



- Board of Directors  
*Engineering and Operations Committee*

12/11/2012 Board Meeting

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**7-7**

## **Subject**

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Appropriate \$770,000; and authorize (1) final design of a solids transfer system for the Joseph Jensen Water Treatment Plant; (2) agreement with Los Angeles Department of Water and Power for Metropolitan use of solids lagoons at the Aqueduct Filtration Plant; and (3) agreement with Los Angeles Department of Recreation and Parks for its use of ball fields at the Jensen plant (Approp. 15371)

## **Executive Summary**

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This action authorizes final design of a solids transfer system and related agreements to permit Metropolitan use of solids lagoons located on the grounds of the Los Angeles Department of Water and Power's Aqueduct Filtration Plant. The agreements are consistent with the terms and agreements that were authorized by Metropolitan's Board in July 2012. Use of the LADWP lagoons will support reliable, long-term solids handling at the Joseph Jensen Water Treatment Plant.

## **Timing and Urgency**

In July 2012, Metropolitan's Board authorized staff to negotiate with the Los Angeles Department of Water and Power (LADWP) to develop a 50-year agreement for Metropolitan use of solids lagoons on the grounds of LADWP's Aqueduct Filtration Plant. Under this strategy, the long-term use of LADWP lagoons, supplemented by a planned mechanical solids dewatering facility at the Jensen plant, would together support a Jensen flow capacity of 500 mgd. This arrangement would provide a long-term solution for the Jensen plant's solids handling needs, would reduce Metropolitan's up-front capital expenditures and minimize near-term impacts on Metropolitan's treated water surcharge, and would allow a local youth sports organization to continue the use of its ball fields at the Jensen plant.

Staff has concluded the negotiations with LADWP, and has completed other predecessor steps necessary to move forward with needed Jensen solids handling improvements utilizing the LADWP lagoons. Completed steps include:

- Final terms and conditions have been negotiated with the LADWP for Metropolitan use of solids lagoons at the site of the Aqueduct Filtration Plant for a period of 50 years. These terms and conditions are consistent with those authorized by Metropolitan's Board in July 2012. The Metropolitan/LADWP agreement was approved by the Los Angeles City Council in September 2012.
- Final terms and conditions have been negotiated with the Los Angeles Department of Recreation and Parks (LADRP) for its continued use of a portion of the Jensen plant site for a period of 45 years. These terms and conditions are consistent with those authorized by Metropolitan's Board in July 2012. The Metropolitan/LADRP agreement was approved by the Los Angeles City Council in September 2012.
- Preliminary design of a solids transfer system from the Jensen plant to the LADWP lagoons has been initiated, while environmental documentation for the Jensen solids handling improvements has been completed.

Staff recommends moving forward with final design of the new solids transfer system and with authorization of the two agreements at this time. The Jensen Solids Handling Improvements project has been reviewed with Metropolitan's Capital Investment Plan (CIP) prioritization criteria, and is categorized as a Cost Efficiency/Productivity project. Funds for this action are available within Metropolitan's capital expenditure plan for fiscal year 2012/13.

## **Details**

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### **Background**

The Jensen plant was placed into service in 1972 with an initial capacity of 400 mgd. The plant was expanded in the early 1990s to its current capacity of 750 mgd. The Jensen plant exclusively treats water from the West Branch of the State Water Project, and delivers it to Metropolitan's Central Pool portion of the distribution system and to exclusive service areas in the western portion of the distribution system.

Residual chemicals and settled solids collected from the Jensen plant's sedimentation basins are currently thickened on-site and then air-dried at two nearby LADWP lagoons on the grounds of its Aqueduct Filtration Plant. This cooperative arrangement, which was initiated in February 2005, provides sufficient solids handling capacity to process only 15 percent of the solids generated at the Jensen plant's maximum flowrate under design conditions. Solids produced at the Jensen plant may also be discharged to a city of Los Angeles sanitary sewer. However, sewer disposal is expensive and is limited by the discharge permit.

