



● **Capital Investment Plan (CIP) Quarterly Report for the period ending March 2013**

Summary

This report provides a summary of fiscal year accomplishments, 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 2012/13, 16 board actions appropriated a total of \$29.7 million, and four construction contracts were awarded. Through March 2013, 73 programs encompassing over 350 projects were underway. All capital programs are within their appropriated budgets. Actual fiscal year capital expenditures through March 2013 for all programs totaled \$94 million, compared to a budget of \$173 million. For the entire fiscal year, the projected capital expenditures are \$152 million, compared to a budget of \$257 million. The fiscal year variance is primarily attributed to the significant cost savings for a single under-budget construction contract, the Weymouth Oxidation Retrofit Program (ORP), and the need to adjust the scope and /or schedule for several refurbishment and replacement (R&R) projects to combine them with other projects at the same location, or to evaluate multiple design alternatives, in order to realize overall cost savings.

While current capital expenditures are well below budget, staff anticipates that the expenditures will increase during fiscal year 2013/14 as a number of projects commence construction. Staff continues to assign a high priority to projects required for safety and to meet regulatory compliance deadlines, as well as those needed to ensure reliable and efficient operation.

During the quarter ending March 2013, three major shutdowns related to capital construction were successfully completed on the Colorado River Aqueduct (CRA), within portions of the distribution system, and at the Weymouth plant. The Upper Feeder was shut down to support the installation of new and refurbished control gates at the Eagle Rock Control Tower and at the Puddingstone Spillway. Other work completed within the distribution system included prestressed concrete cylinder pipeline repairs and inspections on the Sepulveda Feeder, Irvine Cross Feeder, San Diego Pipeline No. 4, Palos Verdes Feeder, and Second Lower Feeder. The CRA shutdown enabled construction to proceed to replace high voltage disconnect switches at the Gene and Iron Mountain Pumping Plants, refurbish expansion joints on pumping plant delivery lines, and install new and refurbished control gates and components at the Copper Basin outlet facilities. During this period, \$13.2 million in construction contract payments were disbursed, reflecting progress on projects such as the Diemer and Weymouth ORP's, the electrical system upgrades at the Weymouth plant, the La Verne Coating Shop upgrades, as well as those projects described above. Seven construction contracts were completed during the third quarter of fiscal year 2012/13.

At the end of the third quarter, 23 construction contracts were underway with a total value of approximately \$366 million. Five contracts are 99 percent complete.

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

Purpose

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

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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.

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

Supply and Delivery – 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 (ORP)**
Testing and start-up activities on individual systems have commenced, while construction continues on mechanical and electrical systems in the Ozone Generation Building and Contactors, and on the chemical feed systems.
Construction of ozone facilities at the Diemer plant is approximately 99 percent complete. The construction has exceeded the approved contract duration and a time extension is under negotiation. Approved change orders to date are less than two percent of the contract value.



**Diemer Plant
Liquid oxygen (LOX) tank farm**

- **Weymouth Oxidation Retrofit Program**
Work is proceeding on mass grading, yard piping, underground electrical and plumbing at the Ozone Generation Building, and on concrete slabs for the inlet conduit and contactor outlet structure. Construction work previously completed as part of the Weymouth ORP includes the relocation of the plant inlet conduit and installation of new electrical switchgear.
Construction of the ozone facilities at the Weymouth plant commenced in July 2012, and is approximately 13 percent complete.



**Weymouth Plant
Placement of concrete for ozone contactor outlet structure**

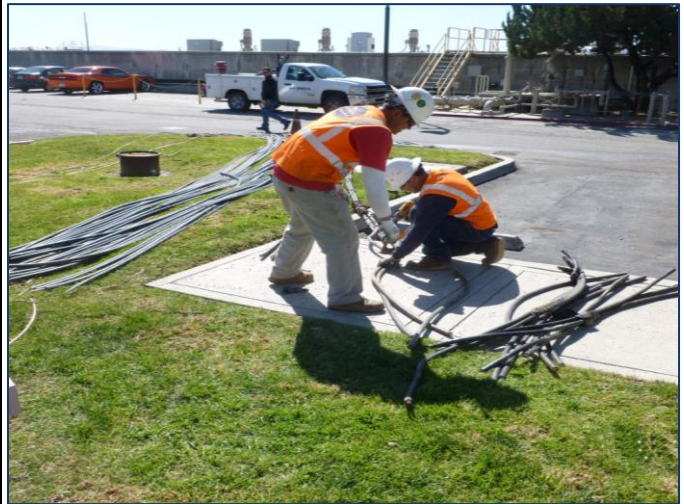
Infrastructure Reliability – Treatment Plants

