

- Information Technology Strategic Plan (ITSP) – Quarterly Report for the period ending December 2007

Summary

This report provides a quarterly update of the Information Technology Strategic Plan (ITSP) and information technology (IT) activities in general for the period ending December 2007. There were a number of important milestones achieved during the period that are summarized in this 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 updated periodically 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.

Attachments

Attachment 1 provides a summary of Board actions and the appropriations for the ITSP programs through December 31, 2007.

Attachment 2 provides a summary of the appropriations and expenditures through December 31, 2007.


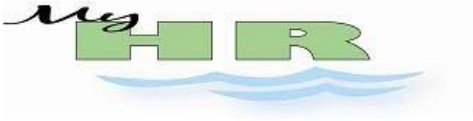

Attachment 3 provides a summary list of IT capital projects and their status.

Detailed Report

Below are highlights of progress and major milestones reached for IT projects / initiatives during the period of October 1st through December 31, 2007. 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

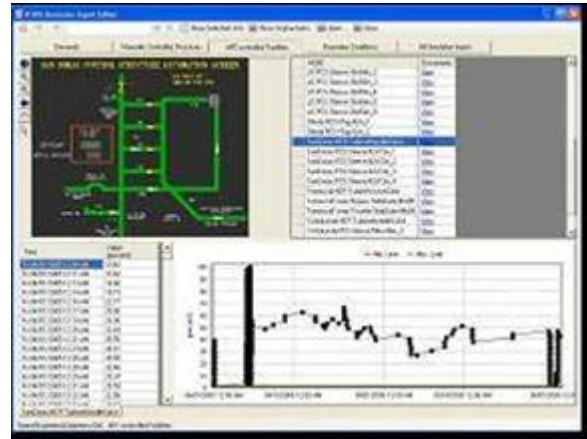
<p style="text-align: center;">Enhanced Reliability:</p>	<p style="text-align: center;">Fiscal Year 2007-08 to date Budget: \$ 6.81 M Expended: \$ 3.32 M</p>
<p>Completed PeopleSoft 8.9 Upgrade as part of Phase II of the Human Resources Improvement project</p> <ul style="list-style-type: none"> ■ In March 2007, the Board authorized Phase II of the Human Resources (HR) Improvement project. The first component of the Phase II effort is to upgrade the PeopleSoft Human Resource Management System to version 8.9. The upgrade was necessary to maintain vendor support and get system upgrades. In October 2006, Oracle, the HR system vendor, published a support schedule including tax updates required for the payroll processing will no longer be available from Oracle as of March 2008. Delaying the upgrade would have increased Metropolitan’s risk by operating a critical system without necessary payroll support. In addition, the upgrade gives employees the ability to direct paycheck funds into multiple accounts. ■ During the period, staff successfully completed the PeopleSoft v8.9 upgrade. The upgrade coincides with HR’s introduction of “My HR” providing a single point of entry for all employee self-service transactions. ■ With the completion of the PeopleSoft upgrade, the next step in Phase II of the HR Improvement project is to begin the design phase of the Employee Relations (ER) Module and the Employee Learning Management (ELM) Module. The ER module will assist HR staff in managing grievance deadlines and other ER data (e.g. grievances, disciplinary actions, etc.). The ELM Module will provide self-service capabilities for employees and managers to track training compliance including certification and completion. ■ The target completion for the ER and ELM Modules is in the fourth quarter of fiscal year 2007/08. 	<div style="text-align: center;">  <p>PeopleSoft 8.9 Upgrade</p>   </div>

Updated the Board on the SMART-Ops Project and Proposed Pilot of the Eastern Distribution System

