



● **Capital Investment Plan (CIP) Quarterly Report for the period ending December 2012**

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 second quarter of fiscal year 2012/13, 16 board actions appropriated a total of \$26.2 million, and seven construction contracts were awarded. Through December 2012, 73 programs encompassing over 350 projects were underway. All capital programs are within their appropriated budgets. Actual fiscal year expenditures through December 2012 for all capital programs totaled \$62.4 million, compared to a budget of \$102.8 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.

Approximately \$105 million of cost savings will be realized for the Weymouth ORP due to the continuing favorable bidding climate. The actual low bid received for this project which reflects the highly competitive bidding conditions, was approximately \$95 million as compared to the budget estimate of \$200 million. Other contributors to the variance projection include the rehabilitation of the flocculation and sedimentation basins at the Diemer plant, the replacement of filter valves and upgrade of the filter surface wash system at the Jensen plant, and rehabilitation work on the Colorado River Aqueduct (CRA). For the Diemer basins, initiation of final design was delayed to address the remediation of hazardous waste and to minimize interferences with ongoing construction due to tight working conditions at the plant. The completion of final design for the Jensen filter surface wash upgrades, which is now under construction, was delayed so that replacement of the service water pumps could be incorporated into the same package. A number of CRA projects have been rescheduled to coordinate the timing of needed upgrades as well as potential economies of scale resulting from combining work, as was done for the two Jensen projects.

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 December 2012, \$14.9 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, refurbishment of the Copper Basin Outlet Facilities, and replacement of access structure covers on the CRA. Five construction contracts were completed during the second quarter of fiscal year 2012/13.

At the end of the second quarter, 28 construction contracts were underway with a total value of approximately \$368 million. Two 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 Manger'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)

Construction of ozone facilities at the Diemer plant is approximately 99 percent complete. A shutdown of the Diemer plant was successfully completed in January 2012 to tie-in the new facilities hydraulically to the existing plant. Testing and start-up activities on several systems have commenced, while construction continues on mechanical and electrical systems in the Ozone Generation Building and Contactors, and the chemical feed systems. 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
Ozone Generation Building and Contactors**

- Weymouth Oxidation Retrofit Program

Construction of the main ozone facilities commenced in July 2012, and is approximately 9 percent complete. Construction of the new ORP Switchgear Building under a separate contract is 98 percent complete and is scheduled to be completed by March 2013. This building will house the circuit breakers, new standby generators, and other electrical equipment to serve the new ozone facilities.



**Weymouth Plant
Electric duct bank removal**

Infrastructure Reliability – Treatment Plants

- **Diemer Filter Media Replacement**
- **Weymouth Electrical Upgrades**
- **Diemer Electrical Improvements**
- **Jensen Filter Outlet Chlorination and Chemical Trench**

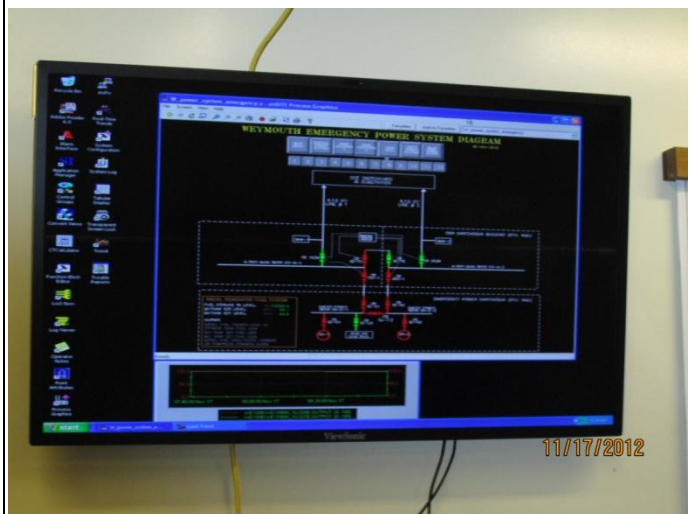
- **Diemer Filter Media Replacement**
 This project replaced anthracite and sand filter media to improve filter performance and prevent the release of manganese into the plant’s treated water following the commencement of ozonation and biological filtration.

