

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

June 12, 2007 Board Meeting

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8-3

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**Subject**

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Appropriate \$22.7 million; and award a \$14,556,000 contract to C.W. Roen Construction Co. to construct ozone contactors at the Mills plant (Approp. 15424)

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**Description**

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**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 to treat 160 mgd, which is the design capacity of the existing ozone contactors. The Mills plant exclusively treats State project water and serves Eastern Municipal Water District and Western Municipal Water District of Riverside County.

When the Mills Oxidation Retrofit Program (ORP) was initiated in 1996, the ozone treatment capacity was established at 326 mgd to match the overall hydraulic capacity of the Mills plant following completion of Mills Expansion No. 2 in 1996. Due to low flow conditions in the service area, Modules 1 and 2 were removed from service in 1997 and have not been operated since. In January 2000, the hydraulic design capacity of the Mills ozone contactors was reduced to 160 mgd due to the low flow conditions. Construction of the Mills ORP was completed in 2003 with an ozone hydraulic capacity of 160 mgd.

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. The hydraulic capacity upgrade is expected to be completed in 2009 to meet increased treated water demands in eastern Riverside County. In concert with this 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.

This action awards a construction contract for the addition of Ozone Contactors 3 and 4. Elements of work include constructing two ozone contactors, making tie-ins to existing process and utility lines, and installing two Metropolitan-furnished ozone control panels. As discussed with the Board in August 2006, these control panels will be purchased through a separate procurement contract that Metropolitan will negotiate directly with Ozonia North America, the supplier of the existing Mills ozone equipment. Ozonia was selected via competitive bid to supply ozone equipment for each of Metropolitan's plants. Staff will return to the Board at a later date for award of the procurement contract for the additional Mills ozone system equipment.

**Ozone Contactors 3 and 4 – Construction (\$22.7 million)**

Specifications No. 1549 for Mills Ozone Contactors 3 and 4 was advertised for bids on March 13, 2007. As shown in [Attachment 2](#), four bids were received and opened on May 10, 2007. The low bid from C.W. Roen Construction Co., in the amount of \$14,556,000 complies with the requirements of the specifications. The bids ranged from \$14,556,000, to \$20.5 million. The engineer's estimate was \$22.45 million. Staff believes that the low bid amount for this contract could reflect potential savings in concrete construction; lower pricing for electrical equipment; and more competitive bids due to increased competition from greater subcontractor participation. In addition, the low bidder has taken advantage of an opportunity within the specifications to eliminate several temporary water gates by aggressively scheduling the construction work. Nevertheless, staff's opinion is that the low bid amount will present a challenge to C.W. Roen Construction Co. to complete the

contract profitably. C.W. Roen is an experienced contractor which has previously completed work for Metropolitan, and it has indicated its desire to proceed with the work in accordance with the bidding documents and with its bid amount. For this contract, Metropolitan has established a Small Business Enterprise (SBE) participation level of at least 20 percent of the bid amount. C.W. Roen Construction Co. has committed to meet this level of participation.

This action appropriates \$22.7 million in budgeted funds and awards a \$14,556,000 construction contract to C.W. Roen Construction Co. for the addition of Ozone Contactors 3 and 4 at the Mills plant. In addition to the amount of the contract, the appropriated funds include \$1.43 million for Metropolitan force construction and installation of security-related equipment, \$2.28 million for construction inspection, \$2.4 million for staff and consultant support, and \$2,034,000 for remaining budget. Support activities include project management, coordination with permitting agencies, environmental monitoring, technical support during construction, and preparation of operating manuals and record drawings.

As this project was designed primarily by Metropolitan staff, technical support during construction will also be provided by staff, with assistance from specialty consultants. Lee & Ro, Inc. is recommended to provide technical support to coordinate this work with the construction of other Mills Capacity Upgrade projects for which Lee & Ro is the engineer of record. Lee & Ro was selected through a competitive process (Request for Qualifications No. 719) and work will be performed under a board-authorized agreement. No amendment to the existing Lee & Ro agreement is required. The SBE participation level established for this agreement is 20 percent.

Environmental monitoring is recommended to be performed by BonTerra Consulting. BonTerra was selected through a competitive process (Request for Proposals No. 763), and work will be performed under an existing agreement authorized by the General Manager. No amendment to the existing BonTerra agreement is required. BonTerra is an SBE firm and thus achieves 100 percent SBE participation.

A specialty firm will install security-related equipment to integrate the new and expanded facilities with the existing Mills plant security system. Installation of security-related equipment will be performed under a new comprehensive security agreement which will address multiple Metropolitan facilities. Authority to enter into this new agreement will be requested from the Board in July 2007; funding for the work is included in this action.

Metropolitan staff will perform construction inspection of this contract. For this project, the anticipated cost of inspection and support is approximately 14 percent of the total construction cost. Engineering Services' goal for inspection of projects with construction cost greater than \$3 million is 9 percent to 12 percent. Staff has estimated the level of inspection required for this project based on the nature and complexity of the work.

