



- **CIP Quarterly report for the period ending March 2012**

Summary

This report provides a summary of fiscal year accomplishments, fiscal year capital expenditures to date, and status updates on major capital projects. Also included in this report is information regarding service connections and relocations authorized by the General Manager during the reporting period.

During the third quarter of fiscal year 2011/12, seven board actions appropriated a total of \$19.4 million, and two procurement contracts and one construction contract were awarded. Through March 2012, 63 programs encompassing over 300 projects were underway. All capital programs are within their appropriated budgets. Actual fiscal year capital expenditures through March 2012 for all programs totaled \$108.1 million, compared to a budget of \$199.9 million for the three quarters. The fiscal year variance between budgeted and expended dollars is primarily due to the rescheduling of construction of the Weymouth Oxidation Retrofit Program (ORP) to begin in fiscal year 2012/13. Other program variances are due to rescheduling of several construction projects to minimize potential conflicts with other ongoing projects at the same location, to better define the scope and cost of the work, and to evaluate alternative methodologies and schedules. A high priority continues to be assigned to projects required for safety and to meet regulatory compliance deadlines, as well as those needed to ensure reliable and efficient operations.

During the period from July 2011 through March 2012, \$55.9 million in construction contract payments were made, reflecting progress on projects such as the Diemer ORP, the electrical system upgrades at the Weymouth plant, the LaVerne Coating Shop upgrades, the domestic and fire water system improvements at the Diemer plant, and the completion of the Diemer North Access Road. Seventeen construction contracts were completed during the first three quarters of the 2011/12 fiscal year.

At the end of the third quarter, 21 construction contracts were underway with a total value of approximately \$263 million. Two contracts are 99 percent complete.

More detailed information regarding accomplishments is included in the following pages.

Detailed Report

Section 2720 of the Administrative Code requires the General Manager to report quarterly to the Engineering and Operations Committee on the Capital Investment Plan, including Service connections approved by the General Manager pursuant to Sections 4700-4708 with the estimated cost and approximate location of each and the execution of any relocation agreements involving an amount in excess of \$100,000 under the authority of Section 8122(c).

No new agreements for service connections or relocations were approved during the reporting period.

Highlights of progress and major milestones on selected projects are presented below, grouped by driver. The project drivers are described below:

Water Quality – Programs to ensure Metropolitan meets all applicable water quality regulations and codes.

Infrastructure Reliability – Programs to upgrade, refurbish or replace, existing facilities and equipment, including pipeline relocations and protection; and to ensure the protection, safety, and security of Metropolitan's employees, visitors, and all real and intellectual properties and assets.

Regulatory – Programs to ensure Metropolitan's operations and processes are in full compliance with all applicable regulations and codes other than water quality regulations.

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Cost/Efficiency/Productivity – Programs to upgrade, replace, or provide new facilities, software applications and technology that will provide economic savings that outweigh project costs through enhanced business and operating processes.

Supply and Delivery Reliability – Programs to provide new water supplies and/or major delivery or treatment facility expansions, including service connections.

Water Quality

- **Diemer Oxidation Retrofit Program**
- **Weymouth Oxidation Retrofit Program**
- **Cross Connection Prevention Program**

- **Diemer Oxidation Retrofit Program**

Construction of ozone facilities at the Diemer plant is approximately 96 percent complete. Testing and start-up activities will be initiated in late 2012. A shutdown of the Diemer plant was successfully completed in January 2012 to hydraulically tie-in the new facilities to the existing plant.



Diemer Plant
New Ozone Generation Building and Contactors

- **Weymouth Oxidation Retrofit Program**

Final design of the main Weymouth ORP construction contract is complete. Competitive bids were received and opened on April 2, 2012. Construction of the new ORP Switchgear Building is 91 percent complete and is scheduled to be completed by late 2012. Construction of the Weymouth Inlet Conduit Relocation project, which is required to support the Weymouth ORP, was completed in October 2011.



Weymouth Plant
New Electrical Switchyard

- **Cross Connection Prevention Program**

The Cross Connection Prevention Program was initiated to address 300 sites where air release/vacuum valves located in underground vaults create a potential cross connection. A total of 12 construction contracts are being utilized to relocate the valves to above-ground enclosures. Phases I, II, and III have been completed, covering a combined total of 221 sites.

Phase IV, which addresses the remaining 79 sites, commenced construction in March 2011. The two remaining construction contracts are 95% complete and will be completed by June 2012.



Typical Air Release/Vacuum Valve Relocation

Infrastructure Reliability – Treatment Plants

- **Diemer North Access Road**
- **Weymouth Electrical Upgrade**
- **Diemer Fire and Potable Water Pump Station**
- **Diemer Filter Media Replacement**

- Diemer North Access Road

The Diemer North Access Road will provide a secondary access route to the Diemer plant. The road will also enhance security and provide fire break capabilities for the plant. Road construction was completed in February 2012. It is anticipated that the road will be open for use by summer 2012.