 Construction was completed in early November 2012.



**Diemer Plant
Filters in east module**

- **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. Several minor system shutdowns were successfully completed to allow tie-ins of various motor control centers and power substations. Construction is 98 percent complete and is scheduled to be completed by March 2013.



**Weymouth Plant
New standby generator display screen in the ORP
Switchgear Building**

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- Diemer Electrical Improvements

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

Final design of the Phase II improvements, which will replace and upgrade the aged electrical components and reconfigure power distribution to critical plant processes, is 95 percent complete.



Diemer Plant
New switchgear and standby generator buildings

- Jensen Filter Outlet Chlorination and Chemical Trench

This project will provide the necessary dosage of chlorine at the filter outlet to maintain chlorine residual in the distribution system under certain State Water Project water quality conditions. The chemical trench, which also conveys ammonia piping, is needed to safely contain the pipes that convey chemicals and other utilities from the chemical tank farms to their application points.

Construction of the new trench, piping, and chlorine ejector building is 90 percent complete.



Jensen Plant
New chemical trench and chemical feed piping

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. Carbon fiber lining modifications were completed on San Diego Pipeline No. 5 and the Lake Skinner Outlet Conduit. Similar carbon fiber lining modifications will be performed on three additional pipelines during planned shutdowns in early 2013.



Application of carbon fiber lining on San Diego Pipeline No. 5

- **Eagle Rock Tower and Puddingstone Spillway Gates Rehabilitation**

This project will replace the radial gate at Puddingstone Spillway with two slide gates, and rehabilitate five corroded slide gates at the Eagle Rock Tower. The Puddingstone Spillway radial gate is used to isolate a portion of the Upper Feeder. The five slide gates in the Eagle Rock Tower are used to regulate flows in the Upper Feeder, Santa Monica Feeder, and Palos Verdes Feeder.

Construction is 70 percent complete. A planned shutdown has been rescheduled at the request of the City of Glendale to arrange for needed water service through a temporary bypass connection. Construction is now scheduled to be completed in March 2013.



Fabrication of new components in the contractor’s shop

Infrastructure Reliability – Colorado River Aqueduct

- CRA Access Structures, Transition Structures and Manhole Cover Replacement
- Copper Basin Reservoir Outlet Structure Rehabilitation

- CRA Access Structures, Transition Structures and Manhole Cover Replacement

This project removed damaged and corroded steel transition structure covers, concrete and steel manhole covers, and metal support beams along the CRA; replaced 56 transition covers with new steel covers and 75 manhole covers with new pre-cast concrete covers; and refurbished 66 manhole structures.

Construction was completed in December 2012.



**Colorado River Aqueduct
Transition structure covers**


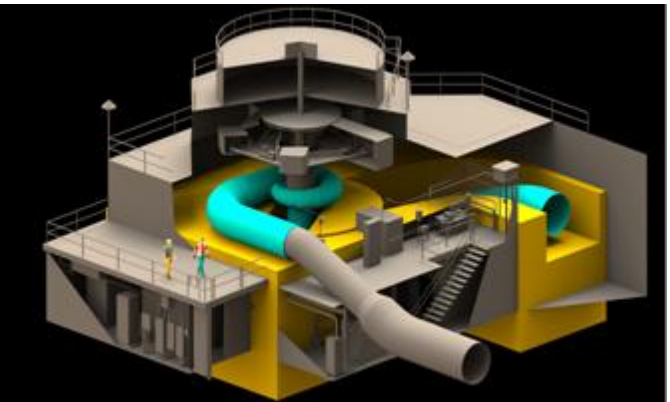
- Copper Basin Reservoir Outlet Structure Rehabilitation

This project includes the rehabilitation of three slide gates; fabrication of two drop gates; construction of a storm drain line and a pre-fabricated concrete building to house the new electrical control and power systems; and installation of a wire-mesh slope stabilization system, Metropolitan-furnished transformer, switchboard, and transfer switch.