In July 2012, Metropolitan's Board authorized staff to negotiate with LADWP for a 50-year use agreement that would allow Metropolitan to utilize solids lagoons on LADWP property. In conjunction with a future mechanical dewatering facility at the Jensen plant, this agreement would meet Metropolitan's long-term solids handling needs while allowing a local youth sports organization to maintain its current ball field location on the grounds of the Jensen plant. Metropolitan's Board also authorized staff to negotiate with LADWP for a 45-year use agreement for that youth sports operation, contingent upon the LADWP solids lagoon use agreement remaining in effect. These agreements would provide a long-term solution for the Jensen plant's solids handling needs, would provide near-term financial benefits to Metropolitan, and would enhance the Jensen plant's operational reliability.

Staff has concluded the negotiations with LADWP and LADWP, and has completed other predecessor steps necessary to move forward with Jensen solids handling improvements utilizing the LADWP lagoons. This board action includes the following elements: (1) Approval of the project and adoption of a California Environmental Quality Act (CEQA) determination, which includes certification of the project's environmental impact report and addendum; (2) Authorization of the use agreements with LADWP and LADWP; and (3) Authorization for final design to proceed on the Jensen solids transfer system. Each element of this action is described below.

### **Jensen Solids Transfer System – Final Design Phase (\$770,000)**

The planned solids transfer system will transport thickened residual solids from the Jensen plant to newly refurbished LADWP lagoons at the Aqueduct Filtration Plant. The planned improvements will include 8,000 feet of pipeline; security fencing; utility conduits for transmission of supervisory control and data acquisition (SCADA) information; a utility crossing of Bull Creek; four lagoon inlet structures; and various valves, flow meters, cleanouts, and appurtenances.

Final design phase activities will include detailed field investigations, development of utility easements, preparation of drawings and specifications, development of a construction cost estimate, receipt of competitive bids, and all other activities in advance of award of a construction contract. The detailed field investigations will include field surveying, baseline record drawings, hazardous material testing, and potholing.

This action appropriates \$770,000 and authorizes final design phase activities for a solids transfer system for the Jensen plant. Final design will be performed by Metropolitan staff. The requested funds include \$285,000 for final design; \$97,000 for the detailed field investigations; \$38,000 for utility easements and right-of-way support; \$150,000 for project management, bid advertisement and award, and project controls; and \$200,000 for remaining budget.

The anticipated cost of final design is approximately 15 percent of the estimated construction cost. Engineering Services' goal for design of projects with construction cost less than \$3 million is 9 to 15 percent. The construction cost for this project is anticipated to range from \$1.8 million to \$2.3 million.

**Agreement No. 1 - Agreement with LADWP for Metropolitan Use of Solids Lagoons at the Aqueduct Filtration Plant**

This agreement has been developed in accordance with the terms and conditions that were authorized by Metropolitan's Board in July 2012. It provides a long-term solution for the Jensen plant's solids handling needs, reduces Metropolitan's initial capital expenditures, and minimizes near-term impacts to Metropolitan's treated water surcharge. The lagoon use agreement was approved by the Los Angeles City Council in September 2012.

For the 50-year duration of the lagoon use agreement, LADWP will allow Metropolitan to use four lagoons on the grounds of its Aqueduct Filtration Plant. Four existing lagoons will be rehabilitated by LADWP for Metropolitan's initial use. During the first ten years of the agreement, Metropolitan will construct two new lagoons on the Aqueduct Filtration Plant site and return two of the original lagoons to LADWP for its own use. LADWP will also design, construct, and operate a groundwater management system, at no cost to Metropolitan, so that high groundwater does not impact lagoon construction and/or operation.

The four lagoons are expected to have sufficient capacity to process 50 percent of the solids generated by the Jensen plant at a flowrate of 500 mgd under design conditions. During the past few years, the Jensen plant has processed all of its solids using only two LADWP lagoons due to favorable source-water quality and low water demands in the Jensen service area. If this trend continues, four LADWP lagoons could support expected near-term water demands up to 500 mgd.

