



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

December 8, 2009 Board Meeting

7-3

Subject

Appropriate \$1.36 million; and award \$845,777 contract to Genesis Construction for repair of the Lake Skinner Outlet Conduit (Approp. 15441)

Description

This action authorizes the repair of three distressed prestressed concrete cylinder pipe (PCCP) sections on the Lake Skinner Outlet Conduit. Results of a recent electromagnetic inspection revealed three sections with structural deterioration that warrant prompt repair to maintain reliability and to reduce the risk of impacts associated with unplanned shutdowns from pipeline failure. The work includes repairing the distressed pipe sections by inserting steel liner pipe.

Timing and Urgency

Replacement of the three distressed pipe sections of the Lake Skinner Outlet Conduit is needed to maintain reliable deliveries of water from Lake Skinner to the Robert A. Skinner Water Treatment Plant. A pipeline failure would affect Metropolitan's ability to convey Lake Skinner water for seasonal peak demands, to regulate flows, and to meet member agency demands during emergencies. The pipeline is the sole outlet of water from Lake Skinner. A pipeline failure would expose Metropolitan to costly repairs.

This project has been reviewed with Metropolitan's updated Capital Investment Plan (CIP) prioritization criteria. Staff recommends award of a construction contract at this time to enhance water delivery reliability, improve safety, and take advantage of the current highly competitive bidding climate. This project is categorized as an Infrastructure Upgrade project and is budgeted within Metropolitan's CIP for fiscal year 2009/10.

Background

The Lake Skinner Outlet Conduit, which is located upstream of the Skinner plant, is a 13.5-foot-diameter PCCP line which was built in 1971. This line conveys untreated water for one mile from Lake Skinner to the Skinner plant, and to San Diego Pipelines Nos. 3 and 5 for delivery to the San Diego County Water Authority.

The three distressed pipe sections were detected during 2006 electromagnetic inspections of the Lake Skinner Outlet Conduit, and were initially identified to have 20, 15, and 5 prestressing wire breaks. These pipe sections are located at two separate locations within the embankments of the Skinner Administration Building parking lot area (see [Attachment 3](#)). Since the pipeline operates under relatively low pressure, structural analyses indicated that immediate repairs were not required at that time. Results of recent inspections conducted in March 2009 revealed that the three distressed pipe sections had further deteriorated and now had 25, 15, and 10 wire breaks. Based on the new data and industry experience with PCCP, prompt repair of the pipe sections is recommended to reduce the risk of costly emergency repairs.

In May 2009, Metropolitan's Board authorized final design and pipe fabrication for repair of the Lake Skinner Outlet Conduit. The distressed pipe segments will be repaired by inserting a steel liner pipe. Staff assessed several alternative methods to complete the repair, including direct replacement, lining with steel pipe, and carbon fiber lining. Due to the depth and surface features above the pipe sections to be repaired, direct replacement was not considered cost-effective. Carbon fiber lining would not be effective for these repairs, because the presence

of corrosive soil would limit the repairs' life span to less than ten years. The selected repair method, lining with steel pipe, is less disruptive than direct replacement. Further, it will not affect flow capacity as the inside diameter will be diminished only slightly, and will not introduce significant pressure drop. The life expectancy for the selected repair method is equivalent to that of the original pipeline (i.e., 50+ years.) Final design and pipe fabrication have now been completed, and staff recommends award of a construction contract to complete the repairs.

Lake Skinner Outlet Conduit Repairs – Construction (\$1,360,000)

Specifications No. 1657 for the Lake Skinner Outlet Conduit Repairs was advertised for bids on September 23, 2009. The contract includes excavation, saw cutting and removal of the top of the existing pipe, installation of new 150-inch outside diameter welded steel pipe sections furnished by Metropolitan, concrete encasement, backfill, and landscape restoration. The repairs will be completed during a planned 10-day shutdown in May 2010. As shown in [Attachment 2](#), eight bids were received and opened on October 29, 2009. The apparent low bidder, Zusser Company, Inc., requested to be relieved from its bid in accordance with the California Public Contract Code due to an inadvertent clerical error made during the bid process, which materially changed its bid. Upon review of the request and documentation submitted, Metropolitan released Zusser Company from its bid. The second low bid from Hemet Mfg. Co., Inc. dba Genesis Construction, in the amount of \$845,777, complies with the requirements of the specifications. The six higher bids ranged from \$848,000 to \$1,148,101. The engineer's estimate was \$693,000. Staff has investigated the difference between the group of bids and the engineer's estimate, and attributes the differences primarily to higher-than-expected costs for excavation. The engineer's estimate assumed that a simplified shoring system and open-cut excavation would be used to support the sides of the excavation. The actual bids received are the result of the contractors opting to use a more robust and costly shoring system to ensure the stability of the excavation. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 20 percent of the bid amount. Genesis Construction is an SBE firm and thus achieves 100 percent participation.

This action appropriates \$1.36 million and awards a \$845,777 construction contract to Genesis Construction to repair three PCCP sections on the Lake Skinner Outlet Conduit. In addition to the amount of the contract, the requested funds include \$78,700 for Metropolitan force shutdown activities; \$138,000 for construction inspection; \$60,400 for technical support by design staff, submittals review, and as-built drawings; \$84,600 for contract administration, environmental monitoring, and project management; and \$152,523 for remaining budget.

Metropolitan staff will perform inspection of the construction contract. For this project, the anticipated cost of inspection is approximately 14 percent of the total construction cost. Engineering Services' goal for inspection of construction contracts less than \$3 million is 9 to 15 percent.