Construction is 22 percent complete and is scheduled to be completed by May 2013.



Concrete placement of storm drain inlet

Infrastructure Reliability – Other	
<ul style="list-style-type: none">• La Verne Coating Shop Upgrades• Yorba Linda Power Plant Upgrades	
<ul style="list-style-type: none">• La Verne Coating Shop Upgrades <p>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 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 95 percent complete and is scheduled to be completed by February 2013</p>	 <p>La Verne Coating Shop New blast booth</p>
<ul style="list-style-type: none">• Yorba Linda Power Plant Upgrades <p>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.</p> <p>The turbine manufacturer has completed the submittal of detailed shop drawings for the new equipment. The turbine is on schedule to be delivered by December 2013. Final design of the installation contract is 70 percent complete.</p>	 <p>3-dimensional rendering of the Yorba Linda Power Plant</p>

Regulatory

- **Chemical Unloading Facility Chlorine Containment**
- **Mills Hazardous Waste Staging and 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 and is scheduled to be completed by April 2013.



Existing Chemical Unloading Facility

- **Mills Hazardous Waste Staging and Containment**

This project constructed a new containment structure that meets up-to-date code requirements. The new facility will be used as a staging area for hazardous products such as used chemicals, oils, and paint, until a waste contractor removes the products for proper disposal. Construction was completed in December 2012.



**Mills Plant
Hazardous Waste Staging and Containment 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, the 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 30 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.

Fourteen projects were authorized under the 2012/13 Minor Cap program through the second quarter of fiscal year 2012/13. The eight projects authorized during the second quarter (October through December) are listed below:

- Oak Street Pressure Control Structure Roof Replacement – This project will replace the deteriorated and leaking roof on the Oak Street Pressure Control Structure.
- Skinner Module 7 Sodium Hypochlorite Piping Retrofit – This project will replace corroded sodium hypochlorite piping at the Module 7 chemical jet mix and filter outlet injection points.
- Weymouth Turbidity Meter Replacement – This project will replace aging turbidimeters that are becoming less reliable and are no longer supported by equipment vendors, on all 48 filters at the Weymouth plant.
- CRA Hinds Pump Unit No. 8 Refurbishment – This project will refurbish the impellor on Pump Unit No. 8 at the Hinds Pumping Plant that was damaged by debris in the pump inlet.
- SCADA Communications Upgrade - Verizon Region – This project will upgrade the Verizon region of the SCADA frame relay communications network to state-of-the-art Multiprotocol Label Switching communication technology. The frame relay technology is being discontinued by the service providers.
- SCADA Communications Upgrade - AT&T Region – This project will upgrade the AT&T region of the SCADA frame relay communications network to state-of-the-art Multiprotocol Label Switching communication technology. The frame relay technology is being discontinued by the service providers.
- Weymouth Rail Refurbishment – This project will refurbish the deteriorated 70-year old railroad spur that serves the Weymouth Plant.
- Cajalco Creek Dam Manhole Cover Retrofit – This project will replace three existing manhole risers and covers at Cajalco Creek Dam with steel lids that can be safely removed and replaced by state Division of Safety of Dams inspectors. The manholes house seepage monitoring instrumentation.

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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	14
Number of Projects Completed Through December 2012	30	32	21	19	10	7	1
% of Work Complete	99%	100%	97%	93%	79%	61%	15%
Number of Projects Over 3 years	1	0	1	0	0	0	0
Expenditures Through December 2012	\$3.88M	\$4.33M	\$3.77M	\$3.18M	\$2.25M	\$1.80M	\$0.32M

Through December 2012, 120 of the 148 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 6 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 August 2013.

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

- Upgrade Microwave Buildings at 6 locations for code compliance associated with the emergency generators and fuel tanks
This project has experienced delays due to delays in permitting with local agencies. The project is scheduled to be completed by November 2013.