



● Information Technology Strategic Plan (ITSP) – Quarterly Report for period ending December 2009

Summary

This report provides a quarterly update on progress to implement Metropolitan’s Information Technology Strategic Plan (ITSP) and on information technology (IT) activities in general for the period ending December 31, 2009. 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, 2010 include rollout of the new Inventory Bar-Coding System; and completion of a draft of the updated IT Strategic Plan report.




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 is currently being updated in light of 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.

Detailed Report

Below are highlights of progress and major milestones reached on IT projects / initiatives during the period of October 1st through December 31, 2009. 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>Productivity / Cost Efficiency:</p>	<p>Fiscal Year 2009-10 Budget: \$ 0.99 M Expended: \$ 0.45 M</p>
<p>Key Accomplishments Included:</p> <p>Completed Rollout of the New Fuel Management System</p> <ul style="list-style-type: none"> ■ The Fuel Management System allows Metropolitan to more effectively and efficiently manage fuel inventory. Previously, Metropolitan tracked fuel usage and fuel inventory information manually. The new system automatically captures fueling data and stores information from the vehicle (e.g., mileage) and the fuel pump (e.g., fuel dispensed), resulting in enhanced productivity while minimizing errors associated with manual data entry. ■ During the period, installation of the new fuel system was completed and rolled out to the desert locations. Currently, all twelve of Metropolitan’s fueling sites have been completed and are operational. Initial feedback from Water System Operations has been positive, attributing to the systems “ease-of-use” and by eliminating paperwork associated with manual data entry processes. <p>Continued IT Strategic Plan Update Effort</p> <ul style="list-style-type: none"> ■ Metropolitan’s Information Technology Section is in the process of updating its ITSP. The ITSP provides a roadmap to guide the investment and deployment of information technology at Metropolitan. The goal of the plan is to leverage IT investments to increase long-term reliability, while improving Metropolitan’s overall efficiency and effectiveness. ■ During the period, staff completed a SWOT (Strengths-Weaknesses-Opportunities-Threats) workshop with key stakeholders, comprised of technical staff from WSO, IT and consultant SCADA experts. The workshop focused on Metropolitan’s SCADA system, which is used to monitor and control many mission critical water treatment and distribution processes. Conducted IT Strategic Plan update working session with the ITSP Steering Committee comprised of managers from across Metropolitan’s key business functions. The session including a review of major findings and recommendations as well as a discussion of the proposed IT strategic direction. 	  

- A draft of the updated IT Strategic Plan report is scheduled to be completed next quarter.

Other Key Accomplishments During the Period:

Applied for Grant Funding for Information Technology Projects

- During the period, IT staff completed the necessary documentation and application to apply for grant funding under the American Recovery and Reinvestment Act of 2009. The projects submitted by the IT Section were part of a larger Metropolitan effort to seek grant funding for projects that qualify under the ARRA act. The application was submitted in December and the results are expected to be announced in early 2010. The three IT projects submitted for consideration are the PC Power Optimization, Enterprise UNIX Server Upgrade, and the Headquarters Datacenter Sustainability Upgrade Project.
- In addition, staff is currently looking into software/subscriptions that will allow Metropolitan to more quickly and easily locate potential grant funding sources, determine its applicability to Metropolitan projects, and track and manage submitted grants.

Municipal Information Systems Association of California (MISAC) Conference




- IT Staff attended the MISAC conference which brought together IT professionals throughout the state to discuss current issues, and to participate in educational programs provided by the sponsors. These conferences benefit Metropolitan through the exchange of ideas with peers from other municipalities on improving business processes to increase organizational efficiencies.

Expenditures in the Productivity/Cost Efficiency category were lower than planned as of the second quarter of fiscal year 2009/10. The fiscal year variance between planned and expended dollars is primarily due to work that has not yet begun for the Ozone Optimization project, as staff researches potential grant funding for this project; and the Material Interface project, which is currently in the design phase.



