



● ITSP Quarterly Report - Written Report (period ending Mar. 2015)

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 December 31, 2014. 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 refreshed in 2010 and is currently being updated 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 CIP planning process.

There were a number of important milestones achieved during the period that are summarized in this report. Selected accomplishments include: completed the pilot phase acceptance test of the Emergency Radio System project; started to mobilize the telephone replacement project; deployed core switches at primary sites of the Network Communications Infrastructure project including the Metropolitan’s Headquarters datacenter, Lake Mathews Disaster Recovery Facility, Weymouth, and Eagle Rock; and conducted IT Disaster Recovery exercises involving critical applications used by Water System Operations, Finance, Water Quality, Legal and Human Resources.

Key milestones for the upcoming quarter ending June 30, 2015 include: continuing to deploy new network devices as part of the Network Communications Infrastructure project; continuing to finalize design of the Emergency Radio System project, and continuing to deploy the new telephone system.

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.

Detailed Report

Attached are highlights of progress and major milestones reached on IT projects / initiatives during the period of January 1, 2015 through March 31, 2015. 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

<p align="center">Enhanced Reliability:</p>	<p align="center">Through 3rd Quarter FY Budget: \$8.67 M FY Expended: \$4.67 M</p>
<p>Key Accomplishments Included:</p> <p>Network Reliability Upgrades Project</p> <p>Metropolitan’s network connects workstations, servers, and computer equipment via communication lines that extend throughout the distribution system and to the Colorado River Aqueduct (CRA) pumping plants. A majority of Metropolitan’s communication network devices have been in continuous operation between 7 and 12 years. Recent inspections have identified network hardware components showing signs of wear and requiring increasingly frequent repairs. Typical useful life expectancy for network hardware ranges from seven to nine years for network equipment. Metropolitan depends on this communication network to transmit data, voice, video, and command signals to operate its distribution and business systems.</p> <ul style="list-style-type: none"> ▪ During this period, the project team received approximately \$1.6 million of network equipment for replacing end-of-life communications infrastructure. Staff initiated deployment of core switches for primary sites including Metropolitan’s Headquarters datacenter, Lake Mathews Disaster Recovery Facility, Weymouth, and Eagle Rock. The core switches serve as the gateway to support data communications. ▪ In addition, the project team finalized the construction bid documents for electrical power, air-conditioning, and Uninterruptible Power Supplies for the network rooms at Metropolitan’s Headquarters building. ▪ Next step, the project team will continue to deploy additional network devices and will issue the construction bid for upgrading the network rooms at Metropolitan’s Headquarters building. <p>Voice over Internet Protocol (VOIP) Project</p> <p>The new telephone replacement project will replace the existing telephone system that has reached the end of its useful service life. This system has been in continuous operation for over 22 years and is at the end of its useful service life. The upgrade to a VOIP-based system will create the infrastructure foundation to enable future convergence of related communications technologies such as messaging (e-mail, instant messaging, text messaging, fax, and</p>	 

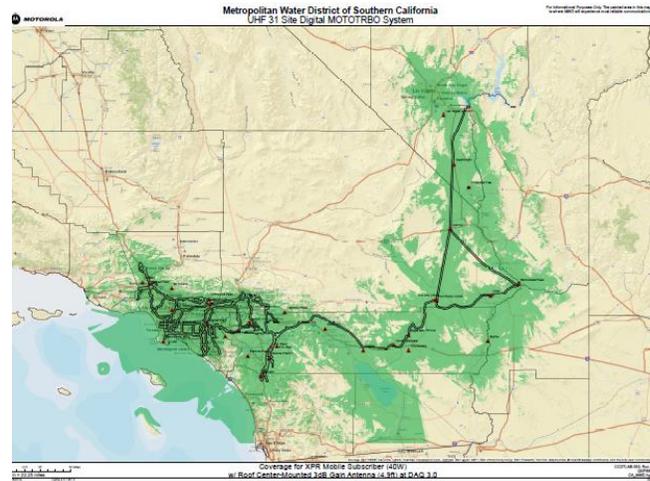
The existing radio configuration uses a combination of three different localized systems which were deployed over a period of three decades. The systems lack reliability, capacity, and coverage to meet disaster recovery needs, and are difficult to use. During recent disaster recovery exercises, the radio systems could not provide an effective means of communication. This project will replace the existing three systems with a single system of sufficient capacity, usability, and coverage to communicate across Metropolitan's entire service area.

