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METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

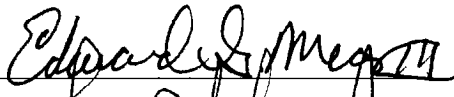
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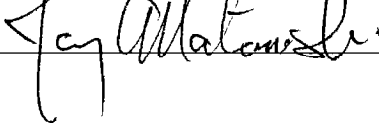
April 23, 1997

To: Board of Directors (Engineering and Operations Committee--Action)
(Budget and Finance Committee--Action)

From: General Manager

Submitted by: J. W. Malinowski
Chief of Operations





Subject: Strategic Operations and Maintenance Management System (SOMMS)

Reference: Appropriation No. 15259/Authorization No. 1

RECOMMENDATION(S)

It is recommended that your Board:

(1) authorize an increase in Appropriation No. 15259 from \$1,027,400 to \$6,977,400, for a total increase of \$5,950,000, utilizing funds from the Pay-As-You-Go Fund to finance full implementation of the Strategic Operations and Maintenance Management System (SOMMS) Project;

(2) authorize the General Manager to increase the maximum payable under the agreement with Project Software and Development, Inc. by an amount not to exceed \$420,000 for the purchase of MAXIMO software and initial training for full implementation of the SOMMS Project;

(3) authorize the General Manager to increase the maximum payable under the consulting agreement with EMA, Inc. by an amount not to exceed \$300,000 for necessary support services for maintenance process reengineering, and;

(4) authorize the General Manager to increase the maximum payable under the consulting agreement with Northern Digital, Inc. by an amount not to exceed \$300,000 for development of links between MAXIMO and the core business software systems.

BRIEF DESCRIPTION

In August 1994, your Board approved capital funding of \$1,027,400 under Appropriation Nos. 696 (now 15259) and 099 for the SOMMS project to implement and evaluate a pilot of an integrated computerized maintenance management system. Staff developed and issued a Request for Proposals; evaluated the responses; selected a software package, MAXIMO, from Project Software and Development Inc. (PSDI); trained appropriate staff in the use and support of MAXIMO; and implemented MAXIMO in two field branches as a pilot.

The pilot has been successfully completed. Therefore, the Operations Division proposes to fully implement SOMMS in fiscal year 1997-98. Attachment I outlines the cost estimate for full implementation. These costs, estimated at \$6,161,495, include standard software applications, hardware such as hand-held readers, and upgraded workstations that will be placed in field offices and shops for use by maintenance personnel. This cost represents an increase of about \$2,725,000 from the original budget estimate.

The increase in budget is due to three factors. The original estimate did not include money for hand-held devices for the maintenance forces. A recent demonstration of the hand-held devices showed that, at the end of the day, a person's time record could be entered from the hand-held device to PC connected to MAXIMO in about five minutes. To enter the same time record via keyboard takes about 30 minutes. The payback for this technology is one month after implementation. The original estimate also did not include automated fuel dispensing. This will reduce errors in fuel accounting and eliminate the current requirement to manually enter fuel usage on a paper record and then enter that record in the business systems. Finally, our experience with the pilot demonstrated a need for more staff labor than originally planned for the full roll-out and that the development of the links to the business systems will require more consulting services than originally planned.

The literature shows that the payback from programs of this type is typically realized in three-to-five years of implementation. Our pilot has demonstrated that a 10% improvement in efficiency is possible from this project. Approximately 600 personnel in the Operations Division are employed in maintenance of our facilities and equipment. A 10% improvement in efficiency would allow us to reduce that number to 540. The resulting annual savings in salaries and benefits are approximately \$4,200,000. The attached graph plots the projected savings against the capital program and the anticipated annual system maintenance, which will be included in the O&M budget. We anticipate project payback at the beginning of fiscal year 2001-2002.

PURPOSE/BACKGROUND

The objectives of the SOMMS project are to better manage the performance of Operations Division maintenance personnel, provide for continuous improvement, and implement "Best Business Practices" in operational and maintenance activities. The plan incorporates the recommendations of the Peer Review Committee and the Blue Ribbon Task Force reports. A pilot was implemented at the Riverside Branch and at the Construction Services Branch garage facility. Its purpose was to establish a working model combining automation, reengineering of existing maintenance procedures, and employee training to produce "Total Productive Operations" (TPO).

The Operations Division currently maintains and supports three rudimentary computerized maintenance management systems that will be consolidated into a comprehensive, integrated resource management system utilizing the MAXIMO software from PSDI. MAXIMO is the leading client/server asset maintenance system on the market, designed to meet critical needs of business and government. MAXIMO supports a fully scalable client/server architecture, ORACLE, and other relational databases and graphical user interface.

The pilot has proved that MAXIMO will help reduce critical equipment downtime, control maintenance expenses, cut spare-parts inventories and costs, improve purchasing efficiency and more effectively deploy productive assets, personnel and other resources.

Staff proposes to purchase MAXIMO software from PSDI and the necessary PC servers and workstations from Metropolitan's supplier of such equipment. Procurement of the monitoring equipment and hand-held readers will be competitively bid.

This project is included in the fiscal year 1997-98 capital improvement program.

ALTERNATIVES TO PROPOSED ACTION

One alternative to the proposed action is to maintain the status quo. This would require maintaining four different computerized maintenance management systems. It would also preclude achieving the projected efficiencies and reductions in permanent maintenance staff.

A second alternative would be to abandon the four computerized maintenance management systems and perform strictly reactive maintenance. This would be an even more costly option and would not satisfy several regulatory record keeping requirements.

CEQA COMPLIANCE / ENVIRONMENTAL DOCUMENTATION

The proposed action is exempt from the provisions of the California Environmental Quality Act because it does not have the potential to cause a significant effect on the environment.

