THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Action

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

5/13/2025 Board Meeting

7-2

Subject

Amend the Capital Investment Plan for fiscal years 2024/25 and 2025/26 to include the ozone contactor expansion joint improvements at the F.E. Weymouth Water Treatment Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The ozone contactors at the F.E. Weymouth Water Treatment Plant (Weymouth plant) consist of four large concrete basins, in which the plant's inlet water is mixed with ozone and then conveyed through a common outlet channel to the next step in the treatment process. The outlet channel and contactors are sealed at the seams to minimize water leakage. Recent inspections of the ozone contactors have revealed leakage around the common outlet channel, likely resulting from a degraded concrete wall expansion joint. Timely implementation of expansion joint improvements will reduce the risk of an unplanned shutdown and address the leakage in a timely and cost-effective manner while maintaining reliability of the contactors.

This action amends the Capital Investment Plan (CIP) for fiscal years 2024/25 and 2025/26 to include improvements to the Weymouth plant's ozone contactor expansion joints. See **Attachment 1** for the Allocation of Funds and **Attachment 2** for the Location Map.

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

Staff Recommendation: Option #1

Option #1

Amend the Capital Investment Plan for fiscal years 2024/25 and 2025/26 to include the ozone contactor expansion joint improvements at the F.E. Weymouth Water Treatment Plant.

Fiscal Impact: Expenditure of $330,000 in capital funds. All costs will be incurred in the current biennium and have been previously appropriated. It is not anticipated that the addition of the project listed above to the CIP will increase CIP expenditures in the current biennium beyond those that have been previously appropriated by the Board.
Business Analysis: This option will enhance the continued reliability of the ozone contactors and the Weymouth plant's ozonation system.

Option #2

Do not proceed with this project at this time.
Fiscal Impact: None
Business Analysis: Under this option, staff would continue monitoring the leakage and performing short-term repairs. Increased leakage from the contactor expansion joint may lead to an unplanned shutdown to perform emergency repairs.

Alternatives Considered

Staff considered incorporating the project into the next biennial CIP Budget. This option would delay the implementation of the recommended improvements to address leakage within the contactor building, potentially exacerbating the deteriorating condition of the joint seals and leading toward more costly future rehabilitation. Staff determined that the current approach to begin improvements for the ozone contactors expansion joints within the current biennium will reduce the risk of an unplanned shutdown and will address the leakage in a timely and cost-effective manner.

Applicable Policy

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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

By Minute Item 53598, dated April 9, 2024, the Board appropriated a total of $636.48 million for projects identified in the Capital Investment Plan for Fiscal Years 2024/2025 and 2025/2026.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves organizational, maintenance, or administrative activities; personnel-related actions; and/or general policy and procedure making that will not result in direct or indirect physical changes in the environment. (Public Resources Code Section 21065; State CEQA Guidelines Section 15378(b)(2) and (5).) In addition, the study and design associated with the ozone contactor joint system is exempt from CEQA because it consists of basic data collection, research, experimental management, 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 that a public agency has not yet approved, adopted, or funded. (State CEQA Guidelines Section 15306.).

CEQA determination for Option #2:

None required

Details and Background

Background

The Weymouth plant was placed into service in 1941 with an initial capacity of 100 million gallons per day (mgd) and was expanded twice to its current capacity of 520 mgd. The plant delivers a blend of waters from the Colorado River Aqueduct and the State Water Project to Metropolitan's Central Pool portion of the distribution system and an exclusive service area. The Weymouth plant utilizes ozone as the primary disinfectant to reduce the formation of disinfection by-products for compliance with current drinking water regulations and to control taste-and-odor-causing compounds and algal toxins. The plant is located in the city of La Verne.

The Weymouth plant's ozone contactor structure was placed into service in 2016. The facility features four rectangular concrete contactors arranged in series along their length and two galleries that house essential instrumentation and control equipment. Each contactor is 160 feet long, 48 feet wide, and 30 feet tall. The concrete walls along the length of Contactors 2 and 3 are adjacent, relying on an expansion joint between the walls to allow for thermal expansion and contraction caused by temperature fluctuations. A similar expansion joint is located in the middle of each contactor. The two instrumentation galleries are located between Contactors 1 and 2 and between Contactors 3 and 4. The plant's inlet water is mixed with ozone in the contactors and then conveyed through a common outlet channel to the next step in the treatment process.

