THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Report

Engineering Services Group

- Capital Investment Plan (CIP) Quarterly Report for the period June 2013

Summary

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

During the fourth quarter of fiscal year 2012/13, fourteen board actions appropriated a total of $23.9 million, and six construction contracts were awarded. Through June 2013, 73 programs encompassing over 350 projects were underway. All capital programs are within their appropriated budgets. Actual fiscal year capital expenditures through June 2013 for all programs totaled $125.6 million, compared to a fiscal year budget of $257. The variance is primarily attributed to: 1) the significant cost savings for a single under-budget construction contract, the Weymouth Oxidation Retrofit Program (ORP); 2) timing of contractor progress payments; and 3) the need to adjust the scope and/or schedule of 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 period from July 2012 through June 2013, $54.6 million in construction contract payments were disbursed, reflecting completion of construction contracts for the Diemer Oxidation Retrofit Program, the replacement of the high voltage disconnect switches at the Gene and Iron Mountain Pumping Plants, the La Verne Coating Shop upgrades, refurbishment of expansion joints on the Colorado River Aqueduct (CRA) pumping plant delivery lines, and installation of new and refurbished control gates at the Eagle Rock Control Tower and the Puddingstone Spillway. Work continues on Weymouth ORP construction, the electrical upgrades at the Weymouth plant, prestressed concrete cylinder pipe (PCCP) repairs and inspections, and refurbishment of control gates at the Copper Basin Reservoir outlet. Twenty-two construction contracts were completed during fiscal year 2012/13.

At the end of the fiscal year, 21 construction contracts were underway with a total value of approximately $359 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 Manager's Quarterly Reports.

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:

Date of Report: 9/10/2013

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.

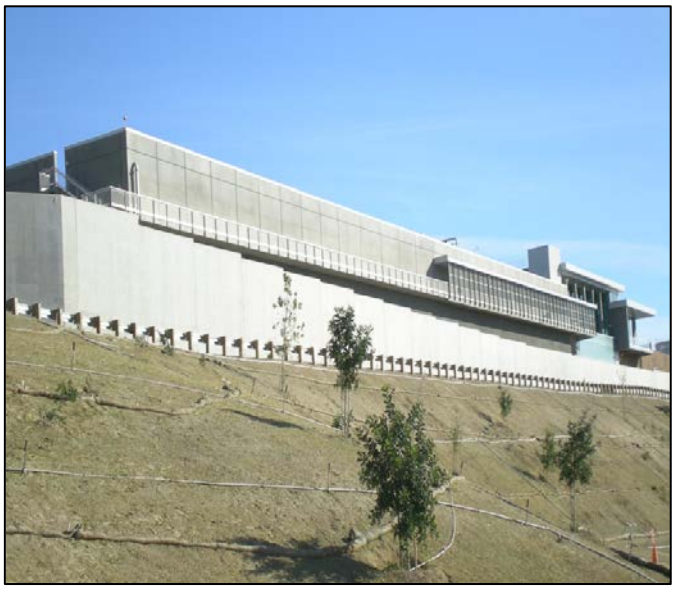
Water Quality

- **Diemer Oxidation Retrofit Program**
- **Weymouth Oxidation Retrofit Program**

- Diemer Oxidation Retrofit Program (ORP)

  Construction of the main ozone contract at the Diemer plant is complete. The notice of completion was recorded on June 18, 2013.

  Testing and start-up activities for the new ozonation system have commenced. Other remaining work includes: ongoing monitoring of the environmental mitigation requirements; modifications to chemical feed and life/safety systems; SCADA system integration; addition of process control instrumentation; and preparation of plant-wide operational schematics.



Diemer Plant
Ozone Generation Building and Contractors

- Weymouth Oxidation Retrofit Program

  Weymouth represents the final Metropolitan treatment plant to receive ozone as the primary disinfectant.

  Construction of the Weymouth ozone facilities commenced in July 2012, and is approximately 21 percent complete.

  Other work completed or underway under the Weymouth OPR includes relocation of the plant inlet conduit, new electrical switchgear, and modifications to chemical feed systems.

