• ITSP Quarterly Board Report (period ending Dec 2012)

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, 2012. There were a number of important milestones achieved during the period that are summarized in this report. Key milestones for the upcoming quarter ending March 31, 2013 include completing an independent review by an outside consultant of the RFP for the final design and implementation of the Emergency Communication Radio System; initiating the construction phase as part of the uninterruptable power supply (UPS) upgrade at Metropolitan's Headquarters; continuing the design and development of the cloud-based Environmental and Safety Management Information System; commence concurrent negotiations with selected vendors as a part of the PC Replacement project; and negotiated an update to Metropolitan's enterprise agreement (Microsoft) for software licensing and support.

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.

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 October 1 through December 31, 2012. 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: 3/12/2013

Enhanced Reliability:	**Through 2nd Quarter**
	FY Budget: $3.33 M FY Expended: $0.69 M

Key Accomplishments Included:

Issued Notice-to-Proceed for Construction Phase of the Wide Area Network Upgrade Project

- As part the effort to enhance communication reliability, and with Board authorization received in the prior reporting period, staff issued the Notice-To-Proceed to begin the construction phase of this project. The approved upgrades include adding secondary communication links (by installing five new microwave transmission sites) which will improve the reliability of the communications and data link between the CRA facilities, the Operations Control Center in Eagle Rock, and Metropolitan's Headquarters Building in Los Angeles. Construction will begin at the Copper Basin followed by Black Peak, Vidal Junction, Rice Road, and Iron Mountain Pumping Plant. Target completion is scheduled for mid-2013.

Continued Design and Development of the new Cloud-Based Environmental and Safety Management Information System

- Currently in development is a new external cloud-based system for Water System Operations' Safety and Environmental Section (SES) to enhance the tracking and monitoring of compliance and permitting activities related to air quality, hazardous materials and waste, fuel and chemical storage tanks, and safety requirements. During the period, staff continued design, development and testing of the new Environmental and Safety Management Information System comprised of 5 key modules (Hazardous Waste, Incident Management, Corrective Actions & Compliance Tracking, Industrial Hygiene and Audit/Inspection). To date, staff has substantially completed the highest priority modules which include Hazardous Waste and the design of the Compliance Tracking module.

Supported Engineering Capital Programs and Projects to Enhance Reliability

- Provided on-going Information Technology (IT) services for engineering capital programs and projects to enhance Metropolitan's infrastructure reliability. In most cases, each capital project will directly or indirectly involve IT, whether it's a new facility, system or upgrades to field

instrumentation that requires transmission of voice/electronic data over Metropolitan's communication network. Working closely with Engineering and Water Operation, IT reviews the requirements with key stakeholders to provide cost effective solutions.

Recent activities include:

- Completed installation of new cabling (fiber and copper) at Morris Dam to replace end-of-life communication lines.
- Completed network design to upgrade communication protocol for Metropolitan's Supervisory Control and Data Acquisition (SCADA) system.
- Provided on-going IT support for the ORP Program at the Weymouth Treatment Plant.

Upgraded Communication Protocol

- During the period, IT staff installed the Multiprotocol Label Switching (MPLS) communication backbone for MWD SCADA locations in Verizon territory. MPLS services will replace the older Frame Relay networking equipment that is no longer supported by the carrier. About half the SCADA endpoints are on Verizon, and the other half AT&T. Frame Relay services are being discontinued by the telecommunication carriers (e.g. Verizon, AT&T). Frame Relay services do not provide the speed, reliability and security required, and Metropolitan must upgrade to MPLS services.

