

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

September 9, 2008 Board Meeting

8-2

Subject

Appropriate \$10.54 million; award \$5,499,000 contract to Brutoco Engineering & Construction, Inc. for Jensen Solids Thickeners Nos. 5 and 6; and authorize (1) preparation of environmental documentation for the Jensen Solids Dewatering Facility and Lagoons project; and (2) professional agreements with Environmental Science Associates and Ninyo & Moore (Approp. 15371)

Description

This action awards a contract to construct Solids Thickeners Nos. 5 and 6 at the Joseph Jensen Water Treatment Plant, and authorizes preparation of environmental documentation, geotechnical investigations, and additions to the preliminary design scope for the Jensen Solids Dewatering Facility and Lagoons project. These two projects will address the Jensen plant's long-term solids processing needs. The solids thickeners project will add needed solids processing capacity, ensure water quality compliance, increase decant washwater recovery, provide more efficient thickening, and improve plant operational flexibility and reliability. The future dewatering facility and lagoons project will enable on-site dewatering of residual solids for off-site disposal. These two projects are categorized as Infrastructure Upgrade projects and are budgeted within Metropolitan's Capital Investment Plan (CIP).

Background

The Jensen 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 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 on the west side of the distribution system.

Residual solids produced from the Jensen plant's water treatment process are currently thickened on-site and then air-dried at the Los Angeles Department of Water and Power's (LADWP's) Los Angeles Aqueduct Filtration Plant solids lagoons. This cooperative arrangement was initiated in February 2005 to handle increased solids production from the Jensen plant. Under the existing Metropolitan-LADWP agreement, Metropolitan may use two of LADWP's lagoons until 2014. At that time, LADWP plans to develop the lagoon site for other purposes, and Metropolitan must have an alternative arrangement in place to handle the Jensen plant's solids. The future lagoon site at the Jensen plant is currently occupied by the Granada Hills Youth Recreation Center, Inc. (GHYRC), which operates and maintains several soccer and baseball fields for youth sports. This lease will expire in November 2010.

Metropolitan's long-term plan for solids handling at the Jensen plant is to thicken and dewater all residual solids on-site. This plan will be executed in two phases. During Phase I, Metropolitan will expand the Jensen plant's existing solids thickening capacity, which will increase the capacity of the existing two LADWP lagoons. New belt presses and on-site solids lagoons to dewater all of the plant's residual solids will be added in Phase II. When Phase II is complete, the Jensen plant will be capable of processing on-site all residual solids generated at full plant capacity (750 mgd) and under anticipated long-term water quality conditions. Further, Metropolitan will no longer need to rely on the LADWP lagoons.

In April 2004, Metropolitan's Board authorized initial preliminary design activities for permanent solids handling facilities at the Jensen plant. In October 2005, the Board authorized final design of the Phase I project, which will add two new thickeners and modify the existing thickening facilities. Final design has been completed and this action awards the Phase I construction contract. This project will increase solids thickening capacity, ensure

water quality compliance, enable more efficient thickening and recovery of decant water, and reduce hydraulic loading on the existing LADWP lagoons and on the upcoming Phase II facilities. The Phase I facilities will also enable the plant to switch from a batch solids thickening process to a continuous solids thickening operation, which will produce consistent, high-solids material that is required for optimal Phase II belt press operation to dewater the solids.

In October 2007, Metropolitan's Board authorized a study to assess the LADWP lagoons' capacity to handle the Jensen plant's residual solids under anticipated long-term conditions. Preliminary results indicate that the two existing LADWP lagoons provide about 40 percent of the needed lagoon capacity to reliably handle the Jensen plant's residual solids under full plant capacity flows. LADWP has no more spare lagoons available for use by Metropolitan. By proceeding with the Phase I facilities at this time, the new thickeners will reduce hydraulic loading on the two existing LADWP lagoons, which will in effect increase their capacity. Until completion of the Phase I and Phase II facilities, excess Jensen plant solids would have to be discharged into the city of Los Angeles sanitary sewer, at a cost of 7.5 times greater than treatment in the lagoons. In the past, when all of the Jensen plant's solids were discharged into the sanitary sewer, the discharge fees totaled approximately \$1 million per month.

