- ## ITSP Quarterly Board Report - Written Report (period ending Sept 2013)

Summary

This report provides a quarterly update on progress to implement Metropolitan's Information Technology Strategic Plan (ITSP) and on information technology (IT) activities for the period ending September 30, 2013. The ITSP provides a roadmap to guide the investment and deployment of information technology at Metropolitan over the next three to five years. The plan was updated in 2010 based on changing business needs and technologies. The goal of the plan is to leverage information technology investments to increase long-term reliability, while improving Metropolitan's overall efficiency and effectiveness. Oversight of IT investments is provided by the IT Guidance Committee consisting of senior management and the Capital Investment Plan (CIP) Evaluation Team as part of the annual CIP planning process.

There were a number of important milestones achieved during the period that are summarized in this report. Selected accomplishments include completed microwave equipment installation at five telecommunication sites as a part of the Wide Area Network project; issued a Request for Proposal to replace end-of-life Enterprise UNIX servers to enhance infrastructure reliability; completed the initial draft of Metropolitan's Supervisory Control and Data Acquisition (SCADA) Master Plan; completed 90% design submittals as a part of the Wadsworth Control and Protection Upgrade Project; and continued to deploy personal computers as part of the PC Replacement project.

Key milestones for the upcoming quarter ending December 31, 2013 include: completing the Wide Area Network Upgrade Project as part of the effort to enhance communication reliability; seeking Board authorization to implement Oracle Accounts Payable Automation System; seeking Board authorization to award a procurement contract and authorize installation of replacement servers for Metropolitan's Supervisory Control and Data Acquisition system; testing of upgrades to the Member Agency Response System (MARS) involving all member agencies; and continuing to deploy personal computers as part of the PC Replacement project.

Purpose

Administrative Code 2700; Article 2 Quarterly Reports; Section 2720 General Manager's Quarterly Reports; (e) To the Organization, Personnel and Technology Committee, the status of all information technology projects throughout the organization.
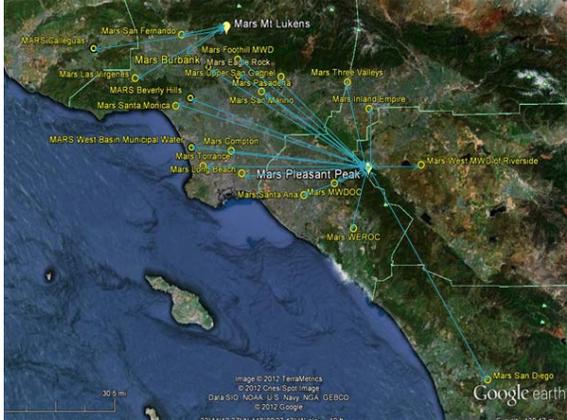
Attachments

Attached are highlights of progress and major milestones reached on IT projects / initiatives during the period of July 1, 2013 through September 30, 2013. The projects are categorized by business driver as follows:

IT STRATEGIC PLAN

Enhanced Reliability – Enhance system reliability

Improved Water Quality – Ensure water quality excellence

Enhanced Cyber Security – Effectively manage and safeguard assets

Productivity / Cost Efficiency – Improve process efficiency and effectiveness

Date of Report: 12/10/2013

Enhanced Reliability:	**Through 1st Quarter**
	FY Budget: $2.53 M FY Expended: $0.96 M

Key Accomplishments Included:

Enhanced Metropolitan's Emergency Response System

- Upgraded Emergency Response System to enhance communication reliability. Metropolitan has mutual aid agreements in place with member agencies under the Member Agency Response System (MARS). Recently, IT staff completed the MARS Radio System Upgrade project, replacing outdated analog communication equipment which had limited coverage and frequency interference issues. The new system provides reliable communication for MARS with newer digital Ultra-High-Frequency technology providing greater coverage and enhanced reliability. Testing involving member agencies is scheduled to take place in second quarter of this fiscal year, followed by full deployment once final testing is completed.

Upgrade Data Center Uninterruptable Power Supply to Enhance System Reliability

- Metropolitan's data center houses all enterprise servers for core applications such as Oracle and PeopleSoft. The uninterruptable power supply (UPS) system prevents power fluctuations and performs as a backup supply in the event of power outage protecting all critical IT assets (e.g. servers) in the data-center. The original UPS system is 14 years old and near the end of its useful life. Installation to replace the UPS system is scheduled for next period.

