



- Board of Directors  
*Engineering and Operations Committee*

2/9/2021 Board Meeting

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**7-1**

## **Subject**

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Award \$2,418,149 contract to Metro Builders & Engineers Group, Ltd. to upgrade the sodium hypochlorite feed system at the Garvey Reservoir; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## **Executive Summary**

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The sodium hypochlorite feed system at Garvey Reservoir is used to maintain appropriate chlorine residual levels and ensure treated water quality within the Central Pool portion of Metropolitan's distribution system. The existing hypochlorite feed system has exceeded its expected service life and has deteriorated over time, requiring frequent repairs in order to maintain its operational functionality. This action awards a construction contract to upgrade the sodium hypochlorite feed system at the Garvey Reservoir site.

## **Details**

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### **Background**

Garvey Reservoir was constructed in 1954 as a component of the Middle Feeder system. The reservoir receives treated water from the F. E. Weymouth Water Treatment Plant and has a maximum storage volume of 1,600 acre-feet. The reservoir provides critical hydraulic flexibility by stabilizing flows within the Middle Feeder and maintaining reliable deliveries to member agency service connections when pipelines are shut down for maintenance.

In 1995, a chemical-feed system was installed to deliver sodium hypochlorite at the outlet of the reservoir. The application of hypochlorite is intended to maintain appropriate chlorine residual levels within the distribution system. The chlorine residual also prevents taste and odor issues at service connections downstream of the reservoir. The hypochlorite feed system includes storage tanks, feed pumps, piping, valves, and flow meters to provide the proper dosage of sodium hypochlorite to the treated water.

The existing hypochlorite feed system has been in operation for over 25 years. Due to the corrosive nature of the sodium hypochlorite, the feed equipment has a typical service life of 15 to 20 years. Although the feed system has generally performed well, it has begun to deteriorate, and repairs are challenging. For example, the existing diaphragm chemical-feed pumps require frequent repairs, but replacement parts are no longer available. Both the polyvinyl chloride chemical-delivery piping and the outer pipe of the double-walled containment piping have become brittle due to weathering and are now susceptible to leaks. A sodium hypochlorite leak would require special handling and disposal as hazardous waste. Should the feed system fail, delivery of sodium hypochlorite to the Garvey Reservoir outlet line would be interrupted, which would impact the quality of water delivered to downstream member agency service connections. Final design of the hypochlorite feed system upgrades is now complete, and staff recommends proceeding with awarding a construction contract for the project at this time.

In accordance with the April 2020 action on the biennial budget for Fiscal Years 2020/21 and 2021/22, the General Manager will authorize staff to proceed with construction of sodium hypochlorite feed system upgrades at Garvey Reservoir, pending board award of the construction contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the Capital Investment Plan Appropriation for Fiscal Years

2020/21 and 2021/22 (Appropriation No. 15517). 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 Distribution System Reliability Program.

### **Sodium Hypochlorite Feed System Upgrades at Garvey Reservoir – Construction**

The scope of the construction contract includes replacing the existing sodium hypochlorite feed pumps, valves, piping, and related appurtenances. In addition, the project will also replace the storage tank instruments, unloading and overflow lines, as well as the chemical containment sensors and alarm system to meet current fire code requirements. Other improvements within this project include modifications to the equipment layout to improve staff access for maintenance and repair activities, and installation of new grating and foundations for equipment.

Metropolitan force activities will include: (1) conducting two shutdowns of the sodium hypochlorite system, flushing of the existing feed system, and establishing safety clearances; (2) conducting final disinfection and water quality testing of the new system; and (3) returning the feed system to service.

A total of \$3,900,000 is required for this work. In addition to the amount of the contract described below, other budgeted funds include: \$390,000 for construction inspection; \$186,000 for Metropolitan force construction; \$374,000 for submittals review, technical support during construction, responding to requests for information, and preparation of record drawings; \$30,000 for materials and supplies; \$201,000 for environmental monitoring, contract administration, and project management; and \$300,851 for remaining budget. **Attachment 1** provides the allocation of the required funds.

