



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

12/10/2024 Board Meeting

7-2

Subject

Award a \$588,000 contract to Heed Engineering for construction of new drainage control improvements at the Lake Skinner dam; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Proper drainage of stormwater runoff is vital to preventing embankment erosion along Metropolitan's dams. The existing concrete drainage control structures at the Lake Skinner dam show signs of deterioration at several locations. This project will improve stormwater collection and runoff, provide long-term protection against erosion, reduce maintenance costs, allow access to the dam monitoring system equipment, and maintain regulatory compliance.

This action awards a \$588,000 contract to Heed Engineering for construction of new drainage control improvements at Lake Skinner dam. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, and **Attachment 3** for the Location Map.

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

Staff Recommendation: Option #1

Option #1

Award a \$588,000 contract to Heed Engineering for construction of drainage control improvements at the Lake Skinner dam.

Fiscal Impact: Expenditure of \$800,000 in capital funds. All costs will be incurred in the Fiscal Years 2024/2025 and 2025/2026 and have been previously authorized.

Business Analysis: This option will ensure regulatory compliance, protect Metropolitan's assets, enhance delivery reliability to member agencies, and reduce the risk of costly urgent repairs.

Option #2

Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: Under this option, staff would continue to monitor the condition of the drainage system at the Lake Skinner Dam and make as-needed repairs.

Alternatives Considered

Staff considered repairing and replacing only the portions of the Lake Skinner dam drainage system with significant damage. However, based on Metropolitan staff inspections, the damage to the drainage system is significant, and spot repairs may not have long-term durability. It was determined that the concrete drainage system at the dam was well past its design life and needed to be replaced. The selected option will replace the

existing drainage structure at the Lake Skinner dam. This alternative is more cost-effective and maintains compliance with regulatory requirements.

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 8, 2024, the Board appropriated a total of \$636.48 million for projects identified in the Capital Investment Plan 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 is exempt from CEQA because it consists of the replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced. Finally, the proposed action consists of minor public or private alterations in the condition of land, water, and/or vegetation, which do not involve the removal of healthy, mature, scenic trees except for forestry or agricultural purposes. (State CEQA Guidelines Sections 15301, 15302, and 15304).

CEQA determination for Option #2:

None required

Details and Background

Background

Lake Skinner was constructed in the 1970s and is located north of the City of Temecula in Riverside County. Its maximum storage capacity is 44,000 acre-feet. The reservoir receives Colorado River Aqueduct and State Water Project supplies via the San Diego Canal. Untreated water from the lake can be delivered to the Robert A. Skinner Water Treatment Plant or to the San Diego area. The reservoir has an earth-filled dam embankment with a maximum height of 109 feet and a crest length of 5,150 feet. The Lake Skinner dam falls under the jurisdiction of the California Department of Water Resources, Division of Safety of Dams (DSOD).

The dam's original construction incorporated unreinforced concrete v-ditches to collect and divert stormwater away from the face of the dam to a local storm drain. In particular, the toe of the dam includes a 4,800-foot-long, 3-foot-wide unreinforced concrete v-ditch that prevents erosion of the dam embankment and controls the flow of storm runoff along the dam. If these drainage structures do not perform as designed, then the dam is subject to erosion that could, over time, compromise the overall stability of the dam.

A recent DSOD annual report noted the poor condition of the v-ditch system along the toe of the dam. The concrete v-ditch has been degraded by erosion caused by storm runoff, creating voids on the underside of the concrete lining. In some locations, the concrete lining has cracked and has displaced sufficiently to impede the flow of the storm runoff. In addition, the adjacent unpaved roadway has potholes and shows signs of erosion and rutting, which produces uneven stormwater runoff and contributes to the degradation of the drainage system. The existing v-ditch system will be replaced with a new 4-foot-wide reinforced concrete trapezoidal drainage channel with a larger capacity to divert stormwater from the dam face. Also, the project will regrade the unpaved 15-foot-wide access road directly adjacent to the v-ditch system to improve drainage from the road into the v-ditch and provide a road that performs well in all weather conditions.

