:  
\$467,644*



CRA radial gate to be replaced

## 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 2018 through December 2019)**

\$7.33 million

**Actual Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$7.20 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

**Status**

Biennium expenditures for this program are slightly less than planned through December 2019 due to shifts in timing of the work.

**Accomplishments**

- Project Controls and Reporting System – Validated integrations and configurations; tested reports
- Mwdh2o.com Redesign – Completed site map and wireframes

**Upcoming Activities**

Upcoming work for the next quarter will include:

- The Project Controls and Reporting System will be deployed and refinement of data will follow.
- Mwdh2o.com Redesign – Continue design and start development

**Estimated Design Completion:**  
September 2020

**Total Project Estimate:**  
\$2.04 million

**Current Phase Estimate:**  
\$266,000

**Cost to Date for Current Phase:**  
\$172,986

**Cost Efficiency & Productivity Program:  
mwdh2o.com Redesign**

This project will redesign the current mwdh2o.com website, which has outgrown its design and content capabilities.

|                              |            |
|------------------------------|------------|
| Phase                        | Design     |
| % Complete for Current Phase | 75%        |
| Design Authorized            | April 2019 |
| Appropriation Number         | 15484      |

Completed site map and wireframes. Upcoming activities in the next quarter include continuation of design activities and starting development.



Current mwdh2o.com website

## 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 2018 through December 2019)**

\$87.42 million

**Actual Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$69.29 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

#### Status

Biennium expenditures for this program are less than planned through December 2019 due to shifts in the timing of planned work for the following projects:

- Orange County Feeder Lining Replacement – Reach 3
- West Valley Feeder No. 1 Improvements
- Dam Assessment – Phase 3
- Palos Verdes Reservoir Rehabilitation

#### Accomplishments

- Awarded a construction contract to rehabilitate Service Connection A-06
- Awarded two procurement contracts for Earthquake Resistant Ductile Iron Pipe and welded steel pipe for the Casa Loma Siphon No.1 Seismic Upgrade
- Completed construction of the Garvey Reservoir Drainage and Erosion Improvements – Zones 2, 3, and 4
- Completed construction of the Orange County Feeder Lining Replacement – Reach 2

#### Upcoming Activities

Upcoming work for the next quarter will include:

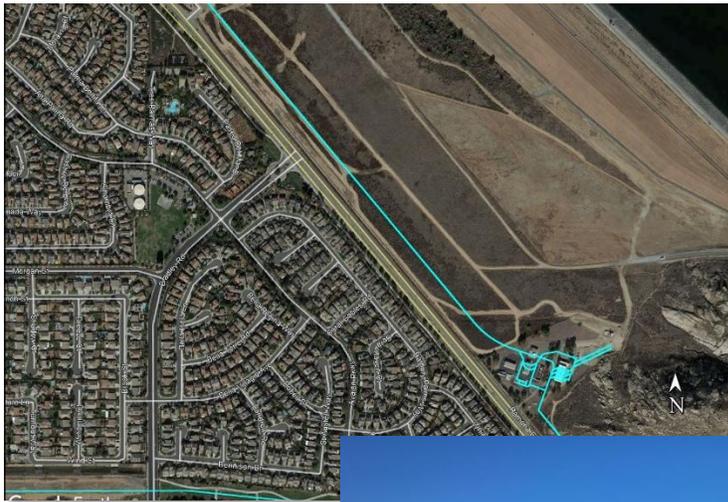
- Award a construction contract for the West Valley Feeder No. 1 De Soto Valve Structure Upgrade
- Complete final design of the Lake Perris Bypass Pipeline Relining
- Continue construction of the Orange County Region Service Center
- Continue construction to rehabilitate the Red Mountain Hydroelectric Plant
- File notice of completion and closeout Orange County Feeder Lining Replacement – Reach 2

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

This project will reline approximately 1,200 feet of the Lake Perris Bypass Pipeline.

|                              |               |
|------------------------------|---------------|
| Phase                        | Final Design  |
| % Complete for Current Phase | 30%           |
| Final Design Authorized      | November 2019 |
| Appropriation Number         | 15503         |

Started final design and completed potholing and surveying. Activities planned for the upcoming quarter include completion of final design, followed by advertisement for bids.



Lake Perris Bypass Pipeline Alignment



*Estimated Final Design  
Completion Date:  
March 2020*

*Total Project Estimate:  
\$7.5 million*

*Current Phase Estimate:  
\$578,000*

*Cost to Date for Current Phase:  
\$105,000*

**Estimated Closeout Completion Date:**  
February 2020

**Total Project Estimate:**  
\$14 million

**Current Phase Estimate:**  
\$10,243,000

**Cost to Date for Current Phase:**  
\$10,100,000

**Distribution System Reliability Program:  
Orange County Feeder Lining Replacement – Reach 2**

This project will replace the deteriorated internal lining along a 4-mile portion of the Orange County Feeder within the cities of Santa Ana and Costa Mesa.

|                               |                         |
|-------------------------------|-------------------------|
| Phase                         | Construction & Closeout |
| % Complete for Current Phase  | 99%                     |
| Construction Contract Awarded | November 2018           |
| Appropriation Number          | 15377                   |
| Contract Number               | 1904                    |

Contractor completed Reach 2 construction and the feeder is back in service. Upcoming activities planned for next quarter include project closeout.



Orange County Feeder: Asphalt placement at Site 8

**Distribution System Reliability Program:  
Wadsworth Sleeve Valves Refurbishment**

This project will refurbish the seven sleeve valves at the Wadsworth Pumping Plant. Work includes fabrication and installation of valve internal components by Metropolitan Forces.

|                              |                         |
|------------------------------|-------------------------|
| Phase                        | Construction & Closeout |
| % Complete for Current Phase | 11%                     |
| Construction Authorized      | November 2019           |
| Appropriation Number         | 15503                   |

Each valve will be refurbished sequentially to maintain pump plant operations. Staff initiated procurement of internal components for all seven valves, and completed fabrication of internal components for Unit No. 1. Upcoming activities for the next quarter include refurbishment and recommissioning of Unit No. 1; completion of procurement activities for all valves; and removal from service, disassembly of the next two units, and start of fabrication of internal components for the next two units.



Wadsworth sleeve valve: New anode installed for cathodic protection

*Estimated Construction  
Completion Date:  
June 2021*

*Total Project Estimate:  
\$952,000*

*Current Phase Estimate:  
\$767,000*

*Cost to Date for Current Phase:  
\$84,607*

## 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 2018 through December 2019)**

\$0

**Actual Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$0.23 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

Status

This is a new capital program that was not initially included in the biennial CIP budget; hence there are no planned expenditures for the biennium.

Accomplishments

- Completed detailed housing assessments and town hall meetings at four desert villages
- Prepared Draft Overview Analysis Report for both Desert Housing Improvements and Employee Village Enhancement projects

Upcoming Activities

Upcoming work for the next quarter will include:

- Start Desert Housing Improvements conceptual design report and Employee Village Enhancement master planning document

## Prestressed Concrete Cylinder Pipe (PCCP) Reliability Program

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

**Planned Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$70.79 million

**Actual Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$71.96 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

**Status**

Biennium expenditures for this program are slightly more than planned through December 2019 due to earlier than anticipated delivery of pipe and better than anticipated construction progress for the Second Lower Feeder PCCP Rehabilitation project.

**Accomplishments**

- Second Lower Feeder (SLF) Reach 4 construction – Site restoration was completed and contractor demobilized
- SLF Reach 2 construction – Received all necessary permits; began shutdown; dewatered pipe and installed bulkhead to maintain water quality; excavated and installed shoring at multiple portal sites; and began steel liner pipe installation
- SLF Reach 3 Final Design – Completed 60% design and began coordination with local agencies for permit approvals; continued shutdown coordination with member agencies
- Sepulveda Feeder, Rialto Feeder, Calabasitas Feeder and Allen-McColloch Pipeline Preliminary Design – Continued system hydraulic analyses, access portal optimizations, and valve replacement studies

**Upcoming Activities**

Upcoming work for the next quarter will include:

- SLF Reach 2 Construction – Continue to excavate and install shoring at remaining portal sites; continue steel liner pipe installation and begin welding steel liner and grouting annular space
- SLF Reach 3 Final Design – Complete 90% design and obtain preliminary permitting approvals from local agencies; continue shutdown coordination with member agencies
- SLF Reach 8 Final Design – Begin final design and obtain preliminary permitting approvals from local agencies; begin shutdown coordination with member agencies
- Sepulveda Feeder, Rialto Feeder, Calabasitas Feeder and Allen-McColloch Pipeline Preliminary Design – Continue preliminary design

**PCCP Reliability Program:  
Second Lower Feeder PCCP Rehabilitation –  
Reach 4**

This project will rehabilitate approximately two miles of existing PCCP segments of the Second Lower Feeder with a steel liner.

|                                   |                         |
|-----------------------------------|-------------------------|
| Phase                             | Construction & Closeout |
| % Complete for Current Phase      | 96%                     |
| Pipe Procurement Contract Awarded | May 2018                |
| Construction Contract Awarded     | November 2018           |
| Appropriation Number              | 15497                   |
| Pipe Procurement Contract Number  | 1925                    |
| Construction Contract Number      | 1940                    |

The contractor completed all shutdown-related work, completed site restoration, and demobilized from the site. Upcoming activities include preparation of record drawings.

*Estimated Closeout Date:  
June 2020*

*Total Project Estimate:  
\$30.2 million*

*Current Phase Estimate:  
\$26,096,000*

*Cost to Date for Current Phase:  
\$23,531,749*



Second Lower Feeder – Reach 4: Site restoration

**Estimated Construction Completion Date:**  
December 2020

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

**Current Phase Estimate:**  
\$61,846,000

**Cost to Date for Current Phase:**  
\$19,770,551

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

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

|                                   |   |
|-----------------------------------|---|
| Phase                             | Pipe Procurement, Construction & Closeout |
| % Complete for Current Phase      | 38%                                       |
| Pipe Procurement Contract Awarded | November 2018                             |
| Construction Contract Awarded     | May 2019                                  |
| Appropriation Number              | 15497                                     |
| Pipe Procurement Contract Number  | 1925                                      |
| Construction Contract Number      | 1902                                      |

Shutdown commenced. Contractor mobilized, set up traffic control, installed bulkhead, and prepared three access sites for construction activities. Upcoming activities include steel lining work at all access sites.



