

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

October 11, 2005 Board Meeting

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7-4

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**Subject**

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Appropriate \$942,000 and authorize final design of solids thickeners as part of the Jensen Improvements Program (Approp. 15371)

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**Description**

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The Joseph Jensen Water Treatment Plant was placed into service in 1972 with an initial capacity of 350 million gallons per day (mgd). The plant was expanded in the early 1990s to its current capacity of 750 mgd. The Jensen plant exclusively treats State project water and delivers treated water to Metropolitan's Central Pool portion of the distribution system.

**Jensen Solids Thickeners – Design (\$942,000)**

Solids produced as a byproduct of treating water at the Jensen plant are currently processed by four thickeners and are mechanically dewatered with temporary (leased) equipment. In April 2004, a conceptual study which evaluated alternatives for permanent solids handling facilities at the Jensen plant was completed. The study concluded that two additional solids thickeners are required to provide operational flexibility and reliability. The study also recommended a permanent mechanical dewatering system (consisting of a dewatering building, a belt press system, and solids storage hoppers) and solids drying beds to cost-effectively dewater solids for off-site disposal. A mechanical dewatering system is currently in operation at the Skinner plant, and others are in construction at the Diemer and Weymouth plants. Solids drying beds are used at the Mills plant.

Metropolitan's Board authorized preliminary design of the Jensen Solids Handling Facilities in April 2004. The scope of the preliminary design included two solids thickeners and a mechanical dewatering system. Addition of these solids handling improvements will be implemented in a phased approach. The two thickeners will be designed and constructed in the first phase; the environmental documentation for the two thickeners was previously adopted by the Board, which will expedite their completion. In the second phase, the mechanical dewatering system, which requires new environmental documentation, will be designed and constructed. The mechanical dewatering system will provide increased solids handling capabilities and relieve Metropolitan's reliance on temporary operations with leased equipment. At this time, staff recommends commencing final design of the two new thickeners. These thickeners will add storage capacity, provide more efficient thickening capability, and improve operational flexibility.

This action authorizes final design of the Jensen solids thickeners, which will include two new solids thickeners and supporting facilities. The final design will be performed by a consultant, Montgomery Watson Harza, Inc. (MWH), under an existing professional services agreement. MWH was selected through a competitive process (Request for Qualifications 578) to perform this type of work, and authority to enter into the agreement was approved by Metropolitan's Board in June 2003. No amendment to the MWH agreement is required for this work.

The final design cost as a percentage of the estimated total construction cost is approximately 12 percent. The Engineering Services goal for design of projects with construction costs less than \$3 million is 9 to 15 percent. Final design of the thickeners is planned to be completed by June 2006. Staff plans to return to the Board in early 2007 for authorization of final design for the remaining components of the Jensen Solids Handling Facilities.

This project has been evaluated and recommended by Metropolitan’s Capital Investment Plan Evaluation Team and funds have been included within the fiscal year 2005/06 capital budget. See [Attachment 1](#) for the Financial Statement and [Attachment 2](#) for the Location Map.

**Policy**

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Metropolitan Water District Administrative Code Section 5108: Capital Project Appropriation  
 Metropolitan Water District Administrative Code Section 8117: Professional and Technical Consultants

**California Environmental Quality Act (CEQA)**

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CEQA determination for Option #1:

To comply with CEQA and the State CEQA Guidelines, Metropolitan as the Lead Agency prepared and processed the Mitigated Negative Declaration (MND) for the Joseph P. Jensen Filtration Plant Expansion. Board adoption of the MND, along with approval of the Jensen Expansion, occurred in March 1989. The Board approved an Addendum to the MND for the Joseph P. Jensen Filtration Plant Expansion in April 1990. The present board action is solely based on approving final design of the Jensen plant solids thickener facilities expansion and not on any changes to the approved project. Hence, the previously adopted environmental documentation in conjunction with the current action fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further environmental documentation is necessary for the Board to act on with respect to the proposed action.

The CEQA determination is: Determine that the proposed action has been previously addressed in the adopted 1989 MND and 1990 Addendum, and that no further environmental analysis or documentation is required.

CEQA determination for Option #2:

None required

**Board Options/Fiscal Impacts**

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**Option #1**

- Adopt the CEQA determination and
    - a. Appropriate \$942,000 in budgeted funds; and
    - b. Authorize final design of the Jensen solids thickeners.
- Fiscal Impact:** \$942,000 of budgeted funds under Approp. 15371

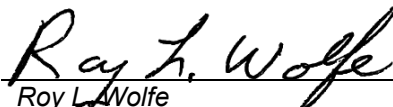

**Option #2**

Do not authorize the work described in this letter. Implementation of this option will forego an opportunity to reduce long-term O&M costs and will increase the risk of unplanned partial plant outages.  
**Fiscal Impact:** None

**Staff Recommendation**

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Option #1

 Roy L. Wolfe Manager, Corporate Resources	9/16/2005 Date
 Dennis B. Underwood CEO/General Manager	9/26/2005 Date

[Attachment 1 – Financial Statement](#)  
[Attachment 2 – Location Map](#)

**Financial Statement for Jensen Water Treatment Plant Improvements Program**

A breakdown of Board Action No. 9 for Appropriation No. 15371 for the Jensen Water Treatment Plant Improvements Program is as follows:

	<b>Previous Total Appropriated Amount (Jun. 2005)</b>	<b>Current Board Action No. 9 (Oct. 2005)</b>	<b>New Total Appropriated Amount</b>
Labor			
Studies and Investigations	\$ 552,500*	\$ 0	\$ 552,500
Design and Specifications	933,000	0	933,000
Owner Costs (Program management, design review, bidding process)	688,000*	291,000	979,000
Construction Inspection and Support	858,000	0	858,000
Metropolitan Force Construction	1,023,500*	0	1,023,500
Material and Supplies	1,559,000	10,000	1,569,000
Incidental Expenses	94,000	10,000	104,000
Professional/Technical Services	1,142,725*	505,000	1,647,725
Equipment Use	80,000	5,000	85,000
Contracts	6,394,275	0	6,394,275
Remaining Budget	1,053,000*	121,000	1,174,000
<b>Total</b>	<b>\$14,378,000</b>	<b>\$ 942,000</b>	<b>\$15,320,000</b>

\* Includes reallocation of \$603,725 Remaining Budget to Professional/Technical Services and project management for solids handling facilities value engineering and geotechnical investigation; to Metropolitan Force Construction for ferric chloride tank farm construction; and to Studies and Investigations for solids handling facilities site selection.

**Funding Request**

<b>Program Name:</b>	Jensen Water Treatment Plant Improvements Program		
<b>Source of Funds:</b>	Revenue Bonds, Replacement and Refurbishment or General Funds		
<b>Appropriation No.:</b>	15371	<b>Board Action No.:</b>	9
<b>Requested Amount:</b>	\$ 942,000	<b>Capital Program No.:</b>	15371-I
<b>Total Appropriated Amount:</b>	\$ 15,320,000	<b>Capital Program Page No.:</b>	E-41
<b>Program Estimate:</b>	\$ 81,730,000	<b>Program Goal:</b>	I-Infrastructure Reliability

