



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

10/8/2024 Board Meeting

7-2

Subject

Award a \$1,833,650 construction contract to Power Engineering Construction Company for San Diego Canal Concrete Liner Rehabilitation; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The San Diego Canal conveys untreated water to Lake Skinner and the Robert A. Skinner Water Treatment Plant (Skinner plant). During an inspection in early 2024, an area of the canal was observed to be in need of rehabilitation. The concrete liner has deteriorated and cracked at this location, and further deterioration could impact water deliveries to the Skinner plant and member agencies in Riverside and San Diego Counties. This action authorizes a \$1,833,650 construction contract to Power Engineering Construction Company to rehabilitate approximately 11,000 square feet of San Diego Canal concrete liner during a planned 2024/2025 shutdown. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the List of Subcontractors, and **Attachment 4** for the Location Map.

Proposed Action(s)/Recommendation(s) and Options

Staff Recommendation: Option #1

Option #1

Award a \$1,833,650 contract to Power Engineering Construction Company to rehabilitate the San Diego Canal at one location.

Fiscal Impact: Expenditure of \$2,660,000 in capital funds. All costs will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option will improve the operational reliability of the San Diego Canal and mitigate against the risk of unplanned outages.

Option #2

Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: This option would forego the opportunity to increase the operational reliability of the San Diego Canal.

Alternatives Considered

An alternative to awarding this construction contract is to have Metropolitan forces complete the construction of the project. Although Metropolitan forces have completed this type of work before, this alternative is not recommended because the work will be conducted simultaneously with the annual Colorado River Aqueduct (CRA) shutdown. During the CRA shutdown, Metropolitan forces are focused on maintenance work, which must be planned prior to the shutdown and executed during the shutdown. The selected option will utilize a contractor

to perform the rehabilitation work at the canal to allow Metropolitan staff to focus on maintenance activities planned for the annual CRA shutdown.

Applicable Policy

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

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

Related Board Action(s)/Future Action(s)

By Minute Item 53598, dated April 9, 2024, the Board appropriated a total of \$636.5 million for projects identified in the CIP for Fiscal Years 2024/2025 and 2025/2026.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is exempt from CEQA because the action consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features involving negligible or no expansion of existing or former use and no possibility of significantly impacting the physical environment. In addition, the proposed action consists of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. Finally, the proposed action consists of minor public or private alterations in the condition of land, water, and/or vegetation, which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. (State CEQA Guidelines Sections 15301, 15303, and 15304).

CEQA determination for Option #2:

None required

Details and Background

The San Diego Canal is a concrete-lined open channel with a trapezoidal cross-section that conveys Colorado River water from the Casa Loma Canal or State Water Project supplies from the Lakeview pipeline to Lake Skinner. The San Diego Canal was constructed in the 1950s and is approximately 15 feet deep, 50 feet wide, and 16 miles long. The canal has a concrete lining made up of individual concrete panels that are approximately 12 feet by 11 feet and vary from four to eight inches in thickness.

The San Diego Canal is routinely shut down and inspected for signs of deterioration and to perform needed repairs. Replacement of deteriorated concrete panels typically occurs in upcoming shutdown seasons following the inspection. If more work is identified than can be completed during the shutdown, the work is prioritized and completed in consecutive years. Inspections in 2019 and 2021 identified degraded portions of the concrete liner, and staff prioritized locations for rehabilitation. Construction at three locations was completed in March 2024.

A degraded portion of the concrete liner has been identified approximately 200 feet downstream of the interconnection between the San Diego Canal and the Casa Loma Canal. At this site, a section of the canal approximately 145 feet in length was identified to have visible cracking along the invert and side panels, groundwater intrusion, panel bulging, and uplift. The rehabilitation work consists of demolition of the damaged liner panels, over-excavation of the subgrade and backfill with aggregate base, and installation of new concrete liner panels. Additionally, weep holes will be installed on invert panels to relieve pore pressure that pushes up on the bottom of the concrete liner when the canal is dewatered due to saturated subgrade soils.

The final design for rehabilitation is complete. Staff recommends proceeding with construction of the liner rehabilitation at this time to improve the reliability of the San Diego Canal and protect against liner failures, which could cause a disruption in service to the Skinner plant and member agencies.

San Diego Canal Concrete Liner Rehabilitation – Construction

The scope of the contract includes the removal and replacement of concrete panels totaling approximately 11,000 square feet on the San Diego Canal and the installation of 24 total weep holes in the invert of the canal. The existing subgrade soil at this location will be over-excavated to a depth of 18 inches and backfilled with aggregate base material. Steel reinforcing will be added to the new concrete panels. Metropolitan forces will perform shutdown work on the canal, including dewatering of the canal in preparation for the contractor's work. The work will be performed during a planned shutdown, which is scheduled to start in February 2025.

