

- **Board of Directors**
Engineering and Capital Programs Committee

November 20, 2007 Board Meeting

8-2

Subject

Appropriate \$4.3 million; and award \$3,403,950 procurement contract to Ozonia North America for ozone equipment for the Mills Ozone System Reliability Program (Approp. 15434)

Description

Background

The Henry J. Mills Water Treatment Plant was placed into service in 1978 with an initial capacity of 75 million gallons per day (mgd). The plant was expanded twice and is currently rated at 160 mgd, based on the capacity of the ozonation system. The Mills plant exclusively treats water from the East Branch of the State Water Project, and delivers it to Eastern Municipal Water District and Western Municipal Water District of Riverside County.

Construction of the Mills Oxidation Retrofit Program (ORP) was completed in 2003 in order to comply with the U.S. Environmental Protection Agency's Disinfectant/Disinfection Byproduct (D/DBP) Rule. The initial Mills installation was based on an ozone hydraulic capacity of 160 mgd. The existing Mills plant ozone generation system includes three ozone generators, two liquid oxygen storage tanks, and related equipment to provide a design ozone dose of 2.0 mg/L at a 326-mgd plant flow. Due to changes in source water quality, ozone doses between 2.0 mg/L and 3.0 mg/L have been needed approximately 35 percent of the time since October 2003. With the current plant flow capacity of 160 mgd, the existing ozone generation system can reliably provide a 3.0 mg/L ozone dose, while maintaining one of the three generators as a backup unit.

In March 2005, Metropolitan's Board authorized preliminary design of the Mills Capacity Upgrade Program. The objective of this program is to increase the hydraulic capacity of the ozone contactors to match the 326-mgd capacity of the remainder of the plant, and to rehabilitate existing plant facilities to reliably treat 326 mgd, while complying with the D/DBP Rule. The hydraulic capacity upgrade is expected to be completed in 2009 to meet increased treated water demands in eastern Riverside County. In concert with the plant upgrade, the Perris Valley Pipeline is planned to be on-line in 2009 to maximize use of the Mills plant, offset peak demands on the Skinner plant, improve water delivery system reliability, and increase operational flexibility in this portion of Metropolitan's service area.

In August 2006, Metropolitan's Board authorized final design of backup ozonation capacity under the Mills Ozone System Reliability Program. The objective of this program is to enhance plant reliability and fully comply with the D/DBP Rule when plant capacity is restored to 326 mgd. Simultaneous operation of all three existing ozone generators will be required to provide a 3.0 mg/L dose upon restoration of the plant's full 326-mgd capacity. Under the procurement authorized by this action, a fourth ozone generator with ancillary equipment will be purchased, which will allow one of the three duty generators to be removed from service for scheduled preventive or emergency corrective maintenance, without impacting plant capacity or compliance with the D/DBP Rule.

Ozone Generation Equipment - Procurement (\$4.3 million)

In August 2006, Metropolitan's Board authorized staff to negotiate a procurement contract directly with Ozonia North America, the supplier of the existing Mills ozone equipment. The basis for this approach was to maintain compatibility with current equipment, minimize overall cost, and to maintain commonality of spare parts and automated control system features.

Ozonía was previously selected through competitive bidding to supply ozone equipment for each of Metropolitan's treatment plants. Staff had considered soliciting bids for the equipment included in this action from two other previously prequalified ozone generator manufacturers, in addition to Ozonia. However, the products from other manufacturers would not be fully compatible with the existing Mills ozone generation system. Specifically, each manufacturer has proprietary control systems and different requirements for the feed gas and power supply systems. These issues would be time-consuming and potentially very expensive to resolve. As a result, staff recommends that procurement of the new Mills equipment proceed directly with Ozonia in order to minimize overall project costs.

The ozone equipment procurement package includes one ozone generator which matches the three existing units, one power supply unit, one 34,000-gallon liquid oxygen storage tank, one nitrogen injection system, three ambient ozone analyzers, two ambient oxygen analyzers, two ozone contactor control panels, and support equipment. The package also includes testing, installation oversight, equipment start-up, training, and extended on-site services.

As discussed with the Board in June 2007, the two ozone contactor control panels will be supplied as Metropolitan-furnished equipment to the construction contractor currently working on the Mills Contactors Nos. 3 and 4 project. These panels will be identical to the existing panels at Contactors Nos. 1 and 2, and will include proprietary software (licensed to Metropolitan) to control ozone gas flows into different contact chambers, to collect data from on-line instrumentation for regulatory reporting and for process adjustments, and to interface with the overall ozone generation control system. The panels are essential for operation of Contactors Nos. 3 and 4.

Staff has completed negotiations with Ozonia North America for the additional ozone generation equipment, and recommends that the procurement contract move forward at this time. The negotiated price for the procurement is consistent with the cost of competitively bid ozone equipment procured for Metropolitan's previous ozonation projects. Due to the specialized nature of the equipment, which is being purchased directly from the manufacturer, no Small Business Enterprise (SBE) participation was established for this contract. The anticipated duration of this procurement contract is two years.