### ***Award of Construction Contract (Metro Builders & Engineers Group, Ltd.)***

Specifications No. 1804 for Sodium Hypochlorite Feed System Upgrades at Garvey Reservoir was advertised for bids on October 22, 2020. As shown in **Attachment 2**, four bids were received and opened on December 10, 2020. The apparent low bidder requested to be released from its bid in accordance with the Public Contract Code, due to an inadvertent clerical error made during the bidding process which materially changed its bid. The second low bid from Metro Builders & Engineers Group, Ltd. in the amount of \$2,418,149 complies with the requirements of the specifications. The two higher bids were \$2,821,000 and \$2,966,500, while the engineer's estimate was \$2,100,000. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 25 percent of the bid amount. Metro Builders & Engineers Group, Ltd. is an SBE firm and thus achieves 100 percent participation. The subcontractors for this contract are listed in **Attachment 3**.

This action awards a \$2,418,149 contract to Metro Builders & Engineers Group, Ltd. to construct sodium hypochlorite feed system improvements within Metropolitan's Garvey Reservoir site.

As described above, construction management and inspection will be performed by Metropolitan staff. The total cost of construction for this project is \$2.634 million, which includes \$2,418,149 for the contract and \$216,000 for Metropolitan forces, materials, and supplies. Engineering Services' performance metric target range for inspection of projects with construction cost less than \$3 million is 9 to 15 percent. For this project, the performance metric goal for inspection is 14.8 percent of the total construction cost.

### **Alternatives Considered**

During the project's initial planning phase, staff examined several alternatives in addition to the recommended project. One alternative involved in-place component rehabilitation of the existing feed system. This alternative would include removing and replacing individual components of the feed system, with the objective of upgrading as many of the existing components as possible, while leaving in place some of the critical structural elements of the existing systems. It was determined that this approach would produce a less reliable system and lead to increased maintenance costs. Another alternative involved adding a new feed system without removing the old one. This alternative would require expanding the existing tank farm to accommodate the new system at a substantially higher cost. Consequently, staff recommends replacing the existing system as a cost-effective approach to increasing system reliability while maintaining treated water quality within the distribution system.

## Summary

This action awards a \$2,418,149 contract to Metro Builders & Engineers Group, Ltd. for sodium hypochlorite feed system upgrades at the Garvey Reservoir site. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the listing of Subcontractors for Low Bidder, and **Attachment 4** for the Location Map.

## Project Milestone

July 2022 – Completion of sodium hypochlorite feed system upgrades at Garvey Reservoir

## 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 11104: Delegation of Responsibilities

By Minute Item 49462, dated June 11, 2013, the Board appropriated \$800,000 for upgrades of the sodium hypochlorite feed system upgrades at Garvey Reservoir.

By Minute Item 51963, dated April 14, 2020 the Board appropriated a total of \$500 million for projects identified in the Capital Investment Plan for Fiscal Years 2020/21 and 2021/22.

## California Environmental Quality Act (CEQA)

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### CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed project involves the funding and minor alterations of existing private or public facilities, along with the construction and reconstruction of minor appurtenant structures, with minor modifications in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees. These activities would result in negligible or no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed action qualifies under Class 1, Class 2, Class 3, and Class 4 Categorical Exemptions (Sections 15301, 15302, 15303, and 15304) of the State CEQA Guidelines.

### CEQA determination for Option #2:

None required

## Board Options

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### Option #1

Award \$2,418,149 contract to Metro Builders & Engineers Group, Ltd. for sodium hypochlorite feed system upgrades at Garvey Reservoir.

**Fiscal Impact:** \$3.9 million in capital funds. All costs will be incurred in the current biennium and have been previously authorized.

**Business Analysis:** These improvements will enhance the reliability of the sodium hypochlorite feed system at Garvey Reservoir to meet water quality requirements in the distribution system.

### Option #2

Do not proceed with the project at this time.