Enhanced Reliability by conducting IT Disaster Recovery Exercises

- During the period, staff completed an information technology disaster recovery / business continuity exercise involving key business users from Engineering, Finance, Water Quality, Legal, Human Resources and Information Technology. The exercise provided live simulation of staff accessing critical applications via servers/databases located at Metropolitan's remote disaster recovery facility. The test was successfully completed and met all the objectives of the exercise, including hands-on training, validation of recovery procedures, and identifying opportunity for enhancements to the IT Disaster Recovery Plan and Procedures Guide.
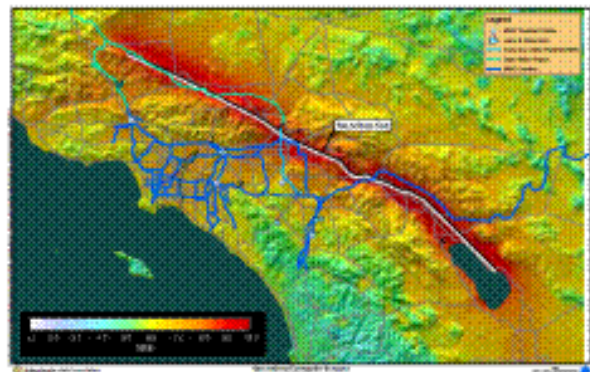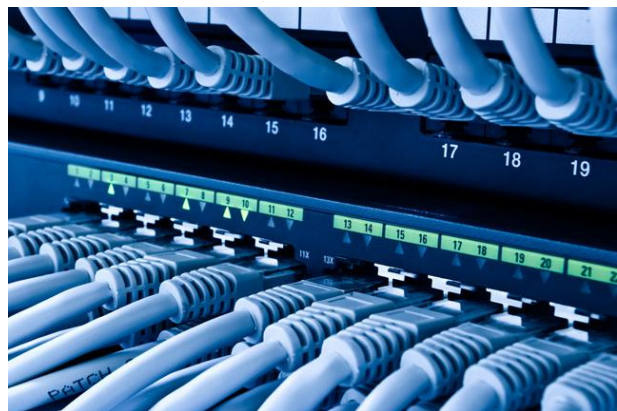
Continued Supervisory Control and Data Acquisition (SCADA) Master Planning

- Metropolitan utilizes a Supervisory Control and Data Acquisition system to monitor and control its water system operations; water planning; regulatory compliance; maintenance management; and energy management. With components of the system reaching the end of their useful life, a Water System Control Master Planning effort is currently underway to provide a roadmap to ensure continued system reliability. Key elements of the master plan are being developed in draft form for review by key stakeholders in WSO, Engineering and IT. The development of the master plan is proceeding on schedule with the issuance of a draft report by end of this fiscal year.
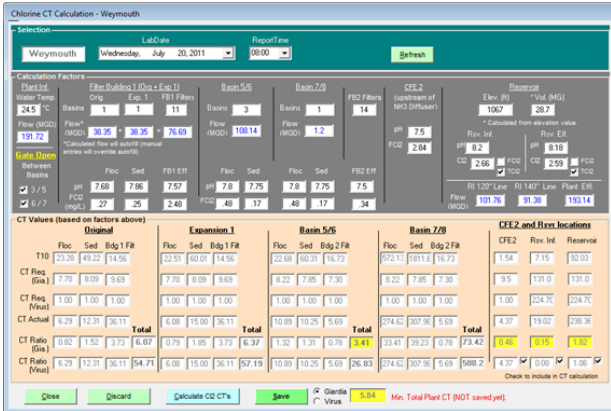
Other Key Activities and Accomplishments

- Completed e-Discovery Commissioning Workshops. During the period, staff conducted workshops with Legal staff in preparation for rolling out the first phase of the new e-Discovery system.

- Conducted network planning and design to enhance the capacity (bandwidth) for remote access communication between Metropolitan Union Station headquarters and remote offices at Washington DC and Sacramento.

- Ensure email Operational Reliability. Completed the migration of employee mailboxes (emails) to a newer version of Exchange used to manage Metropolitan's emails. This upgrade improves operational reliability by enhancing redundancy such as fail-over capabilities. Additionally, built-in redundancies to also support disaster recovery in the event of a major system outage or disaster.

The fiscal year variance between budgeted and expended dollars is in part due to; withholding vendor payment pending acceptance of deliverables; and projects being deferred to allow additional time to investigate alternative approaches and other cost-effective options. A variance in this category is expected to remain pending final recommendations and Board authorization for these reliability initiatives.

Water System Control Master Plan

WSO Manager's Meeting
Sep. 6th, 2012

The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way

Enhanced Cyber Security:	**Through 2nd Quarter**
	FY Budget: $0.25 M FY Expended: $0.14 M

Key Accomplishments Included:

Enhanced IT Infrastructure Network Security

- IT staff installed upgrades to enhance the protection of Metropolitan's communications network.

Participated in Los Angeles Cyber Security Symposium

- Metropolitan's Information Security Manager participated in the Los Angeles Cyber Security Symposium. The symposium, held as part of President Obama's declaration of October as Cyber Security Awareness month, brought together law enforcement (LAPD) and information technology experts from various disciplines to share their expertise and to build cyber security partnerships and alliances with other government agencies.