Under the use agreement, LADWP will also pay for any discharge of Jensen plant solids to the city of Los Angeles sanitary sewer. This obligation will continue for the period prior to completion of Metropolitan's two new lagoons at the Aqueduct Filtration Plant site and completion of an on-site mechanical dewatering facility at the Jensen plant, subject to further feasibility studies and environmental analysis as necessary, up to October 1, 2024. With the use of the two rehabilitated LADWP lagoons and the two new lagoons, it is expected that construction of the mechanical dewatering facility at the Jensen plant may be deferred seven years or longer, reducing up-front capital expenditures.

Before the mechanical dewatering facility is operational, if the treated water demand increases significantly or water quality degrades substantially over a short period of time, the capacity of the four solids lagoons (and sewer discharge) may be insufficient to meet Metropolitan's needs. In this case, Metropolitan may temporarily contract with a belt-press vendor to dewater the solids while initiating design and construction of the mechanical solids dewatering facility at the Jensen plant site.

Terms incorporated into the use agreement include:

- LADWP will allow Metropolitan to use four solids lagoons on LADWP property at no cost, for a period of 10 years, and two solids lagoons on LADWP property at no cost, for the remainder of the 50-year term.
- LADWP will refurbish four existing solids lagoons for Metropolitan's initial use, and allow Metropolitan to construct two new lagoons in the future (to replace two of the initial lagoons), including conducting site characterization analyses to determine the baseline conditions of the four existing lagoons and two new lagoons.
- LADWP will construct and operate groundwater management facilities to minimize the impact of groundwater infiltration on the four existing lagoons and two new lagoons used by Metropolitan.
- LADWP will reimburse Metropolitan for all sanitary sewer disposal costs until Metropolitan constructs the two new lagoons at the Aqueduct Filtration Plant site and a permanent mechanical dewatering facility at the Jensen plant, until up to October 1, 2024.
- LADWP will indemnify, defend, and release/hold harmless Metropolitan from any liability due to occurrence/presence of hazardous waste to the extent permitted by law.
- Metropolitan will provide a no-cost lease to LADWP for use of ball fields at the Jensen plant for a period of 45 years, contingent upon the LADWP solids lagoon use agreement remaining in effect.

- Metropolitan may construct two new lagoons on LADWP property at its cost, and will relinquish use of two existing LADWP lagoons within ten years.
- Metropolitan will construct a new solids transfer system from the Jensen plant to the LADWP lagoons.
- Metropolitan will prepare environmental documents related to the 50-year use agreement and the solids transfer system.
- If, after completing its feasibility study and preliminary design, Metropolitan determines that it is feasible and cost-effective to construct the new lagoons on LADWP property, Metropolitan will prepare environmental documents in the future for the two new lagoons. Metropolitan and LADWP will equally share in the cost for preparation of the documentation and for mitigation for the new lagoons. Construction of the new lagoons will not proceed until further technical and CEQA analyses are completed, and all applicable project approvals are obtained.
- LADWP will secure pre-construction site permits for the two future lagoons, and Metropolitan will secure construction-related permits.
- If Metropolitan determines that construction of the new lagoons is not feasible or cost-effective, or that the groundwater management facilities are not operated and maintained to minimize groundwater infiltration impacts, Metropolitan may terminate its use of the LADWP lagoons and LADWP's use of the ball fields, and Metropolitan will have five years to transition off the use of LADWP's lagoons and to construct its own lagoons on Metropolitan property.
- Metropolitan will be responsible for any of its solids that exceed Title 22 waste standards, including removal and cleanup as required.
- Similar to standard tenant obligations, Metropolitan agrees to indemnify and hold LADWP harmless for any of Metropolitan's actions or omissions on LADWP's property that cause LADWP damages excluding any damages that arise from any commingling with LADWP's solids or water for which LADWP is solely responsible.

This action authorizes an agreement with LADWP for Metropolitan use of solids lagoons on the grounds of the Aqueduct Filtration Plant, and authorizes the General Manager to execute the agreement.