This action also authorizes preliminary design activities for the Phase II facilities, which will include the technical engineering analyses, geotechnical investigations, and preparation of an environmental impact report.

Phase I Residual Solids Handling: Jensen Solids Thickeners Nos. 5 and 6 – Construction (\$9.05 million)

Specifications No. 1557 to construct the Jensen Solids Thickeners Nos. 5 and 6 was advertised for bids on March 18, 2008. The project will add two new solids thickeners and a vault; modify the existing residual solids pumping system and four existing thickeners; remediate joint sealant material containing PCBs; repair joint sealants in a sedimentation basin; and construct related yard piping and site work. As shown in [Attachment 2](#), seven bids were received on July 2, 2008. The low bid from Brutoco Engineering & Construction, Inc., in the amount of \$5,499,000, complies with the requirements of the specifications. The six higher bids ranged from \$5,764,374 to \$7,425,451. The engineer's estimate was \$7,007,000. For this contract, Metropolitan has established a Small Business Enterprise (SBE) participation level of at least 20 percent of the total bid amount. Brutoco Engineering & Construction, Inc. has committed to meet this level of participation.

This action appropriates \$9.05 million in budgeted funds and awards a \$5,499,000 contract to Brutoco Engineering & Construction, Inc. to construct the Jensen Solids Thickeners Nos. 5 and 6 project. In addition to the amount of the contract, the appropriated funds include \$423,000 for Metropolitan force construction; \$748,000 for construction inspection; \$330,000 for hazardous materials sampling and testing services by Ninyo & Moore; \$338,000 for technical support by the design consultant, MWH Americas; \$60,000 for environmental support services by BonTerra Consulting; \$292,000 for project close-out and start-up activities; \$656,000 for all other staff support; and \$704,000 for remaining budget. Staff support includes project management, technical oversight of the consultants, and staff environmental monitoring.

Metropolitan staff will perform construction inspection of this contract. For this project, the anticipated cost of inspection and support is approximately 12.6 percent of the total construction cost. Engineering Services' goal for inspection of projects with construction cost greater than \$3 million is 9 to 12 percent. The inspection budget on this project exceeds the goal due to the extensive testing and monitoring required for hazardous materials remediation.

Technical support by MWH will be performed under an existing board-authorized agreement; MWH was selected through a competitive process via Request for Qualifications No. 719. As the engineer of record, MWH will review submittals, respond to requests for information, and advise inspection staff on technical issues as they may arise. For this agreement, Metropolitan has established an SBE participation level of 18 percent. No amendment to the existing MWH agreement is required for this work.

Environmental monitoring services will be provided by BonTerra Consulting under an existing professional services agreement; BonTerra was selected through a competitive process via Request for Qualifications No. 763. Due to the specialized nature of the environmental monitoring services, Metropolitan did not establish an SBE

participation level for this agreement. No amendment to the existing BonTerra agreement is required for this work.

Hazardous Materials Support – New Agreement (Ninyo & Moore)

A component of the Jensen Solids Thickeners Nos. 5 and 6 project scope involves removal of PCB-laden sealants and asbestos-containing gaskets, all to be performed in accordance with regulatory requirements. Staff recommends that Ninyo & Moore provide hazardous materials sampling and testing services under a new professional services agreement. Ninyo & Moore was selected through a competitive process via Request for Qualifications No. 846. The services will include construction oversight of PCB abatement, and PCB sampling and analysis. For this agreement, Metropolitan has established an SBE participation level of 18 percent.

This action authorizes an agreement with Ninyo & Moore, in an amount not to exceed \$330,000, to provide hazardous materials support for the Jensen Solids Thickeners Nos. 5 and 6 project.