- **Weymouth Electrical Upgrades**
- **Diemer Electrical Upgrades**
- **Weymouth Filter Outlet Chemical Trench**

- **Weymouth Electrical Upgrades**

This project will replace and upgrade numerous features 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 demand of the new ozone facilities. All minor system shutdowns have been successfully completed to allow tie-ins of the motor control centers and power substations throughout the plant.

Construction is 99 percent complete and is scheduled to be completed by June 2013.



Weymouth Plant
Salvaging existing electrical cable

- **Diemer Electrical Upgrades**

This project is being completed in two phases. The first phase, which included construction of new duct banks, switchgear, and standby generators, was completed under the Diemer ORP construction contract.

Final design of the Phase II improvements, which will replace and upgrade aged electrical components and reconfigure power distribution to critical plant processes, has been completed. Award of the construction contract is scheduled for August 2013.



Diemer Plant
New switchgear and standby generator buildings

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- Weymouth Filter Outlet Chemical Trench

This project will provide a new concrete trench system to safely route chemical feed lines to the Weymouth plant's filter outlet channel to provide final disinfection and pH adjustment.

Construction of new injection points was completed during the February 2013 plant shutdown, while construction of the new trench and piping relocation is 30 percent complete.



**Weymouth Plant
Reinforcing steel placement for the chemical trench**

Infrastructure Reliability – Distribution System

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

- **Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation**
This comprehensive long-term program was established to enhance the reliability of Metropolitan’s distribution system and to reduce the risk of costly emergency repairs of PCCP lines.
During recent shutdowns, carbon fiber lining modifications were completed on San Diego Pipeline No. 4 and the Sepulveda Feeder. In addition, electromagnetic inspection was performed on portions of several pipelines, and an Acoustic Fiber Optic monitoring system was installed as a pilot effort in a 4.5 mile section of the Second Lower Feeder for real-time monitoring.



**Second Lower Feeder
Installation of Acoustic Fiber Optic monitoring system**

- **Eagle Rock Tower and Puddingstone Spillway Gates Rehabilitation**
Rehabilitation and installation of all seven slide gates and actuators at the Eagle Rock Tower and Puddingstone Spillway were completed during the scheduled Upper Feeder shutdown in February 2013. Remaining work includes completion of punch list items by the contractor, control system programming by Metropolitan staff, and completion of record drawings.
Construction is 98 percent complete.



**Upper Feeder
Gate installation at Puddingstone Spillway**

Infrastructure Reliability – Colorado River Aqueduct

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

- **Hinds Pumping Plant Standby Generator**
This project includes the design, procurement, and installation of a new standby generator at the Hinds Pumping Plant.
Construction is 95 percent complete and is scheduled to be completed by July 2013.



**Hinds Pumping Plant
New standby generator**

- **CRA High Voltage Disconnect Switches Replacement**
The existing high voltage switches at the 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 in early 2012. The remaining replacement work at the Iron and Gene Pumping Plants was completed during this year's shutdown of the CRA.



**CRA Pumping Plants
High voltage disconnect switch replacement**

Infrastructure Reliability – Other

- **La Verne Coating Shop Upgrades**
- **Yorba Linda Power Plant Upgrades**

- **La Verne Coating Shop Upgrades**

This project will upgrade two coating shop buildings at La Verne to relieve overcrowding and bring the facility into compliance with current building codes. The project includes a self-contained sandblasting 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 99 percent complete and is scheduled to be completed by June 2013.



**La Verne Coating Shop
New ventilation ductwork**

- **Yorba Linda Power Plant Upgrades**

This project at the Diemer plant will replace the existing Pelton hydraulic turbine with a Francis turbine capable of operating under post-ORP hydraulic conditions, and will modify the electrical configuration to use the power on-site to meet energy demands of the Diemer plant.