Weymouth Plant
Ozone Contactor Inlet Conduit

Infrastructure Reliability – Treatment Plants

- **Weymouth Electrical Upgrades**
- **Diemer Electrical Upgrades**
- **Weymouth Filter Outlet Chemical Trench**
- **Diemer Finished Water Reservoir and East Washwater Tank Seismic Upgrade**
- **Weymouth Emergency Broadcast System Rehabilitation**

- 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 need to be replaced. The upgrades will also enable the Weymouth plant to operate under the increased power demand of the new ozone facilities. All 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 December 2013.

Weymouth Plant
New electrical substation

- 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 upgrade existing electrical components and reconfigure power distribution to critical plant processes, has been completed.

  The Board awarded the Phase II construction contract in August 2013.

Diemer Plant
New switchgear and standby generator buildings

- 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.

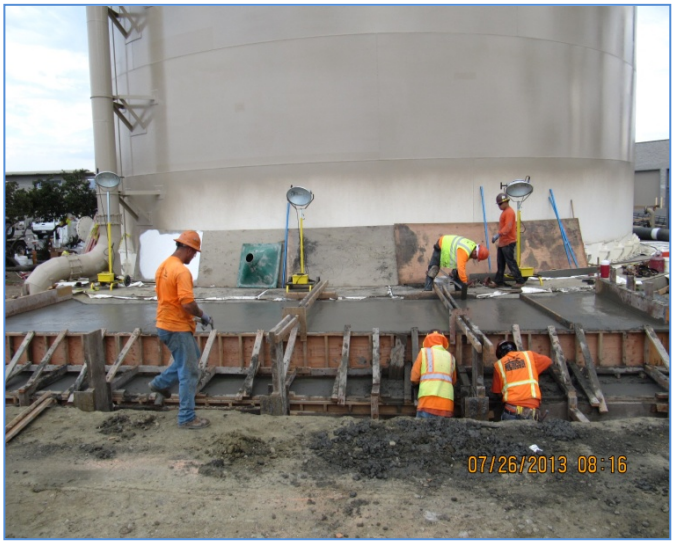
  Construction of new injection points was completed during the February 2013 plant shutdown, while construction of the new trench and piping relocation is 54 percent complete.

Weymouth Plant
Reinforcing steel placement for the chemical trench

- Diemer Finished Water Reservoir and East Washwater Tank Seismic Upgrade

  This project will seismically retrofit the Finished Water Reservoir by constructing a retaining wall to prevent failure on the cast-in-place south slope caissons and thickening the reservoir floor slab. Shear walls and anchor bolts will be added at the East Washwater Tank foundation.

  Construction is 75 percent complete and is scheduled to be completed in October 2013.

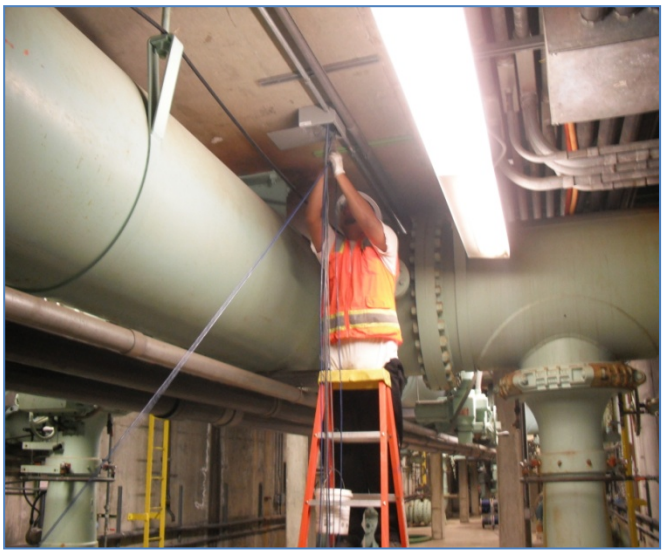


Diemer Plant
Concrete placement on south shearwall

- Weymouth Emergency Broadcast System Rehabilitation

  This project will replace the existing public address system used for general paging, emergency notifications, and evacuations for situations such as fire alarms and chlorine leaks. The project consists of installing a microprocessor-based emergency broadcast system, speakers, alarms, and expanding the existing control system.