A total of \$2,660,000 is required for this work. In addition to the amount of the construction contract described below, allocated funds for Metropolitan staff include \$177,000 for submittal review and preparation of record drawings; \$95,000 for Metropolitan force work, as described above; \$229,000 for construction management and inspection; \$228,000 for contract administration, environmental support, and project management; and \$97,350 for the remaining budget. **Attachment 1** provides the allocation of the required funds. The total cost to complete the canal concrete liner rehabilitation, including the amount appropriated to date, and funds allocated for the work described in this action, is approximately \$3 million.


Award of Construction Contract (Power Engineering Construction Company)

Specifications No. 2119 for San Diego Canal Concrete Liner Rehabilitation was advertised for bids on August 6, 2024. As shown in **Attachment 2**, seven bids were received and opened on September 10, 2024. The low bid from Power Engineering Construction Company, in the amount of \$1,833,650, complies with the requirements of the specifications. The other bids ranged from \$2,100,444 to \$4,000,000, while the engineer's estimate for this project was \$5,090,000. Staff investigated the cost difference between the engineer's estimate and the low bid and attributed the difference to a conservative engineer's estimate based on the short shutdown window and unknown groundwater levels. The contractor's competitive bid reflects a familiarity with the type of work required, as well as their ability to quickly mobilize and complete work expeditiously since they are currently working with Metropolitan on a contract at Diamond Valley Lake. For this contract, Metropolitan established a Small Business Enterprise participation level of at least 25 percent of the contract amount. Power Engineering Construction Company has agreed to meet this level of participation. The subcontractors for this contract are listed in **Attachment 3**.

Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for construction management and inspection of projects with construction greater than \$3 million is 9 to 12 percent. For this project, the performance metric goal for inspection is 11.9 percent of the total construction cost. The total cost of construction for this project is \$1,928,650, which includes the cost of the contract (\$1,833,650) and Metropolitan force work (\$95,000).

Project Milestone

April 2025 – Completion of construction



Mai Hattar
Interim Chief Engineer
Engineering Services

9/18/2024
Date



Deven Upadhyay
Interim General Manager

9/23/2024
Date

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Subcontractors for Low Bidder

Attachment 4 – Location Map

Ref# Es12696256

Allocation of Funds for San Diego Canal Liner Rehabilitation

	Current Board Action (Oct. 2024)
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	228,000
Submittals Review & Record Drwgs.	177,000
Construction Inspection & Support	229,000
Metropolitan Force Construction	95,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	
Power Engineering Construction Co.	1,833,650
Remaining Budget	97,350
Total	\$ 2,660,000

The total amount expended to date is approximately \$300,000. The total estimated cost to complete rehabilitation of the San Diego Canal, including the amount appropriated to date and funds allocated for the work described in this action, is approximately \$3 million.

The Metropolitan Water District of Southern California
Abstract of Bids Received on September 10, 2024, at 2:00 P.M.
Specifications No. 2119
San Diego Canal Liner Rehabilitation

The work includes rehabilitation of approximately 11,000 square feet of concrete liner in the San Diego Canal.

Engineer's estimate: \$5,090,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
Power Engineering Construction Company Alameda, CA	\$1,833,650	\$459,457	25%	Yes
Bosco Constructors Inc. Chatsworth, CA	\$2,100,444	-	-	-
Houalla Enterprises Ltd. Newport Beach, CA	\$2,339,749	-	-	-
Myers and Sons Construction LLC Sacramento, CA	\$2,410,430	-	-	-
Leonida Builders Inc. Santa Clarita, CA	\$2,488,500	-	-	-
Lucas Builder Inc. La Habra, CA	\$2,768,853	-	-	-
J&L Constructors Inc. Huntington Beach, CA	\$4,000,000	-	-	-

¹ Small Business Enterprise (SBE) participation level established at 25 percent for this contract.

The Metropolitan Water District of Southern California

Subcontractors for Low Bidder

**Specifications No. 2119
San Diego Canal Liner Rehabilitation**

Low bidder: Power Engineering Construction Company

Subcontractor	Service Category; Specialty
GGG Demolition Inc. Orange, CA	Abatement of hazardous materials and demolition
Morning Star Concrete Menifee, CA	Concrete
Quality Rebar Inc. San Jacinto, CA	Furnish, fabricate and place reinforcing bars and welded wire mesh
Trinity Equipment Colton, CA	Equipment rental
Dirty Deedz Dumping Los Angeles, CA	Trucking
Genesis Dispatch Inc. Los Angeles, CA	Trucking

Distribution System

