



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

2/13/2024 Board Meeting

7-2

Subject

Award a \$7,842,856 contract to Power Engineering Construction Co. for the installation of a new floating wave attenuator at Diamond Valley Lake; the General Manager has determined that the project is exempt or otherwise not subject to CEQA

Executive Summary

A wave attenuator system is required at Diamond Valley Lake (DVL) to protect boats and the launch ramp from excessive wave action. The original DVL wave attenuator was installed in 2003 and later repaired in 2021 to address urgent structural deteriorations while plans for a more extensive rehabilitation were in development. Following completion of that planning effort, staff recommends an upgrade of the DVL wave attenuation system at this time.

This action awards a contract to install a new replacement attenuator and to refurbish and move the existing attenuator to another location. When this project is completed, the configuration of the new DVL wave attenuator system will consist of two wave attenuators, which will provide added protection to the DVL East Marina and launch ramp area, enhance safety for visitors, and will continue to benefit the surrounding communities by providing recreational opportunities. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the Listing of Subcontractors, and **Attachment 4** for the Location Map.

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

Staff Recommendation: Option #1

Option #1

Award a \$7,842,856 construction contract to Power Engineering Construction Co. to install a new floating wave attenuator and to refurbish and move the existing attenuator to another location at the DVL East Marina.

Fiscal Impact: Expenditure of \$9.875 million in capital funds. Approximately \$100,000 will be incurred in the current biennium and has been previously authorized. The remaining funds for this action will be accounted for in the Capital Investment Plan (CIP) budget for the next biennium following board approval of the budget.

Business Analysis: This option will enable the public to continue to safely use DVL for recreational boating and fishing, which are attractions and activities that draw visitors serviced by the Concession Agreement Between The Metropolitan Water District of Southern California and RRM-CLM- dba Vista Recreation (“Concession Agreement”).

Option #2

Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: Under this option, Metropolitan will further consider options detailed in the alternatives considered section of the board letter. In the interim, there may be a need to close or limit boating-related recreational use of DVL by the public under Metropolitan’s paramount rights powers in the Concession

Agreement to ensure public safety and to further Metropolitan's operation of its water-related facilities. This may also result in Metropolitan indefinitely impacting the concessionaire's operations and negatively affecting rent generation.

Alternatives Considered

Staff considered multiple alternatives to the recommended approach for providing long-term protection to the marina from the force of incoming waves. The first alternative was to fully refurbish the existing attenuator to extend its service life. This alternative did not guarantee a service life longer than five to ten years in its current location. Due to its relatively small size, the existing attenuator would remain susceptible to failure during extreme weather events, jeopardizing continued marina operations. A second alternative was replacing the existing attenuator in-kind and constructing a larger supplemental attenuator. This was the costliest alternative and did not significantly increase the service life over the selected alternative.

Under a third alternative, construction of a long-term attenuator upgrade would be deferred for 12 to 18 months. This alternative would defer the near-term expenditure of CIP funds; however, the existing wave attenuator would continue to deteriorate. The continued deterioration of the existing attenuator would likely mean that this attenuator would need to be replaced in the future contract instead of being refurbished as in the current plan. This approach would likely increase the eventual cost of the future contract.

The selected alternative refurbishes and moves the existing attenuator to a new location and constructs and installs a new and larger attenuator at the location of the existing attenuator. The two attenuators will work in tandem to mitigate the impacts of wind-driven waves near the East Marina. This alternative offers the most cost-effective solution with the best long-term protection of the East Marina and is consistent with the plan identified in the October 2020 board action.

Applicable Policy

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

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

By Minute Item 52138, dated October 13, 2020, the Board authorized rehabilitation of the Diamond Valley Lake Attenuator.

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the CIP for Fiscal Years 2022/2023 and 2023/2024.

Summary of Outreach Completed

Lake-related projects are a specialty type of work, and staff has reached out to specialized contractors to get a better understating of the construction market for this type of work. As a result, the Small Business Enterprise participation level was reduced to allow for competitive bidding.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is exempt from CEQA because it involves repair or minor alteration of an existing public facility and equipment involving negligible or no expansion of existing or former use and no possibility of significantly impacting the physical environment. (State CEQA Guidelines Section 15301.) In addition, the proposed action is exempt from CEQA because it consists of 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 the same purpose and capacity as the structure replaced. (State CEQA Guidelines Section 15302.)