#### **Agreement No. 2 - Agreement with LADWP for Its Use of Ball Fields at the Jensen Plant**

This agreement permits LADWP to continue the use of baseball and soccer fields by a youth sports organization on a portion of the Jensen plant property. This area at the southeast corner of the Jensen plant is the future location of the plant's on-site solids lagoons. An existing lease with LADWP for use of the ball field area was due to expire in January 2011, but has been extended on a month-to-month basis as Metropolitan and LADWP negotiated an extension. Staff has completed the negotiation of a 45-year ball field use agreement with LADWP in conjunction with the negotiations for the 50-year lagoon use agreement with LADWP. The ball field use agreement is consistent with the terms and conditions that were authorized by Metropolitan's Board in July 2012, and was approved by the Los Angeles City Council in September 2012.

For the 45-year duration of the ball field use agreement, Metropolitan will allow the youth sports organization to continue its operations on the Jensen site, subject to the terms and conditions of the use agreement. Under these terms and conditions, Metropolitan will be paid for all water service provided to the ball fields at Metropolitan's full service water rate. If Metropolitan terminates its use of the LADWP lagoons at the Aqueduct Filtration Plant, LADWP must vacate the Jensen ball field site within 12 months. Following removal of the ball field facilities, Metropolitan will have a period of five years to transition from use of the LADWP lagoons to its own facilities on the grounds of the Jensen plant.

This action authorizes a lease agreement with the LADWP for use of ball fields on the site of the Jensen plant, and authorizes the General Manager to execute the agreement.

#### **Summary**

This action appropriates \$770,000; authorizes final design of a solids transfer system for the Jensen plant; authorizes an agreement with LADWP for Metropolitan use of solids lagoons on the grounds of the Aqueduct Filtration Plant; and authorizes an agreement with LADWP for its use of ball fields at the Jensen plant.

The Jensen Solids Handling Improvements have been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2012/13 capital expenditure plan. See [Attachment 1](#) for the Financial Statement and [Attachment 2](#) for the Location Map.

This work is included within capital Appropriation No. 15371, the Jensen Improvements Program, which was initiated in fiscal year 2001/02. Other projects authorized under Appropriation No. 15371 include the Jensen Ferric Chloride Retrofit, Filter Media Replacement, Solids Thickeners Nos. 5 & 6, and the Administration Building Seismic Upgrades. With the present action, the total funding for Appropriation No. 15371 will increase from \$36,352,000 to \$37,122,000.

### ***Project Milestone***

September 2013 – Completion of final design for the Jensen solids transfer system

### **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:

As required under CEQA and the State CEQA Guidelines, a Notice of Preparation (NOP) was prepared and circulated for public review on November 19, 2009. The NOP indicated that the proposed project had the potential to cause one or more significant effects on the physical environment and that Metropolitan would prepare a Draft Environmental Impact Report (Draft EIR). The 30-day public review period for the NOP ended on December 23, 2009. During the review period, comments and input were solicited from federal, state and local government agencies that may have an interest in the proposed project. The NOP is included as Appendix A of the Draft EIR.

On July 6, 2010, Metropolitan released the Draft EIR for public review for a period of 45 days and filed the Notice of Completion. The Notice of Availability of the Draft EIR was published in the Los Angeles Daily News on July 6, 2010, and copies of the Draft EIR were provided to Metropolitan's Reference and Research Center and the Porter Ranch Library, Granada Hills Library, Sylmar Branch Library, and the San Fernando Library. Moreover, Metropolitan distributed approximately 20 copies of the Draft EIR to responsible agencies, trustee agencies, and affected public agencies. Nearby property owners and other interested public groups were sent copies of the Notice of Availability directing them to the Metropolitan webpage with the posted documents. The public review period ended on August 20, 2010. Metropolitan received five letters commenting on the Draft EIR. These comment letters and responses to comments are included in the Final EIR.

