



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

11/14/2023 Board Meeting

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**8-2**

**Subject**

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Adopt the CEQA determination that the proposed action was previously addressed in the Mitigated Negative Declaration and award a \$16,055,500 procurement contract to Northwest Pipe Company for steel pipe to rehabilitate a portion of the Lakeview Pipeline

**Executive Summary**

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The Lakeview Pipeline has experienced significant deformation over much of its length since it was placed into service in 1973. The 11-foot-diameter steel pipe has deflected more than four inches at over 660 locations and as much as 12 inches in four locations; this deflection is attributed to subsidence and the original design of the pipe joints in this pipeline. This deflection has caused numerous leaks at pipe joints and loss of mortar lining, which leads to corrosion of the steel pipe. If not rehabilitated, the corrosion and lack of structural integrity could lead to pipeline failure. Rehabilitation of the Lakeview Pipeline by installing a new steel pipe liner with welded joints is proceeding in stages. Stage 1 rehabilitation was completed in 2015 when one mile of the pipe was relined. Staff plans to complete design and award a construction contract by mid-2024 for Stage 2 rehabilitation and recommends awarding a procurement contract for 12,500 feet of steel liner pipe at this time. This procurement contract award will ensure the timely delivery of the pipe for the upcoming Stage 2 construction contract.

**Details**

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**Background**

The Lakeview Pipeline is a 132-inch-diameter, approximately 11.4-mile-long steel pipe that provides water from the East Branch of the State Water Project (SWP) to the Skinner area. The pipeline, placed in service in 1973, receives untreated water from the Department of Water Resources' Santa Ana Valley Pipeline or Lake Perris and conveys it to the San Diego Canal. In combination with the Inland Feeder, Metropolitan uses the Lakeview Pipeline to blend flows from the SWP and the Colorado River Aqueduct for deliveries in the Skinner area. In times of low SWP allocations, the Lakeview Pipeline can also be used to supply Diamond Valley Lake (DVL) water to the Mills plant, providing an alternate delivery route to the plant as a backup to the Santa Ana Valley Pipeline.

The Lakeview Pipeline has been shut down on numerous occasions to repair leaking pipe joints. The leaks are attributable to a combination of local subsidence along the pipeline alignment caused by deficient placement and compaction of the bedding material that surrounds the pipe. The original design of the pipeline which used rubber-gasket bell and spigot pipe joints, as opposed to Metropolitan's current design of fully welded joints, is particularly susceptible to separation of the joints if subsidence occurs in the vicinity of the pipe. Consequently, the competent installation of the backfill around the pipe is essential to ensure the pipeline's integrity. A comprehensive investigation in 2012 revealed both the issues with the pipe backfill material and excessive deflections, as well as out-of-round distortions over much of the pipeline's length. Over time, these deflections have caused cracking and delamination of the pipeline's mortar lining, which exposes the steel to accelerated rates of corrosion and eventual leakage.

The Lakeview Pipeline contains 1,520 steel pipe segments with rubber-gasket bell and spigot joints. To date, 139 of the joints have received remedial repairs to prevent leaks. Furthermore, with the need to increase system flexibility in the event of low SWP water allocations and to deliver DVL water to the Mills plant by way of the

Lakeview Pipeline, there is a need to enable the Lakeview Pipeline to operate at a higher hydraulic grade than originally designed. This will require relining the pipe to be able to accommodate the higher hydraulic grades in addition to accommodating additional deflection due to future subsidence along the alignment.

The planned rehabilitation of the Lakeview Pipeline has been prioritized based on system requirements and is being completed in three stages. In March 2015, the Stage 1 work was completed to enable water deliveries from DVL to the Mills plant and offset reduced SWP water allocations. This work included lining a one-mile portion of the Lakeview Pipeline, known as the Bernasconi Tunnel, with a steel liner with welded steel joints. The Stage 2 work includes lining 3.7 miles of the Lakeview Pipeline between the Inland Feeder's PC-1 control structure and the Perris Control Facility. The future Stage 3 work will include lining the remaining 6.7 miles of the Lakeview Pipeline that extends from PC-1 to the San Diego/Casa Loma Canal junction structure. The steel pipe liner and use of welded steel joints will be sufficient to ensure the long-term resilience and reliability of the newly lined pipeline under the planned future operating conditions.