Second Lower Feeder – Reach 2: Saw-cutting of PCCP pipe section in preparation for steel-liner

## Regional Recycled Water Supply Program

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

### Planned Biennium-to-date Expenditures (July 2018 through December 2019)

\$4.19 million

### Actual Biennium-to-date Expenditures (July 2018 through December 2019)

\$12.94 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

#### Status

Biennium expenditures for this program are more than planned through December 2019 due to shifts in timing of the work and extended construction and commissioning of the Advanced Water Treatment (AWT) Demonstration Facility.

#### Accomplishments

- System commissioning of the AWT Demonstration Facility has been completed
- Facility start-up and system acclimation commenced in October 2019. Demonstration testing will follow
- Facility grand opening was held on October 10, 2019

#### Upcoming Activities

Upcoming work for the next quarter will include:

- Completion of system acclimation
- Commencement of demonstration testing

## Regulatory Compliance Program

**Program Information:** The Regulatory Compliance Program is comprised of projects to provide for prudent use and management of Metropolitan’s assets in compliance with regulations and codes other than water quality.

**Planned Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$7.96 million

**Actual Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$0.88 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

Status

Biennium expenditures for this program are less than planned through December 2019 due to the decision to combine the Sewer/Water Distribution/Village Roadway Asphalt replacement projects under a single construction package for each pumping plant in order to minimize disturbance to residents and to gain contracting cost efficiencies. .

Accomplishments

- Continued final design of Iron Mountain and Gene Pumping Plants Sewer/Water Distribution/Village Roadway Asphalt Replacement

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue final design of Iron Mountain and Gene Pumping Plants Sewer/Water Distribution/Village Roadway Asphalt Replacement
- Complete preliminary design and initiate final design of Intake Pumping Plant Sewer/Water Distribution/Village Roadway Asphalt Replacement

## 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 2018 through December 2019)

\$8.82 million

### Actual Biennium-to-date Expenditures (July 2018 through December 2019)

\$1.37 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

#### Status

Biennium expenditures for this program are less than planned through December 2019 due to negotiations with permitting agencies over conditions and restrictions for environmental permits taking longer than anticipated.

#### Accomplishments

- Negotiations over the rights-of-way for five of the project sites have been completed, while negotiations for rights-of-way for the remaining 10 project sites that require rights-of-way in the Orange County Region are ongoing.
- Negotiations over environmental permits for the Orange County Region project sites that require permits are ongoing.

#### Upcoming Activities

Upcoming work for the next quarter will include:

- Five project sites in the Orange County Region that do not require right-of-way or environmental permits are planned to be advertised for construction bids.
- Western San Bernardino Region – Incorporate changes into design drawings based on the types of damage experienced during recent storm events.
- Changes to the erosion protection planned for the Riverside and Los Angeles Regions will be incorporated during 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 2018 through December 2019)**

\$7.12 million

**Actual Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$14.89 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

**Status**

Biennium expenditures for this program are more than the planned expenditures through December 2019 due to differences between the planned and actual start of construction for the Greg Avenue Pump Station Rehabilitation.

**Accomplishments**

- Continued construction of the Greg Avenue Pump Station Rehabilitation

**Upcoming Activities**

Upcoming work for the next quarter will include:

- Continue record surveys of properties associated with the Verbena Land Acquisition
- Continue design of the Perris Valley Pipeline Tunnels
- Complete shutdown work for the Greg Avenue Pump Station Rehabilitation

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

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

|                               |                         |
|-------------------------------|-------------------------|
| Phase                         | Construction & Closeout |
| % Complete for Current Phase  | 40%                     |
| Construction Contract Awarded | February 2019           |
| Appropriation Number          | 15488                   |
| Contract Number               | 1911                    |

The contractor completed demolition and removal of the suction header, surge tanks, and existing control building; installed the surge tank piers; and continued work on the new control building. In the upcoming quarter, the contractor plans to complete LADWP substation site work; removal and installation of upstream header; continue work on control building; and place surge tank foundation. The Burbank turnout shutdown will occur in February.

*Estimated Construction*

*Completion Date:*

**December 2021**

*Total Project Estimate:*

**\$33.6 million**

*Current Phase Estimate:*

**\$27,082,000**

*Cost to Date for Current Phase:*

**\$10,832,800**



Installation of surge tank piers

## 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 2018 through December 2019)**

\$56.0 million

**Actual Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$55.39 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

Status

Biennium expenditures for this program are closely tracking planned expenditures through December 2019.

Accomplishments

- Continued construction of Headquarters Building Improvements
- Continued updating Wadsworth Pumping Plant controls, and started testing of updated controls for Bus No. 3 pump/turbine units
- SCADA RTU CPU & OS Replacement – Patch server purchased, installed, and project completed
- Water Ordering & Energy Scheduling System – Finished basic requirements for Energy management software; continued development of Water Ordering software

Upcoming Activities

- Headquarters projects – Continue construction of Headquarters Building Improvements; continue final design of the Stage 2 Physical Security Upgrade and the Headquarters Fire Alarm and Smoke Control Replacement projects
- Continue replacement of the control and protection equipment for the Wadsworth Pumping Plant
- AMR RF Pilot – Completion of satellite and cellular pilots; initiation of two way radio pilot; start installation of all new 900 MHz radio modems at Garvey Reservoir
- Maximo Mobile – Continue to conduct pilot of tablet devices with about 30 maintenance staff
- Maximo Upgrade – Completion of development
- Water Ordering & Energy Scheduling System – User Acceptance testing and go live for Energy Management. Pilot of Water Ordering with one to two member agencies.

**Estimated Construction Completion Date:**  
February 2020

**Total Project Estimate:**  
\$533,045

**Current Phase Estimate:**  
\$32,000

**Cost to Date for Current Phase:**  
\$0\*

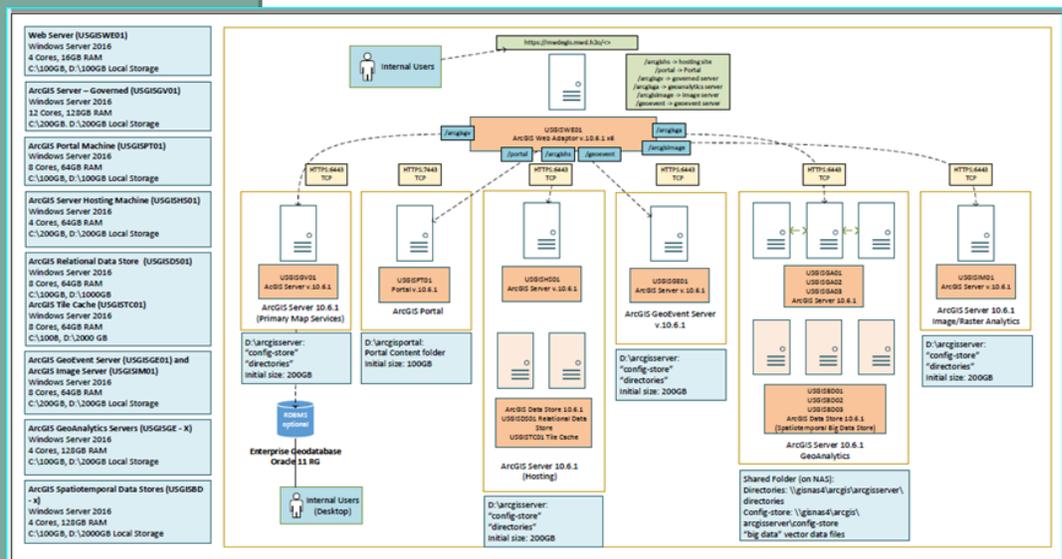
\* Invoice for server memory has not yet been received

### System Reliability Program: Enterprise GIS Infrastructure Upgrade

This project will upgrade the Enterprise GIS (EGIS) infrastructure to accommodate increasing demand for big data services. Big data services involve large amounts of Metropolitan data, including the real-time display of time-series data (e.g. from the SCADA system), three-dimensional “point cloud” data, and self-service online map-making. The improved infrastructure will allow data-intensive GIS applications to run seamlessly on mobile devices.

| Phase                        | Deployment  |
|------------------------------|-------------|
| % Complete for Current Phase | 50%         |
| Board Authorized             | August 2018 |
| Appropriation Number         | 15501       |

Purchased server memory needed for deployment.