American Recovery and Reinvestment Act of 2009



<p align="center">Enhanced Reliability:</p>	<p align="center">Fiscal Year 2009-10 Budget: \$ 5.27 M Expended: \$ 3.72 M</p>
<p>Key Accomplishments Included:</p> <p>Completed Design Phase for CAD Management System</p> <ul style="list-style-type: none"> On September 15, 2009, the board authorized the Computer-Aided Design (CAD) Management System to implement a new system to manage Metropolitan’s CAD drawings and associated files. CAD is the use of computer technology to facilitate the layout, design and drafting of engineering and architectural drawings which are complex (e.g. layers of information with interdependencies) and usually involve multiple users from the different engineering disciplines (e.g. Civil, Electrical, Mechanical, etc.). The new CAD management system will be used to effectively manage the production of these design drawings, specifications and calculations by storing them in a secure repository, managing check-in and check-out of electronic files; automatically creating electronic file backups; and providing advanced search features to facilitate retrieval. During the period, staff completed the design phase and server software installations. Current efforts include configuring the software to manage CAD documents per design specifications along with loading drawings and other engineering documents in preparation for a pilot phase. Pilot testing is scheduled to begin in the fourth quarter of this fiscal year. The project is proceeding according to plan and is within budget. <p>Continued Work on Phase II (Wide Area Network) of the IT Network Upgrade -- 3 of 4 sub-projects completed to date</p> <ul style="list-style-type: none"> The scope of the IT Network Phase II project is to upgrade Metropolitan's wide area network (WAN) to strengthen its overall reliability by eliminating potential single points of failure, improving electrical grounding of communication sites and increasing capacity to handle growth in traffic. To date, three out of the four sub-projects have been completed. The three completed sub-projects are: Fiber-Optic and Cabling Upgrade, Communication Facility (Grounding / Battery) Upgrade, and the WAN Monitoring System Implementation. 	  

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- During the period, IT staff continued to work with the contracting team on two remaining public work procurements associated with upgrading the WAN microwave system. This remaining sub-project is geared to provide alternate communication paths to/from selected Metropolitan sites to improve reliability by eliminating potential single points of failure.
- The current target completion for this project is scheduled for the fourth quarter of fiscal year 2009/10.

Other Key Accomplishments During the Period:

Substantially Completed the Union Station Headquarters Technology Upgrade project

During the period, the core scope of the Union Station Headquarters Technology Upgrade project was completed. This included upgrades to ten-year-old audio, video and IT-related equipment in the main board room and committee rooms in Metropolitan’s headquarters building at Union Station. Staff will continue to monitor performance and make acoustic adjustments and fine tune the system as necessary.

Conducted Training on Emergency Notification System

- In October, as part of continuing efforts to ensure staff are prepared for emergencies, IT staff conducted training on the Emergency Notification System with Emergency Operation Center and IT logistics staff. The system is used for rapid and efficient delivery of alerts, notifications, reporting instructions and other time-critical communications in the event of an emergency.

Expenditures in the Enhanced Reliability category were lower than planned through the second quarter of fiscal year 2009/10. The variance in this category is expected to decrease as activities and expenditures increase for the newer projects (e.g. Water Quality Monitoring and Rapid Event Detection System, CAD, Electronic Discovery Management System) in the second half of the fiscal year.



<p>Enhanced Cyber Security:</p>	<p>Fiscal Year 2009-10 Budget: \$ 0.41 M Expended: \$ 0.23 M</p>
<p>Key Accomplishments Included:</p> <p>Continued Phase II of the Information Security Remediation Initiative</p> <ul style="list-style-type: none"> ■ Staff continued efforts to enhance and upgrade Metropolitan’s IT security infrastructure as part of Phase II of the Information Security Remediation initiative. In this project, proactive measures were implemented to better secure Metropolitan’s network environment against emerging cyber threats. ■ To date, IT staff has completed six initiatives including: <ul style="list-style-type: none"> ■ Physical migration of six SCADA - related applications to better segregate and secure the SCADA network. ■ Deployment of Metropolitan’s wireless network and associated security infrastructure. ■ Deployment of a Security Information Management system to provide a dashboard summarizing security monitoring data, and highlighting any suspicious activity. ■ Deployment of a security vulnerability assessment tool. ■ Deployment of a Wireless Local Area Network (LAN) security analyzer. ■ Deployment of a new database security monitoring and assessment system to better safeguard the information stored in Metropolitan’s production databases. ■ During the period, staff began the development phase for implementation of a new security-related tool (Microsoft’s System Center). The new system will facilitate software distribution, management and asset tracking to Metropolitan’s key production servers and users’ workstations to ensure that they have the latest critical security software patches to protect against cyber threats. ■ Staff recently procured laptop disk encryption software to further enhance Metropolitan’s IT security capabilities and initiated a pilot phase of 50 laptops. 	<div data-bbox="824 453 1466 829" data-label="Image"> </div> <div data-bbox="813 955 1474 1663" data-label="Image"> </div>

