



MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

7-4

August 18, 1998

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

From: *for* General Manager

Edward M. Meese

Submitted by: Gary M. Snyder
Chief Engineer

Gary M. Snyder

Subject: Appropriate \$1,950,000 for Design and Construction for Standpipe
Strengthening Project

Reference: Appropriation No. 15342

RECOMMENDATION(S)

To perform design and construction activities to strengthen 19 standpipes on Metropolitan's distribution system, it is recommended that your Board:

1. Appropriate \$1,950,000 of budgeted funds to finance associated costs; and
2. Authorize the General Manager to have all work performed, except for contracts of \$250,000 or more.

EXECUTIVE SUMMARY

In the early 1990's, Metropolitan's Seismic Strengthening Program was undertaken to identify and correct potential risks to Metropolitan's water treatment, storage and distribution systems. A portion of the study involved analyzing standpipes located on a number of Metropolitan's pipelines and feeders. It was determined that 19 standpipes are in need of seismic strengthening, and without the strengthening could experience severe structural damage or total collapse during a major earthquake. The total program estimate is \$1,950,000.

JUSTIFICATION

The proposed strengthening of the standpipes will help ensure that the existing distribution system remains reliable.

ALTERNATIVE(S) TO PROPOSED ACTION

Do Not Strengthen The Standpipes

An alternative is to not strengthen the standpipes; however, without the strengthening, the standpipes could experience severe structural damage or collapse during a major earthquake. The potential damage would require the respective distribution system pipeline to be shut down until the standpipes are repaired or replaced and surrounding damages mitigated.

FUNDING REQUEST

Program Name: Distribution System - Standpipe Strengthening			
Source of Funds: Pay-as-You-Go Fund			
Appropriation No.: 15342	Board Action No.: 1	FY 98/99 Budget: \$927,200	
Requested Amount:	\$1,950,000	Capital Program No.:	98912-A
Total Appropriated Amount:	\$1,950,000	Capital Program Page No.:	E-34
Total Program Estimate:	\$1,950,000	Program Category:	Asset/System Integrity

ACTIONS AND MILESTONES

- Complete Engineering Studies by August 1998
- Complete Design by March 1999
- Complete Construction by March 2000

CEQA COMPLIANCE / ENVIRONMENTAL DOCUMENTATION

The proposed project qualifies for categorical exemption under the California Environmental Quality Act (CEQA) because it consists of the minor alteration of existing public facilities involving no use beyond that previously existing (State CEQA Guidelines, section 15301). No other environmental documentation is required for this project.

DETAILED REPORT

Metropolitan's Seismic Strengthening Program identified serious structural deficiencies in many of the standpipes located on the distribution system pipelines. These standpipes were designed under old codes that have since been updated. The vertical standpipes are approximately five feet in diameter, are constructed of steel or concrete, and vary in height from approximately 30 to

85 feet. Each standpipe cantilevers out of a concrete base built around the pipeline. The standpipes prevent the pipelines from becoming damaged by pressure surges on the system.

The analysis of Metropolitan's 34 standpipes determined that 19 are in need of strengthening. Without the strengthening, the standpipes could experience severe structural damage during a major earthquake resulting in probable collapse and the release of uncontrolled flows. The damage would require the pipeline to be shut down until the standpipes could be repaired or replaced.

The deficient standpipes will be upgraded by increasing the size of the concrete bases and installing a steel sleeve around the existing standpipes. This work can be completed without a pipeline shutdown. All of the standpipes are located within existing Metropolitan right-of-way with adequate construction access and working area. Construction will be performed by Metropolitan personnel.

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(standpipes.doc)
Attachment(s)

Attachment A
FINANCIAL STATEMENT
(Program No. 98912-A)

The breakdown of the total estimated cost for study, design and construction is shown below:

	<u>Board Action No. 1</u>
Labor:	
Engineering:	
Study	\$ 47,000
Design	81,000
Post Design	79,000
Operations	408,000
Water Quality	4,000
Planning	<u>6,000</u>
Subtotal Labor	\$ 625,000
Material and Supplies	\$ 539,000
Incidental Expenses	11,000
Professional/Technical	20,000
Operating Equipment	33,000
Administrative Overhead	342,000
Contingencies	<u>386,000</u>
Total	<u>\$ 1,950,000</u>
Projected Expenditures of Funds:	
Through Fiscal Year 1997/98	50,000
Fiscal Year 1998/99	927,200
Fiscal Year 1999/00	592,800
Contingencies	<u>386,000</u>
Total	<u>\$ 1,950,000</u>
Source of Funds: Pay-As-You-Go Fund	
Capital Program for Fiscal Year 1998/99	
Total Program	<u>\$2,000,000</u>
Program Estimate for FY 1998/99	<u>\$ 927,200</u>