Phase II Residual Solids Handling: Jensen Solids Dewatering Facility and Lagoons – Environmental Documentation, Geotechnical Investigations, and Additions to Preliminary Design (\$1.49 million)

During Phase II, Metropolitan plans to construct a mechanical dewatering facility with belt presses, conveyors, and a series of lagoons for air drying solids. Based on an assessment of future process space needs at the Jensen plant, it is recommended that the Phase II facilities be sited on the southeastern portion of the plant (See [Attachment 3](#)). This corner of the Jensen plant site is currently leased to the Los Angeles Department of Recreation and Parks, which subleases the property to the GHYRC. GHYRC operates and maintains several soccer and baseball fields for youth sports on this subleased property. Per an agreement between Metropolitan and LADWP, LADWP will relocate GHYRC facilities to its property. In the interim, Metropolitan has renewed the lease with the Department of Recreation and Parks for the Jensen plant property through November 2010. Construction of the Phase II dewatering system is scheduled to commence in December 2010 and to be completed before February 2014, when the Metropolitan-LADWP lagoon use agreement expires.

An environmental impact report is needed to address any impacts from addition of the Phase II facilities at the Jensen plant, and from the relocation of GHYRC operations. In addition, geotechnical investigations of the Phase II site are needed. This action authorizes these activities and incorporation of their results into the preliminary design of the Phase II facilities.

This action appropriates \$1.49 million and authorizes preliminary design activities for the Jensen Solids Dewatering Facility and Lagoons project. The scope of work includes preparation of environmental documentation, geotechnical investigations, and additions to the preliminary design of the Jensen Solids Dewatering Facility and Lagoons project. Preparation of environmental documentation is recommended to be performed by Environmental Science Associates, as discussed below. Geotechnical investigations will be performed by Geo-Logic Associates under an existing professional services agreement. Geo-Logic was selected through a competitive process via Request for Qualifications No. 787. Due to the specialized nature of services, Metropolitan did not establish an SBE participation level for this work. Additions to the technical engineering analyses will be performed by the preliminary design consultant, MWH Americas, under an existing board-authorized agreement. Metropolitan staff activities will include project management, design and value engineering review, surveying, potholing, and external relations with other agencies and the public.

Environmental Documentation Technical Support – New Agreement (Environmental Science Associates)

Preparation of environmental documentation is recommended to be performed by Environmental Science Associates under a new professional services agreement. Environmental Science Associates was selected through a competitive process via Request for Qualifications No. 763. For this agreement, Metropolitan has established an SBE participation level of 18 percent. The scope of work include preparation and processing of an environmental impact report, performing technical studies (addressing issues such as air quality, traffic, noise, recreational facilities, and biological resources), conducting scoping meetings, and preparing correspondence and related documentation in support of CEQA requirements.

This action authorizes an agreement with Environmental Science Associates, in an amount not to exceed \$600,000, to prepare environmental documentation for the Jensen Solids Dewatering Facility and Lagoons project.

Summary

This action appropriates \$10.54 million; awards a \$5,499,000 contract to Brutoco Engineering & Construction, Inc. for the Phase I project (Jensen Solids Thickeners Nos. 5 and 6); authorizes preparation of environmental documentation and preliminary design activities for the Phase II project (Jensen Solids Dewatering Facility and Lagoons); and authorizes agreements with Environmental Science Associates and Ninyo & Moore.

The Phase I and Phase II projects have been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds have been included in the fiscal year 2008/09 capital budget. See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, and [Attachment 3](#) for the Location Maps.

These projects are consistent with Metropolitan's goals for sustainability by protecting water quality and enhancing the reliability of the existing treatment system, in order to maintain reliable water deliveries in the future.

Project Milestones

February 2010 – Completion of Jensen Solids Thickeners Nos. 5 and 6

January 2010 – Completion of preliminary design for the Jensen Solids Dewatering Facility and Lagoons

Late 2013 – Completion of Jensen Solids Dewatering Facility and Lagoons

Policy

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)

Phase I Residual Solids Handling: Jensen Solids Thickeners Nos. 5 and 6 – Construction

CEQA determination for Options #1 and #2:

The environmental effects from the funding, design, construction and maintenance of the proposed Jensen Solids Thickeners Nos. 5 and 6 and a vault were originally evaluated in 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 construction of the proposed 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.

Modifying the existing residual solids pumping system and the existing four thickeners; repairing joint sealants in a sedimentation basin; and related yard piping and site work is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. In particular, the proposed action consists of the approving construction and the minor alteration of existing public structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, if during the implementation of the repair work, contamination of soils should be discovered, then the proposed action qualifies for any minor cleanup actions taken to prevent, minimize, stabilize, or eliminate the release or threat of release of a hazardous substance. Accordingly, this proposed action qualifies under both Class 1 and Class 30 Categorical Exemptions (Sections 15301 and 15330 of the State CEQA Guidelines).