This action appropriates \$4.3 million and awards a procurement contract in the amount of \$3,403,950 to Ozonia North America. In addition to the amount of the contract, the appropriated funds include \$129,000 for factory inspection and performance testing; \$194,000 for technical submittal reviews; \$42,000 for control system integration; \$268,000 for all other staff and consultant support; and \$263,050 of remaining budget. The support activities include project management, permitting with the local fire authority, and preparation of a process hazard analysis. Metropolitan staff will administer the procurement contract, with assistance from specialty consultants for factory inspection and performance testing. The inspections will take place at three locations in the United States and Canada. Submittal reviews will be performed by Metropolitan and by Camp Dresser McKee (CDM) for the portion of the procurement specification prepared by that firm. CDM's work will be performed under an existing board-authorized agreement. No amendment to the CDM agreement is required at this time. For this agreement, Metropolitan established a SBE participation level of 20 percent.

This project has been evaluated and recommended by Metropolitan's Capital Investment Plan Evaluation Team and funds have been included in the fiscal year 2007/08 capital budget. See [Attachment 1](#) for the Financial Statement and [Attachment 2](#) for the Location Maps.

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8140 (e): Competitive Procurement

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The environmental effects from the design, construction, and operation of the Ozone Contactors Nos. 3 and 4 were originally evaluated in the Henry J. Mills Water Filtration Plant Expansion Final Environmental Impact Report (Final EIR), which was certified by the Board on February 12, 1991. The Board also approved the Findings of Fact (findings), the Mitigation Monitoring and Reporting Program (MMRP), and the overall expansion, including the Oxidation Retrofit Program. The present proposed board actions are solely based on appropriating the budgeted funds to award a procurement contract and not on any other substantial changes to the original project. Hence, the previous environmental documentation taken by the Board in conjunction with the proposed actions fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act on the proposed actions.

The proposed nitrogen injection system related improvements are categorically exempt under the provisions of CEQA and the State CEQA Guidelines. In particular, the proposed action consists of the repair, maintenance, minor alteration, and operating of existing equipment and facilities with negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, it will not have a significant effect on the environment. Accordingly, this proposed action qualifies as a Class 1 Categorical Exemption (Section 15301 of the State CEQA Guidelines).

The CEQA determination is: Determine that the design, construction, and operation of the Ozone Contactors Nos. 3 and 4 have been previously addressed in the certified 1991 Final EIR and adopted documentation (i.e., findings and MMRP) and that no further environmental analysis or documentation is required. With respect to nitrogen injection system related improvements, determine the proposed action qualifies under a Categorical Exemption (Class 1, Section 15301 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination and

- a. Appropriate \$4.3 million in budgeted funds; and
- b. Award a \$3,403,950 procurement contract to Ozonia North America for ozone equipment and support services for the Mills plant.

Fiscal Impact: \$4.3 million of budgeted funds (Approp. 15434)

Business Analysis: This option would allow the Mills plant to reliably ozonate the full plant capacity of 326 mgd with up to a 3.0 mg/l ozone dose, in compliance with the D/DBP Rule. A backup ozone generator would be available for use during extended maintenance or an emergency.

Option #2

Do not award the procurement contract.

Fiscal Impact: None

Business Analysis: This option would not permit the Mills plant to reliably ozonate the full plant capacity of 326 mgd with up to a 3.0 mg/l ozone dose, in compliance with the D/DBP Rule.

