



● **Board of Directors**  
***Engineering and Operations Committee***

1/11/2011 Board Meeting

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**7-2**

**Subject**

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Appropriate \$750,000; and authorize final design and construction to replace a sectionalizing valve on the Palos Verdes Feeder (Approp. 15441)

**Description**

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This action authorizes final design and construction to replace a 42-inch sectionalizing valve, known as the Monterey Valve, on the Palos Verdes Feeder.

**Timing and Urgency**

The 70-year-old Monterey Valve has reached the end of its service life and has deteriorated beyond repair. This sectionalizing valve allows the Palos Verdes Feeder to be shut down without also shutting down the entire Upper Feeder from Eagle Rock Control Tower to the Weymouth plant. Timely replacement of this valve is important because isolation of the Palos Verdes Feeder from the Upper Feeder will be required in order to perform repairs on the Palos Verdes Feeder during a scheduled 2012 shutdown. Replacement of the Monterey Valve is planned to take place during a scheduled shutdown of the Upper Feeder and Weymouth plant in March 2011.

This project has been reviewed with Metropolitan's updated Capital Investment Plan (CIP) prioritization criteria and is categorized as an Infrastructure Reliability project. This work was not included within the fiscal year 2010/11 capital budget because the internal condition of the existing valve was not known at the time that the budget was adopted. Approval of this action will not cause Metropolitan's CIP to exceed the fiscal year 2010/11 budget, due to savings experienced on other capital projects (e.g., lower bids due to the competitive bidding environment.)

**Background**

The Palos Verdes Feeder is a 54-inch-diameter welded steel pipeline that was constructed in 1941. The feeder is one of Metropolitan's primary supply lines serving the Central Pool portion of the distribution system. The Palos Verdes Feeder extends approximately 31 miles south from the Eagle Rock Control Tower to Palos Verdes Reservoir. Treated water from the Weymouth plant is delivered through the Upper Feeder to the Eagle Rock Control Tower, and then to the Palos Verdes Feeder, Santa Monica Feeder, and Eagle Rock Lateral.

The Monterey Valve is located downstream of the Eagle Rock Control Tower, within the city of South Pasadena. This 42-inch sectionalizing valve is used to isolate the Palos Verdes Feeder from the Upper Feeder and the other interconnected pipelines. During a previous shutdown, the Monterey Valve was removed from service and replaced with a pipe spool so that the valve could be disassembled for routine maintenance and minor repairs. However, upon detailed inspection, it was determined that the valve had deteriorated beyond repair and would need to be replaced. Without the sectionalizing valve in place, any repairs on the Palos Verdes Feeder would require a complete shutdown of the Upper Feeder, Eagle Rock Control Tower, Eagle Rock Lateral, Santa Monica Feeder and Palos Verdes Feeder.

As a replacement for the deteriorated 42-inch valve, an available 36-inch salvaged valve has been located at Metropolitan's warehouse. Although this 36-inch valve is smaller than the valve it would replace, the 36-inch

valve was originally designed to handle pressures and flows in excess of those required to isolate the Upper Feeder. Use of this valve will enable the work to proceed quickly and avoid approximately 24 months of delay due to the long lead time in ordering and fabricating a new valve. In addition, the existing 36-inch valve will be refurbished at the La Verne Shops resulting in a savings of approximately \$140,000 compared to procuring a new valve.

The Upper Feeder is planned to be shut down in March 2011 at the same time that the Weymouth plant will be shut down for its on-site construction tie-ins and the rehabilitation of three service connections on the Upper Feeder. During this March 2011 shutdown, staff recommends that the pipe spool where the Monterey Valve was located be removed, and that the available 36-inch valve be installed in its place. Given the opportunity to perform this work during a scheduled shutdown, and the risks of not replacing this valve, staff recommends moving forward with the work at this time.

### **Monterey Valve Replacement – Final Design (\$61,000) and Construction (\$689,000)**

Planned work includes piping modifications and replacement of the deteriorated 42-inch valve with the smaller 36-inch valve. This work will be performed round-the-clock within public streets. Construction will include initial reconditioning of the 36-inch valve, procurement of materials, fabrication of reducer piping and fittings, removal of the spool piece, shutdown coordination and traffic controls, dewatering of the pipeline, installation of the reconditioned valve and new fittings, and return of the pipeline back to service. Construction will take place during the planned March 2011 shutdown of the Upper Feeder.

This action appropriates \$750,000 and authorizes final design and construction to replace the Monterey Valve on the Palos Verdes Feeder. The requested funds include: \$458,000 for construction by Metropolitan forces; \$158,000 for materials and supplies; \$61,000 for design and preparation of drawings; \$35,000 for preparation of environmental documentation, local agency permitting, and project management; and a remaining budget of \$38,000. The total cost of construction is \$613,000.

Metropolitan staff will perform all final design and construction activities. The anticipated cost of final design is approximately 10 percent of the total construction cost. Engineering Services' goal for design of projects with construction cost less than \$3 million is 9 to 15 percent.