- The objective of the SMART Operations (SMART Ops) project, formerly named the Real Time Operating System (RTOS), is to develop and implement a hydraulic model that simulates the behavior of Metropolitan’s water distribution system, including the Colorado River Aqueduct (CRA). SMART Ops utilizes hydraulic calculations and data from Metropolitan’s SCADA system to allow staff to evaluate a variety of short and long-term operating scenarios. This is particularly important given the dynamic nature of the volumes from Metropolitan’s water sources. SMART Ops will also be used for planning, emergency training, the re-routing of water during shutdowns, and analyzing distribution system control options.
- The pilot phase was previously completed and served as a “proof of concept” by developing a working hydraulic model that simulates water grade, flows and levels for the Rialto Feeder portion of Metropolitan’s distribution system.
- During the period, staff provided an update to the Board on the completion of the initial pilot deployment and staff’s plans to extend the SMART-Ops pilot to include the eastern portion of the distribution system which will be completed by September 2008.

Received 2007 Innovators Award by Control Microsystems for the Automatic Meter Reading (AMR) Project

- The project involves upgrading the Automatic Meter Reading (AMR) meter sites that supports Metropolitan’s billing and monitoring of water delivery through service connections to member agencies. The current AMR system is based on outdated technology that needs to be upgraded to continue functioning properly. There are approximately 480 water meters located throughout Metropolitan’s distribution system.
- During the period, Metropolitan was awarded the 2007 Innovators Award for the AMR Project. The award is issued annually by Control Microsystems Inc. (CMI) for the project that demonstrates “Leading Edge Design and Implementation of Advanced Supervisory Control and Data



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Acquisition (SCADA) Systems.” CMI is a global developer of advanced Supervisory Control and Data Acquisition (SCADA) equipment and software. The evaluation was conducted by a committee of engineering and product line experts.

Continued IT Disaster Recovery Joint Exercise Planning and Training

- During the period, IT continued joint planning with business continuity staff in preparation for an upcoming IT Disaster Recovery (DR) exercise (scheduled for March 2008). This is an ongoing effort to refine Metropolitan’s ability to recover critical IT systems in the event of a disaster.
- As part of DR preparedness, IT continued to conduct on-going training with staff. Recent training sessions involved logistics staff and focused on emergency communication procedures and protocols.
- In addition, staff visited the City of Anaheim to review its Enterprise Virtual Operations Center application that uses advanced technology to assist the city in both its daily management activities as well as during emergency operations.

Installed Programmable Logic Controller (PLC) for Traveling Bridge and Dry Polymer Systems at the Jensen Treatment Plant

- Programmable Logic Controllers (PLCs) are industrial process control devices that are typically tied into Metropolitan’s SCADA system to control and monitor a variety of important water system-related processes such as filtration, chemical feed, and washwater reclamation.
- This initiative is intended to proactively replace the oldest PLC units before they fail. The criterion is to replace standard PLCs that are older than 10 years. Also, these are field devices that are typically exposed to environmental extremes such as temperature, moisture, and dust.
- During the period, three PLC’s were replaced with new units at the Jensen Treatment Plant. One PLC unit was for a traveling bridge, which is a mechanical carriage device that scours the bottom of the sedimentation basins; and two PLC units were for dry polymer systems.



Completed Requirements Analysis and Issued RFP for Union Station Headquarters Technology Upgrade Project

- The Union Station Headquarters Technology Upgrade project will upgrade audio, video and information technology-related equipment in the main Board room and committee rooms in Metropolitan’s headquarter building at Union Station.
- In December, an RFP was issued to hire an integrator to design and implement the audio/visual system upgrades in the Board room and committee rooms. An ad hoc Board committee was created to provide input.

Continued to implement PC replacement program by rolling out new hardware and software to field sites




- Completed 90% of PC replacement program.
- In the upcoming period, staff will concentrate efforts on rolling out remaining PCs, which are primarily for staff members who are using software applications that must be upgraded to be compatible with Windows Vista, such as Computer Aided Design (CAD) users. Work should be completed in March 2008.