Completed 90% Submittals for Wadsworth Control and Protection Upgrade Project

- As a part of rehabilitation and upgrades of the control and electrical protection systems at the Wadsworth Pumping Plant, staff continued with the preliminary design phase. During the period, the 90% submittals were prepared and are in the review process. Staff also continued with prototype control system testing, as part of the planned upgrades to the control and electrical protection systems at the Wadsworth Pumping Plant. The purpose of the prototype is to test and validate key technical concepts using the preliminary design. Both 90% submittal reviews and prototype testing are scheduled to complete next period.
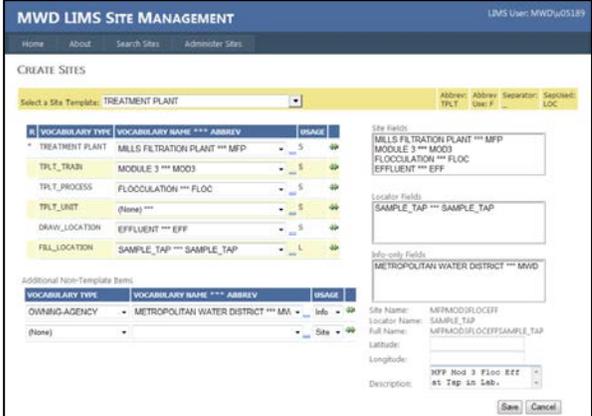
Other Key Activities and Accomplishments

- Compiled Draft Supervisory Control and Data Acquisition (SCADA) Master Plan. As a part of enhancing system reliability, staff is working on a Water Systems Control Master Plan to fully coordinate the operational and business needs of Metropolitan's SCADA Systems. After completion of interviews, internal and external research, and workshops, a draft of the Water System Control Master Plan was prepared and will be presented to WSO management next period.

- Hydraulic Modeling Project - IT staff supported Engineering and Water System Operations staff with data preparation for hydraulic modeling of the conveyance and distribution system as part of Metropolitan's Pre-stressed Concrete Pipe Replacement Program. Distribution system modeling regions have been determined and survey teams from engineering are preparing system data for modeling. During the reporting period, the Board authorized funding and award of a consultant contract.

- Wide Area Network Upgrade Project - As part of the effort to enhance communication reliability, staff continued with Board approved upgrades to add secondary communication links to improve communication reliability and data links between the CRA facilities, the Operations Control Center in Eagle Rock, and Metropolitan's Headquarters Building in Los Angeles. During the period, microwave equipment installations at the five telecommunication sites were substantially completed. Testing (FCC approved frequencies), microwave alignment and system acceptance tests are scheduled for next period.

- Issued in July a Request for Proposal to replace end-of-life Enterprise UNIX servers that support key enterprise business applications (e.g. Oracle & PeopleSoft), to enhance the reliability of Metropolitan's applications that depend on the performance of these servers. A December Board action is planned to seek funding and authorization for award of contract as part of the Enterprise UNIX Server Replacement Project.

The first quarter variance between budgeted and expended dollars is lower than plan primarily due to projects being deferred to allow additional time to investigate alternative approaches and other cost-effective options.

Enhanced Cyber Security:	Through 1st Quarter
	FY Budget: $0.15 M FY Expended: $0.06 M

Key Accomplishments Included:

- As a part of enhancing Metropolitan's Supervisory Control and Data Acquisition System (SCADA) cyber security capabilities, Information Technology and Water System Operations staff continued efforts to reduce security risk with the acquisition of new network monitoring software. The new tools comprised of hardware and software will enhance monitoring capabilities to detect suspicious activities on Metropolitan's SCADA network.

- Delivery of new hardware (servers) is scheduled for next period followed by set-up, configuration, testing and validation, and user acceptance prior to deployment.

Other Key Activities and Accomplishments

- IT Staff continued to monitor and participate in local and national efforts aimed at enhancing security capability for the water sector to help identify prudent steps and best practices. During the period, Metropolitan's Information Security Manager continued legislative reviews and participated in a National Institute of Standards and Technology (NIST) workshop on Cybersecurity Framework in response to Presidential Executive Order 13636 Improving Critical Infrastructure Cybersecurity.