The planned rehabilitation will enhance reliability of the Lakeview Pipeline, prevent future pipe leaks, and provide an alternate supply path for the Mills plant. These improvements are consistent with Metropolitan's long-term plan for supply reliability for the Mills service area. Staff will return to the Board at a later date for award of Stage 2 construction and for authorization of design of the Stage 3 work.

### **Budget Impact**

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with procurement of the steel liner to rehabilitate a portion of the Lakeview Pipeline, pending board award of the procurement contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to the subject contracts during the current biennium are available within the CIP Appropriation for fiscal years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an expenditure of \$17.5 million in capital funds, and approximately \$5 million will be incurred in the current biennium. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the Supply Reliability Program.

### **Lakeview Pipeline Relining, Stage 2 – Procurement**

The scope of the procurement contract includes furnishing 12,500 feet of steel liner segments with diameters ranging from 114 inches to 117 inches, including associated fittings and accessories. The pipe will be stored on Metropolitan property located near the downstream portal of the Bernasconi Tunnel. This initial quantity of Metropolitan-furnished pipe will allow the future contractor to quickly start field installation while they procure the remaining pipe for the remainder of the Stage 2 rehabilitation work.

A total of \$17,500,000 is required to perform this work. In addition to the amount of the contract, the allocated funds include \$355,000 for factory fabrication inspection and functional testing; \$89,000 for submittals review, technical support, and responding to manufacturer requests for information; \$205,000 for Metropolitan forces to receive, offload, and place steel pipe for storage; \$380,000 for materials and supplies for pipe storage area; \$130,000 for contract administration and project management; and \$285,500 for remaining budget.

**Attachment 1** provides the allocation of required funds. The total estimated cost to complete Stage 2 of the Lakeview Pipeline Relining, including the amount appropriated to date, funds allocated for the work described in this action, and all future actions, is expected to range between \$46 million and \$50 million.

### ***Award of Procurement Contract (Northwest Pipe Company)***

Specifications No. 2002 for furnishing 12,500 feet of welded steel pipe and fittings to rehabilitate a portion of the Lakeview Pipeline was advertised for bids on September 7, 2023. As shown in **Attachment 2**, two bids were received and opened on October 19, 2023. As a procurement contract, there are no subcontracting opportunities, and a Small Business Enterprise participation level was not established for this contract. The bid from Northwest Pipe Company in the amount of \$16,055,500, complies with the requirements of the specifications. This amount includes all sales and use taxes imposed by the State of California. The budgetary estimate for this material, based on previous procurements, ranged from \$37 million to \$40 million. Metropolitan obtained a better-than-anticipated price for the welded steel pipe as steel prices decreased by over 40 percent from April 2023 to

October 2023. Proceeding with a contract at this time will enable completion of Stage 2 of the Lakeview Pipeline rehabilitation in a timely and cost-effective manner.

This action awards a \$16,055,500 procurement contract to Northwest Pipe Company to furnish 12,500 feet of welded steel pipe and fittings to rehabilitate a portion of the Lakeview Pipeline.

### **Alternatives Considered**

Staff considered having the installation contractor furnish the steel liner as part of their overall construction contract. By including the pipe fabrication in the installation contract, the contractor would be responsible for the quality and delivery schedule of the pipe; however, this would increase the duration of the contract and impact shutdown logistics. The recommended action allows Metropolitan to procure a large portion of the steel pipe and the contractor to start the relining work with the pipe furnished under the procurement contract that is the subject of this action. The installation contractor will be responsible for fabrication of the remaining approximately 7,000 feet of welded steel pipe, which can be used following installation of the Metropolitan-furnished material. This action mitigates against manufacturing or logistical delays which could impact the scheduled shutdown of the Lakeview Pipeline. Procuring liner pipe in advance will also ensure that the pipe is available in the event of future material shortages or to address an unanticipated urgent repair of the pipeline. Early procurement may also hedge against higher material costs in a volatile steel market.

### **Summary**

This action awards a procurement contract to Northwest Pipe Company, in an amount not to exceed \$16,055,500, to furnish 12,500 feet of welded steel pipe and fittings to rehabilitate a portion of the Lakeview Pipeline. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, and **Attachment 3** for the Location Map.