This project has been evaluated and recommended by Metropolitan's Capital Investment Plan Evaluation Team and funds have been included within the fiscal year 2006/07 capital budget. See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, and [Attachment 3](#) for the Location Maps.

### ***Project Milestones***

June 2009 – Completion of Ozone Contactors 3 and 4 construction

### **Policy**

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Metropolitan Water District Administrative Code Section 5108: Appropriations

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

### **California Environmental Quality Act (CEQA)**

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CEQA determination for Option #1:

The environmental effects from the design, construction, and operation of the Ozone Contactors 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 construction contract for Contactors 3 and 4 at the Mills plant 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 security-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 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 security-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

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### Option #1

Adopt the CEQA determination and

- a. Appropriate \$22.7 million in budgeted funds; and
- b. Award a \$14,556,000 contract to C.W. Roen Construction Co. to construct Mills Ozone Contactors 3 and 4.

**Fiscal Impact:** \$22.7 million of budgeted funds under Approp. 15424

**Business Analysis:** This option would increase the hydraulic capacity of the Mills ozone contactors to match the 326-mgd capacity of the plant in order to meet increased treated water demands in eastern Riverside County.

### Option #2

Do not award the construction contract and re-advertise for bids.

**Fiscal Impact:** Unknown, but probably higher than current bid

**Business Analysis:** This option would delay completion of the Mills Capacity Upgrade Program and increase the risk of not meeting treated water demands.

**Staff Recommendation**

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Option #1

  
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Roy L. Wolfe  
Manager, Corporate Resources

5/18/2007

Date

  
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Jeffrey Kightlinger  
General Manager

5/25/2007

Date

**Attachment 1 – Financial Statement**

**Attachment 2 – Abstract of Bids**

**Attachment 3 – Location Maps**

BLA #5244

**Financial Statement for Mills Capacity Upgrade Program**

A breakdown of Board Action No. 4 for Appropriation No. 15424 is as follows:

	<b>Previous Total Appropriated Amount (May 2006)</b>	<b>Current Board Action No. 4 (Jun. 2007)</b>	<b>New Total Appropriated Amount</b>
Labor			
Studies and Investigations	\$ 1,030,000	\$ -	\$ 1,030,000
Final Design	2,114,000	-	2,114,000
Owner Costs (Program management, contract administration)	1,431,000	1,613,000	3,044,000
Submittals Review	-	437,000	437,000
Construction Inspection and Support	-	2,280,000	2,280,000
Metropolitan Force Construction	57,000	1,163,000	1,220,000
Materials and Supplies	107,000	181,000	288,000
Operating Equipment	-	65,000	65,000
Incidental Expenses	25,000	21,000	46,000
Professional/Technical Services	4,451,000	-	4,451,000
Security Firm	-	164,000	164,000
BonTerra Consulting	-	150,000	150,000
Lee & Ro, Inc.	-	36,000	36,000
Contracts	-	14,556,000	14,556,000
Remaining Budget	753,000	2,034,000	2,787,000
<b>Total</b>	<b>\$ 9,968,000</b>	<b>\$ 22,700,000</b>	<b>\$ 32,668,000</b>

**Funding Request**

<b>Program Name:</b>	Mills Capacity Upgrade Program		
<b>Source of Funds:</b>	Revenue Bonds, Replacement and Refurbishment or General Funds		
<b>Appropriation No.:</b>	15424	<b>Board Action No.:</b>	4
<b>Requested Amount:</b>	\$ 22,700,000	<b>Capital Program No.:</b>	15424-S
<b>Total Appropriated Amount:</b>	\$ 32,668,000	<b>Capital Program Page No.:</b>	E-44
<b>Total Program Estimate:</b>	\$ 101,000,000	<b>Program Goal:</b>	S – Supply & Delivery Reliability

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received on May 10, 2007 at 2:00 P.M.**

**Specifications No. 1549**

**Henry J. Mills Water Treatment Plant  
Ozone Contactors 3 and 4**

The project consists of constructing two ozone contactors, installing Metropolitan-furnished ozone equipment, and making tie-ins to existing process and utility lines within the existing contactor structure at the Mills plant.

**Engineer's Estimate: \$22,450,000**

<b>Bidder and Location</b>	<b>Total</b>	<b>SBE \$</b>	<b>SBE %</b>	<b>Met SBE*</b>
C.W. Roen Construction Co., Danville, CA	\$ 14,556,000	\$ 3,533,258	24.3%	Yes
Brutoco Engineering & Construction, Inc., Fontana, CA	\$ 16,575,000	-	-	-
Kiewit Pacific Co., Santa Fe Springs, CA	\$ 17,717,000	-	-	-
Shimmick Construction Co., Inc., Hayward, CA	\$ 20,500,000	-	-	-

\*SBE (Small Business Enterprise) participation set at 20 percent