**Fiscal Impact:** None

**Business Analysis:** This option would forego an opportunity to protect Metropolitan's assets and maintain treated water quality within the distribution system.

**Staff Recommendation**

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Option #1

  
\_\_\_\_\_  
John V. Bednarski  
Manager/Chief Engineer  
Engineering Services

1/19/2021  
Date

  
\_\_\_\_\_  
Jeffrey Wightlinger  
General Manager

1/21/2021  
Date

**Attachment 1 – Allocation of Funds**

**Attachment 2 – Abstract of Bids**

**Attachment 3 – Subcontractors for Low Bidder**

**Attachment 4 – Location Map**

Ref# es12674369

### Allocation of Funds for Garvey Reservoir Sodium Hypochlorite Feed System Upgrades

|   | <b>Current Board Action</b> |
|---|-----------------------------|
|   | <b>(Feb. 2021)</b>          |
|   | <hr/>                       |
| Labor   |                             |
| Studies & Investigations                          | \$ -                        |
| Final Design                                      | -                           |
| Owner Costs (Program mgmt.,<br>envir. monitoring) | 201,000                     |
| Submittals Review & Record Drwgs.                 | 374,000                     |
| Construction Inspection & Support                 | 390,000                     |
| Metropolitan Force Construction                   | 186,000                     |
| Materials & Supplies                              | 30,000                      |
| Incidental Expenses                               | -                           |
| Professional/Technical Services                   | -                           |
| Right-of-Way                                      | -                           |
| Equipment Use                                     | -                           |
| Contracts   |                             |
| Metro Builders & Engineers Group, Ltd.            | 2,418,149                   |
| Remaining Budget                                  | 300,851                     |
| <b>Total</b>                                      | <b><u>\$ 3,900,000</u></b>  |

The total amount expended to date for the Garvey Reservoir Sodium Hypochlorite Feed System is approximately \$1.9 million. The total estimated cost to complete this project, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is \$5.8 million.

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received on December 10, 2020 at 2:00 P.M.**

**Specifications No. 1804  
Garvey Sodium Hypochlorite Feed System Upgrades**

The project consists of replacing the existing chemical feed pumps, reconfiguring the feed pipe system, upgrading existing control systems, and integrating remote feed control to the supervisory control and data acquisition (SCADA) system.

Engineer's estimate: \$2,100,000

| <b>Bidder and Location</b>   | <b>Total</b>       | <b>SBE \$</b>      | <b><sup>1</sup>SBE %</b> | <b>Met SBE<sup>1</sup></b> |
|--|--------------------|--------------------|--------------------------|----------------------------|
| <sup>2</sup> Environmental Construction, Inc.<br>Woodland Hills, CA      | \$1,811,154        |                    |                          |                            |
| <b>Metro Builders &amp; Engineers Group,<br/>Ltd., Newport Beach, CA</b> | <b>\$2,418,149</b> | <b>\$2,418,149</b> | <b>100%</b>              | <b>Yes</b>                 |
| Green Building Corporation<br>Alhambra, CA                               | \$2,821,000        |                    |                          |                            |
| Steve P. Rados, Inc.<br>Santa Ana, CA                                    | \$2,966,500        |                    |                          |                            |

<sup>1</sup> Small Business Enterprise (SBE) participation level established at 25% for this contract.

<sup>2</sup> Environmental Construction, Inc. requested to be released from its bid in accordance with the Public Contract Code due to an inadvertent clerical error made during the bidding process which materially changed its bid.

**The Metropolitan Water District of Southern California**

**Subcontractors for Low Bidder**

**Specifications No. 1804**

**Garvey Reservoir Sodium Hypochlorite Feed System**

Low bidder: Metro Builders & Engineers Group, Ltd.

| <b>Subcontractor and Location</b>           |
|---|
| LEED Electric, Santa Fe Springs, CA         |
| Rolling Painting, Costa Mesa, CA            |
| Performance Abatement Services, Anaheim, CA |

# Distribution System