After circulation of the Draft EIR, LADWP agreed to allow Metropolitan to continue use of the lagoons on LADWP property, making it unnecessary to relocate the ball fields at this time. Staff determined that continued use of LADWP property may lessen the severity of the potential environmental impacts, but would require modifications to the proposed project

CEQA and the State CEQA Guidelines require the preparation of an addendum to a previously certified EIR if changes or additions are necessary, but none of the conditions described in Section 15162 of the State CEQA Guidelines calling for the preparation of a subsequent EIR have occurred (Section 15164 of the State CEQA Guidelines). The proposed modifications also do not meet any of the conditions requiring the preparation of a supplemental EIR (State CEQA Guidelines, Section 15163). Since the proposed modifications to the project would not result in any new significant effects or any substantial increase in the severity of any significant effect identified in the Draft EIR, an addendum is the most appropriate means of documenting the proposed changes to the project. Accordingly, Addendum No. 1 to the Final EIR has been prepared; references hereafter to the Final EIR include Addendum No. 1.

During the certification process, the Board must certify that the Final EIR has been completed in compliance with CEQA and the State CEQA Guidelines. The Board also must certify that it has reviewed and considered the information presented in the Final EIR. Finally, the Board must certify that the Final EIR reflects Metropolitan's independent judgment and analysis.

CEQA requires that public agencies adopt a mitigation monitoring and reporting program (MMRP) when they approve a project that contains mitigation measures to reduce or avoid significant environmental impacts (Public Resources Code § 21081.6). The Final EIR evaluated potentially significant environmental impacts and proposed feasible mitigation measures. Hence, feasible mitigation measures were prepared and included in the MMRP.

Metropolitan staff will be responsible for administering the MMRP. With respect to impact analyses for the Final EIR, three environmental categories were identified that could not be mitigated to less-than-significant levels. These environmental categories were Air Quality, Noise, and Cumulative Effects (related to Air Quality from construction activities). These impacts can be reduced by the adoption of feasible mitigation measures. However, because it was found that these impacts could not be feasibly mitigated to below a level of significance, the Board will need to consider adoption of a Statement of Overriding Considerations (SOC). The SOC concludes that the benefits of the proposed project substantially outweigh the unavoidable significant adverse impacts that would result from project implementation. The Board will also need to adopt the Findings of Fact (findings) and the MMRP.

See [Attachment 3](#) for the Draft EIR; [Attachment 4](#) for the Final EIR (Responses to Comments and clarifications to the Draft EIR); [Attachment 5](#) for the findings, the SOC and the MMRP; and [Attachment 6](#) for Addendum No. 1. Attachments 3, 4, 5 and 6 are available for review in the Board Executive Secretary's Office.

The CEQA determination is:

(1) Certify that the Final EIR has been completed in compliance with CEQA and the State CEQA Guidelines; certify that the Board has reviewed and considered the information presented in the Final EIR; certify that the Final EIR reflects Metropolitan's independent judgment and analysis; and adopt the findings, the SOC, and the MMRP.

(2) Certify that Addendum No. 1 was prepared in compliance with CEQA and the State CEQA Guidelines; that Addendum No.1 reflects Metropolitan's independent judgment and analysis; that the Board has reviewed and considered the information contained in Addendum No.1 and the Final EIR; and that based on such review and consideration, the Board finds that there is no substantial evidence that the proposed modifications to the previously approved project will create any new significant impacts or substantially increase the severity of any previously identified significant effects.

CEQA determination for Option # 2:

None required

## **Board Options**

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### **Option #1**

Adopt the CEQA determination and

- a. Appropriate \$770,000;
- b. Authorize final design of a solids transfer system for the Jensen plant;
- c. Authorize agreement with Los Angeles Department of Water and Power for use of solids lagoons at the Aqueduct Filtration Plant; and
- d. Authorize agreement with Los Angeles Department of Recreation and Parks for its use of ball fields at the Jensen plant.

**Fiscal Impact:** \$770,000 of capital funds under Approp. 15371.

**Business Analysis:** This option will provide reliable, long-term Jensen plant operation for a flowrate of 500 mgd, and will reduce up-front capital expenditures of approximately \$29.3 million from deferral of the mechanical dewatering facility at the Jensen plant for seven years or longer. The projected total cost to implement this option, including future facilities, is anticipated to range from \$42 million to \$52 million.

