



● **Board of Directors**
Engineering and Operations Committee

6/9/2015 Board Meeting

7-2

Subject

Appropriate \$650,000; and authorize construction of copper sulfate storage facilities at Lake Mathews and Lake Skinner (Approp. 15441)

Executive Summary

This action authorizes construction of copper sulfate storage facilities for control of algae blooms at Lake Mathews and Lake Skinner. These facilities will enable Metropolitan to efficiently control algae blooms within those reservoirs, along with Diamond Valley Lake and nearby canals.

Timing and Urgency

An increasing number of algae events have occurred in recent years at Metropolitan's source water reservoirs and canals. Sudden increases in algal mass, or "algae blooms," can cause taste and odor conditions that may be difficult to control in a downstream water treatment plant. As a preventive measure, copper sulfate is typically applied in reservoirs and canals to control algae blooms. Metropolitan currently stores copper sulfate in limited quantities at Lake Mathews, while there is no copper sulfate storage at Lake Skinner. New storage facilities are needed at both locations to minimize delays in the transport and application of copper sulfate. Staff recommends moving forward with construction of the storage facilities to better control algae growth during current dry conditions.

This project has been reviewed with Metropolitan's Capital Investment Plan (CIP) prioritization criteria, and is categorized as a Supply Reliability/System Expansion project. Funds for this action are available within Metropolitan's capital expenditure plan for fiscal year 2014/15.

Details

Background

Metropolitan staff applies copper sulfate to canals and reservoirs as a preventive measure to control algae blooms. These blooms can create taste and odor conditions that may be difficult to control in downstream water treatment plants. Algae blooms can increase the frequency of filter backwashing, which impacts operating costs and may decrease the effective treatment capacity of the plant. The severity of algae blooms is influenced by a combination of factors including hydrology, available nutrients, sunlight, and temperature. Over the past several years, coincident with recent dry conditions in California, an increasing number of algae events have occurred at Metropolitan's untreated water reservoirs and canals. Due to the severity of the recent drought, Metropolitan is optimizing the use of available storage capacity by drafting and refilling reservoirs. As the water levels fluctuate, algae blooms can increase in both severity and frequency, especially with shallower levels during warm summer months. The timing of specific algae blooms cannot be predicted, and the rapid growth rate can require response actions to take place within hours.

All copper sulfate applied to Metropolitan's canals and reservoirs is presently stored at Lake Mathews. A recent assessment identified that the Lake Mathews facility has insufficient capacity to control significant algae events at multiple sites. In addition, the storage facility is 40 years old and requires upgrades to meet current codes for

storage of hazardous chemicals. Lake Skinner does not presently have a facility for storage of copper sulfate. Timely application of copper sulfate at that location is a challenge due to the distance and/or quantity of material available at Lake Mathews. New copper sulfate storage facilities at the two sites would permit algae to be treated quickly before a bloom could spread and cause significant taste and odor problems. These two locations would also permit rapid response to algae blooms in either Diamond Valley Lake or in nearby canals.

In May 2014, Metropolitan's Board authorized design of copper sulfate storage facilities at Lake Mathews and Lake Skinner. Design has been completed, and staff recommends proceeding with construction at this time.

Lake Mathews and Lake Skinner Copper Sulfate Storage Facilities – Construction (\$650,000)

Planned improvements include the installation of four prefabricated metal storage containers at Lake Mathews and Lake Skinner. At each location, two containers will be installed side by side on a new concrete slab foundation. Each prefabricated container will be approximately 50 feet long by 6 feet wide, with a height of 9 feet, and will be equipped with an integrated fire suppression system, spill control, and ventilation. Site improvements will include extension of electrical service to each container, minor grading, and anchoring of the storage containers. All construction will be performed by Metropolitan forces.

Specifications No. ME-13506 to furnish four hazardous material storage containers was issued on March 16, 2015. As shown in [Attachment 2](#), two bids were received and opened on April 15, 2015. The low bid from Environmental Compliance Products, Inc. in the amount of \$224,640 complies with the requirements of the specifications. This amount includes all sales and use taxes imposed by the state of California. The other bid was \$449,631.22. The budgetary cost estimate for the containers, based on surveys from prospective vendors, was \$281,500. For bid evaluation purposes, an \$11,232 bid-price-reduction credit was provided to each of the bidders who qualified as a Regional Business Enterprise (RBE). Environmental Compliance Products, Inc. is an RBE firm and thus received the bid-price-reduction credit during the bid evaluation. This contract is planned to be awarded under the General Manager's Administrative Code authority to award contracts of \$250,000 or less. Due to the specialized nature of the equipment, Metropolitan did not establish a Small Business Enterprise participation level for this contract. Further, as a procurement contract, there are no subcontracting opportunities.

This action appropriates \$650,000 and authorizes construction of copper sulfate storage facilities at Lake Mathews and Lake Skinner. The requested funds include \$320,000 for construction by Metropolitan forces; \$224,640 for procurement of the storage containers; \$77,000 for project management and preparation of record drawings; and \$28,360 for remaining budget. The total estimated cost to complete the copper sulfate storage facilities at Lake Mathews and Lake Skinner, including the amount appropriated to date and current funds requested, is \$776,000.