Server and component diagram

## 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 2018 through December 2019)**

\$53.70 million

**Actual Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$67.21 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

|                     |   |
|---------------------|---|
| Status              | Biennial expenditures for this program are more than planned through December 2019 due to shifts in timing of the work.   |
| Accomplishments     | <ul style="list-style-type: none"> <li>• Continued construction to rehabilitate the Diemer West Basins and Filter Building and to refurbish Diemer filter valve actuators</li> <li>• Continued construction of the Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades</li> <li>• Began construction of the Jensen Electrical Upgrades – Stage 2</li> <li>• Began construction of the Weymouth Water Quality Instrumentation Improvements</li> </ul>  |
| Upcoming Activities | <p>Upcoming work for the next quarter will include:</p> <ul style="list-style-type: none"> <li>• Award a procurement contract for the Jensen ozone generator dielectrics and power supply units</li> <li>• Complete preliminary design of Weymouth Basins 5-8 Rehabilitation</li> <li>• Continue construction of Diemer West Basin and Filter Building Rehabilitation</li> <li>• Continue construction of Jensen Module Nos. 2 and 3 Flocculator Rehabilitation</li> <li>• Continue construction of Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades</li> <li>• Continue construction of Jensen Electrical Upgrades – Stage 2</li> <li>• Continue construction of Weymouth Water Quality Instrumentation Improvements</li> </ul> |

**Estimated Construction  
Completion Date:  
December 2020**

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

**Current Phase Estimate:  
\$12.33 million**

**Cost to Date for Current Phase:  
\$5,249,014**

**Treatment Plant Reliability Program:  
Weymouth Chlorination Systems Upgrade**

This project will expand the existing chlorine building to house additional chlorination feed equipment and instrumentation at the Weymouth plant.

|                               |                         |
|-------------------------------|-------------------------|
| Phase                         | Construction & Closeout |
| % Complete for Current Phase  | 50%                     |
| Construction Contract Awarded | December 2018           |
| Appropriation Number          | 15477                   |
| Contract Number               | 1883                    |

Contractor completed erection of structural steel at the building addition and compressor canopy; installation of electrical vaults and duct banks; and pad foundation for the motor control center. In the upcoming quarter, the contractor plans to complete concrete repairs at additional walls and painting of structural steel at the building addition and compressor canopy; and continue installation and layout for electrical conduits and panels in the building addition.



Erection of structural steel & utility conduit installation

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

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

|                               |                         |
|-------------------------------|-------------------------|
| Phase                         | Construction & Closeout |
| % Complete for Current Phase  | 52%                     |
| Construction Contract Awarded | October 2018            |
| Appropriation Number          | 15380                   |
| Contract Number               | 1900                    |

Contractor completed installation of new clarifiers, and started installation of new flocculators in Basins Nos. 5 and 6. Upcoming activities planned for next quarter include initiating replacement of 30 filter valves and actuators in six filters; and completion of equipment installation for Basins Nos. 5 and 6.



Diemer West Basin No. 5 Flocculators

*Estimated Construction*

*Completion Date:*

*January 2021*

*Total Project Estimate:*

*\$56.6 million*

*Current Phase Estimate:*

*\$44.2 million*

*Cost to Date for Current Phase:*

*\$18,526,683*

## 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 2018 through December 2019)**

\$3.24 million

**Actual Biennium-to-date Expenditures  
(July 2018 through December 2019)**

\$2.66 million

### PROGRAM HIGHLIGHTS (2<sup>nd</sup> Quarter)

|                     |  |
|---------------------|--|
| Status              | Biennial expenditures for this program are slightly less than planned through December 2019 due to shifts in timing of the work and due to completion of work for less than planned.   |
| Accomplishments     | Procured ozone gas flowmeters. Record drawings for the Weymouth Enhanced Bromate Control Facilities and ORP Switchgear are being prepared.   |
| Upcoming Activities | <p>Upcoming work for the next quarter will include:</p> <ul style="list-style-type: none"> <li>• ORP Completion Activities – Begin replacement of ozone gas flowmeters</li> <li>• Enhanced Bromate Control Facilities – Continue with preparation of record drawings</li> <li>• ORP Switchgear – Continue with preparation of record drawings</li> </ul> |

## MINOR CAPITAL PROGRAM

The Minor Capital Projects (Minor Cap) Program is authorized biennially to enable staff to expedite small capital projects. At the commencement of each biennium, the Board appropriates the entire two-year budget for the program. 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 established by the June 2018 Board action Item 8-3. Prior to that action, the budget cap for minor cap projects was \$250,000. Staff manages these projects so that each project is completed within three years of its initial authorization.

For the past two bienniums, the two-year budgets for the Minor Cap Program have been \$8 million and \$10 million, respectively. 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.

### Minor Cap Program Historical Summary

The following table provides the overall status of the Minor Cap appropriations for the fiscal years 2014/15–2015/16 through 2018/19–2019/20.

|  | Fiscal Year         |                     |                     | Totals  |
|--|---------------------|---------------------|---------------------|---------|
|  | 2014/15–<br>2015/16 | 2016/17–<br>2017/18 | 2018/19–<br>2019/20 |         |
| Amount Appropriated  | \$8M                | \$10M               | \$10M               | \$28M   |
| Expenditures through<br>December 2019                      | \$6.7M              | \$6.3M              | \$3.6M              | \$16.6M |
| Number of Projects<br>Approved                             | 36                  | 44                  | 35                  | 115     |
| Number of Projects<br>Completed<br>(through December 2019) | 34                  | 17                  | 2                   | 53      |
| Percent of Work Complete                                   | 99%                 | 81%                 | 47%                 | N/A     |
| Number of Projects<br>with Durations of Over 3<br>Years    | 3                   | 0                   | 0                   | 3       |

Through December 2019, 53 of the 115 projects have been completed, and three projects have exceeded three years in duration:

- Rehabilitation of the Skinner plant’s contactor concrete walls was completed in June 2019, and the project was closed in October 2019 after processing contractor’s final payment.
- Construction of the Mills Washwater Return Improvements was completed in June 2019, but additional time is required to complete record drawings. This project is scheduled to be complete by February 2020.

- The DVL Marina Water Tank Replacement experienced delays due to additional time required to study options for installation of permanent utilities for the DVL East Marina. Tank procurement is underway, with fabrication and installation expected by spring 2020.

Planned biennium expenditures to date (July 2018 through December 2019) for the Minor Capital Projects Program were \$6.79 million, while actual biennium expenditures for the same period were \$6.35 million.

## Minor Cap Projects, 2<sup>nd</sup> Quarter

### Authorized Projects

Eight projects were authorized under the Minor Cap Program during the 2<sup>nd</sup> Quarter of fiscal year 2019/20 (October through December 2019):

- E-Forms Conversion to Adobe Experience Manager (AEM) – This project will convert the old unsupported E-Form platform to a cloud-based software solution product. The project budget is \$393,460.
- Garvey Reservoir Storm Drain Pipe Replacement – This project will replace a broken storm drainage pipe near the dam abutment at Garvey Reservoir, to prevent leakage into the underlying embankment and maintain soil stability. The project budget is \$261,000.
- Jensen Filter Effluent Turbidimeter Upgrades – This project will replace the filter outlet turbidimeters and sample tubing for all filters at the Jensen plant. The project budget is \$373,000.
- Mills Industrial Wastewater Handling Facility Improvements – This project will improve the accessibility for operation and maintenance of the valves and instruments, by modifying the grating and relocating interfering pipes and equipment. The project budget is \$340,000.
- Santa Monica Feeder Internal Seal Installation – This project will install new internal seals at four pipe joints on the Santa Monica Feeder which have shown signs of leakage. The project budget is \$357,000.
- La Verne Building 40 Compressed Air Upgrades – This project will install a new dedicated air compressor at the La Verne Engineering Services Building to maintain key engineering laboratory functions without relying on the La Verne centralized air system. The project budget is \$59,000.
- Intake Pumping Plant Bank Transformer Rehabilitation – This project will replace deteriorated parts inside one of the Intake Pumping Plant transformers and will provide proper insulation to enhance safety and reliability of the power supply for the CRA intake pumps. The project budget is \$350,000.
- Mills Emergency Generator PLC Upgrade – This project will enhance Mills plant reliability by upgrading the programmable logic controller (PLC) hardware and software for the standby emergency generator. The project budget is \$362,900.

**Completed Projects**

Three projects were completed under the Minor Cap Program during the 2<sup>nd</sup> Quarter of fiscal year 2019/20 (October through December 2019):

- Skinner Contactor Concrete Walls Rehabilitation
- Bacon Island Levee Rehabilitation
- CRA Protective Slab at Station 805+00

**Cancelled Projects**

None.

## PROJECT ACTIONS

Table 5 lists capital projects authorized by the Board and the General Manager during the 2<sup>nd</sup> Quarter, through the authority delegated by the Board in October 2018. The total amount authorized by the General Manager, through eleven Management Actions, for the current biennium during the 2<sup>nd</sup> Quarter of FY 2019/20, is approximately \$10.1 million. 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 Minor Capital projects as well as 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 |
|---|--------------------------------------|--|-------------------------|
| Advanced Water Treatment Demonstration Facility             | Construction <sup>2</sup>            | \$4,000,000                            | \$4,000,000             |
| Casa Loma Siphon Barrel No. 1 Seismic Upgrade               | Procurement                          | \$200,000                              | \$17,500,000            |
| Diemer Chemical Tank Farm Improvements                      | Preliminary Design                   | \$80,000                               | \$80,000                |
| Garvey Reservoir Cover and Liner Replacement                | Study                                | \$500,000                              | \$500,000               |
| Gene Wash Reservoir Discharge Structure Rehabilitation      | Construction                         | \$1,000,000                            | \$9,800,000             |
| Headquarters Building Automation System Upgrades            | Preliminary Design                   | \$500,000                              | \$975,000               |
| Lake Perris Bypass Pipeline Relining                        | Design                               | \$578,000                              | \$700,000               |
| Service Connection A-06 Rehabilitation                      | Construction                         | \$977,480                              | \$1,100,000             |
| Skinner Ozone Generator PLC Control & Communication Upgrade | Equipment Procurement & Installation | \$986,000                              | \$1,455,000             |
| Upper Newport Back Bay Blow-Off Structure Rehabilitation    | Construction                         | \$365,293                              | \$900,000               |
| Wadsworth Pumping Plant Sleeve Valves Refurbishment         | Design, Fabrication, & Installation  | \$952,000                              | \$1,100,000             |
|   | <b>Total</b>                         | <b>\$10,138,773</b>                    | <b>\$38,110,000</b>     |

<sup>2</sup> Activity authorized included additional construction costs and support by Metropolitan Construction Management to install an additional treatment process, commission the control system, and add safety and security features.

Due to a reduction in anticipated expenditures through June 2020 on the Second Lower Feeder PCCP Rehabilitation – Reach 3, \$5 million was returned to the CIP Appropriation for funding other capital work as needed through the remainder of the fiscal year. Table 6 lists capital project funds that were authorized to be reallocated by the General Manager.

