



- Board of Directors
Engineering and Operations Committee

3/9/2021 Board Meeting

7-1

Subject

Authorize an agreement with Arcadis U.S., Inc., in an amount not-to-exceed \$950,000 for engineering design services to rehabilitate Garvey Reservoir and an agreement with Rincon Consultants, Inc., in an amount not to exceed \$300,000 to prepare associated CEQA documentation; the General Manager has determined that this proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Garvey Reservoir is located in Monterey Park and is operated in conjunction with surrounding facilities to distribute and control flow within Metropolitan's Central Pool portion of the distribution system. The existing reservoir cover, liner, and supporting facilities have deteriorated and need rehabilitation to protect water quality and maintain reliable water deliveries. This action authorizes an agreement for engineering design services to rehabilitate Garvey Reservoir and a second agreement to support the preparation of environmental documentation for the project.

Details

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 to Metropolitan's distribution system by stabilizing flows within the Middle Feeder. The reservoir also ensures deliveries to member agency service connections when pipelines are shut down for maintenance.

The State's Division of Drinking Water (DDW) requires that all finished water reservoirs be covered to protect water quality. Metropolitan is in compliance with this requirement and has installed floating reservoir covers at all of its larger treated water storage facilities. Floating reservoir covers consist of a thin membrane material that floats on top of the reservoir's water surface. While floating reservoir covers are a cost-effective means of maintaining water quality, the cover material deteriorates over time. If tears develop in the cover material, the potable water supply is susceptible to contamination. Metropolitan has a proactive reservoir cover inspection and maintenance program. This program includes regular inspections, both above and below the cover, to identify signs of deterioration or damage. This program ensures that the floating covers and reservoirs remain in compliance with DDW requirements.

The useful life of a reservoir's floating cover is generally determined by the staff's ability to continue to make repairs to the cover material. As the cover material ages, it becomes more difficult to make effective repairs as the bonding capability of patches to the original material decreases over time. Metropolitan's experience has shown that the typical useful life for a floating cover is between 20 and 25 years. The floating cover at Garvey Reservoir was previously replaced in 1999 and is at the end of its useful life. As expected with a cover of this age, staff has experienced increasing difficulties in making repairs due to the aging of the cover material. Recently, Metropolitan's divers have also discovered additional deterioration on the underside of the cover.

In addition to the issues with the cover, several other areas of rehabilitation at the reservoir have been identified by staff. Underwater inspections have identified several areas of damage in the reservoir's existing bottom liner. This liner was also installed in 1999. A new membrane liner and subdrain system are required to collect

and convey flows, and to reduce excess hydrostatic pressures within the reservoir bottom. As part of Metropolitan's ongoing efforts to ensure seismic resilience of facilities, studies of the reservoir's inlet/outlet tower were conducted. These studies indicate that the tower and appurtenant junction structure require seismic upgrades to ensure that they can withstand the maximum credible earthquake event in that area. Finally, staff recommends that the reservoir's standby generator be replaced to ensure reliable operations in the event of a power outage. Staff has completed the initial site investigations of the reservoir and supporting facilities and recommends proceeding with preliminary design to rehabilitate the reservoir facilities discussed above.

Staff may recommend additional rehabilitation work at the reservoir once ongoing studies related to the chemical storage and feed systems are completed. This potential future work can be conducted without impacting the currently recommended improvements that are the subject of this board letter.

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 the actions described below, pending board approval of the project 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 Reservoir Cover Replacement Program.

Garvey Reservoir Rehabilitation – Preliminary Design and Environmental Documentation

The preliminary design effort will focus on the replacement of the reservoir cover and liner, making structural improvements to the inlet/outlet tower and junction structure, upgrading the reservoir's rainwater collection and pumping systems, and replacing the existing standby generator. The effort will also assess the need for subdrain systems below the reservoir liner and evaluate the feasibility of making modifications inside the reservoir to improve mixing within the reservoir. Preliminary design will be conducted by both Metropolitan staff and a consultant. The consultant's work includes preliminary design for the replacement of the floating cover, reservoir liner, and subdrain system, and the standby generator at Garvey Reservoir. Metropolitan staff will perform preliminary design for the inlet/outlet tower seismic rehabilitation and other elements of the Garvey Reservoir rehabilitation project.

In order to conduct the recommended rehabilitation construction activities, appropriate environmental analyses must be conducted. CEQA documentation must be prepared and certified by the Board. The environmental documentation will identify project impacts, a determination of their significance on the basis of specific evaluation criteria including, but not limited to air quality, biological resources, cultural resources, greenhouse gases, and noise, as well as potential mitigation measures that will be implemented through the design, construction, and other efforts. The concurrent preliminary design efforts will provide significant input to the environmental documentation. Metropolitan staff will work in conjunction with a specialized environmental consultant to prepare the required documentation.

A total of \$4.4 million is required for this work. Allocated funds include \$950,000 for preliminary design by Arcadis U.S., Inc., described below; \$300,000 for environmental analysis by Rincon Consultants, Inc., also described below; \$1,748,000 for preliminary design and technical oversight by Metropolitan staff; \$944,000 for shutdown planning, permitting, value engineering, geotechnical investigation, public outreach, and project management; and \$458,000 for remaining budget. Value engineering, geotechnical investigation, and public outreach will be performed by specialty firms under contracts planned to be executed under the General Manager's Administrative Code authority to award contracts of \$250,000 or less.

The total cost of construction for the rehabilitation of Garvey Reservoir will be evaluated during the preliminary design. The total estimated cost of this project is currently estimated to range from \$65 million to \$69 million. **Attachment 1** provides the allocation of the required funds.