  Construction of the new system is 80 percent complete.



Weymouth Plant
Speaker cable/wire installation inside the filter pipe gallery

Infrastructure Reliability – Distribution System

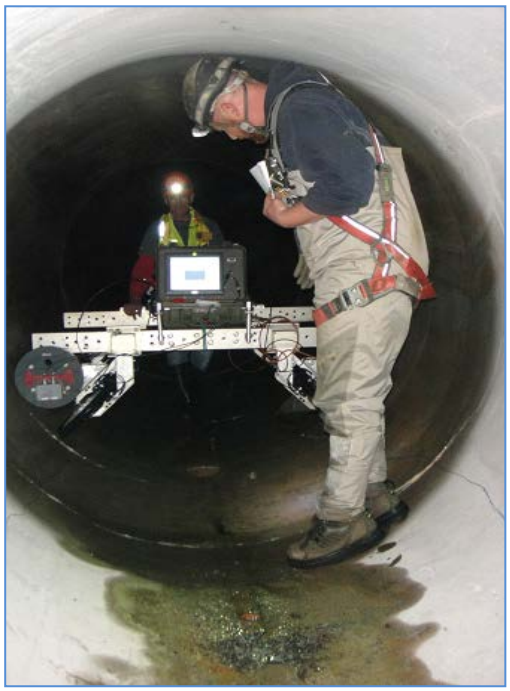
- **Prestressed Concrete Cylinder Pipe Rehabilitation**
- **Eagle Rock Tower and Puddingstone Spillway Gates Rehabilitation**

- 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.

  Results of electromagnetic inspections of the Second Lower Feeder performed in March 2013 identified 19 PCCP pipe segments with increasing levels of distress.

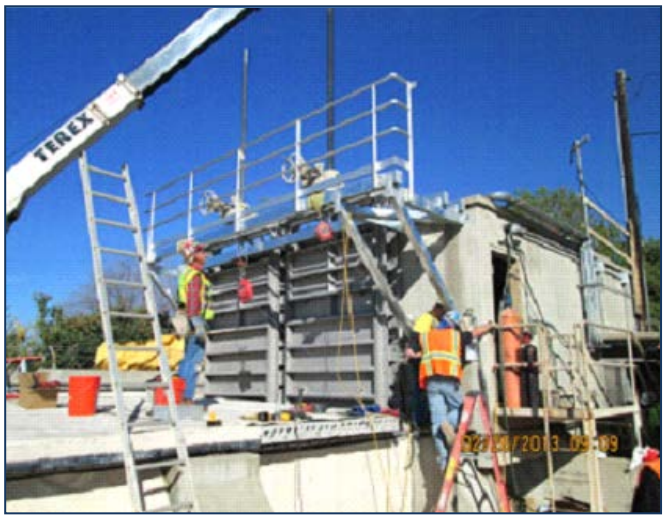
  The Board authorized final design of urgent repairs at three locations on the Second Lower Feeder in July 2013.



Second Lower Feeder
Electromagnetic inspection

- 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 a scheduled Upper Feeder shutdown in February 2013. The notice of completion was recorded on June 5, 2013.



Upper Feeder
Gate installation at Puddingstone Spillway

Infrastructure Reliability – Colorado River Aqueduct

- **Hinds Pumping Plant Standby Generator**
- **CRA High Voltage Disconnect Switches Replacement**
- **Copper Basin Reservoir Outlet Structure Rehabilitation**

- Hinds Pumping Plant Standby Generator

  This project includes replacement and relocation of the standby generator at Hinds Pumping Plant.

  Construction is 99 percent complete and is scheduled to be completed by August 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 needed to be replaced. The switches are used to isolate equipment so that maintenance and repairs can be performed in a safe and timely manner.