Continued On-Going Security Monitoring and Remediation

- Metropolitan's IT Security Team performed on-going security monitoring and effectively protected Metropolitan's cyber assets by using a complement of security software tools and methods/processes to enhance the protection of our computing environment. Recently, staff completed the evaluation phase of new cyber security tools which will further enhance in-house security capabilities related to Metropolitan's Supervisory Control and Data Acquisition (SCADA) system. The SCADA system is used by WSO and supports daily operations.

Other Key Activities and Accomplishments

- 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.
- The IT Security Team continued to provide on-going security awareness as well as security orientation of all new hires.

Expenditures in the Enhanced Cyber Security category were within plan, with total expenditures projected to be on-target for the fiscal year. All projects are projected to complete within Board approved budgets.

Improved Water Quality:	**Through 2ⁿᵈ Quarter**
	FY Budget: $0.0 M FY Expended: $0.09 M

Key Accomplishments Included:

- On-going programming upgrades for software applications that support Metropolitan's water quality (WQ) treatment, monitoring, and compliance reporting. Modifications are typically needed as a result of changing regulatory compliance requirement, or treatment process modifications that support Metropolitan's mission to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

- During this reporting period, internal IT programming staff continued software upgrade efforts that support WSO by enhancing Metropolitan's Water Conservation Application, Water Quality Lab Sheet, and Electronic System Log applications to be web-enabled. Once the upgrades are completed and fully deployed, this will enable WSO management to monitor and retrieve selected WQ data securely and remotely (e.g. online, website).

    - *Water Conservation Application* is used by Metropolitan staff to administer Board approved water conservation programs.

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

    - *Electronic Systems Log* is used to capture water quality related events that must be captured for regulatory compliance.

- Development, programming and preliminary testing for each of these applications are proceeding according to plan. In the next period, IT staff will begin working with WRM to begin user acceptance testing of the Water Conservation Application.

No capital dollars were budgeted in the Water Quality category for this fiscal year. However, a small variance in capital expenditures was incurred as a result of final invoice payments for the Water Quality Monitoring and Rapid Event Detection Project, which completed under-budget. All activities in this category is proceeding according to plan and is being done as part of the fiscal year 2012-13 O&M budget.

Productivity / Cost Efficiency:	Through 2nd Quarter
	FY Budget: $0.14 M FY Expended: $0.0 M

Key Accomplishments Included:

Deployed Web-Based WorkTech Timekeeping System

▪ During the period, the Information Technology Section completed deployment of an upgraded version of Metropolitan's time keeping system (WorkTech version 5.1). This effort is in support of smart technology and innovative business services by providing the foundation for future deployment of new capabilities (e.g. remote time-keeping approval using a wireless device such as a smartphone). Other key drivers for this upgrade includes maintaining software version currency, enhanced efficiencies as the new version of the software include new capabilities for both users as well as approvers.

Received Award for Excellence in IT Practices

▪ Recognized by Municipal Information Systems Association of California (MISAC) and was presented the 2012 Award for Excellence in IT Practices. MISAC is comprised of a professional group of California IT leaders from municipal and special government districts. Metropolitan was rated Excellent based on its practices in IT strategic planning and budget, purchasing, operations, customer satisfaction, project management, training, disaster preparation and recovery, policies and procedures. This is the third year that Metropolitan's has been recognized by MISAC.

Other Key Activities and Accomplishments

▪ Deployed a new software tracking system to manage telecommunication expenditures (e.g., telephone billing and charge backs) that were previously performed manually. The new system improves efficiency and effectiveness by automating processes, providing a central repository for key telecommunication expenditures and is integrated with Metropolitan's financial system.

▪ Continued on-going technology evaluation and advancements applicable to Metropolitan computing environment. Such evaluation typically requires IT staff to set up a development site to allow users/staff to evaluate a host of requirements such as evaluating basic usability/functionality of the tool, to more

complex issues related to software and hardware compatibility, information security, data flow, and technical architecture.

- Continued Delivering On-going Cost-Effective IT Services. As part of IT cost-effective services, staff successfully renegotiated a software agreement during this period, resulting in approximately $10,000 in savings to Metropolitan.

- Continued Metropolitan's Personal Computer Replacement Program (PCRP) for deploying new computing technology throughout the organization. During the period, staff continued PCRP efforts by updating the IT Guidance Committee on progress based on a comprehensive review of user requirements and continued development of a procurement strategy.

There were no capital expenditures for the Productivity / Cost Efficiency category through the second quarter of the fiscal year. The variance in this category stem from the A/P Process Improvement Project that was deferred to focus on the highest priority efforts. A variance is expected to remain pending final recommendation and Board authorization scheduled for the fourth quarter of this fiscal year.

Delivering Cost Effective Services