Engineering Services (Arcadis U.S., Inc.) – New Agreement

Arcadis U.S., Inc. is recommended to provide engineering services for the preliminary design of the Garvey Reservoir Rehabilitation. Arcadis U.S., Inc., was selected through a competitive process via Request for Proposals No. 1255 based on the firm's experience with reservoir covers, and specifically for their expertise in reservoir storage facilities.

The planned activities for Arcadis in the preliminary design of Garvey Reservoir include: (1) survey and geotechnical investigations; (2) hydraulic modeling; (3) development of conceptual layouts of mixing improvements; (4) preparation of preliminary design drawings and technical specifications for replacement of the reservoir cover, liner, and standby generator; and (5) development of design criteria and construction cost estimates.

This action authorizes a new agreement with Arcadis U.S., Inc., for a not-to-exceed amount of \$950,000, to provide engineering design services to rehabilitate Garvey Reservoir. For this agreement, Metropolitan has established an SBE participation level of 25 percent. Arcadis U.S., Inc., has agreed to meet this level of participation. The planned subconsultants for this work are Hilts Consulting Group, Inc. and Paul Hansen Engineering.

Specialized Environmental Services (Rincon Consultants, Inc.) – New Agreement

This action authorizes a new agreement with Rincon Consultants, Inc. for a not-to-exceed total of \$300,000 to prepare environmental documentation for rehabilitation activities at Garvey Reservoir. Rincon Consultants, Inc. is recommended to prepare environmental documentation to address specific environmental impacts for the Garvey Reservoir rehabilitation work. Rincon Consultants, Inc. was selected through a competitive process due to its extensive experience with CEQA compliance, its specific experience with reservoir projects, and its extensive experience with projects in environmentally sensitive locations. The planned scope of work includes preparing environmental documentation and performing technical studies which address issues such as air quality, biological resources, cultural resources, and noise. The planned subconsultant for this work is Fehr & Peers.

Alternatives Considered

During the project's initial planning stage, several alternatives were considered for completing design activities for the rehabilitation of Garvey Reservoir facilities. One alternative was to utilize Metropolitan's design staff to perform all work components, including the preparation of the environmental documentation. However, reservoir covers and liners are of specialized design, and the in-house engineering staff does not routinely work in these areas of design. The recommended approach uses in-house staff for items normally encountered when working on capital improvement projects, while consultants are utilized for specialized design elements. This strategy will also be used for the development of the environmental documentation, with Metropolitan staff managing the specialized consultant in the work. This strategy allows Metropolitan's staff to maintain key engineering and environmental planning competencies, as well as addressing specialized project needs and issues.

After assessing the current workload and expertise for in-house staff, and the relative priority of this project, staff recommends the use of both a specialized consultant and in-house staff to perform the reservoir design and environmental documentation for the rehabilitation of Garvey Reservoir.

Summary

This action authorizes two new agreements: (1) with Arcadis U.S., Inc., for a not-to-exceed amount of \$950,000, to provide engineering services to rehabilitate Garvey Reservoir; and (2) with Rincon Consultants, Inc. for a not-to-exceed total of \$300,000 to prepare the associated environmental documentation.

This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2020/21 capital expenditure plan. See **Attachment 1** for the Allocation of Funds, and **Attachment 2** for the Location Map.

Project Milestone

June 2022 – Completion of preliminary design and environmental documentation to rehabilitate facilities at Garvey Reservoir

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

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)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action consists of basic data collection, research, and resource evaluation activities, which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded. Accordingly, the proposed action qualifies as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

- a. Authorize an agreement with Arcadis U.S., Inc., in amount not-to exceed \$950,000 for engineering services to rehabilitate Garvey Reservoir; and
- b. Authorize an agreement with Rincon Consultants, Inc., in an amount not-to exceed \$300,000 for CEQA documentation

Fiscal Impact: \$4.4 million in capital funds. All costs will be incurred in the current biennium and have been previously authorized.

Business Analysis: This action will sustain reliable operation of Garvey Reservoir within Metropolitan's distribution system.

Option #2

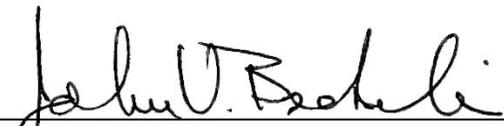
Do not proceed with the new agreements at this time.

Fiscal Impact: None

Business Analysis: This option would forego an opportunity to protect Metropolitan's asset and maintain reliable operation within the distribution system.

Staff Recommendation

Option #1



John V. Bednarski
Manager/Chief Engineer
Engineering Services

2/16/2021
Date



Jeffrey Wightlinger
General Manager

2/22/2021
Date

Attachment 1 – Allocation of Budgeted Funds

Attachment 2 – Location Map

Ref# es12672861

Allocation of Funds for Garvey Reservoir Rehabilitation

| | <u>Current Board Action</u> <u>(March 2021)</u> |
|---|--|
| Labor | |
| Preliminary Design | \$ 1,748,000 |
| Final Design | - |
| Owner Costs (Program mgmt., envir. monitoring) | 944,000 - |
| Submittals Review & Record Drwgs. | - |
| Construction Inspection & Support | - |
| Metropolitan Force Construction | - |
| Materials & Supplies | - |
| Incidental Expenses | - |
| Professional/Technical Services | - |
| Arcadis U.S., Inc. | 950,000 |
| Rincon Consultants, Inc. | 300,000 |
| Right-of-Way | - |
| Equipment Use | - |
| Contracts | - |
| TBD | |
| Remaining Budget | 458,000 |
| Total | <u>\$ 4,400,000</u> |

The total amount expended to date for the Garvey Reservoir Rehabilitation is approximately \$550,000. 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 anticipated to range from \$65.0 million to \$69.0 million.

Distribution System