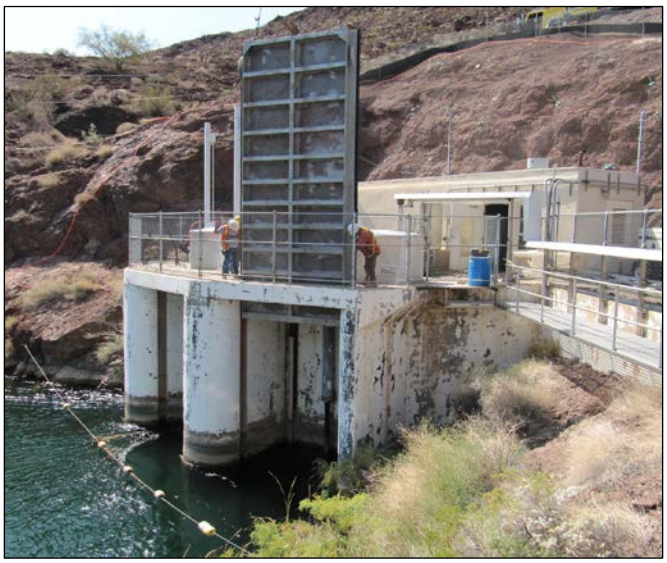
  Construction at the Eagle and Hinds Pumping Plants was completed in early 2012. The remaining work at the Iron and Gene Pumping Plants was completed in March 2013.

CRA Pumping Plants
High voltage disconnect switch

- Copper Basin Reservoir Outlet Structure Rehabilitation

  The Copper Basin Reservoir was constructed in the 1930's. This project will rehabilitate the outlet facility, which utilizes three slide gates for flow control. The slide gates will be refurbished and the electrical power, system control, and data communication equipment will be replaced. Two new drop gates will be fabricated for use during construction to sequentially isolate each slide gate from the reservoir and from the outlet tunnel.

  Construction is 50 percent complete, and is scheduled to be completed by December 2013.



Copper Basin Reservoir Outlet Structure
Installation of refurbished slide gate

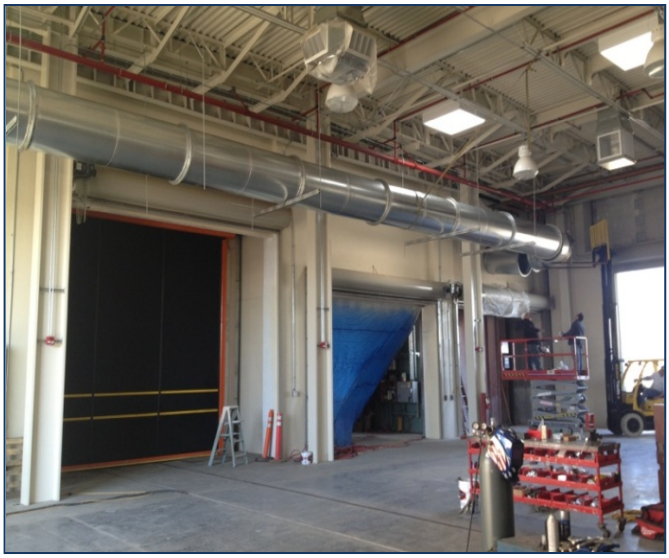
Infrastructure Reliability – Other

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

- La Verne Coating Shop Upgrades

  This project upgraded two existing coating buildings at La Verne to relieve overcrowding and bring the facility into compliance with current building codes. The project includes two self-contained sand blasting booths and two new paint/drying booths.

  Construction of the coating shop upgrades was completed in July 2013.

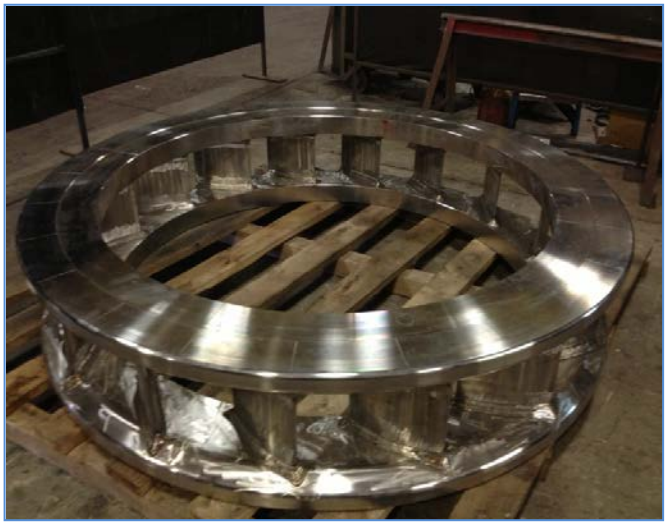


La Verne Coating Shop
New ventilation ductwork

- Yorba Linda Power Plant Upgrades

  This project will replace an existing Pelton hydraulic turbine with a Francis turbine capable of operating under new hydraulic conditions created by the Diemer ozonation facilities, and will modify the electrical configuration to use the power on-site to meet energy demands of the Diemer plant. Fabrication of the major components of the equipment is currently underway.

