

# SWEETWATER AUTHORITY

Governing Board

April 9, 2025



## **Consideration to Direct the General Manager to Issue a Notice Inviting Bids for the Sweetwater Reservoir Aeration and Destratification System Project**

### **RECOMMENDATION**

Staff recommends that the Governing Board direct the General Manager to issue a Notice Inviting Bids for the Sweetwater Reservoir Aeration and Destratification System Project.

### **OVERVIEW**

Sweetwater Reservoir, a eutrophic lake, experiences thermal stratification in spring and summer, leading to oxygen depletion in deeper waters. This results in the release of nutrients and other compounds from the sediment, contributing to algal growth and other water quality issues. In the fall, cooling surface temperatures cause these compounds to recirculate, complicating water treatment at the Robert A. Perdue Water Treatment Plant (Perdue) due to challenges in managing chemical dosing and disinfection.

A lake aeration system, composed of air compressors feeding a diffuser line attached to a buoyant air pipeline anchored near the reservoir's bottom, aims to de-stratify the water column, enhancing water quality by reducing sediment release of various compounds and minimizing blue-green algae blooms. Additional benefits include improved stability of disinfection residuals in the finished water, fewer discolored water complaints, and increased consumer confidence.

From the technical study performed by Hazen and Sawyer in 2022, the aeration system supplying 680 cfm of air flow through the 2,000 linear feet of 3-inch diffuser piping system anchored on the floor of the Reservoir would be adequate to provide the required air flow and mixing to avoid thermal stratification resulting in algae bloom and water quality challenges.

### **Project Activities**

In FY 2023-24, the project design was developed by Hazen and Sawyer, the selected design consultant via the Request for Proposal process. The construction plans and technical specifications were prepared and are currently undergoing a constructability review by Dudek, one of the Authority's as-needed consultants. The Opinion of Probable Construction Cost (OPCC) provided by the Engineer of Record is \$2.9 million.

A CEQA compliant Environmental Impact Report Addendum to the Robert A. Perdue Water Treatment Plant Master Plan was prepared in 2024 and adopted by the Governing Board. Regulatory permit applications were submitted after adoption of the CEQA EIR Addendum, as follows:

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Agency	Permit	Status
U.S. Army Corps of Engineers	Clean Water Act Section 404 - Nationwide Permit for dredge and fill	Tentative approval (pending 401 WQC).
San Diego Regional Board	Clean Water Act Section 401 - Water Quality Certification (WQC)	Under review.
California Department of Fish and Wildlife	Lake and Streambed Alteration Agreement (LSAA)	Under review, expected completion of review by April 15, 2025.
California State, Division of Drinking Water	Water System Permit (CA3710025) Amendment	Permit Amendment request currently under DDW review.

Staff coordinated with the agencies listed above and believes that any changes or additional requirements to the project can be address through an addendum during the bid phase, or a change order during the construction phase. The projected timeline for obtaining the permits is June. In addition, construction funds are proposed in the FY 2025-26 Budget. Therefore, staff intends to advertise the project before the end of the current fiscal year. Upon approval by the Board to issue a Notice Inviting Bids, staff will make a recommendation at a later time to award a contract to the lowest responsible bidder as early as possible in FY 2025-26. The project is anticipated to be completed within six (6) months after issuance of the Notice to Proceed.

#### FISCAL IMPACT

The FY 2024-25 Budget for Capital Investment Project Sweetwater Reservoir Aeration/Destratification System is \$632,000. Additional funding will be needed and proposed with the FY 2025-26 Budget.

Sweetwater Reservoir Aeration/Destratification System Project	
FY 2024-25 Project Budget	\$632,000
Less:	
FY 2024-25 for design and environmental	<366,511>
Constructability review	<6,000>
FY 2024-25 available project budget balance	\$259,489
Proposed FY 2025-26 Budget allocation	<u>3,300,000</u>
Project budget balance upon approval of the FY 2025-26 Budget	\$3,559,489
Less Cost:	
Engineer's Construction Estimate (including 10% Contingency)	<3,200,000>
Construction Management Estimate	<300,000>
Inspection and Monitoring during Construction	<50,000>
Estimated project budget balance	\$9,489

**OPTIONS:**

1. Direct the General Manager to issue a Notice Inviting Bids for the Sweetwater Aeration and Destratification System Project.
2. Other direction as determined by the Governing Board.

**Staff Contact:**

Carlos Quintero, General Manager

Roberto Yano, Assistant General Manager

Kay Kim, Engineering Manager

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**SUPPORTING INFORMATION**

**Attachments**

1. Project Exhibit
2. Staff Presentation

**Strategic Plan**

Strategic Plan Goal 1: Water Quality (WQ) – Provide high quality water that meets regulatory requirements.

- Objective WQ6: Ensure long-term sustainable health of Sweetwater Reservoir.

**Past Board Actions**

October 27, 2021	The Governing Board selected Hazen and Sawyer as the consultant for engineering design services for the proposed aeration/destratification system at Sweetwater Reservoir and directed staff to negotiate a lower fee with Hazen and Sawyer in an amount not-to-exceed \$250,000 in accordance with the FY 2021-22 Budget; and directed staff to propose additional funding for environmental review and permitting in the FY 2022-23 Budget.
August 11, 2021	The Governing Board directed staff to issue a Request for Proposals as presented, for engineering design services for the proposed aeration/destratification system in Sweetwater Reservoir.
June 9, 2021	The Governing Board approved the FY 2021-22 Strategic Plan Detailed Work Plan.
	The Governing Board adopted Resolution 21-14, adopting a Budget for FY 2021-22.