Other key accomplishment include:

- As part of server upgrades at the treatment plants, staff completed processor installation at the Weymouth facility to increase SCADA server performance, and replaced existing server hard drives with higher capacity units which increases historical data storage capacity.

Expenditures in the Enhanced Reliability category were lower than projected through the second quarter of fiscal year 2007-08. This variance is expected to decrease as phase II of the AMR project gets underway. In addition, a portion of the variance stems from the Water Planning Application and Electronic System Log projects which were delayed because internal resources were reassigned to higher priority projects.





<p align="center">Improved Water Quality:</p>	<p align="center">Fiscal Year 2007-08 to date Budget: \$ 0.03 M Expended: \$ 0.03 M</p>
<p>Key accomplishments Included:</p> <p>Oxidation Retrofit Programs</p> <ul style="list-style-type: none"> ■ An important component of the Skinner, Weymouth and Diemer Oxidation Retrofit Programs (ORP) is the design, programming, and installation of hardware and software to control the ozone treatment process. ■ For the Weymouth ORP, IT staff completed review of the final specifications and construction drawings. ■ For the Diemer ORP, IT staff continued to provide technical support and reviewed the 99% design specifications. ■ For the Skinner ORP, IT staff continued support of ORP construction activities. <p>Continued support for Skinner Expansion No. 4</p> <ul style="list-style-type: none"> ■ As part of the Skinner Expansion No. 4 project, staff completed automated process controls (APCs) for chemical feed systems and Washwater Reclamation Plant No. 3. APCs are software programs developed to control and monitor a variety of processes (e.g. chemical dosage, chemical feed valves and feed pumps, and cooling water systems). ■ Staff completed APCs for sodium hypochlorite, sulfuric acid and ferric and liquid polymer chemical feed systems for Modules 4, 5 and 6. ■ Completed a number of SCADA graphic screens used by the Skinner operators for monitoring and controlling dry polymer and sodium hypochlorite chemical addition. 	  



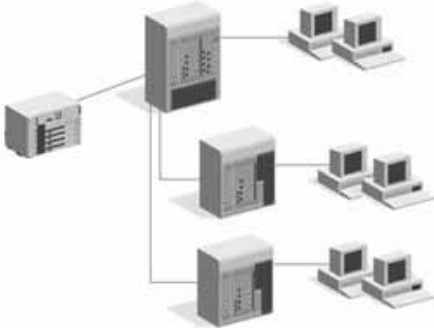
Other Key Accomplishments Included:

- IT staff provided technical support to field staff by setting up SCADA for the hypochlorite feed at Lake Mathews being used as an interim solution to control Quagga Mussels.
- Staff reviewed the final specifications and construction drawings for the sodium hypochlorite feed at Copper Basin to be used as an interim measure to control Quagga Mussels.
- In support of the Weymouth Pilot Plant project, IT staff reviewed 90% design specifications.
- As part of the Plant Influent Flow Metering Upgrade project, staff completed a pilot at the Mills Treatment Plant.
- As part of the Fluoridation Program, staff completed programming and successfully deployed APCs for the fluoride systems at all five treatment plants.
- IT staff reviewed the 99% design specifications for the Perris Valley Pipeline – South Reach project.

Expenditures in the Improved Water Quality category were on budget through the second quarter of fiscal year 2007-08.



