

- **Board of Directors**
Engineering and Capital Programs Committee

June 12, 2007 Board Meeting

7-5

Subject

Appropriate \$1.59 million; and authorize Phase One of the Information Technology Infrastructure Upgrade (Approp. 15376)

Description

As part of ongoing benchmarking efforts to ensure that Metropolitan's Information Technology (IT) resources are managed efficiently and effectively, staff retained a specialized consulting firm, Gartner, Inc., to analyze approaches to optimize use of IT computer servers and disk storage devices. Computer servers and disk storage devices are used to run all computer applications such as email, Oracle Financials, PeopleSoft Payroll/Human Resources, Laboratory Information Management System and the Maintenance Management System. Gartner was asked to assess opportunities for cost avoidance and improvements in reliability that could be achieved through infrastructure (server and disk storage) consolidation, to identify and recommend implementation strategies, and to perform a return-on-investment analysis for the recommended strategies. Their major recommendation focused on consolidating servers to reduce costs.

Metropolitan currently operates 142 Microsoft Windows-based computer servers. Based on forecasted applications growth and scheduled replacement of existing servers as they reach their five-year end-of-life spans, it is estimated that, following the current practice, Metropolitan would need to purchase 210 new servers over the next five years. Presently, there are technologies available which allow different computer applications residing on separate computer servers to be consolidated into fewer servers and disk storage devices. For example, four separate servers may now be consolidated into a single physical server using special "virtualization" software. This special software can create multiple logical or "virtual" servers on one physical device. In addition, there is new disk storage technology that would allow Metropolitan to reduce the disk storage capacity requirement for each server being purchased and instead consolidate the data onto a single centralized large disk storage system.

This new technology would enable Metropolitan to reduce the forecasted number of servers to be purchased over the next five years from 210 to 86. Based on a cost analysis model adapted from the Gartner study and on studies by Eastern Municipal Water District, it is forecasted that by employing this new technology, Metropolitan could reduce its expenditures in operating equipment for servers and associated disk drives over the next five years from \$4.5 million to \$1.7 million, for a reduction of \$2.8 million. In addition, this change in approach would avoid \$500,000 in facility upgrades that would otherwise be needed in Metropolitan's data center to accommodate the increased number of equipment items. This new approach is also projected to reduce expenditures by \$1.1 million in electrical power and cooling costs over a five-year period. In total, the five-year cost avoidance is forecasted to be \$4.4 million. To achieve these cost-avoidance benefits, an investment of \$1.59 million is required for the new "virtualization" software, consolidated storage hardware, specialized consulting assistance, and staff training.

This action appropriates \$1.59 million in budgeted funds and authorizes Phase One of the IT Infrastructure Upgrade project to upgrade hardware and software, and for consulting assistance to obtain the forecasted cost-avoidance savings. Consulting firms will be selected through a competitive process to perform discreet elements of work, as the various elements require different skill-sets. Staff anticipates that the consulting agreements will be less than \$250,000, and will be executed by the General Manager under his Administrative Code authority. Phase Two of the IT Infrastructure Upgrade project, which was also recommended in the Gartner Study, will be

initiated at a later date and will focus on consolidating Metropolitan's computer applications and Internet web environment.

This project is an element of the IT Strategic Plan which has been evaluated and recommended by Metropolitan's Capital Investment Plan Evaluation Team, and funds have been included within the FY 2006/07 capital budget. Staff anticipates returning to the Board in October 2007 for authorization to enter into competitively procured contracts for the purchase of materials for this project.

See **Attachment 1** for the Financial Statement.

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed actions are not defined as a project under CEQA because they involve continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed actions are not subject to CEQA because they involve other government fiscal activities, which do not involve any commitment to any specific project, which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed actions are not subject to CEQA pursuant to Sections 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination and

- a. Appropriate \$1.59 million in budgeted funds; and
- b. Authorize Phase One of the IT Infrastructure Upgrade project.

Fiscal Impact: \$1.59 million of budgeted funds under Approp. 15376

Business Analysis: This option would implement technologies to permit the consolidation of Metropolitan's critical IT infrastructure components and avoid an anticipated expenditure of \$4.4 million in operating equipment purchases, data center facility build-out costs, and electrical power and cooling costs over the next five years.

Option #2

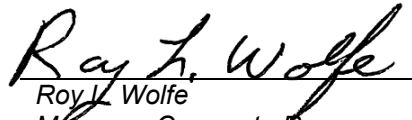
Do not proceed with the IT Infrastructure Upgrade project.

Fiscal Impact: No additional expenditure of budgeted capital funds

Business Analysis: Deferral of this project would forego an opportunity to reduce expenditures on IT infrastructure components over the next five years.

Staff Recommendation

Option #1


Roy L. Wolfe
Manager, Corporate Resources

5/17/2007
Date


Jeffrey Kightlinger
General Manager

5/25/2007
Date

Attachment 1 – Financial Statement

BLA #3999

Financial Statement for ITSP Infrastructure Program

A breakdown of Board Action No. 8 for Appropriation No. 15376 is as follows:

	Previous Total Appropriated Amount (Feb. 2007)*	Current Board Action No. 8 (June 2007)	New Total Appropriated Amount
Labor	\$ 6,120,825	\$ 200,000	\$ 6,320,825
Materials and Supplies	10,078,670	760,000	10,838,670
Incidental Expenses	97,874	-	97,874
Professional/Technical Services	3,446,597	490,000	3,936,597
Contracts	245,000	-	245,000
Remaining Budget	1,082,034 *	140,000	1,222,034
Total	\$ 21,071,000	\$ 1,590,000	\$ 22,661,000

*Also includes reallocation of \$265 from Labor to Remaining Budget for two projects which closed under budget

Funding Request

Program Name:	ITSP Infrastructure Program		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15376	Board Action No.:	8
Requested Amount:	\$ 1,590,000	Capital Program No.:	15376-I
Total Appropriated Amount:	\$ 22,661,000	Capital Program Page No.:	E-36
Total Program Estimate:	\$ 38,800,000	Program Goal:	Reliability & Efficiency