Minor leakage and deterioration of caulking located in the ozone contactor's joint, located between Contactors 2 and 3, was first identified by Metropolitan staff during routine inspections performed in 2021. Staff successfully controlled the leakage using joint sealant injections and performed periodic inspections to evaluate the effectiveness of the joint sealant over time. In December 2024, increased leakage was observed around the

previously repaired areas. Staff once again stopped the leak with a short-term temporary repair. Staff concluded that additional investigation is required, and likely water stop improvements in the area where these contactors adjoin the common outlet channel are needed to prevent recurrent leakage. To maintain the reliability of the contactors, staff recommends moving forward with investigations and design of permanent improvements to the Weymouth ozone contactor expansion joint at this time.

In April 2024, the Board appropriated funds and authorized the General Manager to initiate or proceed with work on all capital projects identified in the CIP, subject to any limits on the General Manager's authority and CEQA requirements. Board authorization is required to commence work on new projects not originally included in the Board-authorized CIP. This action amends the CIP to include the Weymouth Ozone Contactor Expansion Joint Improvements project. It is not anticipated that the addition of this project to the CIP will increase CIP expenditures in the current biennium beyond the amount appropriated by the Board. Funds required for work to be performed pursuant to the subject projects after fiscal year 2025/26 will be budgeted within the Capital Investment Plan Appropriation for fiscal years 2026/27 and 2027/28. 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 Water Treatment Plants Program.

Weymouth Ozone Contactor Expansion Joint Improvements – Design

Planned improvements include replacement of the existing expansion joint between Contactors 2 and 3, addition of a water stop, and minor structural modifications of the contactor/channel concrete walls to accommodate the joint replacement and water stop installation. Planned design activities include conducting a comprehensive evaluation of joint and water stop systems suitable to the ozone contactors; preparation of drawings and specifications for construction of the recommended improvements; advertisement and receipt of competitive bids; and project management. All design phase activities will be performed by Metropolitan staff.

A total of $330,000 is allocated for this work. Allocated funds include $74,000 for field investigations; $141,000 for design activities described above; $84,000 for shutdown planning, bidding and project management; and $31,000 for remaining budget.

Engineering Services' performance metric target range for final design of projects with a construction cost of less than $3 million is 9 to 15 percent. For this project, the performance metric goal for final design is approximately 14.1 percent of the total construction cost. The estimated cost of construction for the contactor expansion joint improvements at Weymouth is anticipated to range from $1.0 million to $1.2 million.

Project Milestone

September 2025 – Complete design of Weymouth Ozone Contactor Expansion Joint Improvements