### **Summary**

This action appropriates \$750,000, and authorizes final design and Metropolitan force construction for replacement of the Monterey Valve on the Palos Verdes Feeder. This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team. This work was not included in Metropolitan's fiscal year 2010/11 capital budget because it was identified after adoption of the budget. Staff recommends proceeding with the work to take advantage of a scheduled March 2011 shutdown. Upon approval of this action, the fiscal year 2010/11 capital expenditure plan will be adjusted to reflect the new work. Approval of this action will not cause Metropolitan's CIP to exceed the fiscal year 2010/11 budget, due to savings experienced on other capital projects (e.g., extremely competitive bid amounts). See [Attachment 1](#) for the Financial Statement, and [Attachment 2](#) for the Location Map.

This project is included within capital Appropriation No. 15441, the Conveyance and Distribution System Rehabilitation Program Phase II, which was initiated in fiscal year 2006/07. Appropriation No. 15441 also includes other projects such as repairs of the Lake Skinner Outlet Conduit, Rialto Pipeline, San Diego Pipeline No. 5, and Sepulveda Feeder. With the present action for the Monterey Valve replacement project, the total funding for Appropriation No. 15441 will increase from \$28,449,000 to \$29,199,000.

This project is consistent with Metropolitan's goal for sustainability by enhancing the reliability of the existing conveyance and distribution system in order to maintain reliable water deliveries in the future.

### ***Project Milestone***

March 2011 – Completion of construction

## Policy

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Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

## California Environmental Quality Act (CEQA)

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CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The overall activities involve the funding, design, minor alterations and replacement of existing public facilities with negligible or no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed action qualifies under Class 1 and Class 2 Categorical Exemptions (Sections 15301 and 15302 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed action qualifies under two Categorical Exemptions (Class 1, Section 15301 and Class 2, Section 15302 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

## Board Options

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### Option #1

Adopt the CEQA determination and

- a. Appropriate \$750,000; and
- b. Authorize final design and construction to replace the Monterey Valve on the Palos Verdes Feeder.

**Fiscal Impact:** \$750,000 of unbudgeted funds under Approp. 15441; funds under the approved CIP budget will be prioritized and made available to cover these expenditures.

**Business Analysis:** This project will protect Metropolitan's assets and enhance the reliability of water deliveries to member agencies.

### Option #2

Do not authorize the project at this time.

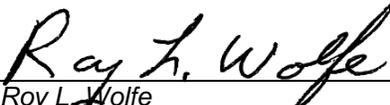
**Fiscal Impact:** This option would potentially result in increased costs, more extensive repairs, and an unplanned shutdown.

**Business Analysis:** This option would forego an opportunity to protect Metropolitan's assets and to perform necessary work during a scheduled shutdown; to enhance the reliability of deliveries to member agencies; and to reduce the risk of costly emergency repairs.

**Staff Recommendation**

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Option #1

 Roy L. Wolfe Manager, Corporate Resources	12/28/2010 <i>Date</i>
 Jeffrey Kightlinger General Manager	12/28/2010 <i>Date</i>

**Attachment 1 – Financial Statement**

**Attachment 2 – Location Map**

Ref# WSO12609087

**Financial Statement for Conveyance and Distribution System Rehabilitation Program – Phase II**

A breakdown of Board Action No. 29 for Appropriation No. 15441 for the Monterey Valve Replacement Project\* is as follows:

	<b>Previous Total Appropriated Amount (Jan. 2011)</b>	<b>Current Board Action No. 29 (Jan. 2011)</b>	<b>New Total Appropriated Amount</b>
Labor			
Studies & Investigations	\$ 1,784,200	\$ -	\$ 1,784,200
Final Design	2,270,400	61,000	2,331,400
Owner Costs (Program mgmt, envir. doc., permitting, record drwgs)	3,500,750	35,000	3,535,750
Construction Inspection & Support	1,269,000	-	1,269,000
Metropolitan Force Construction	6,201,700	458,000	6,659,700
Materials and Supplies	1,299,100	131,000	1,430,100
Incidental Expenses	735,400	27,000	762,400
Professional/Technical Services	1,043,500	-	1,043,500
Equipment Use	223,200	-	223,200
Contracts	7,396,130	-	7,396,130
Remaining Budget	2,725,620	38,000	2,763,620
<b>Total</b>	<b>\$ 28,449,000</b>	<b>\$ 750,000</b>	<b>\$ 29,199,000</b>

**Funding Request**

<b>Program Name:</b>	Conveyance and Distribution System Rehabilitation Program - Phase II		
<b>Source of Funds:</b>	Revenue Bonds, Replacement and Refurbishment or General Funds		
<b>Appropriation No.:</b>	15441	<b>Board Action No.:</b>	29
<b>Requested Amount:</b>	\$ 750,000	<b>Capital Program No.:</b>	15441-I
<b>Total Appropriated Amount:</b>	\$ 29,199,000	<b>Capital Program Page No.:</b>	277
<b>Total Program Estimate:</b>	\$ 53,850,000	<b>Program Goal:</b>	I - Infrastructure Reliability

\*This action is the initial appropriation for the Monterey Valve Replacement Project.

# Monterey Valve Replacement