- Staff completed preliminary design on the IT security account provisioning system to automate and assist security staff with managing access to key applications (e.g. Oracle Financials, PeopleSoft, Human Resources, time keeping) for Metropolitan employees. The initiatives in Phase II of the Information Security Remediation project are scheduled to complete in the fourth quarter of this fiscal year.

Other Key Accomplishments:

- Staff continued to monitor and participate in national efforts aimed at enhancing security capabilities for water utilities to ensure that Metropolitan meet or exceed national standards.
- As part of the ongoing security awareness effort, staff published monthly cyber security tips on Metropolitan’s internal website.
- In addition, staff continued to provide IT security orientation for all Metropolitan new hires.

Expenditures in the Enhanced Cyber Security category were lower than planned for the second quarter of fiscal year 2009/10. The variance relates to time extensions for two security initiatives that required additional analysis (i.e., laptop encryption and implementation of Microsoft System Center). Expenditures (as a percent of budget) are expected to increase as a result of security initiatives currently underway.



Improved Water Quality:

Fiscal Year 2009-10
Budget: \$ 0.15 M Expended: \$ 0.00 M

Key Accomplishments Included:

Water Quality Monitoring and Rapid Event Detection System

- The Water Security Initiative is the U. S. Environmental Protection Agency’s response to the Homeland Security Presidential Directive (HSPD-9) established in 2004, to develop water quality surveillance and monitoring systems to rapidly detect water distribution system contamination in order to isolate and minimize the impact on the general population.
- In December 2009, the board authorized the development and deployment of a new Water Quality Monitoring and Rapid Event Detection System (WQREDS) for Metropolitan. The event detection system software will collect and analyze data from existing water quality instrumentation



located throughout Metropolitan’s treated water distribution system. This software, coupled with the water quality instruments and data, is referred to as the WQREDS and will be used to monitor water quality parameters in the treated water distribution system and to notify staff of potential contamination and unusual water quality conditions. Work on this project is scheduled to begin shortly once the agreement with the consultant is completed.

Skinner Oxidation Retrofit Program

- During the period, IT staff continued to support the startup phase of ozone equipment at the Skinner plant.

Diemer Oxidation Retrofit Program

- During the period, staff continued to review contractor submittals for compliance with Metropolitan’s specifications.

Other Key Accomplishments:

- IT staff provided control system design review and technical support, and participated on a number of water-quality related engineering projects that included:
 - Weymouth Coagulant Tank Farm Modifications
 - Diemer Fire and Potable Water Pump Station
 - Weymouth Power System Upgrade
 - CRA – West Portal Gate Upgrade

There were no expenditures on IT capital projects in the “Improve Water Quality” category during the first half of fiscal year 2009/10. This is because the single water quality-related IT project for fiscal year 2009/10 (Water Quality Monitoring and Rapid Event Detection System) did not begin until authorization was received by the board in December 2009. It should also be noted that IT expenditures associated with other capital projects (e.g., oxidation retrofit) are reported as part of those initiatives and therefore are not reflected in this report.



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Details of Board Items during this period:

- On December 15, 2009, the Board appropriated \$1,548,000; and authorized (1) the Water Quality Monitoring and Rapid Event Detection System; and (2) agreement with Tetra Tech in an amount not to exceed \$1.072 million.
- On December 7, 2009, staff provided quarterly updates on the Information Technology Strategic Plan (ITSP), and information technology (IT) activities in general, for the period ending September 30, 2009.