- In addition, Staff participated in local and regional security forums aimed at enhancing cyber security capabilities by sharing information, solutions and strategies among IT professionals such as the Information Systems Security Association (ISSA) Los Angeles CISO forum, Information System Audit and Control Association (ISACA), and FBI Infragard, and other cyber security symposiums.

- Information Security staff conducted on-going testing and deployment of the latest security patches to ensure up-to-date cyber security protection for Metropolitan's computing environment.

Expenditures in the Enhanced Cyber Security category were within plan for the first quarter of the fiscal year. All projects are projected to complete within Board approved budgets.

Improved Water Quality:	**Through 4ᵗʰ Quarter**
	FY Budget: $0.0 M FY Expended: $0.0 M

Key Accomplishments Included:

Initiated Upgrades to Laboratory Information Management System

- In support of Water System Operations, IT programming staff continued to work closely with Water Quality to upgrade Metropolitan's Laboratory Information Management System (LIMS) to the latest software version. The existing version has been in service since January 2010 and this upgrade is needed to maintain priority vendor support and software currency. The LIMS application contains Metropolitan's water quality State compliance data and is the data-of-record. LIMS manages water quality samples and results for water quality compliance, operational monitoring, and research programs. For a typical year, the application tracks 45,000 water quality samples; 60,000 containers (samples may contain multiple containers); 20,000 quality control aliquots (samples taken for chemical analysis); resulting in upwards of 700,000 results.

- During the period, staff began to set-up, test, and validate the development environment (servers and databases) providing a non-production workspace for programming staff to work while the current system remains in use supporting daily operations. Work is proceeding according to plan as the upgrade is schedule to complete by the end of the fiscal year.

On-going Water Quality Programming Support

- IT staff provided on-going support to other Water Quality software applications that go towards supporting Water System Operations.

- *Water Quality Lab Sheet* - used by Water Quality staff for compliance data collection and reporting.

- *Electronic Systems Log* - used to capture water operation and water quality related events that must be recorded for regulatory compliance and event monitoring.

- *Interim Enhanced Surface Water Treatment Rule (IESWTR)* – used for compliance related to IESWTR that applies to public water systems.

No capital dollars were budgeted in the Water Quality category for this fiscal year. All activities in this category reflect work being done as part of the fiscal year 2013-14 O&M budget.

Productivity / Cost Efficiency:	**Through 1st Quarter**
	FY Budget: $0.33 M FY Expended: $0.05 M

Key Accomplishments Included:

Continued Personal Computer Replacement Program

- Continued Metropolitan's Personal Computer Replacement Program (PCRP) for deploying new computing technology throughout the organization. PCRP deployment has made significant progress throughout the organization and achieved key milestone deliveries to the desert region (Intake, Gene, Hinds, Eagle Mountain, and Iron Mountain); and Headquarters floors 6, 9 through 12; the Sacramento office; Skinner treatment plant; Diamond Valley Lake; the Water Quality Lab; and initiated deployment of new laptops to Board members. Deployment is proceeding according to plan with deployment substantially completing in third quarter of this fiscal year.

Enhanced Business Support and Processing

- Information Technology staff assisted finance staff with key activities related to year-end process and closing of all sub-ledgers and general ledger for fiscal year 2012/13 along with uploading and validating the 2013/14 budget into Oracle. IT staff also assisted Human Resources in implementing Classification/Compensation changes and the new common date MyPerformance Evaluation within PeopleSoft.

Other Key Activities and Accomplishments

- Emerging Technology Advancements—Metropolitan hosted the September SoCal SharePoint User Group Meeting comprised of technology professionals from cities, counties, municipalities, and technology vendors. Users demonstrated how to leverage SharePoint technology to allow for exchange of information, ideas, strategies and best practices. The meeting included representatives from Los Angeles Police Department, and cities of San Diego and Los Angeles.

Expenditures for the Productivity /Cost Efficiency category through the first quarter were lower than plan. The variance in this category stem from the Accounts Payable Imaging Project which will be presented to the Board for authorization next period.