- During the period, the project team completed the final acceptance test of the pilot phase. The pilot test involved two mountain-top radio tower sites, one plant tower, and multiple handheld and mobile (vehicle) radios over a portion of Metropolitan's service area surrounding the Weymouth plant. All objectives of the pilot phase test were successfully met.
- Project team posted Request for Bid for system installation and in the process of selecting a contractor. The installation of communication equipment (e.g. antennas) at various sites throughout Metropolitan's service area will start next fiscal year.
- Next step, starting first quarter of next fiscal year, the project team will configure and integrate all 31 sites into a system-wide integrated system.

Oracle Release 12 (R12) Upgrade Project

The Oracle Financial application supports Metropolitan's core business functions. In order to maintain vendor support and provide new functionality, the application requires an upgrade to the current version. There has not been a major upgrade to the Oracle Applications since 2002, when the Project and Grants Accounting module was deployed. Additionally, the existing Travel Expense Reimbursement system is based on older technology that is no longer supported. This project will replace the existing Travel Expense Reporting system with an integrated Oracle module, iExpenses. In addition, existing financial applications cannot run on new hardware.

- During this period, staff completed the Project Plan and tested the new functionalities in R12.
- Staff also reviewed over 300 customizations in the current version and developed an assessment report for new modules R12.
- Next step is to complete the Conference Room



Pilot, which staff is starting. The purpose of the Conference Room Pilot is:

- to identify how the application meets business needs and identify gaps while in the design phase of the project
- to identify customizations/changes based on standard functionality that will be required before acceptance of the solution

Enterprise UNIX Server Upgrade

UNIX servers located in Metropolitan’s Data Center house the Districts enterprise applications such as the Financial and Human Resource Management systems. These servers support key enterprise business applications (e.g. Oracle and PeopleSoft).

- To date, the majority of systems have been migrated over to the new Itanium server platform.
- The Project Steering committee approved the procurement of two additional Itanium servers and associated licenses to address the computing needs of the upcoming Oracle Financials, PeopleSoft, and Oracle Database Upgrade projects.
- The Enterprise UNIX servers project is scheduled to substantially complete by end of fiscal year.

Other Key Activities and Accomplishments

As part of on-going Disaster Recovery preparedness, staff conducted IT Disaster Recovery exercises involving critical applications used by Water System Operations, Finance, Water Quality, Legal and Human Resources. These exercises provided live simulation of staff accessing critical applications via servers/databases located at Metropolitan's remote disaster recovery facility. The tests were successfully completed and met all the objectives of the exercises including hands-on training, validation of recovery procedures, and identifying opportunities for enhancements to the IT Disaster Recovery Plan and Procedures Guide.

The fiscal year variance for the expenditure is less than budgeted for this category. The variance is expected to decrease as the projects move into subsequent phases.



<p>Enhanced Cyber Security:</p>	<p>Through 3rd Quarter FY Budget: \$0.45 M FY Expended: \$0.21 M</p>
<p>Key Accomplishments Included: Supervisory Control and Data Acquisition Cyber Security Upgrades Project:</p> <p>The mission of enhanced cyber security is to secure system and network resources, protect application systems, safeguard the confidentiality of employee and district information, and educate employees about operating policies, procedures and best practices.</p> <p>Cyber security is a high priority and key part of the Information Technology Strategic Plan (ITSP). Maintaining a secure computing environment requires regular enhancements and upgrades to Metropolitan’s IT information security infrastructure to ensure protection against continually evolving cyber threats. The implementation of SCADA Cyber Security project is substantially completed. Staff continued to conduct a follow up on security/vulnerability assessment to ensure Metropolitan’s system network and data are secured.</p> <p>Other Key Activities and Accomplishments</p> <ul style="list-style-type: none"> ▪ Staff completed review of cyber security legislation HR85: Terrorism Prevention and Critical Infrastructure Protection Act of 2015. ▪ Staff briefed the Board on Cyber Security activities as part of the Organizational, Personnel and Technology Committee March Meeting. Pursuant to Gov. Code Section 54957(a) the discussion was held in closed session. ▪ As an ongoing effort to evaluate emerging technologies applicable to Metropolitan, staff is in the process of assessing Cyber Security Awareness tools for use to train and educate employees. <p>Expenditures in the Enhanced Cyber Security category were within plan for the third quarter. All projects are projected to complete within Board approved budgets.</p>	

