

- **Board of Directors**
Water Quality and Operations Committee

August 19, 2008 Board Meeting

7-5

Subject

Appropriate \$1.87 million; and authorize completion of the interim chlorination facilities at the outlets of Copper Basin and Lake Mathews for the Quagga Mussel Control Program (Approp. 15447)

Description

Quagga mussels were discovered January 6, 2007 at Lake Mead and Lake Havasu. Inspections in June 2007 indicated the rapid spread of mussels into Metropolitan's Colorado River Aqueduct (CRA) with detections up to 125 miles downstream of the Intake Pumping Plant. Subsequently, mussels were found in Lake Mathews and Lake Skinner. The presence and spawning of quagga mussels in the Colorado River and downstream facilities, if unchecked, would adversely affect the capacity and operation of Metropolitan's conveyance, storage, and distribution systems.

In response, Metropolitan initiated a multi-phased Quagga Mussel Control Program (QMCP), which began a comprehensive effort of enhanced detection, surveillance, and mitigation strategies. Phase I of the Program addressed immediate strategies and its results were used to prioritize infrastructure upgrades and develop future control plans. Phase II consists of a comprehensive, interim approach for mussel management over the next 5-10 years, and Phase III will consist of long-term needs and cost minimization strategies.

As part of Phase I, staff placed into service temporary chlorine feed systems at the outlets of Copper Basin and Lake Mathews in July and November 2007, respectively. These initial feed systems were intended as a stop-gap mussel control measure until more permanent facilities could be installed. The temporary systems are labor intensive to operate (requiring continuous staffing), include bleach fed from leased delivery trailers, and provide very limited bleach storage. These temporary systems have thus far been successful in controlling the downstream proliferation of quagga mussels.

In September 2007, the Board authorized Phase II actions, including construction of interim chlorination systems to enhance the temporary facilities. These enhancements will allow Metropolitan to feed bleach on a longer-term basis, return the leased bleach trailers to the vendor, and reduce staffing levels dramatically (from approximately 350 hours per week at each site to less than 40 hours per week). Phase II also authorized (1) studies to determine if a chemical other than chlorine should be recommended for long-term quagga control, (2) conceptual and preliminary design of permanent systems if an alternate chemical is selected, and (3) conceptual design of isolation barriers at various CRA locations which would allow off-line maintenance or chemical treatment. Staff will return in the future for authorization of final design for permanent mussel control facilities. If chlorine is ultimately selected as the best chemical to control quagga mussels in the long term, the interim facilities will remain in place with only modest additions (e.g., permanent roofs covering the containment areas).

Funding of Remaining Interim Facility Construction Work (\$1.87 million)

Significant progress in the design and construction of the interim facilities has been achieved. Chemical feed commenced at the new Copper Basin tank farm in June 2008, within nine months of board authorization to proceed with the project. In addition, much of the Lake Mathews earthwork, civil, and structural work have been completed. Staff anticipates that the Lake Mathews facility will begin feeding bleach from the tank farm in October 2008, 13 months after initial board authorization.

In September 2007, the Board appropriated an initial amount of \$4,288,000 to kick off design and construction of the Copper Basin and Lake Mathews interim chlorination systems. The initial funding allowed staff to fast-track

construction and to complete much of the work in a very short time. At this time, staff requests an additional \$1.87 million to complete the remaining Lake Mathews construction activities, which include installation of tanks and equipment, paving, facility testing, and start-up. The funds will also be used to install support infrastructure at both Copper Basin and Lake Mathews, including security systems and water quality monitoring equipment.

Summary

This action appropriates \$1.87 million in budgeted funds, and authorizes completion of all remaining work for the interim chlorination facilities at the outlets of Copper Basin and Lake Mathews (see [Attachment 2](#) for the location map). This project has been evaluated and recommended by Metropolitan's Capital Investment Plan Evaluation Team, and funds have been included in the fiscal year 2008/09 capital budget. See [Attachment 1](#) for the Financial Statement.

This project is consistent with Metropolitan's goals for sustainability by enhancing the reliability of the existing CRA conveyance system in order to maintain reliable water deliveries in the future.

