

- **Information Technology Strategic Plan (ITSP) – Quarterly Report for the period ending September 2005**

## Summary

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This report provides a quarterly update of the Information Technology Strategic Plan (ITSP) for the month ending September 2005. There were a number of important milestones achieved during the period that are summarized later in this report.

The Information Technology Strategic Plan (ITSP) provides a roadmap to guide the investment and deployment of information technology (IT) 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 and executive management, and the CIP Review Committee as part of the annual Capital Investment Planning process.

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## Attachments

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[Attachment 1](#) provides a summary of board actions, appropriation and expenditure status for the ITSP programs through September 30, 2005.

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## Quarterly Report

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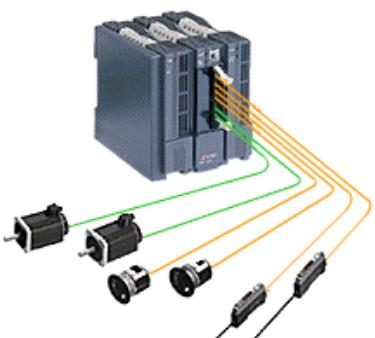
### IT Strategic Plan by Business Drivers

Below are highlights of progress and major milestones reached for ITSP projects during the period. The projects are categorized by business driver as follows:



IT STRATEGIC PLAN
<a href="#">Enhanced Reliability</a> – enhance system reliability
<a href="#">Improved Water Quality</a> – ensure water quality excellence
<a href="#">Enhanced Cyber Security</a> – effectively manage and safeguard assets
<a href="#">Productivity / Cost Efficiency</a> – improve process efficiency and effectiveness

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<p><b>Enhanced Reliability:</b></p> <p><b>Key accomplishments included:</b></p> <p><b>Procurement of Programmable Logic Controller (PLC) units</b></p> <ul style="list-style-type: none"> <li>■ The programmable logic controller units are used to control critical processes, such as hydroelectric plants, emergency generators, and treatment plant flocculation systems. These devices are tied into Metropolitan's Supervisory Control and Data Acquisition (SCADA) system.</li> </ul> <p>Over the years, Metropolitan has acquired over 100 PLCs from 10 different manufacturers, comprised of 18 different models. Several of these are no longer supported by the vendors. The PLC standardization project was devised as a system-wide effort to select and implement a single brand of PLC equipment and software. As a model for testing and development, a pilot was performed for the PLC project.</p> <ul style="list-style-type: none"> <li>■ During the period, a pilot effort to replace selected PLCs was successfully completed. Training services were procured and coordination of remaining PLC installations is underway.</li> </ul> <p><b>Implement Power Management System (PMS)</b></p> <ul style="list-style-type: none"> <li>■ The Power Management System is new software designed to streamline hydroelectric plant (HEP) power management and billing. Currently, this is primarily a manual function augmented by the use of spreadsheets. The revenue generated by Metropolitan through hydroelectric power management ranges from \$15 million to \$20 million per year. An automated system is needed to facilitate recordkeeping and ensure sufficient audit trails are maintained for the power management process. Recent deregulation and accounting changes in the power industry have made these processes much more complex, thereby increasing Metropolitan's workload. This new system will help Metropolitan manage this additional work without increasing staff in this area.</li> </ul>	<p><b>Through 1<sup>st</sup> Quarter</b></p> <p><b>Budget: \$ 1.2 M      Expended: \$ 400 K</b></p>  <p>Programmable Logic Controller</p>
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- The Power Management System project is proceeding according to plan. The Power Management System is in the final testing phase and is scheduled for deployment in October 2005.

**Automated Meter Reading System (AMR)  
Upgrade - Asset and Real Property Committee  
approval**

- The Automated Meter Reading System is the primary source of data for water billing, providing information on the amount of water delivered to each member agency. There are approximately 450 water meters located throughout Metropolitan's water distribution system. The current AMR system is based on outdated technology that needs to be upgraded to continue functioning properly.
- This project will upgrade the AMR system based on a phased approach implementing commercially available off-the-shelf technology.
- A contractor was selected through a competitive request for proposal (RFP) process and a contract was negotiated.
- The Asset and Real Property Committee approved the award of contract in the September meeting.

**Completed contract negotiations for the Phonemail  
Replacement project**

- The Phonemail Replacement Project replaces outdated phonemail equipment that supports communications within Metropolitan and with external entities. The project includes the replacement of the 15-year-old systems at 15 locations to reduce redundancy and allow the systems to be administered with greater efficiency and reliability.
- During the period, development of equipment specifications, requisition and contract negotiations were completed.



