



• CIP Quarterly report for the period ending December 2011

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 second quarter of fiscal year 2011/12, ten board actions appropriated a total of \$13.3 million, and eight construction contracts were awarded. Through December 2011, 63 programs encompassing over 300 projects were underway. All capital programs are within their appropriated budgets. Actual fiscal year capital expenditures through December 2011 for all programs totaled \$69.6 million, compared to a budget of \$127.9 million for the first two 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 construction projects in consideration of 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 December 2011, \$35.3 million in construction contract payments were made, reflecting progress on projects such as the Diemer ORP, the Diemer North Access Road, the domestic and fire water system improvements at the Diemer plant, the electrical system upgrades at the Weymouth plant, and the LaVerne Coating Shop upgrades. Six construction contracts were completed during the same period.

At the end of the second quarter, 24 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).

A new agreement to expand the capacity of Service Connection EM-20 from 100 cubic feet per second (cfs) to 110 cfs was executed. Service Connection EM-20 is located on the San Diego Pipeline No. 3 Bypass Pipeline. The cost of the expansion, which requires modifications to the automated meter reader (AMR) and remote terminal unit (RTU), is estimated to be \$9,753. No new relocations were approved during the reporting period.

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

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.

Board Report (CIP Quarterly report for the period ending December 2011)

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**

- **Diemer Oxidation Retrofit Program**
Construction of ozone facilities at the Diemer plant is approximately 92 percent complete, and all testing and start-up work are anticipated to be completed by late 2012. A scheduled shutdown of the Diemer plant occurred in January 2012 to perform various tie-ins to the new facilities.



**Diemer Plant
Installation of new inlet piping**

- **Weymouth Oxidation Retrofit Program**
Final design of the main Weymouth ORP construction contract is complete. This project was advertised for bids on January 17, 2012. Construction of the new ORP Switchgear Building is 90 percent complete and is scheduled to be completed by mid-2012. Construction of the Weymouth Inlet Conduit Relocation project, which is required to support the Weymouth ORP, was completed in October 2011.



**Weymouth Plant
Conductor installation between the new S.C. Edison
switchyard and the ORP switchgear**

Infrastructure Reliability - Treatment Plants

- **Diemer North Access Road**
- **Weymouth Electrical Upgrades**
- **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 is 99% complete as of December 2011.

A revegetation contract commenced in late 2011 with anticipated completion in April 2012. Monitoring of the revegetation will continue for a period of five years, in accordance with the project's environmental permits.



Installation of fire hydrant and piping along the new 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 design and many of the principal components date back to the plant's original construction and have reached the end of their service life. The new upgrades will also enable the Weymouth plant to operate under the increased power demands of the new ozone facilities. Construction is 89 percent complete and is scheduled to be completed by mid-2012.



Installation of new fiber optic cable to 2nd floor of Weymouth Administration Building

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

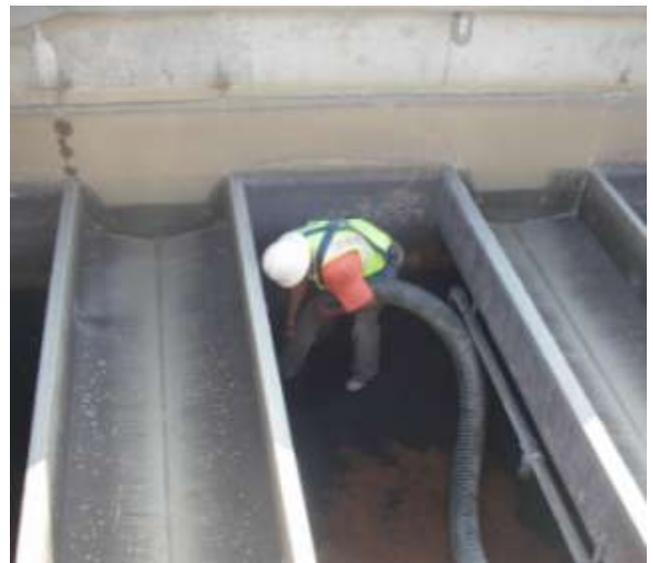
The Diemer Fire and Potable Water Pump Station is being relocated and upgraded to meet increased fire water demands resulting from the new and planned facilities at the Diemer plant, and to draw potable water from downstream of the Diemer Finished Water Reservoir. Construction is 96 percent complete and is scheduled to be completed by March 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 20 percent complete and is scheduled to be completed by August 2012.



**Diemer Plant
Removal of anthracite from filter bed**

Infrastructure Reliability - Distribution System

- Prestressed Cylinder Concrete Pipe Rehabilitation and Replacement Program
- Eagle Rock Tower and Puddingstone Spillway Gates Rehabilitation

- Prestressed Cylinder Concrete Pipe (PCCP) Rehabilitation

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 (AMP), Sepulveda and Foothill Feeders has been completed. Final design of joint repairs for other PCCP lines is in progress. In addition, electromagnetic inspections of 16.42 miles on three PCCP lines have been completed.



Cross-section of typical PCCP

- Eagle Rock Tower and Puddingstone Spillway Gates Rehabilitation

The project consists of refurbishing and installing five slide gates; removing a radial gate and replacing with two electric motor-operated slide gates; installing Metropolitan-furnished actuators for each gate; providing new gate stems and guides; restoring damaged surfaces; and testing and commissioning all gates. Construction is 3 percent complete and is scheduled to be completed in February 2013.



Existing Eagle Rock gates to be refurbished

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

The 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 50% complete, and is scheduled to be completed by May 2012.



Placement of concrete for the transformer containment structure

- 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 is 5 percent complete. The work is scheduled to be completed by March 2013.