*Table 6: Capital Project Funds Reallocated by General Manager Authorization*

| Project   | Amount Authorized for Reallocation to CIP Appropriation | Adjusted Amount for Current Biennium |
|---|---|--------------------------------------|
| Second Lower Feeder PCCP Rehabilitation – Reach 3 | \$5,000,000   | \$7,353,956*                         |
| <b>Reallocated Funds:</b>                         | <b>\$5,000,000</b>                                      |                                      |

\* This amount does not include remaining budget allocated with each of the projects at the time of the allocations.

## CEQA DETERMINATIONS

Table 7 lists CEQA exemption determinations made by the General Manager during the 2<sup>nd</sup> Quarter. Consistent with CEQA, the Board delegated this authority to the General Manager in October 2018. 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   |
|--|
| Casa Loma Siphon Barrel No. 1 Seismic Upgrade – Pipe Procurement & Hazard Mitigation |
| CRA Main Pump Reliability – Main Motor Condition Assessment                          |
| Gene Wash Reservoir Discharge Structure Rehabilitation                               |
| Jensen Ozone PSU and Critical Components Upgrades                                    |
| Lake Perris Bypass Pipeline Relining   |
| Mills Emergency Generator PLC Upgrade  |
| Santa Monica Feeder Internal Seal Installation                                       |
| Skinner Ozone Control System Upgrades  |
| Wadsworth Pumping Plant Sleeve Valves Refurbishment                                  |
| West Valley Feeder No. 1 De Soto Valve Structure Upgrade                             |

## CONSTRUCTION AND PROCUREMENT CONTRACTS

The table below summarizes the status of all active construction and procurement contracts that were awarded by the Board during the reporting quarter. Total contract earning for the quarter was approximately \$62.2 million.

*Table 8: Summary of Construction and Procurement Contracts during 2<sup>nd</sup> Quarter  
(October through December 2019)*

| Summary   | Construction  | Procurement  |
|---|---------------|--------------|
| Number of Contracts Active during this Quarter <sup>3</sup> | 29            | 13           |
| Total Contract Amount of Active Contracts                   | \$354,429,152 | \$68,293,437 |
| Number of Contracts Completed this Quarter <sup>4</sup>     | 4             | 0            |
| Number of Contracts Awarded this Quarter                    | 2             | 3            |
| Total Contract Amount of Contracts Awarded this Quarter     | \$5,911,380   | \$15,847,990 |
| Contract Earnings <sup>5, 6, 7</sup> this Quarter           | \$48,154,002  | \$14,035,196 |

The figures on the next two pages show the locations of the 29 active and recently completed construction contracts.

<sup>3</sup> Number of Contracts Active during this Quarter includes those that were underway as well as those that were completed during the 2<sup>nd</sup> Quarter.

<sup>4</sup> Completed construction contracts are those which Metropolitan has accepted as physically complete and has filed Notice of Completion during the 2<sup>nd</sup> Quarter. Completed procurement contracts are those which Metropolitan has received complete delivery and use of field services during the 2<sup>nd</sup> Quarter. No procurement contracts were completed during the 2<sup>nd</sup> Quarter.

<sup>5</sup> Contract earnings reflected in this report represent the value of the work performed by the contractor by the 25<sup>th</sup> day of the month. Contract earnings include contract retention and other similar deductions for the amounts earned by the contractor, but otherwise required to be withheld by Metropolitan by law or by contract.

<sup>6</sup> Contract payments are typically made by Metropolitan in the month following performance of the work.

<sup>7</sup> For the reasons listed above in the preceding two footnotes, contract payments in Metropolitan's financial system will be less than the earnings until the final payment has been made to the contractor.