Improved Water Quality:	Through 3rd Quarter FY Budget: \$0.00 M FY Expended: \$0.00 M
<p>Key Accomplishments Included:</p> <p>Upgraded Electronic System Log (ESL) Staff upgraded the Electronic System Log (ESL) system, which is used by WSO to maintain critical operations data as mandated by the State. Staff is evaluating upgrades to add a file export feature to facilitate analysis and to incorporate user requested reporting features.</p> <p>Other Key Activities and Accomplishments IT staff continued to provide on-going support to important Water Quality software applications used for asset tracking, identifying water movement to capture storages, deliveries and sales, and compliance reporting. These included:</p> <ul style="list-style-type: none"> ▪ Laboratory Information Management System (LIMS) – a transactional processing system for water samples and analytical results including scheduling and tracking of water samples, managing departmental workflow and workload, validating and storing analytical results, and providing reports. IT staff modified the formats of the reporting and calculations to enhance ease of use. ▪ Filtration Plant Laboratory Sheet (Labsheet): State and Federal authorities require water filtration plans to log specific water quality values resulting from laboratory tests. This information is then incorporated into Treatment Plant Compliance reports. Per customer request, staff modified the program, Labsheet, to provide the State with more accurate contact time ratio calculation. <p>No capital dollars were budgeted in the Water Quality category for the third quarter. All activities in this category reflect work being done as part of the fiscal year 2014-2015 O&M budget.</p>	

<p>Productivity / Cost Efficiency:</p>	<p>Through 3rd Quarter FY Budget: \$0.69 M FY Expended: \$0.68 M</p>
<p>Key Accomplishments Included:</p> <p>PeopleSoft Human Capital Management (HCM) Upgrade 9.2</p> <p>The upgrade of the PeopleSoft application is vital to payroll processing, tracking of employee-related information and monitoring of required compliance training. Staff evaluated alternative solutions and the findings indicate that upgrading the PeopleSoft application is the most reliable path to pursue for Metropolitan. The upgraded HCM application including Employee Relations, Payroll, Benefits and Temporary Worker, and Consultant Tracking Module, will allow Metropolitan to continue to receive vendor support and needed tax updates.</p> <ul style="list-style-type: none"> ▪ During this period, staff continued with the testing. Also, the project team simplified configuration in multiple areas and automated daily processes that were formerly done manually. ▪ Currently, staff working on: <ul style="list-style-type: none"> ▪ Completing preliminary testing, including core HCM processes and all interfaces ▪ Preparing new environment for User Acceptance Testing ▪ Setting up and testing security/role privileges and assignments ▪ Next step, staff plans to complete set up of environment for user acceptance testing with a target completion date at the end of the fiscal year. <p>Other Key Activities and Accomplishments</p> <ul style="list-style-type: none"> ▪ Cloud Computing Technology and Collaborative Work Environment Solutions: <ul style="list-style-type: none"> ▪ Along with Water Resources Management (WRM), the IT staff participated in a demonstration of a software-as-a-service cloud solution for managing WRM’s agreements. Staff is evaluating whether the proposed solution will meet the user requirements. ▪ Staff created new SharePoint collaborative work sites that includes: <ul style="list-style-type: none"> ▪ Collaboration site for the Oracle Financial Upgrade Project. ▪ Collaboration site for Record Management’s Document Services Team. 	 

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- Staff conducted SharePoint training classes that included:
 - Three sessions for members of the Oracle Financial Upgrade Project and Finance staff.
 - One session of introductory SharePoint training for general end-users; more training sessions are planned.
- Support the General Manager’s Bay Delta Conservation Plan strategic priority: Staff worked with stakeholders to provide and support a risk management software tool and video conferencing capability.
- Metropolitan continued its effort to update its Information Technology Strategic Plan (ITSP). The purpose of the ITSP is to provide a roadmap to guide the investment and deployment of information technology at Metropolitan over the next three to five years. The plan is updated periodically based on changing business needs and technology advancements. Staff began detailed planning of future initiatives that will guide IT investment. Next quarter, staff is planning to present to the Board the IT Strategic Plan findings and initiatives.
- As a part of developing innovative solutions, IT Staff worked in collaboration with Administrative Services Section staff to evaluate a mobile asset application. The new application “Fixed Asset Cycle Count” is a system of applications with features to allow cycle count coordinators to count asset items and upload information in real-time. The new application will enhance productivity by replacing the manual process of data-entry. Next step is to conduct final testing and initiate deployment in the first quarter of next fiscal year.

Expenditures for the Productivity / Cost Efficiency category were within plan for the third quarter. All projects within this category are projected to complete within Board approved budgets.