A revegetation contract commenced in late 2011 and was completed in April 2012. The contractor is currently maintaining the new vegetation during a 9-month Establishment and Maintenance Period. Monitoring of the re-vegetation will continue for a period of five years, in accordance with the project’s environmental permits.



Diemer North Access Road

- Weymouth Electrical Upgrades

The Weymouth Electrical Upgrades project will replace and upgrade numerous components of the plant’s power distribution system. The existing system’s principal components date back to the plant’s original construction and have reached the end of their service life. The upgrades will also enable the Weymouth plant to operate under the increased power demands of the new ozonation facilities. Construction is 90 percent complete and is scheduled to be completed by late 2012.



**Weymouth Power System Upgrade
Standby Generator Installation**

- **Diemer Fire and Potable Water Pump Station**

The Diemer Fire and Potable Water Pump Station is being relocated and upgraded to meet increased fire water demands resulting from the new and planned facilities at the Diemer plant, and to draw potable water from downstream of the plant's finished water reservoir. The new pumps have been successfully tested, and overall construction is 99% complete. Construction is scheduled to be completed in late May 2012.



**Diemer Plant
Fire and Potable Water Pump Station**

- **Diemer Filter Media Replacement**

This project will replace anthracite and sand filter media to improve filter performance and avoid the release of manganese to the treated water following the commencement of ozonation and biological filtration. Construction is 50 percent complete and is scheduled to be completed by September 2012.



**Diemer Plant
West-Side Filter Bays**

Infrastructure Reliability - Distribution System

- **Prestressed Cylinder Concrete Pipe (PCCP) Rehabilitation**

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The initial stage of the PCCP Rehabilitation and Replacement Program was authorized in September 2011. This comprehensive long-term program was established to provide reliability for Metropolitan’s water distribution system and reduce the risk of costly emergency repairs of PCCP lines. Rehabilitation of PCCP segments on the Allen McColloch Pipeline, Sepulveda Feeder, and Foothill Feeder has been completed. Final design of joint repairs for other PCCP lines is in progress. In addition, electromagnetic inspections of 33 miles of PCCP lines have been completed.



**PCCP Rehabilitation
Carbon Fiber Joint Repairs**

Infrastructure Reliability – Colorado River Aqueduct (CRA)

- **Eagle Mountain Pumping Plant Standby Generator Replacement**
- **CRA High -Voltage Disconnect Switches Replacement**

- Eagle Mountain Pumping Plant Standby Generator Replacement

This project will relocate and replace the existing 50-year-old standby diesel engine generator, fuel tank, and accessories. Standby generators at the CRA pumping plants are needed to provide back-up power for critical auxiliary systems such as fire and cooling water pumps, emergency lighting, and sump pumps. Construction is 90% complete, and is scheduled to be completed by May 2012.



**Eagle Mountain Pumping Plant
New Standby Generator**

- CRA High Voltage Disconnect Switches Replacement

The existing high voltage switches at all five CRA pumping plants were installed in the 1930's and 1950's, and have reached the end of their service life. Some switches do not operate reliably and spare parts are no longer available. The switches are needed to isolate equipment so that maintenance and repairs can be performed in a safe and timely manner. Construction at the Eagle and Hinds Pumping Plants was completed this winter. The remaining work is scheduled to be completed during the fiscal year 2012/13 winter shutdown period.



CRA High Voltage Disconnect Switches Replacement

Infrastructure Reliability – Other

- **La Verne Coating Shop Upgrades**
- **Dam Rehabilitation and Safety Improvements**

- La Verne Coating Shop Upgrades

There are two coating shop buildings at La Verne that are overcrowded and whose equipment has reached the end of its service life. The upgraded facility will improve quality, increase efficiency, and enhance worker safety. The project includes a self-contained sand blasting booth, a modern blast media collection and filter system, several new paint/drying booths, material staging areas, and work benches. Construction of the coating shop upgrades is 50 percent complete and is scheduled to be completed by December 2012.



LaVerne Coating Shop Upgrades

- Dam Rehabilitation and Safety Improvements

The Dam Stability Assessment project is one component of the Dam Rehabilitation and Safety Improvements Program. This project provides an overall evaluation of the seismic stability of Metropolitan’s dams and appurtenant structures, and provides a framework for evaluating and comparing risks.

Through April 2012, the evaluations of 24 of Metropolitan’s 30 dams have been completed, with conclusions that the dams are in satisfactory condition. Detailed evaluations are underway for the six remaining dams.