This work is included within capital Appropriation No. 15441, the Conveyance and Distribution System Rehabilitation Appropriation - FY 2006/07 Through FY 2011/12, which was initiated in fiscal year 2006/07. With the present action, the total funding for Appropriation No. 15441 will increase from \$61,989,000 to \$62,639,000. This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2014/15 capital expenditure plan. See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, and [Attachment 3](#) for the Location Map.

Project Milestone

October 2015 – Completion of construction

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

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 project involves the funding; final design; and minor alterations, reconstruction or replacement of existing public facilities along with the construction of minor appurtenant structures with no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed action qualifies under Class 1, Class 2, and Class 3, Categorical Exemptions (Sections 15301, 15302, and 15303 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed action qualifies under three Categorical Exemptions (Class 1, Section 15301; Class 2, Section 15302; and Class 3, Section 15303 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination that the proposed action is categorically exempt from CEQA, and

- a. Appropriate \$650,000; and
- b. Authorize construction of copper sulfate storage facilities at Lake Mathews and Lake Skinner.

Fiscal Impact: \$650,000 in capital funds under Approp. 15441

Business Analysis: This option will increase copper sulfate storage capacity which will enable staff to respond rapidly to simultaneous algae events.

Option #2

Do not authorize construction of the copper sulfate storage facilities at this time.

Fiscal Impact: None

Business Analysis: This option would not address taste and odor risks associated with algae growth that may be difficult to control with the water treatment process.

Staff Recommendation

Option #1


 _____ 5/19/2015
 Gordon Johnson Date
 Manager/Chief Engineer
 Engineering Services


 _____ 5/26/2015
 Jeffrey Kightlinger Date
 General Manager

Attachment 1 – Financial Statement

Attachment 2 – Abstract of Bids

Attachment 3 – Location Map

Financial Statement for Conveyance and Distribution System Rehabilitation Appropriation – FY 2006/07 Through FY 2011/12

A breakdown of Board Action No. 68 for Appropriation No. 15441 for copper sulfate storage facilities at Lake Mathews and Lake Skinner¹ is as follows:

	Previous Total Appropriated Amount (Dec. 2014)	Current Board Action No. 68 (June 2015)	New Total Appropriated Amount
Labor			
Studies & Investigations	\$ 4,305,000	\$ -	\$ 4,305,000
Final Design	5,161,293	-	5,161,293
Owner Costs (Program. mgmt., permitting)	6,602,123	66,000	6,668,123
Submittals Review & Record Drwgs	655,670	11,000	666,670
Construction Inspection & Support	3,434,550	-	3,434,550
Metropolitan Force Construction	10,757,710	320,000	11,077,710
Materials & Supplies	3,068,400	224,640	3,293,040
Incidental Expenses	946,900	-	946,900
Professional/Technical Services	2,801,000	-	2,801,000
Right-of-Way	550,000	-	550,000
Equipment Use	330,200	-	330,200
Contracts	20,838,254 ²	-	20,838,254
Remaining Budget	2,537,900 ²	28,360	2,566,260
Total	\$ 61,989,000	\$ 650,000	\$ 62,639,000

Funding Request

Appropriation Name:	Conveyance and Distribution System Rehabilitation Appropriation – FY 2006/07 Through FY 2011/12		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15441	Board Action No.:	68
Requested Amount:	\$ 650,000	Budget Page No.:	272
Total Appropriated Amount:	\$ 62,639,000	Total Appropriation Estimate:	\$121,000,000

¹ The total amount expended to date on the Copper Sulfate Storage Facilities at Lake Mathews and Lake Skinner is approximately \$40,000. The total cost to complete this project, including the amount appropriated to date and current funds requested, is \$776,000.

² Includes previous allocation of \$127,000 from Remaining Budget to address utility setback requirements for the Sepulveda Feeder Cathodic Protection project.

The Metropolitan Water District of Southern California

Abstract of Bids Received on April 15, 2015 at 11:00 A.M.

Specifications No. ME-13506

Copper Sulfate Chemical Storage Facilities at Lake Mathews and Lake Skinner

The work consists of furnishing four pre-fabricated metal storage containers equipped with integrated fire suppression system, spill control, and ventilation.

Engineer's Estimate: \$281,500

Bidder and Location	Base Bid Price Total¹	Regional Business Credit	Evaluated Bid Total^{2,3}
Environmental Compliance, Inc. Huntington Beach, CA	\$224,640.00	Yes	\$213,408.00
Safety Storage, Inc. Charleston, IL	\$449,631.22	No	\$449,631.22

¹Includes sales and use taxes of 8.75 percent imposed by the State of California.

²Due to the specialized nature of the equipment, no Small Business Enterprise participation level was established for this procurement contract.

³Includes Regional Business Enterprise bid-price-reduction credit of \$11,232 for the evaluated bid total.