A majority of the shop drawings for the new equipment have been completed and the manufacturer has ordered raw stock material for all major fabricated components.

The turbine is on schedule to be delivered by December 2013. Final design of the installation contract is 80 percent complete.



Inspection of the turbine manufacturer’s shop facilities

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. The new chlorine containment facilities will include an enclosed building to house chlorine rail cars and cargo trailers, trans-loading equipment, chlorine neutralization system, process monitoring room, and an emergency generator.

Final design is 99 percent complete. Additional provisions for handling residual chlorine gas in the rail cars are under review prior to finalizing the design.



Existing Chemical Unloading Facility

Cost/Efficiency/Productivity

- **CEQA and Entitlements for Solar Power Facilities at Diamond Valley Lake**

- **CEQA and Entitlements for Solar Power Facilities at Diamond Valley Lake**

In February 2011, Metropolitan's Board authorized the initiation of CEQA compliance and entitlement activities related to the proposed Diamond Valley Lake solar power projects. As anticipated, SunEdison has executed a Power Purchase Agreement with the City of Riverside. The 25-year agreement requires delivery of 20 megawatts of power annually. SunEdison continues to work with the City of Hemet on a draft project description. The CEQA and Entitlement phase is 33 percent complete.



SunEdison Solar Farm

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Capital Program for Projects Costing Less Than \$250,000

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

Twenty three projects were authorized under the 2012/13 Minor Cap program through the third quarter of fiscal year 2012/13. The nine projects authorized during the third quarter (January through March) are listed below:

- Skinner Ozone Contactor Sample Piping and Tracer Piping Relocation – This project will reposition and extend sample lines to the ozone residual analyzers in contactors Nos. 1, 2 and 4.
- Cajalco Creek Detention Basin Spillway Access Ramp – This project will construct an access ramp onto the dam spillway.
- Santiago Control Tower Cathodic Protection – This project will purchase and install equipment to cathodically protect submerged slide gates.
- Weymouth Operation and Maintenance Building Crane – This project will extend three monorails 17 feet into the loading area for overhead cranes in the Weymouth Operations and Maintenance Building.
- Weymouth Water Quality Lab Entrance Improvements – This project will replace damaged concrete sidewalks and hardscape.
- Perris Pressure Control Structure Roof Replacement – This project will replace the deteriorated and leaking roof on the Perris Pressure Control Structure.
- Santiago Pressure Control Structure Roof Replacement – This project will replace the deteriorated and leaking roof on the Santiago Pressure Control Structure.
- Coastal Pressure Control Structure Roof Replacement – This project will replace the deteriorated and leaking roof on the Coastal Pressure Control Structure.
- Coyote Creek Pressure Control Structure Roof Replacement - This project will replace the deteriorated and leaking roof on the Coyote Creek Pressure Control Structure.

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The following table provides the overall status of the 2006/07 through 2012/13 Minor Cap programs.

FY Budget	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Amount Appropriated	\$5.6M	\$5.0M	\$4.825M	\$4.5M	\$3.5M	\$3.0M	\$5.0M
Number of Projects Approved	31	32	22	23	17	17	23
Number of Projects Completed Through March 2013	30	32	21	19	10	7	2
Percent of Work Complete	99%	100%	97%	93%	83%	61%	8%
Number of Projects Over 3 years	1	0	1	0	0	0	0
Expenditures Through March 2013	\$3.88M	\$4.53M	\$3.83M	\$3.26M	\$2.46M	\$1.88M	\$0.80M

Through March 2013, 121 of the 165 projects have been completed, while two have exceeded three years in duration. The two projects and their variance explanations are as follows:

Fiscal Year 2008/09 Minor Cap – Projects Over Three Years in Duration

- Replace six residual solids pumps at the Skinner plant

This project has experienced delays due to non-responsive bids for equipment that required re-advertisement, and scheduling shifts to accommodate other project shutdowns. The project is scheduled to be completed by December 2013.

Fiscal Year 2006/07 Minor Cap – Projects Over Three Years in Duration

- Upgrade Microwave Buildings at six locations for code compliance associated with the emergency generators and fuel tanks

This project has experienced delays in permitting with local agencies. The project is scheduled to be completed by December 2013.