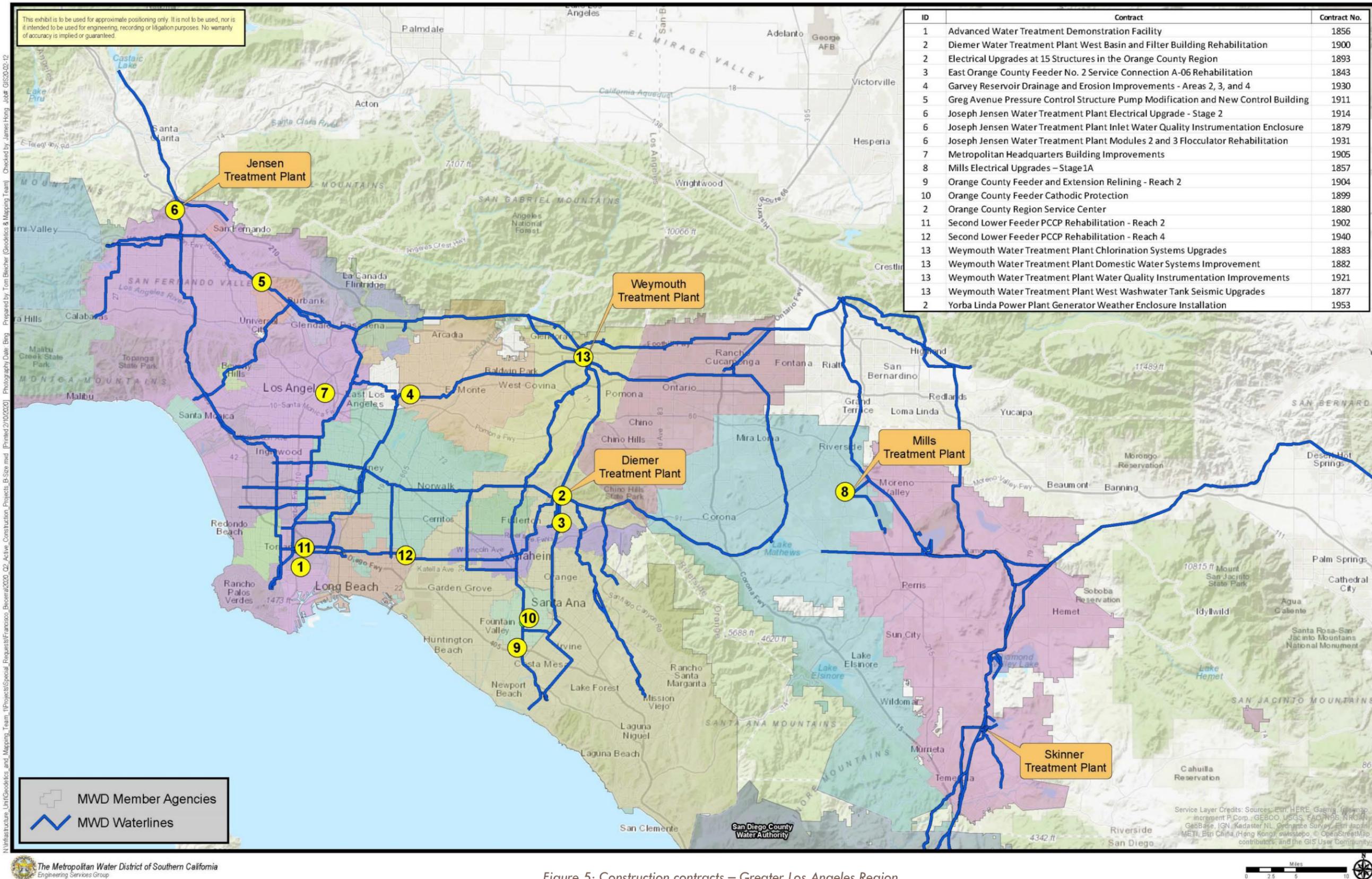


Figure 5: Construction contracts – Greater Los Angeles Region

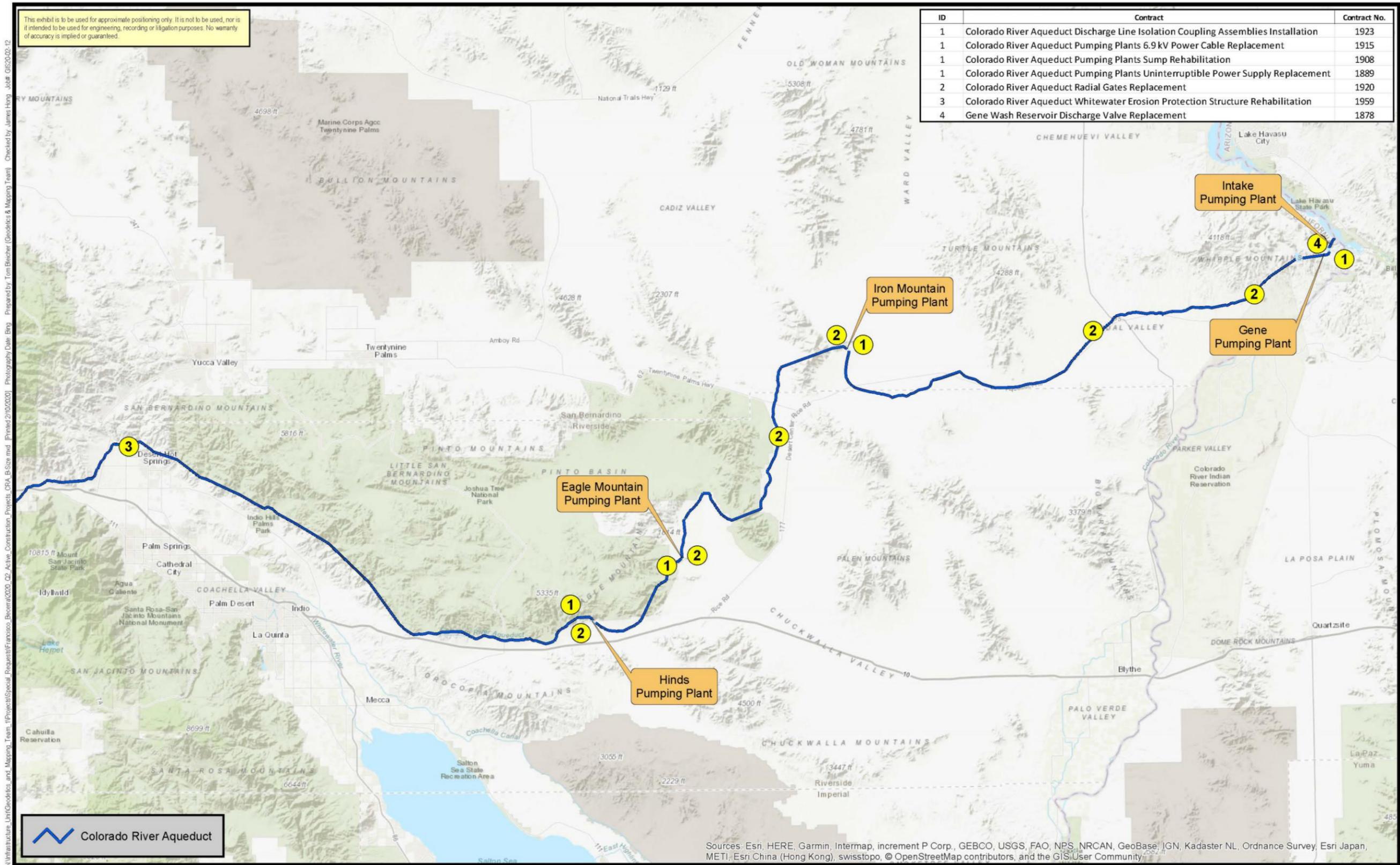


Figure 6: Construction contracts – Colorado River Aqueduct



**Notice of Completion during 2<sup>nd</sup> Quarter:**

The following table shows the two contracts for which Notice of Completion (NOC) was filed during the 2<sup>nd</sup> Quarter of FY 2019/20. 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: Notice of Completion Filed This Quarter*

| Contract No.   | Contract   | Notice of Completion | Original Bid Amount | Final Contract Costs | Change Order | Change Order % |
|----------------|--|----------------------|---------------------|----------------------|--------------|----------------|
| 1856           | Advanced Water Treatment Demonstration Facility                      | October 2019         | \$13,856,000        | \$14,369,821         | \$513,821    | 3.7%           |
| 1890           | Intake Pumping Plant 2.4 kV Power Line Relocation                    | November 2019        | \$5,553,669         | \$5,589,075          | \$35,406     | 0.6%           |
| 1930           | Garvey Reservoir Drainage & Erosion Improvements – Zones 2, 3, and 4 | October 2019         | \$648,745           | \$869,767            | \$221,022    | 34.1%          |
| 1940           | Second Lower Feeder PCCP Rehabilitation – Reach 4                    | October 2019         | \$14,536,130        | \$14,011,881         | \$114,368    | 0.8%           |
| <b>Totals:</b> |  |                      | <b>\$34,594,544</b> |                      |              |                |

For the 2<sup>nd</sup> quarter, the total amount of completed contracts was approximately \$34.6 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. In the case of Contract No. 1940, actual monies paid on the bid items for steel tariffs and permit fees were considerably less than what the bid sheet indicated.

The rolling average of change orders on completed contracts during the preceding 12-month period (January through December 2019) is 1.34%<sup>8</sup>. As for Contract No. 1930, change orders were issued to take advantage of the contractor on-site to extend drainage piping that would have otherwise been completed in a future contract.

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

|  |   |              |
|--|---|--------------|
| <sup>8</sup> Original amount of contracts completed (Jan. through Dec. 2019) | = | \$59,428,220 |
| Sum of change orders for completed contracts (Jan. through Dec. 2019)        | = | \$793,451    |
| Change order percentage for (Jan. through Dec. 2019)                         | = | 1.34%        |

**Contracts Awarded during 2<sup>nd</sup> Quarter:**

During the period of October through December 2019, two construction contracts totaling approximately \$5.9 million and three procurement contracts totaling approximately \$15.8 million were awarded by the Board.

*Table 10: Construction Contracts Awarded This Quarter*

| <b>Construction Contracts</b>  |                            |
|--|----------------------------|
| <b>East Orange County Feeder No. 2 Service Connection A-06 Rehabilitation</b>                        |                            |
| Contract Number  | 1943                       |
| Contractor   | Kaveh Engineering          |
| Amount   | \$594,480                  |
| <b>Gene Wash Reservoir Discharge Valve Replacement</b>   |                            |
| Contract Number  | 1878                       |
| Contractor   | Gracon, LLC                |
| Amount   | \$5,316,900                |
| <b>Procurement Contracts</b>   |                            |
| <b>Furnishing Earthquake-Resistant Ductile Iron Pipe for the Casa Loma Siphon Barrel No. 1</b>       |                            |
| Contract Number  | 1968                       |
| Contractor   | Kubota Corporation         |
| Amount   | \$9,237,782                |
| <b>Furnishing Steel Pipe for Casa Loma Siphon Barrel No. 1</b>                                       |                            |
| Contract Number  | 1978                       |
| Contractor   | Northwest Pipe Company     |
| Amount   | \$6,134,208                |
| <b>Furnishing Equipment to Upgrade the Ozone Control System at the Skinner Water Treatment Plant</b> |                            |
| Contract Number  | PO TBD                     |
| Contractor   | Royal Industrial Solutions |
| Amount   | \$476,000                  |

The following table lists the 25 ongoing construction contracts through the end of the 2<sup>nd</sup> Quarter.

Table 11: Active Construction Contracts at the End of 2<sup>nd</sup> Quarter

| Cont. No. | Contract Title | Contractor  | Contract Amount <sup>9</sup>                      | Earnings Through Dec. 2019 | Start Date   | Est. Completion Date | Est. Percent Complete |     |
|-----------|----------------|---|---|----------------------------|--------------|----------------------|-----------------------|-----|
| 1         | 1857           | Mills Electrical Upgrades – Stage 1A  | Stronghold Engineering Incorporated               | \$3,097,927                | \$2,846,566  | 9/11/17              | 2/20                  | 92% |
| 2         | 1877           | F. E. Weymouth Water Treatment Plant – West Washwater Tank Seismic Upgrades       | Canyon Springs Enterprises dba RSH Construction   | \$2,591,576                | \$2,549,626  | 3/21/18              | 1/20                  | 98% |
| 3         | 1878           | Gene Wash Reservoir Discharge Valve Replacement                                   | Gracon, LLC                                       | \$5,316,900                | \$0          | 1/21/20              | 6/21                  | 0%  |
| 4         | 1879           | Joseph Jensen Water Treatment Plant Inlet Water Quality Instrumentation Enclosure | Unispec Construction, Inc.                        | \$1,000,070                | \$894,380    | 3/23/18              | 3/20                  | 89% |
| 5         | 1880           | Orange County Region Service Center   | R.I.C. Construction Co.                           | \$9,411,457                | \$6,804,581  | 4/17/18              | 2/20                  | 72% |
| 6         | 1882           | Weymouth Plant Domestic Water Systems Improvement                                 | Mladen Buntich Construction Company, Inc.         | \$3,740,000                | \$2,640,630  | 6/4/18               | 2/20                  | 71% |
| 7         | 1883           | F. E. Weymouth Water Treatment Plant Chlorination Systems Upgrades                | J. F. Shea Construction, Inc.                     | \$8,487,170                | \$4,308,634  | 1/28/19              | 1/21                  | 51% |
| 8         | 1889           | Colorado River Aqueduct Pumping Plants Uninterruptible Power Supply Replacement   | CSI Electrical Contractors, Inc.                  | \$939,000                  | \$720,900    | 6/18/18              | 3/20                  | 77% |
| 9         | 1893           | Electrical Upgrades at 15 Structures in the Orange County Region                  | Minako America Corporation dba Minco Construction | \$2,606,700                | \$1,732,150  | 12/14/18             | 3/20                  | 66% |
| 10        | 1899           | Orange County Feeder Cathodic Protection  | American Construction and Supply, Inc.            | \$556,000                  | \$163,000    | 10/18/18             | 6/20                  | 29% |
| 11        | 1900           | Diemer Water Treatment Plant West Basin and Filter Building Rehabilitation        | Environmental Construction, Inc.                  | \$38,539,196               | \$20,686,131 | 11/13/18             | 12/20                 | 54% |
| 12        | 1902           | Second Lower Feeder PCCP Rehabilitation – Reach 2                                 | J. F. Shea Construction, Inc.                     | \$53,273,196               | \$24,157,057 | 6/12/19              | 12/20                 | 45% |