### **Project Milestones**

November 2024 – Board award of steel pipe installation contract

October 2024 – Delivery of steel pipe

### **Policy**

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

Metropolitan Water District Administrative Code Section 8140: Competitive Procurement

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 49375, dated April 9, 2013, the Board authorized design of rehabilitation of the Lakeview Pipeline.

By Minute Item 49864, dated August 19, 2014, the Board authorized construction of the Bernasconi Tunnel liner installation.

By Minute Item 50326, dated December 8, 2015, the Board adopted the Mitigated Negative Declaration for the proposed project, adopted the Mitigation Monitoring and Reporting Program, and authorized design of repairs to the Lakeview Pipeline.

By Minute Item 52778, dated April 14, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/23 and 2023/24.

### **California Environmental Quality Act (CEQA)**

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#### **CEQA determination for Option #1:**

On December 8, 2015, the Board adopted a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the Lakeview Pipeline Repair Project and approved the project. The present board action does not involve any changes to the approved project. Therefore, the environmental documentation previously prepared and adopted in connection with the project fully complies with CEQA and no further environmental analysis or documentation is required.

**CEQA determination for Option #2:**

None required

**Board Options**

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**Option #1**

Adopt CEQA determination that the proposed action was previously addressed in the adopted 2003 Mitigated Negative Declaration, and award a \$16,055,500 contract to Northwest Pipe Company to furnish 12,500 feet of welded steel pipe to rehabilitate a portion of the Lakeview Pipeline.

**Fiscal Impact:** Expenditure of \$17.5 million in capital funds. Approximately \$5 million will be incurred in the current fiscal year and has been previously authorized.

**Business Analysis:** This option will improve the operational reliability of the Lakeview Pipeline.

**Option #2**

Do not proceed with this project at this time.

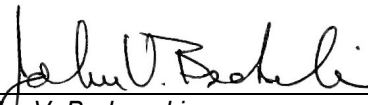

**Fiscal Impact:** None

**Business Analysis:** This option will forego an opportunity to improve the operational reliability of the Lakeview Pipeline, which may lead to unplanned shutdowns and costly urgent repairs.

**Staff Recommendation**

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Option #1

	10/26/2023
_____ John V. Bednarski Manager/Chief Engineer Engineering Services	Date
	10/30/2023
_____ Adel Hagekhalil General Manager	Date

**Attachment 1 – Allocation of Funds**

**Attachment 2 – Abstract of Bids**

**Attachment 3 – Location Map**

Ref# es12698675

**Allocation of Funds for Lakeview Pipeline Rehabilitation, Stage 2 Procurement**

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	<b>Current Board Action (Nov. 2023)</b>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., contract admin.)	105,000
Submittals Review & Record Drwgs.	89,000
Construction Inspection & Support	355,000
Metropolitan Force Construction	205,000
Materials & Supplies	380,000
Incidental Expenses	25,000
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
Northwest Pipe Company	16,055,500
Remaining Budget	<u>285,500</u>
<b>Total</b>	<b><u><u>\$ 17,500,000</u></u></b>

The total amount expended to date for the Lakeview Pipeline Rehabilitation is approximately \$6.0 million. The total estimated cost to complete the project, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from \$46 million to \$50 million.

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received on October 19, 2023**

**Specifications No. 2002**

**Furnishing Steel Liner for Lakeview Pipeline Rehabilitation, Stage 2**

The work consists of furnishing and delivering of 648 feet of 7/8-inch-thick, 114-inch-diameter steel pipe sections and 11,907 feet of 7/8-inch-thick, 117-inch-diameter steel pipe sections.

Budgetary estimate: \$46 million to \$50 million

<b>Bidder and Location</b>	<b>Base Bid Price Total <sup>1,2</sup></b>
<b>Northwest Pipe Company Adelanto, CA</b>	<b>\$16,055,500</b>
Thompson Pipe Group Rialto, CA	\$23,577,905

<sup>1</sup> As a procurement contract, there are no subcontracting opportunities.

<sup>2</sup> Includes sales and use taxes of 10.25 percent imposed by the state of California

# Distribution System