<p style="text-align: center;">Enhanced Cyber Security:</p>	<p style="text-align: center;">Fiscal Year 2007-08 to date Budget: \$ 0.48 M Expended: \$ 0.54 M</p>
<p>Key accomplishments Included:</p> <p>Continued Phase II of the Information Security Remediation Initiative</p> <ul style="list-style-type: none"> ■ As part of Phase II of the Information Security Remediation initiative, staff continued efforts to enhance and upgrade Metropolitan’s IT security infrastructure. Activities included proactively implementing measures to secure the computing environment against cyber threats associated with newly evolving technologies. This included new software and hardware to ensure that Metropolitan’s computing environment remains secure. ■ During the period, the Security Information Management system was delivered, installed, and is currently being configured. The Security Information Management software allows staff to proactively monitor critical security events and network activity in real-time to identify any suspicious activity and facilitate appropriate action to safeguard Metropolitan’s network and computer systems. ■ Completed migration of six applications from the SCADA network to the Business Network to further strengthen security of Metropolitan’s SCADA system. <p>Other key accomplishment during the period</p> <ul style="list-style-type: none"> ■ As part of the on-going security awareness effort, staff published monthly cyber security tips on Metropolitan’s internal website and staff continued to provide IT security orientation for all Metropolitan new hires. <p>Expenditures in the Enhanced Cyber Security category were slightly higher than projected through the second quarter of fiscal year 2007-08.</p>	<div style="text-align: center;">  </div> <div style="text-align: center; margin-top: 20px;">  </div>

<p>Productivity / Cost Efficiency:</p>	<p>Fiscal Year 2007-08 to date Budget: \$ 1.60 M Expended: \$ 0.60 M</p>
<p>Continued Business Process Improvement Projects</p> <ul style="list-style-type: none"> ■ The Integrated Budget Management System (IBMS) project will implement an integrated budgeting system to ensure complete and consistent budget development, analysis, and reporting. The new integrated system will replace five existing separate budgeting systems. Once fully implemented, it is anticipated that the payback period for implementing such a system will be approximately five years through increased staff productivity. After the first year, the estimated savings will average \$900,000 annually. ■ During the period, prototypes were developed to replace the functions currently performed by the Personnel Budget System, the Capital Budget System, and the Budget Estimating System. ■ Metropolitan currently tracks fuel usage and fuel inventory information manually. The Fuel Management System will automate capture of this information and address an associated audit finding. The automated system is expected to reduce cost for manual entry of fuel tickets, tracking of fuel usage, and inventory records resulting in an estimated savings of approximately \$180,000 annually with a payback period of approximately six years. ■ During the period, staff conducted design sessions and trained fleet mechanics on installation of fuel management devices. The target completion is in the first quarter of fiscal year 2008/09. <p>Responded to technical needs of the Board of Directors</p> <ul style="list-style-type: none"> ■ As part of on-going efforts to support technical needs of the Board, staff set-up a wireless local-area-network (LAN) and created a “business center” for the Directors at Gene Camp. In addition, staff upgraded security for the Directors’ wireless LAN in Union Station Headquarters. <p>Continued assessment of new communication and collaboration technology</p> <ul style="list-style-type: none"> ■ Previously, staff conducted field visits with Microsoft, Google, and Cisco to evaluate potential new communication technologies for implementation at Metropolitan. 	  

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- During the period, staff conducted a field visit to Hewlett Packard to evaluate potential new video conferencing technology. In addition, staff initiated a pilot effort for web conferencing. Also, staff set up a prototype of the single “in box” concept by including voicemail messages in the user’s Outlook email inbox. This included testing automated transcription software that translates audio voicemail messages into text.

Expenditures in the Productivity / Cost Efficiency area were lower than projected through the second quarter of fiscal year 2007-08. The variance for this category is expected to decrease in that some new projects are now underway (such as the Fleet and Fuel Management Systems projects) in addition to increased expenditures associated with reaching key milestones on existing projects (such as the Integrated Budget Management System and Phase II of the Human Resources Technology Improvement project). A small variance in this category is expected to remain as the Oracle Accounts Payable Imaging project was deferred to focus available resources on the highest priority efforts.