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

| Cont. No.  | Contract Title | Contractor  | Contract Amount <sup>9</sup>                          | Earnings Through Dec. 2019 | Start Date   | Est. Completion Date | Est. Percent Complete |     |
|--|----------------|---|---|----------------------------|--------------|----------------------|-----------------------|-----|
| 13   | 1904           | Orange County Feeder and Extension Relining – Reach 2                                   | Michels Corporation dba Michels Pipeline Construction | \$6,967,500                | \$6,895,775  | 12/7/18              | 1/20                  | 99% |
| 14   | 1905           | Metropolitan Headquarters Building Improvements   | Bernards Bros. Inc.                                   | \$44,029,000               | \$20,987,578 | 1/14/19              | 6/22                  | 48% |
| 15   | 1908           | CRA Pumping Plants – Sump Rehabilitation  | Michels Corporation dba Michels Pipeline Construction | \$26,900,000               | \$403,500    | 1/24/19              | 3/22                  | 2%  |
| 16   | 1911           | Greg Avenue Pressure Control Structure – Pump Modification and New Control Building     | J. F. Shea Construction, Inc.                         | \$20,975,000               | \$6,269,593  | 3/7/19               | 12/20                 | 30% |
| 17   | 1914           | Joseph Jensen Water Treatment Plant Electrical Upgrade – Stage 2                        | Helix Electric, Inc.                                  | \$14,784,000               | \$1,316,830  | 8/14/19              | 4/22                  | 9%  |
| 18   | 1915           | Colorado River Aqueduct Pumping Plants 6.9 kV Power Cable Replacement                   | Baker Electric, Inc.                                  | \$16,452,832               | \$6,271,799  | 3/11/19              | 6/20                  | 38% |
| 19   | 1920           | Colorado River Aqueduct – Installation of Radial Gates at Seven Facilities              | McMillen, LLC dba McMillen Jacobs Associates          | \$10,439,354               | \$195,000    | 9/18/19              | 6/21                  | 2%  |
| 20   | 1921           | F. E. Weymouth Water Treatment Plant Water Quality Instrumentation Improvements         | Mehta Mechanical Company, Inc. dba MMC, Inc.          | \$2,944,000                | \$0          | 9/16/19              | 2/21                  | 0%  |
| 21   | 1923           | Colorado River Aqueduct – Discharge Line Isolation Couplings and Bulkheads Installation | J. F. Shea Construction, Inc.                         | \$32,946,000               | \$545,784    | 9/27/19              | 6/21                  | 2%  |
| 22   | 1931           | Joseph Jensen Water Treatment Plant Modules 2 and 3 Flocculator Rehabilitation          | Myers & Sons Construction, LLC                        | \$8,888,000                | \$855,269    | 6/14/19              | 2/21                  | 10% |
| 23   | 1943           | East Orange County Feeder No. 2 Service Connection A-06 Rehabilitation                  | Kaveh Engineering & Construction, Inc.                | \$594,480                  | \$18,000     | 11/14/19             | 7/20                  | 3%  |
| 24   | 1953           | Installation of Yorba Linda Generator Enclosure   | Mehta Mechanical Company, Inc. dba MMC, Inc.          | \$475,000                  | \$195,000    | 8/1/19               | 2/20                  | 41% |
| 25   | 1959           | Colorado River Aqueduct – Whitewater Erosion Protection Structure Rehabilitation        | Rockforce Construction, LLC.                          | \$3,634,250                | \$896,077    | 10/11/19             | 4/20                  | 25% |
| <b>Total contract value for active construction contracts:</b> |                |   | <b>\$319,588,608</b>                                  |                            |              |                      |                       |     |

The following table lists the 13 ongoing procurement contracts through the end of the 2<sup>nd</sup> Quarter.

Table 12: Active Procurement Contracts at the End of 2<sup>nd</sup> Quarter

| Cont. No.   | Contract   | Contractor  | Contract Amount <sup>10</sup>             | Earnings Through Dec. 2019 | Start Date <sup>11</sup> | Est. Delivery Completion Date | Est. Percent Complete <sup>12</sup> |     |
|---|------------|---|---|----------------------------|--------------------------|-------------------------------|-------------------------------------|-----|
| 1   | 1851       | Furnishing Horizontal Axially Split Centrifugal Pumps for the Greg Avenue Pump Station    | Xylem Water Solutions U.S.A., Inc.        | \$1,492,290                | \$478,878                | 5/16/17                       | 5/20                                | 32% |
| 2   | 1861       | Furnishing Lubricated Plug Valves for Second Lower Feeder                                 | Southwest Valve & Equipment, Inc.         | \$2,380,909                | \$2,362,968              | 9/11/17                       | Delivered                           | 99% |
| 3   | 1867       | Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 1           | Crispin Valve, LLC                        | \$4,866,067                | \$0                      | 12/18/17                      | 4/20                                | 0%  |
| 4   | 1868       | Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 2           | DeZurick, Inc.                            | \$771,984                  | \$0                      | 12/18/17                      | 4/20                                | 0%  |
| 5   | 1873       | Furnishing One Hydraulic Shear System for the La Verne Maintenance Shops                  | Landmark Solutions, LLC                   | \$146,925                  | \$14,203                 | 3/21/18                       | 2/20                                | 10% |
| 6   | 1912       | Furnishing Large-Diameter Conical Plug Valves   | Ebara Corporation                         | \$23,750,060               | \$2,375,006              | 12/24/18                      | 6/23                                | 10% |
| 7   | 1922       | Furnishing One Double Column Vertical Machining Center for the La Verne Maintenance Shops | Gosiger Machine Tools, LLC (Gosiger West) | \$2,194,600                | \$1,953,295              | 9/17/18                       | Delivered                           | 90% |
| 8   | 1925       | Furnishing Steel Pipe for the Second Lower Feeder PCCP Rehabilitation – Reaches 2 and 4   | Ameron Water Transmission Group, LLC      | \$12,977,916               | \$12,136,514             | 2/6/18                        | 6/20                                | 94% |
| 9   | 1948       | Refurbishing Valve Actuators for the Diemer Water Treatment Plant                         | Flowserve Litorque                        | \$3,532,700                | \$996,900                | 2/16/19                       | 3/21                                | 28% |
| 10  | 1968       | Furnishing Earthquake-Resistant Ductile Iron Pipe for the Casa Loma Siphon Barrel No. 1   | Kubota Corporation                        | \$9,237,782                | \$0                      | February 2020*                | 9/20                                | 0%  |
| 11  | 1978       | Furnishing Steel Pipe for the Casa Loma Siphon Barrel No. 1                               | Northwest Pipe Company                    | \$6,134,208                | \$0                      | 1/16/20                       | 12/20                               | 0%  |
| 12  | PO 1888 76 | Furnish Two Sodium Hypochlorite Storage Tanks to Replace Existing Tanks at Lake Mathews   | Pacific Mechanical Supply                 | \$331,996                  | \$0                      | 5/20/19                       | 2/20                                | 0%  |
| 13  | PO TBD     | Furnishing Equipment to Upgrade the Ozone Control System at Skinner Water Treatment Plant | Royal Industrial Solutions                | \$476,000                  | \$0                      | March 2020*                   | 3/21                                | 0%  |
| <b>Total contract value for active procurement contracts:</b> |            |   | <b>\$68,293,437</b>                       |                            |                          |                               |                                     |     |

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

<sup>11</sup> As of the date of this report, a Notice to Proceed has not been finalized and as such, dates marked with an asterisk are estimates only.

<sup>12</sup> Estimated Percent Complete is based on contract payments and may not reflect actual progress of fabrication. The contract will be 100% complete upon delivery of fabricated items and field services.

## 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 less than \$3 million, and those with projected construction costs greater than \$3 million.

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

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

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, become the project-specific metric goals, and in almost all cases lie within or below the metric target ranges. In rare cases, metric goals may be established which exceed the metric target ranges. In these cases, explanations for the variance are provided.

The tables that follow summarize the performance metric goals that were established for projects that were authorized to proceed with final design and construction in the current reporting period under each project category (projected construction costs less than and greater than \$3 million). For this reporting period, three projects established a metric goal for final design or inspection that exceeded the metric target range.

Table 13: Performance Metric Goals, Projects < \$3 Million

| Project   | Metric       | Est. Cost of Metric | Est. Construction Cost  | Goal % (Target range: 9-15%) |
|---|--------------|---------------------|-------------------------|------------------------------|
| Wadsworth Pumping Plant Sleeve Valves Refurbishment | Final Design | \$74,000            | \$767,000               | 9.6%                         |
| Service Connection A-06 Rehabilitation              | Inspection   | \$89,000            | \$960,000 <sup>13</sup> | 9.3%                         |

<sup>13</sup> The estimated construction cost has been revised from \$648,480 to \$960,000 to allow Metropolitan to procure materials and fabricate parts for the contractor installation so that overall project could be accelerated to meet agency request.

Table 14: Performance Metric Goals, Projects &gt; \$3 Million

| Project  | Metric       | Est. Cost of Metric | Est. Construction Cost | Goal % (Target range: 9-12%) |
|--|--------------|---------------------|------------------------|------------------------------|
| Lake Perris Bypass Pipeline Relining                   | Final Design | \$300,000           | \$6,300,000            | 4.8%                         |
| Gene Wash Reservoir Discharge Structure Rehabilitation | Inspection   | \$815,000           | \$6,866,900            | 11.9%                        |

Once a project phase is complete, either final design or construction, staff's performance against these metrics is then calculated and compared to the original goal. Table 15 and Table 16 below summarize the comparison between the original goal and the actual performance metrics for each project category for the current reporting period. In some cases, the actual performance metric at the completion of the phase may exceed the original performance metric goal but not the overall target.

Table 15: Performance Metric Actuals, Projects &lt; \$3 Million

| Project  | Metric       | Actual Cost of Metric | Construction Cost       | Goal % (Target range: 9-15%) | Actual % |
|--|--------------|-----------------------|-------------------------|------------------------------|----------|
| Service Connection A-06 Rehabilitation           | Final Design | \$115,067             | \$960,000 <sup>14</sup> | 12.0%                        | 12.0%    |
| Garvey Reservoir Drainage & Erosion Improvements | Inspection   | \$92,418              | \$1,053,746             | 14.8%                        | 8.8%     |

Table 16: Performance Metric Actuals, Projects &gt; \$3 Million

| Project  | Metric       | Actual Cost of Metric | Construction Cost | Goal % (Target range: 9-12%) | Actual % |
|--|--------------|-----------------------|-------------------|------------------------------|----------|
| Gene Wash Reservoir Discharge Structure Rehabilitation | Final Design | \$819,510             | \$6,866,900       | 11.7%                        | 11.9%    |
| Second Lower Feeder PCCP Rehabilitation - Reach 4      | Inspection   | \$728,657             | \$16,727,178      | 9.2%                         | 4.4%     |

<sup>14</sup> The estimated construction cost has been revised from \$648,480 to \$960,000 to allow Metropolitan to procure materials and fabricate parts for the contractor installation so that overall project could be accelerated to meet agency request.