CEQA determination for Option #2:

None required

Details and Background

Background

Metropolitan's DVL provides emergency storage in the event of a major earthquake, carryover storage as a reserve for drought conditions, and seasonal storage to meet annual member agency demands. DVL is Metropolitan's largest reservoir, with a maximum storage capacity of 810,000 acre-feet. In addition to its water supply benefits, DVL also provides recreational opportunities for the region.

The DVL East Marina opened to the general public in 2003 and is currently leased and operated on Metropolitan's behalf by a private entity through a ten-year concession agreement between Metropolitan and RRM-CLM- dba Vista Recreation, running from October 1, 2021, to September 30, 2031. Under the current concession agreement, RM-CLM- dba Vista Recreation is required to provide recreational access to the public for fishing, private boat launches, and boat rentals, subject to contractual provisions permitting Metropolitan to close or limit the concessionaire's use of the marina and DVL waters as needed by Metropolitan for its core water-related functions and operations and the repair, construction, and use of its facilities and for public safety.

Wind-generated waves traveling across the lake toward the East Marina create turbulent conditions for visitors attempting to board and launch vessels on the lake. These conditions pose a risk of property damage and possible injury to marina visitors. On windy days, the boat launch facilities are closed to public use as the current wave attenuator cannot mitigate waves under these conditions.

As part of the marina construction, a single floating wave attenuator was installed by Metropolitan in 2003 to diminish the impact of wind-generated waves traveling across the lake in a manner that protects the boat ramp launch operations. The existing floating wave attenuator consists of 16 reinforced concrete box segments, which are connected with post-tensioned cables running throughout its length. The attenuator is 800 feet long by 8 feet wide with a depth of 8 feet and includes a metal skirt system that extends below the waterline. The current concession agreement allocates to Metropolitan ownership, control, maintenance, repair, and replacement powers for any wave attenuator and associated anchoring and cabling systems that are installed in the DVL area.

Over many years of service in a harsh freshwater environment, the existing single attenuator has suffered significant structural damage, including cracked concrete sections that exposed reinforcing bars. A feasibility study was conducted for Metropolitan in 2019 by a consultant who specializes in this type of work to evaluate the current attenuator system's effectiveness and make recommendations on the rehabilitation or replacement options for the attenuator. The study recommended that improvements be conducted in two stages. Stage 1 included making urgent repairs to the existing attenuator to ensure the continuation of safe recreational boating operations and to preserve the asset until a rehabilitation or replacement design could be developed. This urgent work was completed in 2021. Stage 2 work includes more extensive improvements to the existing attenuator and adds a second attenuator in the lake to improve the performance of the overall wave attenuator system. This approach will provide a cost-effective, long-term solution to ensure safe recreational boating access to the public. The final design for Stage 2 is complete, and staff recommends the award of a construction contract at this time.

Diamond Valley Lake Wave Attenuator System Replacement – Construction

The scope of the contract includes: (1) rehabilitating portions of the existing attenuator, including repair of spalled concrete and installing anchor blocks; (2) relocating the refurbished existing attenuator to a new location in the lake; and (3) installing a new attenuator system at the current site of the existing attenuator. The new attenuator will be 800 feet long by 12 feet wide with a depth of 8 feet. The combined use of two wave attenuators will increase the mass and inertia of the attenuator system and improve its ability to reflect most of the wave energy away from the boat launching area.

A total of \$9.875 million is required to perform this work. In addition to the amount of the contract, allocated funds for professional services include \$60,000 for Kennedy Jenks Consultants to provide construction support related to the design of the wave attenuator system; and \$10,000 for environmental monitoring through an on-call consultant agreement. This work will be completed under existing board-authorized agreements. Allocated funds

for Metropolitan staff include \$783,000 for construction management and inspection; \$375,000 for submittals review, responding to requests for information, and preparation of record drawings; \$352,000 for contract administration, environmental monitoring support, and project management; and \$452,144 for remaining budget. **Attachment 1** provides the allocation of required funds.