Project Milestones

June 2010 – Completion of construction

See [Attachment 1](#) for the Financial Statement and [Attachment 3](#) for the Location Map.

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

Policy

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)

CEQA determination for Option #1:

The project was previously determined to be categorically exempt under the provisions of CEQA and State CEQA Guidelines. The Board found this project to be exempt under Class 1, Section 15301; Class 2,

Section 15302; and Class 4, Section 15304 of the State CEQA Guidelines on May 12, 2009. A Notice of Exemption (NOE) was filed on the project at that time and the statute of limitations has ended. With the current board action, there are no substantial changes proposed to the project since the original NOE was filed. Hence, the previous environmental documentation in conjunction with the project fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act with regards to the proposed action.

The CEQA determination is: Determine that the proposed action has been previously addressed in the 2009 NOE (Class 1, Section 15301; Class 2, Section 15302; and Class 4, Section 15304 of the State CEQA Guidelines) and that no further environmental analysis or documentation is required.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination and

- a. Appropriate \$1.36 million; and
- b. Award \$845,777 contract to Hemet Mfg. Co., Inc. dba Genesis Construction for repairs to the Lake Skinner Outlet Conduit.

Fiscal Impact: \$1.36 million in budgeted funds under Approp. 15441

Business Analysis: This project will protect Metropolitan’s assets, reduce the risk of costly emergency repairs, help maintain reliable water deliveries to the Skinner plant, and take advantage of the current highly competitive bidding climate.

Option #2

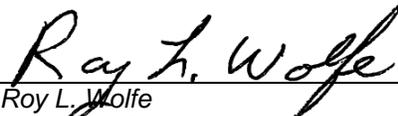
Do not award the construction contract and re-advertise in an attempt to receive more favorable bids.

Fiscal Impact: Unknown

Business Analysis: This option may or may not result in a lower bid, and would delay repairs to the Lake Skinner Outlet Conduit. This option could lead to higher costs, more extensive repairs, and an unplanned shutdown in the event of pipeline failure.

Staff Recommendation

Option #1

	11/18/2009
Roy L. Wolfe Manager, Corporate Resources	Date

	11/19/2009
Jeffrey Kightlinger General Manager	Date

[Attachment 1 – Financial Statement](#)

[Attachment 2 – Abstract of Bids](#)

[Attachment 3 – Location Map](#)

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

A breakdown of Board Action No. 18 for Appropriation No. 15441 for the Lake Skinner Outlet Conduit Repairs Project* is as follows:

	Previous Total Appropriated Amount (Dec. 2009)	Current Board Action No. 18 (Dec. 2009)	New Total Appropriated Amount
Labor			
Studies & Investigations	\$ 1,156,800	\$ -	\$ 1,156,800
Preliminary Design	141,600	-	141,600
Final Design	1,465,550	-	1,465,550
Owner Costs (Program mgmt, contract admin., envir. monitoring)	2,050,350	128,000	2,178,350
Construction Inspection & Support	328,500	138,000	466,500
Metropolitan Force Construction	3,804,000	78,700	3,882,700
Materials and Supplies	642,100	-	642,100
Incidental Expenses	502,900	5,000	507,900
Professional/Technical Services	750,500	12,000	762,500
Equipment Use	149,200	-	149,200
Contracts	2,286,000	845,777	3,131,777
Remaining Budget	1,424,500	152,523	1,577,023
Total	\$ 14,702,000	\$ 1,360,000	\$ 16,062,000

Funding Request

Program Name:	Conveyance and Distribution System Rehabilitation Program - Phase II		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15441	Board Action No.:	18
Requested Amount:	\$ 1,360,000	Capital Program No.:	15441
Total Appropriated Amount:	\$ 16,062,000	Capital Program Page No.:	277
Total Program Estimate:	\$ 53,850,000	Program Goal:	Infrastructure Reliability

* The total amount expended to date on the Lake Skinner Outlet Conduit Repair project is approximately \$704,000.

The Metropolitan Water District of Southern California
Abstract of Bids Received on October 29, 2009 at 2:00 P.M.
Specifications No. 1657
Lake Skinner Outlet Conduit Repairs

The project will replace three PCCP sections with welded steel pipe. The work includes excavation, installation of Metropolitan-furnished steel pipe, welding, grouting, and restoration of surface conditions.

Engineer's Estimate: \$693,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE*
1. Zusser Company, Inc., Los Angeles, CA	\$583,400**	N/A	N/A	N/A
2. Hemet Mfg. Co., Inc. dba Genesis Construction, Hemet, CA	\$845,777	\$845,777	100	Yes
3. TC Construction Co. Inc., Santee, CA	\$848,000	N/A	N/A	N/A
4. L.H. Woods & Sons, Inc., Vista, CA	\$897,777	N/A	N/A	N/A
5. Mladen Buntich Construction Co., Inc., Upland, CA	\$914,000	N/A	N/A	N/A
6. J. F. Shea Construction, Inc., Walnut, CA	\$930,000	N/A	N/A	N/A
7. Gantry Constructors, Inc., Clarkdale, AZ	\$1,064,000	N/A	N/A	N/A
8. MMC, Inc., La Palma, CA	\$1,148,101	N/A	N/A	N/A

* SBE (Small Business Enterprise) participation level was established at 20% for this contract

** Zusser Company, Inc., requested to be relieved from its bid in accordance with the California Public Contract Code due to an inadvertent clerical error, which materially changed its bid for the project. Upon review of the request and documentation submitted, Metropolitan released Zusser from its bid.

Lake Skinner Outlet Conduit Repairs