4/28/2025
Mai M. Hattar *Date*
Interim Chief Engineer
Engineering Services

4/28/2025
Deven Upadhyay *Date*
General Manager

Attachment 1 – Allocation of Funds

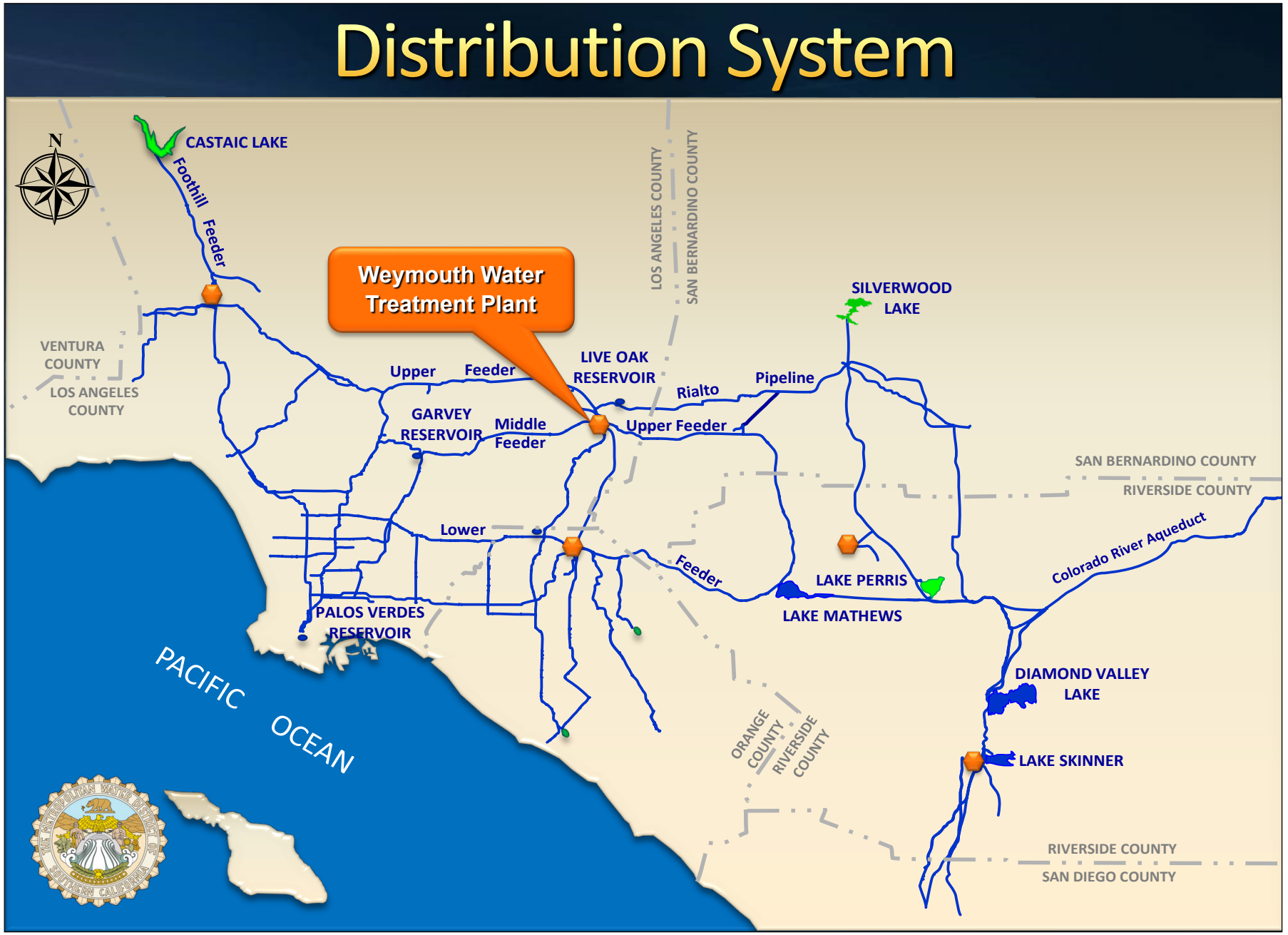
Attachment 2 – Location Map

Ref# es12708226

Allocation of Funds for Weymouth Ozone Contactor Expansion Joint Improvements

	Current Board Action (May 2025)
Labor	
Studies & Investigations	74,000
Final Design	141,000
Owner Costs (Program mgmt., shutdown planning)	84,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	31,000
Total	**$ 330,000**

This is the initial allocation of funds to improve the expansion joint at the Weymouth plant's ozone contactors. The total estimated cost to complete this project, including the funds allocated for the work described in this action, and future construction costs, is anticipated to range from $1.3 million to $1.5 million.


Distribution System
N
CASTAIC LAKE
Foothill Feeder
Weymouth Water Treatment Plant
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
VENTURA COUNTY
LOS ANGELES COUNTY
Upper Feeder
LIVE OAK RESERVOIR
Rialto Pipeline
GARVEY RESERVOIR
Middle Feeder
Upper Feeder
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
Lower Feeder
Colorado River Aqueduct
LAKE PERRIS
LAKE MATHEWS
PALOS VERDES RESERVOIR
PACIFIC OCEAN
DIAMOND VALLEY LAKE
ORANGE COUNTY
RIVERSIDE COUNTY
LAKE SKINNER
RIVERSIDE COUNTY
SAN DIEGO COUNTY