Electrical ductbank work in the 230 kV switchyard at Eagle Mountain Pumping Plant

Infrastructure Reliability – Other

- **La Verne Coating Shop Upgrades**
- **Palos Verdes Reservoir Cover Replacement**

- **La Verne Coating Shop Upgrades**

There are two coating shop buildings at La Verne that are overcrowded and do not meet current building codes. The equipment in the coating shops is 30 to 50 years old and 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 33 percent complete and is scheduled to be completed by December 2012.



Installation of electrical manhole and ductbank

- **Palos Verdes Reservoir Cover Replacement**

The floating cover on the Palos Verdes Reservoir has reached the end of its service life. Additionally, the reservoir's existing gunite-concrete liner surface has several areas of damage and will require installation of a new membrane liner and subdrain system. Preliminary design for the cover replacement is 75% complete and is scheduled to be completed by March 2012. A comprehensive liner evaluation report has been completed, and findings and recommendations will be incorporated into the final design.



Aerial view of the dewatered Palos Verdes Reservoir with the cover removed

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 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 40% complete and is scheduled to be completed by late 2012. Construction is scheduled to begin in fiscal year 2013/14.



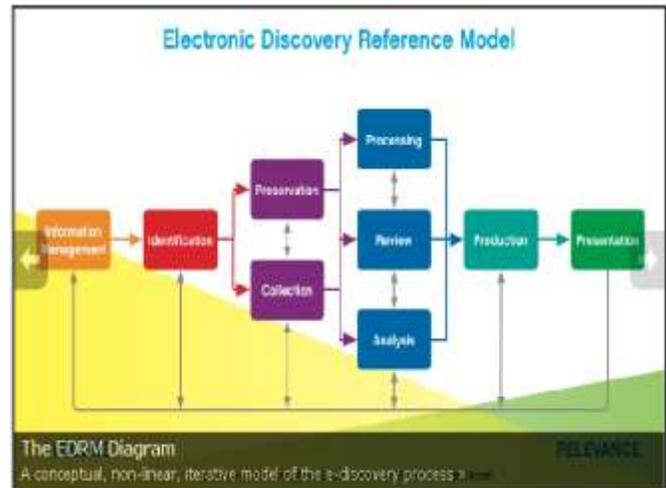
Existing Chemical Unloading Facility

Cost/Efficiency/Productivity

- **Electronic Discovery Management System**
- **Project Controls and Reporting System**

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

During the period, staff completed development and testing of email archiving and E-Discovery software tools for the Legal Department to use in responding to discovery and public records requests. The next phase of this project is to begin the process of migrating Metropolitan emails into the central e-Discovery archiving system. This phase is scheduled to begin in January 2012, followed by a comprehensive testing phase of applying e-Discovery tools to emails.



- **Project Controls and Reporting System**

Metropolitan’s existing Project Management Information System, which provides detailed reports on project expenditures, is outdated and in need of replacement. The requirements for a new Project Controls and Reporting System using Primavera software linked to the Oracle Project Accounting and Grants Management system are currently being determined. The system will provide industry standard project management and controls capabilities and reporting including resource allocation, schedule based budgeting, and earned value. The first phase is scheduled to begin in fiscal year 2012/13.



Supply and Delivery Reliability

- Perris Valley Pipeline South Reach

- Perris Valley Pipeline South Reach

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. Negotiations with the contractor are continuing regarding claims due to deletion of the tunnel.



Relocation of tunnel casing from Perris Valley Pipeline South Reach to Lake Mathews for storage

Capital Program for Projects Costing Less Than \$250,000 for Fiscal Year 2011/12 (Minor Cap 11/12)

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 during the fiscal year without seeking additional board approval.

10 projects were authorized under the Minor Cap 11/12 capital program through the second quarter of fiscal year 2011/12:

- Eastside Pipeline Butterfly Valve Seal Replacement – Replace the leaking rubber seal and retainer bolts.
- Jensen Finished Water Reservoir No. 1 Inlet Gates Repair – Rehabilitate the inlet gates at the Jensen Finished Water Reservoir.
- Jensen Ozone Cooling Water Line Modifications – Modify the stainless steel cooling water piping system to eliminate and prevent leaks that have developed due to corrosion.
- Jensen UPC-24 High Voltage Power Supply Rehabilitation – Procure and install 1,400 feet of high voltage cable and 300 feet of electrical conduit to replace the existing 40-year-old electrical conduit.
- Jensen Finished Water Reservoir No. 1 Roof Improvements – Install a lightweight concrete seal layer over the existing deteriorated insulating concrete roof material.
- Yorba Linda Feeder Discharge Return System Quagga Mussel Control Basins – Procure and install equipment and piping to efficiently retain, treat, and return discharged raw water from the Yorba Linda Feeder to the Diemer plant inlet line.
- Skinner Ammonia Leak Detection Replacement – Replace ammonia leak detectors that have failed and are no longer supported by the vendor.
- Weymouth 140-inch Combined Filter Outlet Structural Repair – Refurbish the degraded concrete ceiling on the combined filter outlet line under the Administration Building.
- Total Organic Carbon Analyzer Replacement – Replace the outdated total organic carbon analyzers at Metropolitan’s five treatment plants and in the treated water distribution system.
- Skinner Solids Handling Pumps and Washwater Reclamation Plant – Replace four solids handling pumps at Washwater Reclamation Plant No. 3 that have developed leaks due to the abrasiveness of the pumped solids.

The following table provides the overall status of the Minor Cap 11/12 program.

Minor Cap Program FY 2011/12	Total Estimate
10 Projects Authorized	\$1,674,000
Unallocated Funds	\$1,066,000
Remaining Budget	\$ 260,000
Total Program	\$3,000,000