The CEQA determination is: Determine that the Jensen Solids Thickeners Nos. 5 and 6 and a vault have been previously addressed in the adopted 1989 MND and 1990 Addendum, and that modifying the existing residual solids pumping system and the existing four thickeners; repairing joint sealants in a sedimentation basin; and related yard piping and site work qualifies under two Categorical Exemptions (Class 1, Section 15301 and Class 30, Section 15330 of the State CEQA Guidelines).

CEQA determination for Option #3:

None required

Hazardous Materials Support – New Agreement (Ninyo & Moore)

CEQA determination for Options #1 and #2:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities (Section 15378(b)(2) of the State CEQA Guidelines). The proposed action is not subject to CEQA because it involves other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Sections 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is not subject to the provisions of CEQA pursuant to Sections 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines.

CEQA determination for Option #3:

None required

Phase II Residual Solids Handling: Jensen Solids Dewatering Facility and Lagoons – Environmental Documentation, Geotechnical Investigations, and Additions to Preliminary Design

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action consists of basic data collection and resource evaluation activities, which do not result in a serious or major disturbance to an environmental resource. This may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded. Accordingly, the proposed action qualifies as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed action qualifies under a Categorical Exemption (Class 6, Section 15306 of the State CEQA Guidelines).

CEQA determination for Options #2 and #3:

None required

Environmental Documentation Technical Support – New Agreement

CEQA determination for Options #1 and #2:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities (Section 15378(b)(2) of the State CEQA Guidelines). The proposed action is not subject to CEQA because it involves other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is not subject to the provisions of CEQA pursuant to Sections 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines.

CEQA determination for Option #3:

None required

Board Options

Option #1

Adopt the CEQA determinations and

- a. Appropriate \$10.54 million in budgeted funds;
- b. Award a \$5,499,000 contract to Brutoco Engineering & Construction, Inc. for the Jensen Solids Thickeners Nos. 5 and 6 project;
- c. Authorize an agreement with Ninyo & Moore in an amount not to exceed \$330,000 for hazardous materials sampling and testing;
- d. Authorize preparation of environmental documentation and preliminary design activities for the Jensen Solids Dewatering Facility and Lagoons project; and
- e. Authorize an agreement with Environmental Science Associates in an amount not to exceed \$600,000 for environmental support.

Fiscal Impact: \$10.54 million of budgeted funds under Approp. 15371

Business Analysis: This option will add needed solids thickening and dewatering capacities to reliably and cost-effectively handle the Jensen plant's residual solids under full plant capacity flows. Addition of Thickeners Nos. 5 and 6 will reduce hydraulic loading on the downstream dewatering processes, which will increase the LADWP lagoons' capacity, and also enable the plant to switch from a batch solids thickening process to a continuous solids thickening operation, which will produce consistent, high-solids material that is required for reliable belt press operation to dewater the solids in the future. The Jensen Solids Dewatering Facility and Lagoons project will add needed on-site solids handling capacity to reliably handle the Jensen plant's residual solids under full plant capacity flows, which will eliminate Metropolitan's reliance on the LADWP lagoons. Use of the LADWP lagoons is scheduled to end in 2014.

Option #2

Adopt the CEQA determinations and

- a. Appropriate \$9.05 million in budgeted funds;
- b. Award a \$5,499,000 contract to Brutoco Engineering & Construction, Inc. for the Jensen Solids Thickeners Nos. 5 and 6 project;
- c. Authorize an agreement with Ninyo & Moore in an amount not to exceed \$330,000 for hazardous materials sampling and testing;
- a. Do not authorize preparation of environmental documentation and preliminary design activities for the Jensen Solids Dewatering Facility and Lagoons project; and
- b. Do not authorize an agreement with Environmental Science Associates.

Fiscal Impact: \$9.05 million of budgeted funds under Approp. 15371

Business Analysis: This option would forego an opportunity to provide on-site solids handling in the future, which would require leasing of belt presses or disposal to the sanitary sewer, which are both much higher in operating costs.