Final design for the Lake Skinner Dam Drainage System Improvements project is complete. Staff recommends proceeding with construction of the new drainage control structures at this time. These drainage control structures will improve stormwater diversion, have a significantly longer service life, and comply with DSOD requirements.

Lake Skinner Dam Drainage System Improvements – Construction

The scope of the contract consists of demolition of the existing v-ditch system at the toe of the dam, clearing and grubbing of the construction area, construction of a 4,800 linear-foot long and 4-foot-wide reinforced concrete trapezoidal drainage channel, and grading of the adjacent unpaved 15-foot wide adjacent roadway.

A total of \$800,000 is allocated for this work. In addition to the amount of the construction contract described below, allocated funds for Metropolitan staff include: \$86,000 for construction management and inspection; \$53,000 for submittal review and preparation of record drawings; \$41,000 for contract administration, environmental support, and project management; and \$32,000 for the remaining budget. **Attachment 1** provides the allocation of the required funds. The total cost to complete the drainage system replacement, including the amount appropriated to date and funds allocated for the work described in this action, is approximately \$1.0 million.

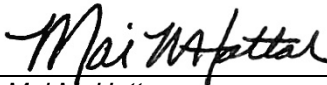
Award of Construction Contract (Heed Engineering)

Specifications No. 2078 for Lake Skinner Dam Drainage System Improvements was advertised for bids on Thursday, August 29, 2024. As shown in **Attachment 2**, five bids were received and opened on October 24, 2024. The low bid from Heed Engineering, in the amount of \$588,000, complies with the requirements of the specifications. The other bids ranged from \$766,000 to \$1,086,226, while the engineer's estimate for this project was \$999,000. Staff investigated the difference between the low bid and the engineer's estimate and attributed the difference to lower-than-expected costs for demolition, grading and profit markup, which reflects the contractor's intent to self-perform the majority of the work. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 25 percent. Heed Engineering is a certified SBE firm and thus achieves 100 percent SBE participation.

Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for construction management and inspection of projects with construction less than \$3 million is 9 to 15 percent. For this project, the performance metric goal for inspection is 14.6 percent of the total construction cost. The total cost of construction for this project is \$800,000.

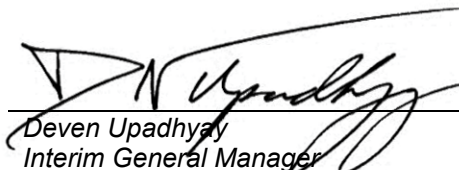
Project Milestone

September 2025 – Completion of construction



 Mai M. Hattar
 Interim Chief Engineer
 Engineering Services
 11/19/2024

 Date



 Deven Upadhyay
 Interim General Manager
 11/27/2024

 Date

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Location Map

Allocation of Funds for Lake Skinner Dam Drainage System Improvements

	<u>Current Board Action (Dec. 2024)</u>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	41,000
Submittals Review & Record Drwgs.	53,000
Construction Inspection & Support	86,000
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
Heed Engineering	588,000
Remaining Budget	<u>32,000</u>
Total	<u>\$ 800,000</u>

The total amount expended to date is approximately \$237,000. The total estimated cost to complete the drainage system improvements, including the amount appropriated to date, is \$1.04 million.

The Metropolitan Water District of Southern California
Abstract of Bids Received on October 24, 2024, at 2:00 P.M.
Specifications No. 2078
Lake Skinner Dam Drainage System Improvements

The work consists of replacing approximately 4,800 linear feet of an existing gunite channel with a reinforced concrete channel and grading of adjacent roadway.

Engineer's Estimate: \$999,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
Heed Engineering Foothill Ranch, CA	\$588,000	\$588,000	100%	Yes
NMN Construction Inc. Walnut, CA	\$766,000	-	-	-
Crimson Marie Company Phelan, CA	\$813,269	-	-	-
IO Environmental and Infrastructure Inc. San Diego, CA	\$854,373	-	-	-
Bosco Constructors Inc. Chatsworth, CA	\$1,086,226	-	-	-

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

Distribution System