### Option #2

Do not proceed with the project or authorize the agreements at this time.


**Fiscal Impact:** The current capacity of the two LADWP solids lagoons used by the Jensen plant will be insufficient to handle all residual solids generated at the plant, during periods of either peak Jensen flowrates or unfavorable source-water quality. The discharge of excess solids (those that exceed the LADWP lagoons' capacity) into the sanitary sewer is estimated to cost between \$3 million and \$5 million per year, based on an annual average plant flowrate of 300 mgd. This cost would increase with higher plant flowrates and unfavorable source-water quality.

**Business Analysis:** This option would delay completion of the solids transfer system and refurbishment of the four LADWP lagoons for Metropolitan's use. After the current agreement for use of two LADWP lagoons expires in February 2014, the Jensen plant would discharge all solids to the sanitary sewer. Jensen plant capacity could be limited based on discharge limitations to the sewer. Alternately, an on-site solids handling project at the Jensen plant would need to be initiated. The on-site facilities would take approximately four years to complete, and would have an anticipated cost between \$47 million and \$52 million.

### Staff Recommendation

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Option #1

  
 \_\_\_\_\_ 11/27/2012  
 Gordon Johnson  
 Manager/Chief Engineer,  
 Engineering Services  
 Date

  
 \_\_\_\_\_ 11/29/2012  
 Jeffrey Kightlinger  
 General Manager  
 Date

[Attachment 1 – Financial Statement](#)

[Attachment 2 – Location Map](#)

[Attachment 3 – Draft Environmental Impact Report](#)

[Attachment 4 – Final Environmental Impact Report](#)

[Attachment 5 – Findings of Fact, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program](#)

[Attachment 6 – Addendum No. 1 to Final Environmental Impact Report](#)

## Financial Statement for Jensen Water Treatment Plant Improvements Program

A breakdown of Board Action No. 19 for Appropriation No. 15371 for Jensen solids handling improvements<sup>1</sup> is as follows:

	<b>Previous Total Appropriated Amount (Oct. 2012)</b>	<b>Current Board Action No. 19 (Dec. 2012)</b>	<b>New Total Appropriated Amount</b>
Labor			
Studies & Investigations	\$ 2,031,415	\$ 123,000	\$ 2,154,415
Final Design	3,260,553	282,000	3,542,553
Owner Costs (Program mgmt., bidding process)	3,712,098	148,000	3,860,098
Construction Inspection & Support	2,211,400	-	2,211,400
Submittals Review & Record Drwgs.	115,000	-	115,000
Metropolitan Force Construction	2,153,400	-	2,153,400
Materials & Supplies	2,167,219	-	2,167,219
Incidental Expenses	213,184	7,000	220,184
Professional/Technical Services	4,015,498	10,000	4,025,498
Equipment Use	84,000	-	84,000
Contracts	16,270,497	-	16,270,497
Remaining Budget	117,736 <sup>2</sup>	200,000	317,736
<b>Total</b>	<b>\$ 36,352,000</b>	<b>\$ 770,000</b>	<b>\$ 37,122,000</b>

## 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>	19
<b>Requested Amount:</b>	\$ 770,000	<b>Capital Program No.:</b>	15371-I
<b>Total Appropriated Amount:</b>	\$ 37,122,000	<b>Capital Program Page No.:</b>	312
<b>Total Program Estimate:</b>	\$ 100,925,000	<b>Program Goal:</b>	I-Infrastructure Reliability

<sup>1</sup> The total amount expended to date on the Jensen solids handling improvements is approximately \$3,000,000.

<sup>2</sup> Includes previous reallocation of \$984,565 from Remaining Budget to the following projects: (1) \$472,000 for preliminary design and environmental documentation for the Jensen solids handling improvements; (2) \$228,919 for development of project options and preparation of multiple agreements to support those options; (3) \$105,528 for baseline record drawing preparation for the Jensen dry polymer building; and (4) \$178,118 for equipment procurement for the traveling bridge demonstration project.



# Joseph Jensen Water Treatment Plant