Water flow meter tied into AMR system



Hardware for Phonemail System

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<p><b>Other Information Technology (IT) accomplishments related to Enhanced Reliability</b></p> <ul style="list-style-type: none"><li>■ Metropolitan launched an initiative to replace outdated CRT-style computer monitors with energy efficient flat panel models. As part of this initiative, all primary monitors at Union Station and all field site offices will be replaced. Most of the monitors are over ten years old and are due for replacement consistent with industry standards and Metropolitan's normal replacement cycle.</li><li>■ The benefits of this project include reduction in employee downtime due to failing monitors, reduced eyestrain for users and lower energy costs.</li><li>■ For the period, accomplishments include replacement of monitors at all Desert Facilities (Eagle, Gene, Hinds, Intake and Iron) and the Skinner Treatment Plant.</li></ul> <p>Expenditures in the Enhanced Reliability category were less than budget due to resource constraints. The focus of staff's effort was devoted to completing the highest priority projects already in progress. Work on other new initiatives was deferred until additional resources become available.</p>	 <p>Flat panel monitor</p>
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<p><b>Improved Water Quality:</b></p> <p><b>Technology accomplishments for water quality related engineering projects include:</b></p> <p><b>Jensen Treatment Plant</b></p> <ul style="list-style-type: none"><li>■ The Jensen Oxidation Retrofit Project (ORP) is a large capital program to add ozonation to the Jensen Plant. A major component of this program included design, programming, and installation of hardware and software to control the ozone process.</li><li>■ During the period, operator graphic screens were implemented to monitor and control ozone processes. Also, automated process control (APC) software programs for the ozone system were written by staff to monitor and control chemical dosages, control chemical feed valves and feed pumps, and to cool the ozone generators.</li></ul>	<p><b>Through 1st Quarter</b> <b>Budget: \$19.6 K      Expended: \$ 54.1 K</b></p>  
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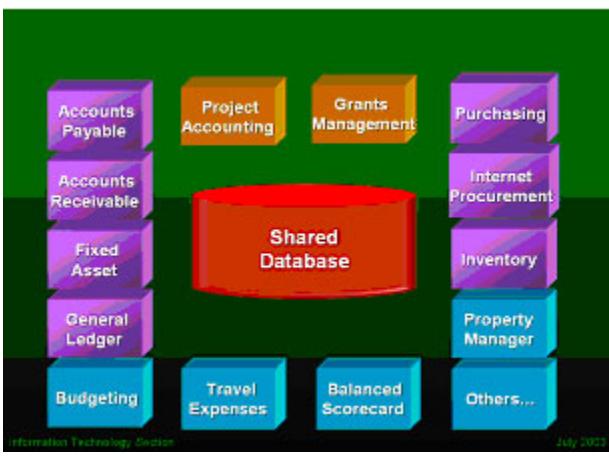
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<p><b>Skinner Treatment Plant</b></p> <ul style="list-style-type: none"><li>■ The Skinner Oxidation Retrofit Project (ORP) is a large capital program to add ozonation to the Skinner Plant. A major component of this program includes design, programming, and installation of hardware and software to control the ozone process.</li><li>■ Technology work was performed to support several capital projects at the Skinner facility including Skinner Module #7, Skinner ORP, Washwater Reclamation Plant (WWRP) #3 and WWRP #2 Flocculator replacement, Skinner Chemical Tank Farms and Chlorine Containment and Handling. As an example, SCADA work is needed to monitor and control chlorine feed and monitor the conditions of the leak detectors in the chlorine containment building.</li><li>■ During this period, the technology aspects of the final design were reviewed and approved. Staff has initiated development of operator graphic SCADA screens to monitor and control new filter modules.</li></ul> <p>Expenditures in the Improved Water Quality category were greater than budget because costs expected in fiscal year 2004/05 were not incurred until the past quarter.</p>	 <p>Oxidation Retrofit Program</p>
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<p><b>Enhanced Cyber Security:</b></p> <p><b>Key accomplishments included:</b></p> <p><b>Completed Security Assessment Study</b></p> <ul style="list-style-type: none"> <li>■ The goal of this project is to perform a comprehensive cyber security assessment to help ensure that Metropolitan's networks and computer systems are adequately safeguarded. While several cyber security assessments have been conducted in targeted areas over the last few years, it has been five years since the last comprehensive assessment was completed.</li> <li>■ The consulting firm (KEMA) completed the cyber security assessment and prepared a report outlining the results. Overall, after this comprehensive review, no critical vulnerabilities were noted in Metropolitan's business and SCADA networks. The consultants provided several recommendations to improve cyber security and staff is working on a prioritized list of action items.</li> </ul> <p><b>Initiated self-service password reset</b></p> <ul style="list-style-type: none"> <li>■ This project will provide Metropolitan computer users with the ability to reset their own passwords. This self-service capability will eliminate the requirement for staff to call into a help desk for password resets, thereby yielding labor savings. The estimated annual savings is \$120,000.</li> <li>■ During the period, software and hardware installation was completed and planning for the pilot phase was completed.</li> </ul> <p>Overall, during the first quarter, expenditures in the Enhanced Cyber Security area were above budget. Expenditure variances are due to some work being completed in the first quarter of fiscal year 2005/06 rather than the prior quarter as originally scheduled.</p>	<p><b>Through 1st Quarter</b>  <b>Budget: \$26.6 K      Expended: \$ 100 K</b></p>   <p style="text-align: center;">Self-service password reset</p>
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Productivity / Cost Efficiency:	<b>Through 1st Quarter</b> <b>Budget: \$ 1.0 M      Expended: \$ 1.1 M</b>
<p><b>Key accomplishments included:</b></p> <p><b>Perform Telecommunications Cost Review</b></p> <ul style="list-style-type: none"> <li>■ Metropolitan launched a comprehensive review of all telecommunication lines and the associated costs. The goal was to look for ways to reduce costs while still providing the necessary communication services.</li> <li>■ During the period, the inventory of Metropolitan circuits for telephone lines going in and out of the Diamond Valley Lake (DVL) area was completed. This resulted in additional savings of approximately \$10,000 per year through elimination of lines that were no longer necessary.</li> <li>■ To date, the Metropolitan-wide cumulative total of one-time credits received through the telecommunications cost review is \$243,000. The estimated ongoing annual savings is \$964,000.</li> </ul>	
<p><b>Deployed Project Accounting/Grants Management (PAGM)</b></p> <ul style="list-style-type: none"> <li>■ Project Accounting and Grant Management are two new software modules in Oracle's "e-Business Suite." They are fully integrated with other financial and procurement software (General Ledger, Fixed Asset, Accounts Receivable, Accounts Payable, Purchasing, Procurement and Inventory) already used by Metropolitan and share one common database.</li> <li>■ Project and Grant Managers will have improved visibility over charges and credits that impact their programs, and will have the ability to efficiently monitor both actual and committed costs. The Project Accounting module contains additional controls that help avoid incorrect charges to projects. Also, other project accounting work such as cost transfers can be accomplished much more efficiently. In the aggregate, it is estimated that all of the efficiencies associated with the implementation of this new software will</li> </ul>	 <p>Project Accounting and Grants Management</p>

