

FEB 11 1992



MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
Harvey E. Duff
SECRETARY

January 24, 1992

Board of Directors (Engineering & Operations Committee--Action)
(Finance & Insurance Committee--Action)

General Manager

Revision No. 2 to Appropriation No. 593 to Increase Funding
from \$400,000 to a Total of \$1,500,000 for Vibration Mitigation
at the Olinda Pressure Control Structure

Report

In October 1991, your Board approved Revision No. 1 to Appropriation No. 593 to a total of \$400,000 to finance all estimated costs for modification of a valve at the Olinda Pressure Control Structure; continuation of testing the acoustic filter concept; and authorization to enter into an agreement with Flow Sciences, Inc. (Consultant) to provide engineering services in an attempt to eliminate vibrations caused by flows through the control structure. The vibrations emanating from the structure have resulted in lawsuits, and your Board has been regularly consulted regarding this matter.

Modification of the valve has been completed, with minimal reduction of the vibrations; however, installation and testing of small-scale acoustic filters (pulsation dampeners) on the Lower Feeder reduced the vibrations significantly. The Consultant concurs with staff's recommendation that the acoustic filter concept is a feasible and cost-effective method of mitigating the vibrations. An alternative to the acoustic filter method would be the relocation of the control structure, at an estimated cost of \$7,000,000.

The installation of the acoustic filter system consists of the design and procurement of a 96-inch-diameter replacement section of steel pipe with a manifold and set of acoustic filters attached; procurement and installation of control equipment; and model and full-size testing of the system to analyze air scouring and baffle configurations to determine optimum settings at all flow rates. All design, procurement, and installation work will be accomplished by District personnel.

An increase of \$1,100,000 to Appropriation No. 593 to a total of \$1,500,000 is now required for procurement and

installation of the acoustic filter system and appurtenant work. A breakdown of the total estimated costs is shown on Attachment "A."

The proposed action is exempt from the provisions of the California Environmental Quality Act in that it consists of minor modifications of an existing facility involving no expansion of use beyond that previously existing.

Board Committee Assignments

This letter was referred for action to:

The Engineering and Operations Committee because it has jurisdiction over the contracting of construction programs and the ordering of equipment or materials to be used, pursuant to Administrative Code Section 2431(b); and

The Finance and Insurance Committee because it has jurisdiction over appropriations, pursuant to Administrative Code Section 2441(d).

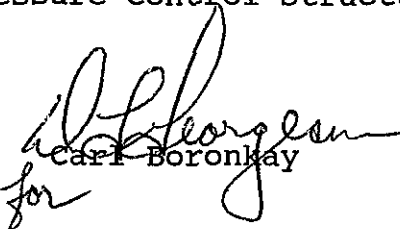
Recommendations

ENGINEERING AND OPERATIONS COMMITTEE FOR ACTION.

It is recommended that the General Manager be authorized to procure and install the acoustic filter system and appurtenant work for vibration mitigation at the Olinda Pressure Control Structure.

FINANCE AND INSURANCE COMMITTEE FOR ACTION.

It is recommended that the Board authorize an increase of \$1,100,000 to Appropriation No. 593 from the 1991 Revenue Bond Construction Fund to a total of \$1,500,000 for vibration mitigation at the Olinda Pressure Control Structure.


Carl Boronkay
for

ATTACHMENT A**Fiscal Statement**

The total cost breakdowns for Revision No. 1 and Revision No. 2 are as follows:

	<u>Rev. No. 1</u>	<u>Rev. No. 2</u>
Labor:		
Engineering	\$ 103,000	\$ 262,000
Controls Group	0	6,000
Field Construction	61,000	124,000
Water Quality	0	6,000
Environmental	2,000	6,000
Inspection	0	9,000
Right of Way	1,000	5,000
Survey	0	6,000
Corrosion Lab	<u>0</u>	<u>6,000</u>
Total Labor	167,000	430,000
Materials	10,000	550,000
Incidental Expenses	2,000	3,000
Professional and Technical Services		
Northrop University	90,000	90,000
Flow Science, Inc.	<u>10,000</u>	<u>10,000</u>
Total Professional & Technical	100,000	100,000
Equipment Use	15,000	35,000
Administrative Overhead	81,000	238,000
Contingencies	<u>25,000</u>	<u>144,000</u>
Totals	<u>\$ 400,000</u>	<u>\$ 1,500,000</u>

ATTACHMENT A (Continued)

Estimated Funds Required:

Initial Funds	\$ 250,000
Revision No. 1	150,000
Revision No. 2	<u>1,100,000</u>
Total	\$ 1,500,000

Source of Funds: 1991 Revenue Bond Construction Fund

Class One: Projects directly related to delivery of water which, if delayed, will adversely impact reliability of service.

Projected Expenditure of Funds:

Through Fiscal Year 1991-92	\$ 750,000
Fiscal Year 1992-93	<u>750,000</u>
Total	\$ 1,500,000

1991-92 Capital Program (Program No. 5-5930-23):

Estimated Program Cost	\$ 215,000
Program Estimate for Fiscal Year 1991-92	\$ 35,400

Project Benefit: Complaints of vibrations allegedly emanating from the structure have resulted in legal actions.