Automated Dam Monitor at Diamond Valley Lake

Regulatory

• **Chemical Unloading Facility Chlorine Containment**

• **Chemical Unloading Facility (CUF) Chlorine Containment**

The Chemical Unloading Facility, which was constructed in 1975, is used to transfer liquid chlorine from vendor-supplied rail cars to Metropolitan-owned cargo trailers. These cargo trailers are then delivered by truck to several Metropolitan treatment plants where they are housed within chlorine containment facilities. Metropolitan’s policy is to provide containment facilities where chlorine is stored in order to meet up-to-date fire code requirements and a consistent level of safety and security. Chlorine containment facilities have been completed at each of Metropolitan’s five water treatment plants. CUF is the final location to be addressed. The new facilities include a new enclosed building that will house two 90-ton liquid chlorine railcars and four 19-ton cargo trailers, trans-loading equipment, chlorine neutralization system, process monitoring room, maintenance area, emergency generator, and a recompression system for use during transloading operations and routine trailer maintenance. Final design is 60% complete and is scheduled to be completed by late 2012. Construction is scheduled to begin in fiscal year 2013/14.



Existing Chemical Unloading Facility

Cost/Efficiency/Productivity

- **Electronic Discovery Management System**
- **CEQA and Entitlement for Solar Power Facilities at Diamond Valley Lake**

- **Electronic Discovery Management (E-Discovery) System**

Staff completed development and testing of email archiving and E-Discovery software tools for the Legal Department for use in responding to discovery and public records requests. The emails are being indexed and archived in a central storage area on Metropolitan servers, instead of end users' disk drives. This will reduce the risk of losing important information that Metropolitan is required to preserve. Migration and archiving of all emails to the new central storage area is expected to be completed this fiscal year.



- **CEQA and Entitlement for Solar Power Facilities at Diamond Valley Lake (DVL)**

In February 2011, the Board authorized initiation of CEQA compliance and entitlement activities related to the proposed Diamond Valley Lake solar power projects. Staff and consultants have worked with the City of Hemet to review existing environmental assessments, geotechnical studies, and other site issues. Additionally, staff and consultants have provided input into the update of the City's General Plan. Moreover, some environmental constraint analyses have been completed. These efforts and the data collected will be used during the CEQA process. This phase of the project is 15% complete.



Sun Edison Solar Farm in Austin TX

Supply and Delivery Reliability

- Perris Valley Pipeline South Reach

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The Perris Valley Pipeline is a new 6.5-mile-long treated water conveyance facility in western Riverside County. Construction of the South Reach, with the exception of a portion of tunnel, was completed in November 2011.

During the period, Metropolitan’s Construction Services Unit transported the tunnel casing segments that were fabricated for the deferred tunnel portion from temporary storage at the fabrication plant. The pipe and tunnel casing will be stored at Lake Mathews until needed.



Metropolitan crews unloading tunnel casing for storage at Lake Mathews

Capital Program for Projects Costing Less Than \$250,000 for Fiscal Year 2011/12

The Minor Cap program is authorized every fiscal year to enable staff to expedite small capital projects that invariably arise during the year. Because 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 the criteria without seeking additional board approval.

A total of seventeen projects have been authorized under the Minor Cap 2011/12 program through the third quarter of fiscal year 2011/12. During the period from January 1 through March 31, 2012, the following seven projects were authorized:

- Diemer Tunnel Chlorine Detection System – Replacement of aging and outdated chlorine detection system components.
- Weymouth Terrazzo Drop Gate Covers – Rehabilitation of damaged and deteriorated terrazzo drop gate covers over the Weymouth inlet conduit located in the Administration Building.
- Weymouth Chlorine Scrubber Platform – Construction of additional elevated access platforms around the chlorine scrubber equipment in the containment building to improve access for maintenance.
- CRA Canal Liner Replacement – Replacement of cracked canal liner at three locations along the CRA.
- Whipple Mountain Sodium Hypochlorite Diffuser Replacement – Replacement and relocation of the sodium hypochlorite diffuser used for Quagga Mussel control to eliminate the corrosive effect on the tunnel mortar lining.
- Weymouth Drainage Improvements – Construction of grading improvements near Sedalia Avenue to eliminate excessive turbidity in discharged storm water and comply with the plant’s NPDES General Permit.
- Lakeview Pipeline Leak Repair at Station 2510+49 – Installation of an internal buttstrap at the pipe joint to eliminate a recently discovered leak.

The following table provides the overall status of the Minor Cap 2011/12 capital program.

Amount appropriated	\$3,000,000
Number of projects approved under the program	17
Number of projects initiated to date	14
Number of projects completed through March 2012	3
Percentage of projects completed	18%
Expenditures through March 2012	\$796,398

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