Contract Type <input type="checkbox"/> New <input checked="" type="checkbox"/> Amended	Funding <input checked="" type="checkbox"/> Capital <input type="checkbox"/> O & M	Type of Competition <input type="checkbox"/> RFQ <input checked="" type="checkbox"/> RFP No.: 159 <input type="checkbox"/> Informal RFP
Contract Form <input type="checkbox"/> Lease <input checked="" type="checkbox"/> Professional Services	Budget Status <input checked="" type="checkbox"/> FY 97-98 Amount \$6,161,495 <input type="checkbox"/> Out-Year Amount \$ <input type="checkbox"/> Non-Budget Amount \$	<input type="checkbox"/> Other Competition <input type="checkbox"/> Sole Source

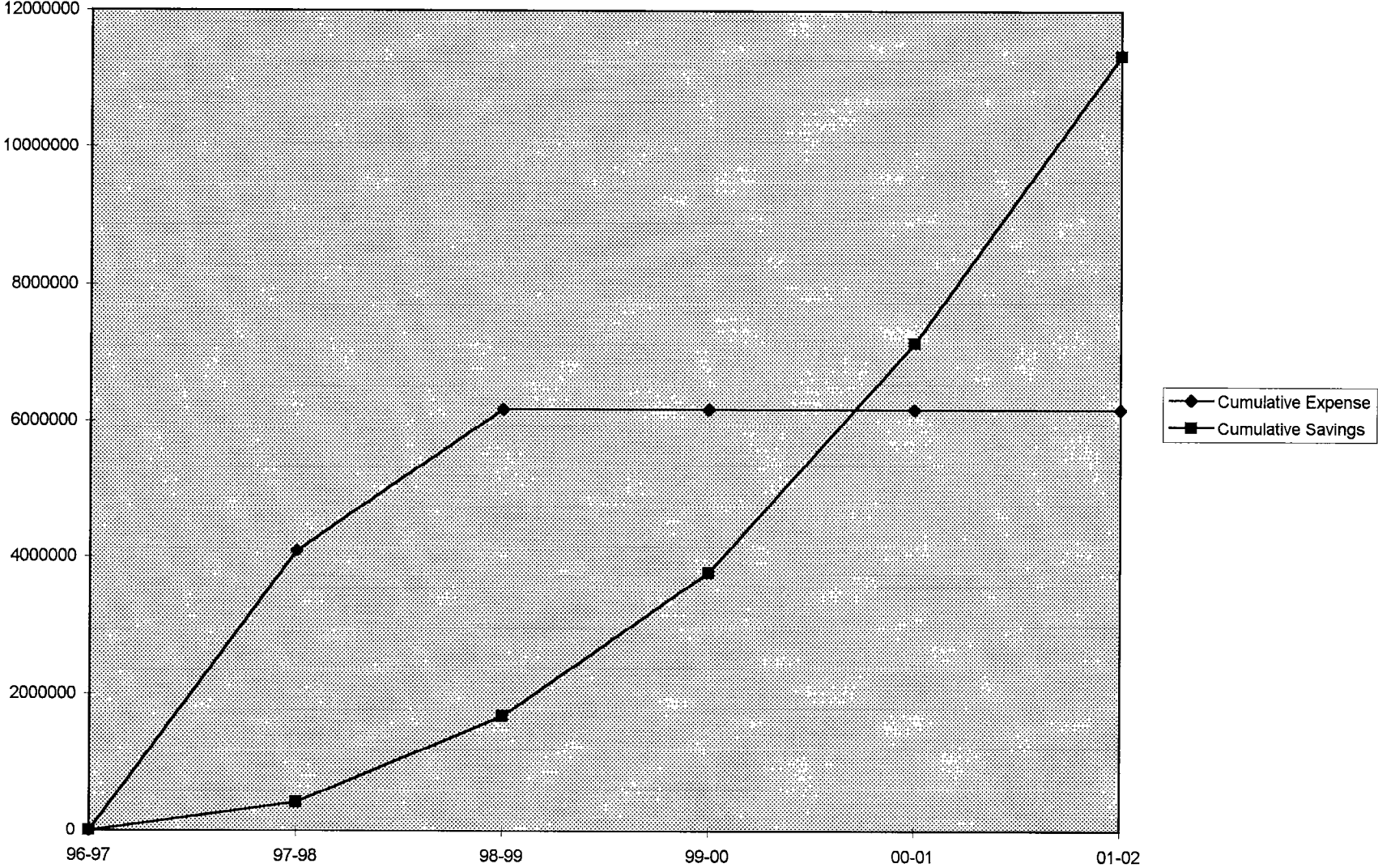
Attachments

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Budget Estimates for SOMMS

Budget Category	Pilot Actual	Roll-Out Budget	Project Total
Software	\$ 426,337	\$ 396,400	\$ 822,737
MAXIMO	\$405,473	\$320,000	
Automated Fueling		\$ 76,400	
Vibration Monitoring	\$ 20,864		
Hardware	\$ 0	\$2,462,000	\$2,462,000
PC Upgrades		\$ 516,700	
Handheld Equipment		\$1,686,000	
Vibration Monitoring		\$ 30,000	
Automated Fueling		\$ 229,300	
Materials&Supplies	\$ 13,694	\$39,000	\$ 52,694
Labor	\$ 546,106	\$2,434,000	\$2,980,106
Staff	\$349,708	\$1,850,000	
Consultants	\$196,398	\$ 584,000	
Training	\$ 16,500	\$ 70,000	\$ 86,500
Sub-Total	\$1,002,637	\$5,401,400	\$6,404,037
Contingency		\$ 540,140	\$ 540,140
Total	\$1,002,637	\$5,941,540	\$6,944,177

Projected Cost Savings From SOMMS Project



Projected Cost Savings From SOMMS Project