Staff Recommendation

Option #1



Roy L. Wolfe
Manager, Corporate Resources

10/30/2007
Date



Jeffrey Kightlinger
General Manager

10/31/2007
Date

Attachment 1 – Financial Statement

Attachment 2 – Location Map

BLA #5649

Financial Statement for Mills Ozone System Reliability Program

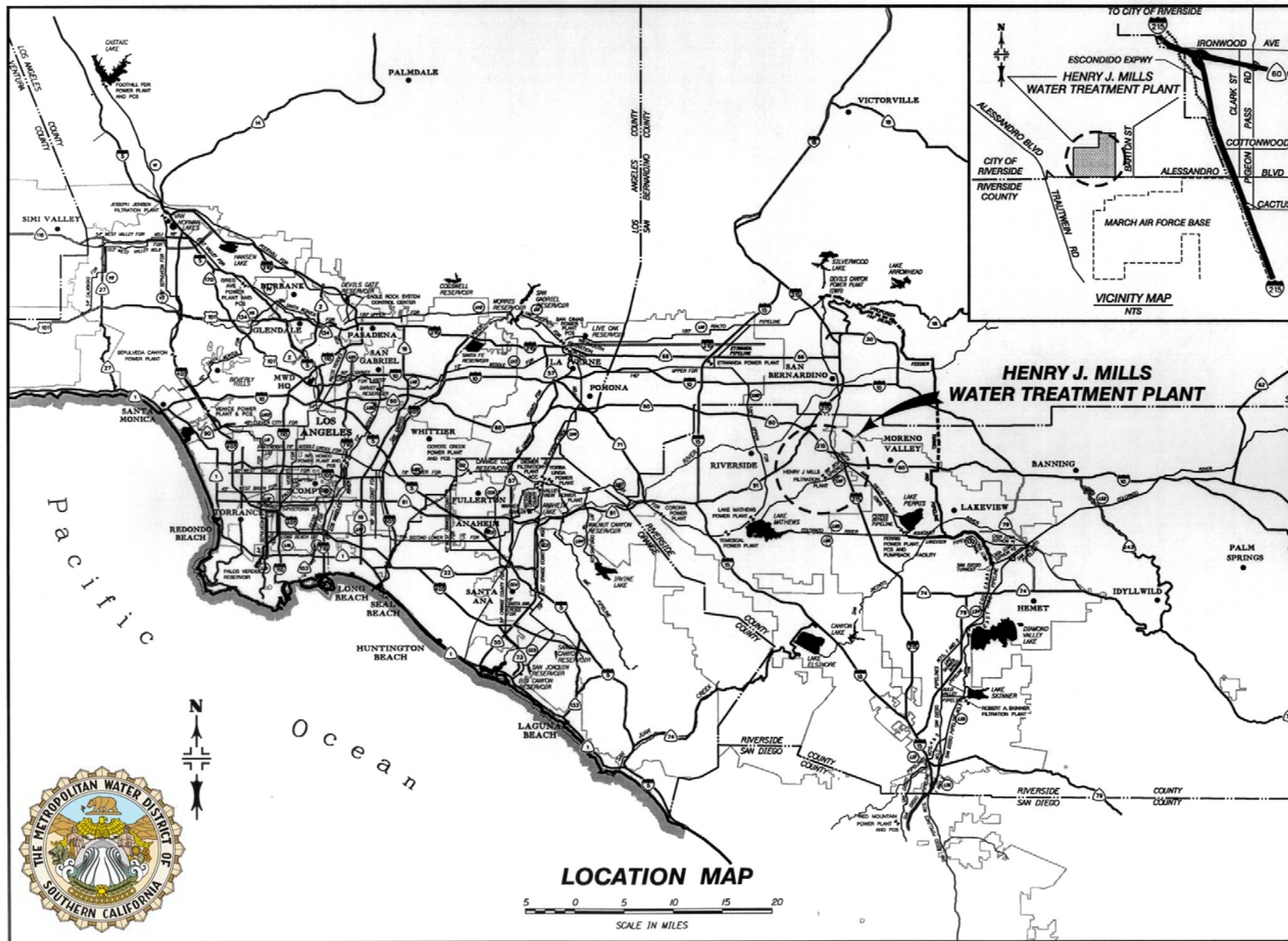
A breakdown of Board Action No. 2 for Appropriation No. 15434 is as follows:

	Previous Total Appropriated Amount (Aug. 2006)	Current Board Action No. 2 (Nov. 2007)	New Total Appropriated Amount
Labor			
Studies and Investigations	\$ 16,500	\$ -	\$ 16,500
Final Design	26,700	-	26,700
Owner Costs (Program mgmt., contract admin., permitting)	180,100 *	191,000	371,100
Submittals Review	-	189,000	189,000
Construction Inspection and Support	-	77,000	77,000
Control System Integration	-	42,000	42,000
Materials and Supplies	5,000	-	5,000
Ozone Eqpt. Procurement	-	3,403,950	3,403,950
Incidental Expenses	5,000	15,000	20,000
Professional/Technical Services	7,800	-	7,800
Camp Dresser McKee	449,510 *	74,000	523,510
Local Fabrication Inspection Firm	-	15,000	15,000
Performance Testing Consultant	-	30,000	30,000
Contracts	-	-	-
Remaining Budget	9,390 *	263,050	272,440
Total	\$ 700,000	\$ 4,300,000	\$ 5,000,000

* Includes previous reallocation of \$82,510 from Remaining Budget to Owner Costs and Professional/Technical Services for development of equipment procurement package and negotiations with the manufacturer.

Funding Request

Program Name:	Mills Ozone System Reliability Program		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15434	Board Action No.:	2
Requested Amount:	\$ 4,300,000	Capital Program No.:	15434-W
Total Appropriated Amount:	\$ 5,000,000	Capital Program Page No.:	E-48
Total Program Estimate:	\$ 7,500,000	Program Goal:	W - Water Quality





**Ozone
Generation
Building**

**Existing
Contactors Nos. 1 & 2**

**New Ozone
Contactors Nos. 3 & 4**

Alessandro Blvd.