



**COMMISSION
AGENDA MEMORANDUM**

Item No.

8f

ACTION ITEM

Date of Meeting

April 16, 2024

DATE: April 9, 2024

TO: Stephen P. Metruck, Executive Director

FROM: Eileen Francisco, Director, Aviation Project Management
Keri Stephens, Director, Aviation Facilities and Capital Programs

SUBJECT: Water Reservoir Rehabilitation (C801172)

Amount of this request: \$2,019,000

Total estimated project cost: \$3,169,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to 1) advertise, award, and execute a major works construction contract to rehabilitate and provide improvements to the 2-million-gallon water reservoir at the Port of Seattle, and 2) execute related project change orders, amendments, work authorizations, purchases, contracts, and take other actions necessary to support and deliver the Water Reservoir Rehabilitation project within the approved budget, (3) authorize use of Port of Seattle crews to support the design and construction activities. The amount of this request is \$2,019,000 for a total estimated project cost of \$3,169,000.

EXECUTIVE SUMMARY

The 2-million-gallon water reservoir at Seattle-Tacoma International Airport is an above ground steel tank that provides water storage for domestic use and fire suppression to the entire airport. The September 2021 inspection indicated that severe corrosion has appeared in many areas on the reservoir and, if not addressed, could result in deformation of the structure. Additionally, the presence of rust also puts the water quality into jeopardy. This project will rehabilitate the structure to extend its useful life.

JUSTIFICATION

The Department of Health requires that water reservoirs be kept in good operating condition. The reservoir was built in the year 2000 as a requirement under the National Fire Protection Association 24 code, ensuring the airport has reliable water on hand (in a tank) to fight any fire on the airport. Without the rehabilitation efforts the reservoir is at risk of potential structural failure and water quality degradation.

Diversity in Contracting

Meeting Date: April 16, 2024

This project has established a WMBE aspirational goal of 7%.

DETAILS

The water reservoir is located north of the airport off Host Road. The reservoir has a 2 million gallon capacity for fire suppression and domestic water. It is generally recommended that water reservoirs of this type be inspected and cleaned every 3 to 5 years. Previous inspections include a 2013 dive inspection, 2017 cathodic protection survey, and 2018 dive inspection. The most recent inspections include a 2021 dive inspection, cathodic protection inspection, and 2022 exterior coating test.

The Department of Health requires that water reservoirs be kept in good, operating condition.

During construction, the airport’s water source will be switched over from the reservoir to Seattle Public Utilities. Coordination and planning efforts with Aviation Maintenance, Boiler, and the Fire Department are underway for this event, as well as giving contractors access to the tank during construction.

The project scope requires that the water reservoir be drained completely. Due to environmental restrictions, the water cannot be drained directly into the sewer. Therefore, storage tanks will be brought onto the site to hold the water during construction.

Scope of Work

The project scope seeks to rehabilitate the structure and extend the asset’s useful life by 20 years by implementing the following improvements:

- (1) Complete replacement of interior coatings
- (2) Partial replacement of exterior coatings
- (3) Column base plate modifications
- (4) Cathodic protection system improvements
- (5) Rebuild interior and exterior access ladders to meet safety codes
- (6) Installation of davit post sleeve on tank roof
- (7) Replace weathered tank hardware including nuts, bolts, cables, and pulleys
- (8) Install tank sampling ports
- (9) Valve vault improvements and repairs
- (10) Installation of sump pump in valve vault

Meeting Date: April 16, 2024

Schedule

Activity

Construction start	2024 Quarter 3
In-use date	2025 Quarter 2

Cost Breakdown

	This Request	Total Project
Design	\$0	\$1,150,000
Construction	\$2,019,000	\$2,019,000
Total	\$2,019,000	\$3,169,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Do not proceed with construction.

Cost Implications: Project team would need to expense \$531,472 cost to date.

Pros:

- (1) Don't need to switch water sources
- (2) No further cost incurred.

Cons:

- (1) Will not be in compliance with Washington State Department of Health
- (2) Reduced usable life of the structure
- (3) Presents health and safety hazard to the public

This is not the recommended alternative.

Alternative 2 – Proceed with the full scope of the Water Reservoir Rehabilitation project.

Cost Implications: \$3,169,000

Pros:

- (1) Eliminates risk of the tank's structural integrity becoming compromised.
- (2) Eliminates risk of jeopardizing water quality.
- (3) Some of the additional scope items require the tank be empty. Including them in this project eliminates the need to drain the tank a second time, saving both time and money.
- (4) Including the additional scope items will fulfill requirements set by the Washington Administrative Code regarding storage requirements and sampling ports for water quality monitoring.

Cons:

- (1) Incur additional capital cost.

This is the recommended alternative.

Meeting Date: April 16, 2024

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate – Status 2 Budget	\$1,572,000	\$0	\$1,572,000
Previous changes – 5/24/22 Design Auth	\$1,571,000	\$26,000	\$1,597,000
Current change	\$0	\$0	\$0
Current estimate	\$3,143,000	\$26,000	\$3,169,000
AUTHORIZATION			
Previous authorizations	\$1,124,000	\$26,000	\$1,150,000
Current request for authorization	\$2,019,000	\$0	\$2,019,000
Total authorization, including this request	\$3,143,000	\$26,000	\$3,169,000
Remaining amount to be authorized	\$0	\$0	\$0

Annual Budget Status and Source of Funds

The Water Reservoir Rehabilitation (C801172) is included in the 2024-2028 capital budget and plan of finance with a budget of \$3,143,000. The funding source would be Airport Development Fund.

Financial Analysis and Summary

Project cost for analysis	\$3,169,000
Business Unit (BU)	AV Division wide
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase due to inclusion of capital (and operating) costs in airline rate base.
IRR/NPV (if relevant)	N/A
CPE Impact	\$0.01 in 2026

Future Revenues and Expenses (Total cost of ownership)

Not applicable.

ATTACHMENTS TO THIS REQUEST

- (1) Presentation

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

May 24, 2022 – The Commission authorized the Executive Director to design and prepare construction documents for the Water Reservoir Rehabilitation project in the amount of \$1,000,000.