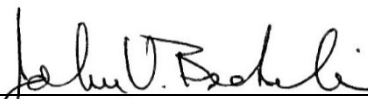
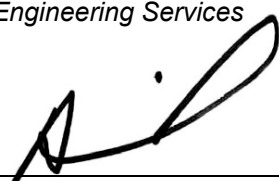
Award of Construction Contract (Power Engineering Construction Co.)

Specifications No. 2004 for the installation of a new attenuator was advertised for bids on August 25, 2023. As shown in **Attachment 2**, four bids were received and opened on November 21, 2023. The bid from Power Engineering Construction Co. in the amount of \$7,842,856 complies with the requirements of the specifications. The engineer’s estimate was \$11.1 million. Staff investigated the difference between the engineer’s estimate and the low bid and attributed the difference to a conservative engineer’s estimate and aggressive outreach to contractors by Metropolitan staff, which included extending the bid period. For this contract, Metropolitan established a Small Business Enterprise participation level of at least 15 percent of the bid amount. Power Engineering Construction Co. has committed to meeting this participation level. The subcontractors for this contract are listed in **Attachment 3**.

Metropolitan staff will perform construction management and inspection. Engineering Services’ performance metric target for construction management and inspection of projects with construction more than \$3 million is 9 to 12 percent. For this project, the performance metric for inspection is 10.9 percent of the total construction cost. The total cost of construction for this project is \$7,842,856.

Project Milestone

May 2026 – Complete construction of the wave attenuator system

	1/29/2024
John V. Bednarski Manager/Chief Engineer Engineering Services	Date
	1/29/2024
Adel Hagekhalil General Manager	Date

Attachment 1 –Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – List of Subcontractors for Low Bidder

Attachment 4 – Location Map

Allocation of Funds for Diamond Valley Lake Wave Attenuator System Replacement Project

	Current Board Action (Feb. 2024)
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	352,000
Submittals Review & Record Drwgs.	375,000
Construction Inspection & Support	783,000
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Envinronmental Consultant	10,000
Kennedy Jenks	60,000
Right-of-Way	-
Contracts	
Power Engineering Construction Co.	7,842,856
Remaining Budget	452,144
Total	\$ 9,875,000

The total amount expended for the Diamond Valley Lake Wave Attenuator System Replacement Project is approximately \$675,000. The total estimated cost to complete this project, including funds spent to date and funds allocated for the work described in this action, is \$10.55 million.

The Metropolitan Water District of Southern California
Abstract of Bids Received on November 21, 2023, at 2:00 P.M.
Specifications No. 2004
Diamond Valley Lake Wave Attenuator System Replacement

The work consists of replacing the existing floating wave attenuator (FWA) with a new system; installing the new FWA; positioning new anchor cables with attachments to existing and new anchor blocks; and rehabilitating and relocating the existing FWA to a new position south of the current location.

Engineer's Estimate: \$11.1 million

Bidder and Location	Total	SBE Amount	SBE %	Met SBE¹
Power Engineering Construction Co. Alameda, CA	\$7,842,856	\$1,176,428	15%	Yes
Jilk Heavy Construction Inc. Brea, CA	\$8,435,000	-	-	-
Pacific Maritime Group San Diego, CA	\$9,330,000	-	-	-
GMZ Engineering Inc. Westlake Village, CA	\$10,310,00	-	-	-

¹ SBE (Small Business Enterprise) participation level was established at 15 percent for this contract.

The Metropolitan Water District of Southern California
Subcontractors for Low Bidder
Specifications No. 2004
Diamond Valley Lake Wave Attenuator System Replacement

Low bidder: Power Engineering Construction Co.

Subcontractor and Location	Service Category, Specialty
Crescent Diving & Contracting Inc. Crescent Hills, CA	Diving
Galvez Trucking Inc. Anaheim, CA	Trucking/Hauling Services

Distribution System