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Attachment 1

Summary of Board actions:

The following table provides a sequential listing of ITSP Board appropriations through December 31, 2007:



Details of Board Actions during this period:

- In October, provided an oral presentation to the Board on the SMART-Ops project as part of the Control System Enhancement Program.
- In December, provided quarterly updates on the Information Technology Strategic Plan (ITSP), and information technology (IT) activities in general, for the period ending September 2007

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Attachment 2

Summary of Board Actions:

The following table provides a summary of ITSP Board appropriations and expenditures through December 31, 2007:

Appropriation No.	Program Description	Total Amount Appropriated	Expenditures (Through December 31, 2007)
15397	Control System Enhancement Program (CSEP)	\$ 17,533,000	\$ 8,740,096
15406	Laboratory Information Management System (LIMS) Program	\$ 1,175,000	\$ 1,013,956
15408	Maintenance Management System (MMS) Upgrade Program	\$ 605,000	\$ 493,798
15411	Business, Finance & Human Resource (BF&HR) Program	\$ 18,389,230	\$ 9,275,879
15376	Information Technology Infrastructure Program	\$ 23,671,000	\$ 14,976,949
15411	Information Technology Security Program	\$ 4,436,000	\$ 2,695,417
		\$ 65,809,230	\$ 37,196,095

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Attachment 3

Summary list of IT capital projects:

Enhanced Reliability	
Peoplesoft Software Version Upgrade (v8.9) as part of HMRS Phase II	Completed
Email System Upgrade	Completed
IT Business Systems / Data Recovery	Completed
Energy Management System (Phase I)	Completed
Programmable Logic Controller Standardization (Phase 1)	Completed
Maintenance Management System Software Version Upgrade	Completed
Control System Data Storage and Reporting	Completed
Telecommunication Infrastructure Upgrade Program	Completed
Peoplesoft Software Version Upgrade (from 7.5 to 8.3)	Completed
Automatic Meter Reading / Remote Terminal Unit Upgrade	In Progress
SMART Operations - formerly Real Time Operating System (RTOS)	In Progress
Control System Enhancement Program Implementation	In Progress
Control Systems Communications Upgrade	In Progress
Energy Management System (Phase II)	In Progress
Programmable Logic Controller - Lifecycle Replacement (Phase II)	In Progress
IT Network Upgrade (Phase I)	In Progress
IT Network Upgrade (Phase II)	In Progress
Field Emergency Generator Upgrade	In Progress
Phonemail Replacement	In Progress
Two Way Radio Upgrade (Phase I)	In Progress
Union Station Headquarters Technology Upgrade	In Progress
Human Resources (Peoplesoft) Improvement Plan (Phase II)	In Progress
Water Billing System Upgrade	In Progress
IT Infrastructure Upgrade (Phase I)	In Progress
IT Disaster Recovery Facility Upgrades	In Progress
Inventory Bar-Coding System	In Progress
Employee Relations Module and Learning Management Module Implementation	In Progress
IT Testing Tools	In Progress
Enhanced Distribution System Control	On Hold (*1)
Colorado River Aqueduct (CRA) Control Integration	On Hold (*1)
Improved Water Quality	
Oxidation Demonstration Plant (ODP) Control System Replacement	Completed
Laboratory Information Management System Upgrade	Completed
Plant Influent Flow Metering Upgrade	In Progress
Enhanced Cyber Security	
Information Security Administration Software	Completed
SCADA Operator Authentication	Completed
IT Security Monitoring Improvement	Completed
SCADA Security Improvements	Completed
Information Security Assessment/Remediation (Phase I)	Completed
Information Security Assessment/Remediation (Phase II)	In Progress
Productivity / Cost Efficiency	
E-Business Suite	Completed
Project Accounting and Grants Management	Completed
Human Resources (Peoplesoft) Improvement Plan (Phase I)	Completed
Enterprise Geographic Information System (Phase I)	Completed
Mobile Technology and Materials Interface	In Progress
Fuel Management System	In Progress
Integrated Corporate Budgeting System	In Progress
Fleet Management System	In Progress

Footnote*

(1.) The Enhanced Distribution System Control and Colorado River Aqueduct (CRA) Control Integration projects are on-hold pending completion of predecessor projects.