## **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.

### **Relocations**

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

Utility Agreement Number: AR1209

Agency: City of Redondo Beach

Description: The City of Redondo Beach is constructing a right-turn-lane addition on Inglewood Avenue north of Manhattan Beach Boulevard, requiring relocation of Metropolitan's Service Connection WB-13 AMR cabinet, electrical service pedestal, vent stack, and below-ground appurtenant piping.

Estimated Amount: \$362,000

## **PROJECTS EXPENSED TO OVERHEAD**

Progress, costs, and future plans for the projects listed below were evaluated by Engineering Services, Finance, Water System Operations, and Information Technology. This assessment determined that no further work on these projects is warranted. All of the listed projects received the necessary Board authorization for various levels of effort conducted. However, no Metropolitan capital asset was ever placed into service. Accrued costs have been expensed since no capital asset will be constructed in the foreseeable future.

All of the funds appropriated to perform the authorized work for these projects will be returned to funds available for allocation, and the affected Appropriations will be reduced accordingly.

*Table 17: Projects Expensed to Overhead*

| <b>Project</b>   | <b>Expensed Amount</b> |
|--|------------------------|
| Chuckwalla Groundwater Storage Project – Feasibility Study       | \$1,628,624            |
| Skinner Modules 4 to 6 Surface Wash Valves and Actuators Upgrade | \$51,805               |

**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 18: Program and Appropriation Budget vs. Cost and Planned Expenditures vs. Actuals*

| Capital Programs/Appropriations                            | Appn. No.    | Total to Dec. 2019       |                                 | Biennium to Dec. 2019            |                                 |
|--|--------------|--------------------------|---------------------------------|----------------------------------|---------------------------------|
|  |              | Appn. Amount (\$1,000's) | Actual Expenditures (\$1,000's) | Planned Expenditures (\$1,000's) | Actual Expenditures (\$1,000's) |
| <b>Colorado River Aqueduct Reliability Program</b>         | <b>Total</b> | <b>\$353,271</b>         | <b>\$289,573</b>                | <b>\$74,157</b>                  | <b>\$43,590</b>                 |
| Cabazon Radial Gate Facility Improvements                  | 15320        | \$696                    | \$500                           | \$0                              | \$46                            |
| White Water Siphon Protection                              | 15341        | \$15,223                 | \$10,493                        | \$2,941                          | \$1,139                         |
| CRA - Conveyance Reliability                               | 15373        | \$105,428                | \$106,923                       | \$11,018                         | \$5,945                         |
| CRA – Pumping Plant Reliability                            | 15374        | \$24,467                 | \$23,988                        | \$3                              | \$1                             |
| CRA - Electrical/Power Systems Reliability                 | 15384        | \$47,551                 | \$31,231                        | \$10,922                         | \$8,705                         |
| CRA - Reliability for FY2006/07 through FY2011/12          | 15438        | \$107,602                | \$88,025                        | \$13,687                         | \$11,543                        |
| CRA Main Pump Reliability                                  | 15481        | \$26,879                 | \$8,931                         | \$8,257                          | \$5,836                         |
| CRA Reliability for FY2012/13 through FY2017/18            | 15483        | \$23,070                 | \$18,493                        | \$24,324                         | \$9,386                         |
| CRA Reliability for FY2018/19 through FY2023/24            | 15507        | \$1,355                  | \$989                           | \$3,006                          | \$989                           |
| <b>Cost Efficiency &amp; Productivity Program</b>          | <b>Total</b> | <b>\$198,900</b>         | <b>\$169,851</b>                | <b>\$7,333</b>                   | <b>\$7,201</b>                  |
| DVL Recreation Facilities                                  | 15334        | \$87,064                 | \$64,044                        | \$599                            | \$52                            |
| Power Reliability and Energy Conservation                  | 15391        | \$54,795                 | \$52,842                        | \$23                             | \$660                           |
| Information Technology System - Business, Finance, and HR  | 15411        | \$22,468                 | \$22,225                        | \$893                            | \$618                           |
| Yorba Linda Power Plant Modifications                      | 15446        | \$17,125                 | \$17,004                        | \$0                              | \$13                            |
| Business Operations Improvement                            | 15484        | \$7,270                  | \$6,588                         | \$1,608                          | \$673                           |
| Project Controls and Reporting System                      | 15490        | \$6,440                  | \$4,134                         | \$2,319                          | \$2,466                         |
| Enterprise Content Management                              | 15500        | \$1,900                  | \$1,207                         | \$1,892                          | \$912                           |
| Property Acquisition, 4725 Via Corona, City Of Yorba Linda | 15514        | \$1,778                  | \$1,751                         | \$0                              | \$1,751                         |
| DVL Recreation Rehabilitation & Refurbishment              | 15515        | \$60                     | \$56                            | \$0                              | \$56                            |

| Capital Programs/Appropriations  | Appn. No.    | Total to Dec. 2019       |                                 | Biennium to Dec. 2019            |                                 |
|--|--------------|--------------------------|---------------------------------|----------------------------------|---------------------------------|
|  |              | Appn. Amount (\$1,000's) | Actual Expenditures (\$1,000's) | Planned Expenditures (\$1,000's) | Actual Expenditures (\$1,000's) |
| <b>Distribution System Reliability Program</b>   | <b>Total</b> | <b>\$381,803</b>         | <b>\$334,053</b>                | <b>\$87,417</b>                  | <b>\$69,285</b>                 |
| Conveyance and Distribution System - Rehabilitation                                      | 15377        | \$95,236                 | \$91,546                        | \$21,743                         | \$11,610                        |
| Reservoir Cover and Replacement  | 15417        | \$52,964                 | \$51,520                        | \$18,317                         | \$13,275                        |
| Dam Rehabilitation & Safety Improvements   | 15419        | \$10,310                 | \$8,764                         | \$7,423                          | \$2,364                         |
| Conveyance and Distribution System - Rehabilitation for FY2006/07 through FY2011/12      | 15441        | \$107,829                | \$101,322                       | \$3,380                          | \$6,363                         |
| Hydroelectric Power Plant Improvements   | 15458        | \$18,247                 | \$12,599                        | \$3,595                          | \$5,053                         |
| Conveyance and Distribution System - Rehabilitation for FY2012/13 through FY2017/18      | 15480        | \$89,352                 | \$65,764                        | \$30,405                         | \$28,082                        |
| Pipeline Rehabilitation and Replacement  | 15482        | \$573                    | \$96                            | \$0                              | \$96                            |
| Conveyance and Distribution System - Rehabilitation for FY2018/19 through FY2023/24      | 15503        | \$7,292                  | \$2,442                         | \$2,554                          | \$2,442                         |
| <b>District Housing &amp; Property Improvements Program</b>                              | <b>Total</b> | <b>\$1,500</b>           | <b>\$234</b>                    | <b>\$0</b>                       | <b>\$234</b>                    |
| Employee Village Enhancement   | 15513        | \$1,500                  | \$234                           | \$0                              | \$234                           |
| <b>Minor Capital Projects Program</b>  | <b>Total</b> | <b>\$47,000</b>          | <b>\$27,928</b>                 | <b>\$6,795</b>                   | <b>\$6,349</b>                  |
| Capital Program for Projects Costing Less Than \$250,000 for FY2010/11                   | 15468        | \$3,500                  | \$3,002                         | \$0                              | \$29                            |
| Capital Program for Projects Costing Less Than \$250,000 for FY2012/13 through FY2013/14 | 15476        | \$10,000                 | \$8,432                         | \$0                              | -\$26                           |
| Capital Program for Projects Costing Less Than \$250,000 for FY2014/15 through FY2015/16 | 15489        | \$8,000                  | \$6,659                         | \$1,068                          | \$565                           |
| Capital Program for Projects Costing Less Than \$250,000 for FY2016/17 through FY2017/18 | 15498        | \$10,000                 | \$6,248                         | \$3,645                          | \$2,194                         |
| Capital Program for Projects Costing Less Than \$400,000 for FY2018/19 through FY2019/20 | 15504        | \$15,500                 | \$3,587                         | \$2,082                          | \$3,587                         |
| <b>Prestressed Concrete Cylinder Pipe Rehabilitation Program</b>                         | <b>Total</b> | <b>\$249,908</b>         | <b>\$178,421</b>                | <b>\$70,791</b>                  | <b>\$71,966</b>                 |
| Assess Condition Of Metropolitan's Prestressed Concrete Cylinder Pipe                    | 15297        | \$7,870                  | \$7,870                         | \$0                              | \$196                           |
| PCCP Rehabilitation and Replacement  | 15471        | \$24,243                 | \$19,746                        | \$2,919                          | \$1,661                         |
| Sepulveda Feeder PCCP Rehab  | 15496        | \$26,310                 | \$21,137                        | \$1,914                          | \$5,938                         |
| Second Lower Feeder PCCP Rehab   | 15497        | \$180,855                | \$126,956                       | \$57,608                         | \$61,459                        |
| Allen-McColloch Pipeline, Calabasas Feeder, and Rialto Pipeline PCCP Rehabilitation      | 15502        | \$10,630                 | \$2,712                         | \$8,351                          | \$2,712                         |