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<p>translate to an annual cost avoidance of approximately \$700,000 once staff is fully proficient in using the new system.</p> <ul style="list-style-type: none"><li>■ The Grant Management module tracks information through all stages of the grant process, from proposal through completion, and complies with regulatory reporting requirements. The implementation of this software provides a single source for grant and project information, helping to ensure complete and consistent reporting.</li><li>■ As part of this upgrade, Metropolitan renegotiated its software maintenance contract to lower its annual cost. Over a five-year period, this translates to a cost savings of more than \$1 million.</li><li>■ During the period, testing and training were completed and the new Project Accounting / Grants Management software modules were fully implemented on September 7, 2005.</li></ul> <p><b>Prototype “Condition Assessment” QuickMap</b></p> <ul style="list-style-type: none"><li>■ “Quick maps” are easy-to-use mapping and analysis software tools for special purpose applications.</li><li>■ During this period, a Condition Assessment QuickMap was developed and released for evaluation by Engineering Services. The QuickMap provides a mapping interface to Engineering’s equipment database and condition assessment data for the distribution system, as surveyed by Engineering between Fall 2003 and December 2004. Condition assessment mapping displays the most critical state of a piece of equipment at a location. Access is provided to equipment data, as well as to photographs taken during the inspection. This data is displayed against a background of aerial imagery. By utilizing this new QuickMap, the cost of researching condition assessment data is reduced by 75% and critical risk related data is distributed in a very efficient manner.</li></ul> <p>Overall, expenditures were slightly above budget in the productivity/cost efficiency category during the fiscal year, as projects came online in the quarter.</p>	 <p><b>Legend</b></p> <table border="1"><thead><tr><th>Priority Category</th><th>Symbol Description</th></tr></thead><tbody><tr><td>Very High Priority</td><td>Red circle with a black dot</td></tr><tr><td>High Priority</td><td>Orange circle with a black dot</td></tr><tr><td>Medium Priority</td><td>Blue circle with a black dot</td></tr><tr><td>Low Priority</td><td>Green circle with a black dot</td></tr><tr><td>Category 2a</td><td>Light blue circle with a black dot</td></tr><tr><td>Not Inspected</td><td>Grey circle with a black dot</td></tr></tbody></table>	Priority Category	Symbol Description	Very High Priority	Red circle with a black dot	High Priority	Orange circle with a black dot	Medium Priority	Blue circle with a black dot	Low Priority	Green circle with a black dot	Category 2a	Light blue circle with a black dot	Not Inspected	Grey circle with a black dot
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**Attachment 1**

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**Summary of board actions:** The following table provides a summary of ITSP board actions from February 2002 through September 2005

Board Action Date	Appropriation No.	Description	Appropriation	Expenditure (through September 30, 2005)
October-02	15397	Control System Enhancement Program (CSEP)	\$ 11,000,000	\$2,528,765
February-03	15406	Laboratory Information Management System (LIMS)	\$ 1,175,000	\$998,557
May-03	15408	Maintenance Management System (MMS)	\$ 605,000	\$485,749
July-03	15411	Oracle E-Business Suite & Grants Management	\$ 4,038,230	\$3,231,036
September-03	15376	Enterprise GIS Project	\$ 4,377,000	\$2,832,518
October-03	15411	Peoplesoft Self Service Modules	\$ 1,850,000	\$1,467,931
April-04	15376	IT Infrastructure Program	\$ 5,603,000	\$4,743,422
Jul-04	15378	IT Security Program	\$ 925,000	\$316,185
			\$ 29,573,230	\$16,604,163