

February 12, 1999

To: Board of Directors (Executive Committee--Action)

From: General Manager _____

Submitted by: Gary M. Snyder
Chief Engineer _____

Subject: Appropriate \$2,920,000 and Delegate Authority to Procure Equipment for the Replacement of Filter Valves and Operators at the Robert A. Skinner Filtration Plant

Reference: Appropriation No. 15332

RECOMMENDATION(S)

To replace the filter valves and operators at the Robert A. Skinner Filtration Plant (Skinner plant) it is recommended that the Board:

1. Appropriate \$2,920,000 in budgeted funds to finance all associated costs;
2. Authorize the General Manager to have all work performed;
3. Delegate to the General Manager the authority to award a procurement contract for equipment, not to exceed \$1,760,000; and
4. Determine that the replacement project qualifies for a Class 1 Categorical exemption under the California Environmental Quality Act.

EXECUTIVE SUMMARY

The influent and surface wash filter valves and filter drain gate operators in Modules 1 through 3 at the Skinner plant have reached the end of their service life and are experiencing high maintenance costs and low reliability. It is proposed to replace 108 valves and 54 operators at a total estimated cost of \$2,920,000. It is cost-effective for Metropolitan forces to complete the replacement over a three-year period.

JUSTIFICATION

Most of the valves and operators have been repaired on numerous occasions during their 25-year life; however, significant and continuing leakage problems are causing increased operational difficulties, as well as increased operations and maintenance costs. These factors potentially jeopardize the ability of the Skinner plant Modules 1-3 to reliably meet water quality standards.

Complete replacement of the valves and operators is proposed to ensure operational reliability, reduce costs, and facilitate future maintenance.

ALTERNATIVE TO PROPOSED ACTION

Continue Operating with Existing Equipment

This alternative will lead to increased operating and maintenance costs and more frequent valve and operator failures that will further reduce plant reliability and require repairs to be made on an emergency basis.

FUNDING REQUEST

Program Name: Skinner Filtration Plant - Replacement of Filter Valves and Operators in Modules 1-3			
Source of Funds: Pay-As-You-Go Fund			
Appropriation No.: 15332	Board Action No.1		Budget: \$3,090,000
Requested Amount:	\$2,920,000	Capital Program No.:	98906&7-A*
Total Appropriated Amount:	\$2,920,000	Capital Program Page No.:	E-76-77
Total Program Estimate:	\$2,920,000	Program Category:	Asset/system integrity

*This program combines two programs from the Capital Program for Fiscal Year 1998/99: (1) the Skinner plant - Replace Operators and Gears for Filter Butterfly Valves Modules 1-3 (Program No. 98906-A) and (2) Skinner plant - Replace Surface Washwater Valves Modules 1-3 (Program No. 98907-A).

ACTIONS AND MILESTONES

- In August 1999 complete final design and advertise
- By October 2000 complete delivery of equipment
- In May 2003 complete valve and operator installation

CEQA COMPLIANCE / ENVIRONMENTAL DOCUMENTATION

The proposed project qualifies for a Class 1 categorical exemption under the California Environmental Quality Act (CEQA) because it consists of the repair, maintenance, or minor alteration of an existing public facility involving negligible or no expansion of use beyond that previously existing (State CEQA Guidelines, Section 15301). No other environmental documentation is required for this project.

DETAILED REPORT

The filter influent and surface wash filter valves, their associated motor operators, and the drain gate operators for Modules 1 through 3 at the Skinner plant are over 25-years old. Repairing these components has become a continuing and costly maintenance problem for the plant staff as they are nearing the end of their useful service lives. These valves can not be easily repaired in-place, thereby necessitating costly and time consuming removal and shop repairs. For many of the valves, spare parts are difficult if not impossible to obtain, as the original equipment vendor no longer supports this equipment. Therefore, maintenance of these items requires costly custom fabrication of replacement parts by plant staff and vendors. Finally, excessive leakage, up to 500 gallons per minute per valve, can disrupt the normal functioning of the plant's filtration process. This includes subjecting the filter beds to filter media disruption and additional backwashes, which will shorten filter media life, thereby jeopardizing the plant's reliability to meet current and future effluent turbidity standards. New filter media is currently being installed in these filters under a separate program (Program No. 15229-A).

It is proposed to procure 54 filter influent valves and operators, 54 filter surface wash valves and operators, and 54 24-inch by 48-inch filter drain gate operators.

Because most of the valves and operators are in poor condition, it is intended to obtain their replacements under a single-procurement contract. A single contract also provides significant price advantages and uniformity in replacement parts over multiple contracts and manufacturers. In order to expedite award of the contract, this letter requests a delegation of authority to the General Manager to award the contract, in an amount not to exceed \$1,760,000 to the lowest responsible bidder. Installation of the valves will be phased over a multi-year period to allow cost-effective deployment of personnel without interrupting continued Skinner plant operations, with an overall completion date of May 2003. Metropolitan will perform engineering design, preparation of plans and specifications, equipment procurement, contract administration and fabrication inspection. Installation of all equipment will be by Metropolitan forces.

The total estimated cost of the program is \$2,920,000. This is a reduction of \$170,000 from the original budget which included two separate programs that are now being consolidated into this single program. These two programs from the Capital Program for Fiscal Year 1998/99 are the Skinner plant - Replace Operators and Gears for Filter Butterfly Valves Modules 1-3 (Program No. 98906-A) and the Skinner plant - Replace Surface Washwater Valves Modules 1-3 (Program No. 98907-A). A breakdown of estimated costs is shown on the attached Financial Statement (Attachment A).

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Attachment 9-4A

Attachment 9-4B

Attachment 9-4A

FINANCIAL STATEMENT

(Capital Program No. 98907-A)

The breakdown of the total estimated cost for replacement of filter valves and operators in Modules 1-3 at the Robert A. Skinner Filtration Plant is as follows:

	<u>BOARD ACTION</u>
	<u>NO. 1</u>
Labor:	
District Forces Installation	\$ 402,000
Contract Administration and Quality Control	55,000
Final Design	25,000
Study/Preliminary Design	5,000
Project Management	5,000
Water Quality	<u>3,000</u>
Subtotal Labor	\$ 495,000
Material and Supplies	1,760,000
Incidental Expenses	2,000
Operating Equipment	7,000
Administrative Overhead	275,000
Contingencies	<u>381,000</u>
Total	<u>\$2,920,000</u>
Source of Funds: Pay-As-You-Go Fund	
Projected Expenditures of Funds :	
Through Fiscal Year 1998/99	30,000
Fiscal Year 1999/00	800,000
Fiscal Year 2000/01	1,450,000
Fiscal Year 2001/02/02	110,000
Fiscal Year 2002/03	149,000
Contingencies	<u>381,000</u>
Total	\$2,920,000
Capital Program for Fiscal Year 1998/99	
Total Budget	\$3,090,000
Program Estimate for FY 1998/99	\$2,016,300

Attachment 9-4B

Skinner Modules 1-3 Filter Valves Replacement

Total Budget: \$2,920,000