Option #3

- a. Do not award the construction contract and re-advertise in an attempt to receive more favorable bids;
- b. Do not authorize preparation of environmental documentation and preliminary design activities for the Jensen Solids Dewatering Facility and Lagoons project; and
- c. Do not authorize the professional services agreements.

Fiscal Impact: Unknown

Business Analysis: This option may or may not result in a lower bid price, and would delay completion of the solids thickeners. Metropolitan would forego an opportunity to provide on-site solids handling in the future, which would require leasing of belt presses or disposal to the sanitary sewer, which are both much higher in operating costs.

Staff Recommendation

Option #1


Roy L. Wolfe
Manager, Corporate Resources

8/26/2008

Date


Jeffrey Kightlinger
General Manager

8/26/2008

Date

Attachment 1 – Financial Statement

Attachment 2 – Abstract of Bids

Attachment 3 – Location Maps

BLA #6196

Financial Statement for Jensen Improvements Program

A breakdown of Board Action No. 13 for Appropriation No. 15371 is as follows:

	Previous Total Appropriated Amount (Apr. 2008)	Current Board Action No. 13 (Sep. 2008)	New Total Appropriated Amount
Labor			
Studies and Investigations	\$ 740,350	\$ 116,000	\$ 856,350
Final Design	2,033,401 *	-	2,033,401
Owner Costs (Program mgmt., envir. monitoring)	1,365,541	1,137,000	2,502,541
Construction Inspection and Support	858,000	748,000	1,606,000
Metropolitan Force Construction	1,609,400	347,000	1,956,400
Materials and Supplies	2,104,900	51,000	2,155,900
Incidental Expenses	129,933 *	15,000	144,933
Professional/Technical Services	2,004,840 *	-	2,004,840
Environmental Science Associates		600,000	600,000
Ninyo & Moore		330,000	330,000
MWH		661,000	661,000
Geo-Logic Associates		65,000	65,000
BonTerra Consulting		60,000	60,000
Equipment Use	94,000	15,000	109,000
Contracts	6,678,226	5,499,000	12,177,226
Remaining Budget	335,409 *	896,000	1,231,409
Total	\$ 17,954,000	\$ 10,540,000	\$ 28,494,000

* Includes previous reallocation of \$262,142 from Remaining Budget to Final Design (\$145,369), Incidental Expenses (\$1,933), and Professional/Technical (\$114,840) for design of the Jensen Caustic Soda Tank Farm Chemical Containment System Upgrade project.

Funding Request

Program Name:	Jensen Improvements Program		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15371	Board Action No.:	13
Requested Amount:	\$ 10,540,000	Capital Program No.:	15371-I
Total Appropriated Amount:	\$ 28,494,000	Capital Program Page No.:	E-38
Total Program Estimate:	\$ 89,700,000	Program Goal:	I-Infrastructure Reliability

The Metropolitan Water District of Southern California

Abstract of Bids Received on July 2, 2008 at 2:00 P.M.

Specifications No. 1557

**Joseph Jensen Water Treatment Plant
Solids Thickeners Nos. 5 and 6**

The project will construct solids thickeners and repair the existing sludge handling system. The work includes constructing two new solids thickeners and a sludge vault, modifying the existing sludge pumping system and four existing solids thickeners, repairing sedimentation basin joint sealants, and related yard piping and site work.

Engineer's Estimate: \$7,007,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE*
Brutoco Engineering & Construction , Inc. Fontana, CA	\$5,499,000	\$1,476,249	26.87%	Yes
Cora Constructors, Inc. Palm Desert, CA	\$5,764,374	N/A	N/A	N/A
Steve P. Rados, Inc. Santa Ana, CA	\$5,791,000	N/A	N/A	N/A
J.F. Shea Construction, Inc. Walnut, CA	\$6,044,465	N/A	N/A	N/A
Metro Builders & Engineers Group, Ltd. Newport Beach, CA	\$6,667,308	N/A	N/A	N/A
Norman A. Olsson Construction, Inc. Orange, CA	\$7,415,000	N/A	N/A	N/A
Hobbs-Bannerman, Inc. Westminster, CA	\$7,425,451	N/A	N/A	N/A

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

Jensen Water Treatment Plant