| Capital Programs/Appropriations                             | Appn. No.    | Total to Dec. 2019       |                                 | Biennium to Dec. 2019            |                                 |
|---|--------------|--------------------------|---------------------------------|----------------------------------|---------------------------------|
|   |              | Appn. Amount (\$1,000's) | Actual Expenditures (\$1,000's) | Planned Expenditures (\$1,000's) | Actual Expenditures (\$1,000's) |
| <b>Regional Recycled Water Supply Program</b>               | <b>Total</b> | <b>\$21,000</b>          | <b>\$20,661</b>                 | <b>\$4,192</b>                   | <b>\$12,935</b>                 |
| Demonstration-Scale Recycled Water Treatment Plant          | 15493        | \$21,000                 | \$20,661                        | \$4,192                          | \$12,935                        |
| <b>Regulatory Compliance Program</b>                        | <b>Total</b> | <b>\$170,234</b>         | <b>\$167,907</b>                | <b>\$7,956</b>                   | <b>\$876</b>                    |
| Chlorine Containment and Handling Facilities                | 15346        | \$162,370                | \$160,328                       | \$0                              | \$697                           |
| CRA - Discharge Containment                                 | 15385        | \$7,864                  | \$7,579                         | \$7,956                          | \$179                           |
| <b>Right of Way &amp; Infrastructure Protection Program</b> | <b>Total</b> | <b>\$23,830</b>          | <b>\$22,973</b>                 | <b>\$8,820</b>                   | <b>\$1,366</b>                  |
| Right of Way & Infrastructure Protection                    | 15474        | \$23,830                 | \$22,973                        | \$8,820                          | \$1,366                         |
| <b>System Flexibility/Supply Reliability Program</b>        | <b>Total</b> | <b>\$656,377</b>         | <b>\$605,188</b>                | <b>\$7,123</b>                   | <b>\$14,895</b>                 |
| Hayfield and Lake Perris Groundwater Recovery               | 15402        | \$1,500                  | \$705                           | \$622                            | \$448                           |
| Perris Valley Pipeline                                      | 15425        | \$129,100                | \$127,100                       | \$319                            | \$1,631                         |
| Joint Water Purification Study                              | 15462        | \$947                    | \$686                           | \$0                              | \$0                             |
| Water Delivery System Improvements                          | 15488        | \$53,149                 | \$39,486                        | \$1,588                          | \$11,033                        |
| Verbena Property Acquisition                                | 15492        | \$264,000                | \$260,093                       | \$2,579                          | \$1,596                         |
| Delta Wetlands Properties (Delta Islands)                   | 15494        | \$196,000                | \$177,118                       | \$2,016                          | \$187                           |
| Wegis & Wey Property Acquisition                            | 15511        | \$11,681                 | \$0                             | \$0                              | \$0                             |
| <b>System Reliability Program</b>                           | <b>Total</b> | <b>\$255,753</b>         | <b>\$216,758</b>                | <b>\$55,996</b>                  | <b>\$55,386</b>                 |
| Information Technology System - Infrastructure              | 15376        | \$50,321                 | \$45,532                        | \$13                             | \$988                           |
| Information Technology System - Security                    | 15378        | \$9,621                  | \$7,238                         | \$1,831                          | \$880                           |
| La Verne Shop Facilities Upgrade                            | 15395        | \$45,010                 | \$45,118                        | \$4,415                          | \$3,934                         |
| Quagga Mussel Control Program                               | 15447        | \$10,796                 | \$10,596                        | \$0                              | \$0                             |
| Water Operation Control                                     | 15467        | \$51,414                 | \$36,377                        | \$15,238                         | \$13,151                        |
| Union Station Headquarters Improvements                     | 15473        | \$43,458                 | \$37,791                        | \$8,247                          | \$26,810                        |
| IT Infrastructure Reliability                               | 15487        | \$19,940                 | \$14,427                        | \$10,176                         | \$2,389                         |

| Capital Programs/Appropriations  | Appn. No.    | Total to Dec. 2019       |                                 | Biennium to Dec. 2019            |                                 |
|--|--------------|--------------------------|---------------------------------|----------------------------------|---------------------------------|
|  |              | Appn. Amount (\$1,000's) | Actual Expenditures (\$1,000's) | Planned Expenditures (\$1,000's) | Actual Expenditures (\$1,000's) |
| Operations Support Facilities Improvement                                    | 15495        | \$17,708                 | \$16,269                        | \$8,760                          | \$5,208                         |
| Metropolitan Security System Enhancements                                    | 15499        | \$4,271                  | \$2,303                         | \$2,040                          | \$970                           |
| Infrastructure Reliability Information System                                | 15501        | \$3,214                  | \$1,107                         | \$2,755                          | \$1,056                         |
| System-Wide Paving & Roof Replacements for FY 2018/19 through FY 2019/20     | 18909        | \$0                      | \$0                             | \$426                            | \$0                             |
| Enterprise Data Analytics  | 18910        | \$0                      | \$0                             | \$2,096                          | \$0                             |
| <b>Treatment Plant Reliability Program</b>                                   | <b>Total</b> | <b>\$883,576</b>         | <b>\$792,375</b>                | <b>\$53,703</b>                  | <b>\$67,212</b>                 |
| Skinner Water Treatment Plant Improvements                                   | 15365        | \$154,206                | \$150,899                       | \$0                              | \$108                           |
| Weymouth Water Treatment Plant Improvements                                  | 15369        | \$190,910                | \$181,024                       | \$9,675                          | \$4,441                         |
| Jensen Water Treatment Plant Improvements                                    | 15371        | \$47,352                 | \$46,845                        | \$4,015                          | \$243                           |
| Diemer Water Treatment Plant Improvements                                    | 15380        | \$213,657                | \$179,794                       | \$6,246                          | \$24,122                        |
| 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                  | \$2,004                         | \$267                            | \$394                           |
| Diemer Water Treatment Plant Improvements for FY2006/07 through FY2011/12    | 15436        | \$70,939                 | \$61,953                        | \$7,935                          | \$9,339                         |
| Weymouth Water Treatment Plant Improvements for FY2006/07 through FY2011/12  | 15440        | \$19,559                 | \$18,232                        | \$957                            | \$1,477                         |
| Jensen Water Treatment Plant Improvements for FY2006/07 through FY2011/12    | 15442        | \$68,620                 | \$55,368                        | \$2,004                          | \$6,731                         |
| Mills Water Treatment Plant Improvements for FY2006/07 through FY2011/12     | 15452        | \$21,477                 | \$18,924                        | \$2,522                          | \$3,494                         |
| Weymouth Water Treatment Plant Improvements for FY2012/13 through FY2017/18  | 15477        | \$71,557                 | \$60,943                        | \$7,812                          | \$11,226                        |
| Diemer Water Treatment Plant Improvements for FY2012/13 through FY2017/18    | 15478        | \$1,425                  | \$781                           | \$285                            | \$411                           |
| Mills Water Treatment Plant Improvements for FY2012/13 through FY2017/18     | 15479        | \$1,094                  | \$414                           | \$2,397                          | \$245                           |
| Skinner Water Treatment Plant Improvements for FY 2012/13 Through FY 2017/18 | 15485        | \$1,990                  | \$1,703                         | \$0                              | \$3                             |
| Jensen Water Treatment Plant Improvements for FY2012/13 through FY2017/18    | 15486        | \$7,449                  | \$6,156                         | \$1,202                          | \$2,920                         |
| Weymouth Water Treatment Plant Improvements for FY2018/19 through FY2023/24  | 15505        | \$200                    | \$200                           | \$191                            | \$200                           |
| Jensen Water Treatment Plant Improvements for FY2018/19 through FY2023/24    | 15508        | \$360                    | \$128                           | \$4,104                          | \$128                           |

| Capital Programs/Appropriations   | Appn. No.    | Total to Dec. 2019       |                                 | Biennium to Dec. 2019            |                                 |
|---|--------------|--------------------------|---------------------------------|----------------------------------|---------------------------------|
|   |              | Appn. Amount (\$1,000's) | Actual Expenditures (\$1,000's) | Planned Expenditures (\$1,000's) | Actual Expenditures (\$1,000's) |
| Diemer Water Treatment Plant Improvements for FY2018/19 through FY2023/24     | 15510        | \$455                    | \$265                           | \$549                            | \$265                           |
| Skinner Water Treatment Plant, Improvements For FY 2018/19 Through FY 2023/24 | 15512        | \$2,941                  | \$1,465                         | \$2,126                          | \$1,465                         |
| Mills Water Treatment Plant Improvements for FY2018/19 through FY2023/24      | 18905        | \$0                      | \$0                             | \$1,417                          | \$0                             |
| <b>Water Quality/Oxidation Retrofit Program</b>                               | <b>Total</b> | <b>\$877,069</b>         | <b>\$871,888</b>                | <b>\$3,239</b>                   | <b>\$2,655</b>                  |
| Skinner Filtration Plant, Oxidation Retrofit                                  | 15388        | \$245,155                | \$244,582                       | \$0                              | \$49                            |
| Diemer Water Treatment Plant Oxidation Retrofit                               | 15389        | \$370,192                | \$370,024                       | \$1,797                          | \$219                           |
| Weymouth Water Treatment Plant Oxidation Retrofit                             | 15392        | \$251,482                | \$247,997                       | \$1,325                          | \$1,625                         |
| Enhanced Bromate Control  | 15472        | \$10,240                 | \$9,285                         | \$117                            | \$762                           |
| <b>Total CIP</b>  |              | <b>\$4,119,221</b>       | <b>\$3,697,810</b>              | <b>\$387,522</b>                 | <b>\$353,950</b>                |

Notes on above table:

- \$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 or write-offs greater than actual fiscal year costs
- Two appropriations, CRA – Conveyance Reliability and La Verne Shop Facilities Upgrade, have exceeded their authorized budgets during the 2<sup>nd</sup> Quarter. These variances will be rectified in the coming quarter.
  - CRA – Conveyance Reliability (Appropriation No. 15373): Costs exceeded the budget for the following reasons:
    - Extensive extra work scope was identified for the Gene Wash and Copper Basin Discharge Valve Replacements project. Consequently, the project was split into two construction contract packages to better address immediate concerns from the Division of Safety of Dams (DSOD), and to add improvements to the access road to the Copper Basin valve.
    - Additional funding from FEMA (the Federal Emergency Management Agency), for a completed project to refurbish sections of the aqueduct, has not yet been credited to the appropriation.
  - La Verne Shop Facilities Upgrade (Appropriation No. 15395): Costs exceeded the budget because the new vertical machining center footing design was more extensive than originally anticipated. Consequently, additional efforts were required to complete geotechnical testing and footing design.

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