  The turbine is scheduled to be delivered by January 2014. Final design of the installation contract is 90 percent complete, and advertisement for bids for a construction contract is scheduled for fall 2013.



New stainless steel turbine runner

Regulatory

- **Chemical Unloading Facility Chlorine Containment**

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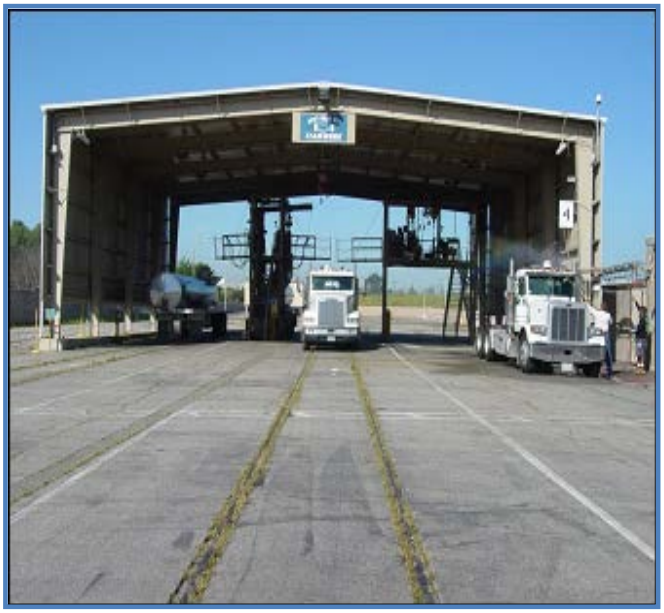
  The Chemical Unloading Facility, which was constructed in 1975, is used to transfer liquid chlorine from vendor-supplied rail cars to Metropolitan-owned cargo trailers. The new chlorine containment facilities will include an enclosed building to house chlorine rail cars and cargo trailers, trans-loading equipment, chlorine neutralization system, process monitoring room, and an emergency generator.

  Final design is 99 percent complete and is scheduled to be complete by December 2013.



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 the project description. As a result of the City's concerns about the project location, SunEdison is exploring alternative project sites at DVL. The CEQA and Entitlement phase is 35 percent complete.

SunEdison Solar Farm

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 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.

A total of twenty-four projects were authorized under the 2012/13–2013/14 Minor Cap program through the fourth quarter of fiscal year 2012/13. One project was authorized during the fourth quarter (April through June) and is listed below:

- Diemer Irrigation Raw Water Conversion to Industrial Water – This project will convert the source water of the irrigation system from untreated to industrial water, and will install irrigation pipelines and control panels throughout the Diemer plant.

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	2012/13-2013/14
Amount Appropriated	$5.6M	$5.0M	$4.825M	$4.5M	$3.5M	$3.0M	$10.0M
Number of Projects Approved	31	31	22	23	17	16	24
Number of Projects Completed Through June 2013	30	31	21	22	12	7	3
Percent of Work Complete	99%	100%	98%	94%	85%	72%	16%
Number of Projects Over 3 years	1	0	1	1	0	0	0
Expenditures Through June 2013	$3.88M	$4.31M	$3.83M	$3.26M	$2.46M	$1.88M	$1.80M

Through June 2013, 125 of the 164 projects have been completed, while four have exceeded three years in duration. The four projects and their variance explanations are as follows:

Fiscal Year 2009/10 Minor Cap – Projects Over Three Years in Duration

- Etiwanda Cavitation Facility Infrastructure Rehabilitation

  This project required rescheduling due to the substantial lead-time for equipment procurement/delivery. The project is scheduled to be completed by October 2013.

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 projects. 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.