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The project was previously determined to be categorically exempt under the provisions of CEQA and State CEQA Guidelines. The chlorination facilities at the outlet of Copper Basin were found to be exempt under Class 1, Section 15301, Class 3, Section 15303, Class 4, Section 15304, Class 6, Section 15306, and Class 9, Section 15309 of the State CEQA Guidelines on July 18, 2007. A Notice of Exemption (NOE) was filed on the project at that time and the statute of limitations has ended. The chlorination facilities at the outlet of Lake Mathews were found to be exempt under Class 1, Section 15301, Class 3, Section 15303, and Class 4, Section 15304 of the State CEQA Guidelines on October 11, 2007. A Notice of Exemption (NOE) was filed on the project at that time and the statute of limitations has ended. With the current board action, there is no substantial change proposed to the project since the original NOE was filed. Hence, the previous environmental documentation in conjunction with the project fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act with regards to the proposed action.

The CEQA determination is: Determine that the proposed action has been previously addressed in the 2007 NOEs (Class 1, Section 15301, Class 3, Section 15303, Class 4, Section 15304, Class 6, Section 15306, and Class 9, Section 15309 of the State CEQA Guidelines for the Copper Basin outlet facilities; Class 1, Section 15301, Class 3, Section 15303, and Class 4, Section 15304 of the State CEQA Guidelines for the Lake Mathews outlet facilities) and that no further environmental analysis or documentation is required.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination and

- a. Appropriate \$1.87 million; and
- b. Authorize completion of all work for the interim chlorination facilities at the outlets of Copper Basin and Lake Mathews.

Fiscal Impact: \$1.87 million of budgeted funds under Approp. 15447

Business Analysis: This option allows completion of the interim Lake Mathews and Copper Basin outlet chlorination facilities and improves the infrastructure around the facilities.

Option #2

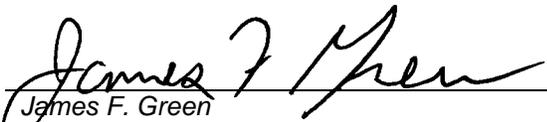
Do not authorize remaining work for the interim chlorination facilities at the outlets of Copper Basin and Lake Mathews.

Fiscal Impact: The construction of the Lake Mathews facility would not be completed. Chlorine feed would have to be terminated when the agreement to use the vendor’s chlorine tankers expires in October 2008. Loss of chlorine feed at Lake Mathews would increase ongoing operations and maintenance (O&M) costs to control mussels which proliferate downstream. Cameras would not be installed at Copper Basin, which may adversely affect Metropolitan’s ability to continue with unmanned operations and increase O&M costs by physical inspections.

Business Analysis: The Lake Mathews interim chlorination facility would not become operational and quagga mussel infestations downstream could result in significant O&M cost increases and impaired water delivery.

Staff Recommendation

Option #1

 James F. Green for Eddie A. Rigdon Manager, Water System Operations	8/4/2008 Date
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 Jeffrey Kighlinger General Manager	8/6/2008 Date
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[Attachment 1 – Financial Statement](#)

[Attachment 2 – Location Map](#)

Financial Statement for Quagga Mussel Control Program

A breakdown of Board Action No. 3 for Appropriation No. 15447 is as follows:

	Previous Total Appropriated Amount (Feb. 2008)	Current Board Action No. 3 (Aug. 2008)	New Total Appropriated Amount
Labor			
Studies and Investigations	\$ 473,900	\$ -	\$ 473,900
Preliminary Design	274,500	-	274,500
Final Design	625,000	439,000	1,064,000
Owner Costs (Program management, construction support)	479,400	347,000	826,400
Metropolitan Force Construction	2,595,600 *	836,000	3,431,600
Materials and Supplies	2,049,600	148,000	2,197,600
Incidental Expenses	27,000	-	27,000
Professional/Technical Services	585,000	-	585,000
Equipment Use	20,000	-	20,000
Contracts	100,000	100,000	200,000
Remaining Budget	450,000 *	-	450,000
Total	\$ 7,680,000	\$ 1,870,000	\$ 9,550,000

* Reflects reallocation of \$300,000 from Remaining Budget to Metropolitan Force Construction for interim chlorination facilities at Copper Basin and Lake Mathews.

Funding Request

Program Name:	Quagga Mussel Control Program		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15447	Board Action No.:	3
Requested Amount:	\$ 1,870,000	Capital Program No.:	15447-S
Total Appropriated Amount:	\$ 9,550,000	Capital Program Page No.:	N/A
Total Program Estimate:	\$ 15,922,000	Program Goal:	S-Supply and Delivery Reliability

