



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

4/11/2017 Board Meeting

7-3

Subject

Adopt CEQA determination and authorize increase in change order authority for the construction contract to refurbish lagoons for the Joseph Jensen Water Treatment Plant

Executive Summary

This action authorizes an increase in the General Manager's authority to execute change orders for the construction contract currently underway to refurbish four solids lagoons on property owned by the Los Angeles Department of Water and Power (LADWP) for long-term use by the Joseph Jensen Water Treatment Plant. The contractor has encountered several instances where the existing conditions deviated from the original record drawings. In addition, delays due to the recent heavy rains have extended the duration of construction. As a result of these issues, additional time and resources have been required by the contractor. Staff has estimated the total value of changes anticipated for the project and recommends increasing the change order authority at this time as a proactive measure so the work may continue without delay for the remainder of the contract.

No funds are required in this action, as all Metropolitan costs will be reimbursed by LADWP. This work is being performed on LADWP's behalf pursuant to a long-term use agreement between Metropolitan and LADWP that enables Metropolitan to utilize four solids lagoons on LADWP's property for a period of 50 years. This use agreement was approved by Metropolitan's Board in February 2013. A related reimbursable agreement that was approved by the Board in November 2013 authorizes Metropolitan to perform this work on LADWP's behalf, subject to reimbursement. No amendment is needed to the existing reimbursable agreement with LADWP.

Timing and Urgency

Refurbishment of the lagoons at LADWP's Aqueduct Filtration Plant to enable their use by Metropolitan will provide long-term solids dewatering capability for the Jensen plant. During the course of construction, the contractor encountered a number of differing site conditions that caused additional labor and material costs to be incurred. In addition, additional time has been required to execute the work.

Metropolitan's construction contracts are typically completed with final change order amounts falling well within the General Manager's Administrative Code authority. On the subject project, staff anticipates that the extent of extra work required will exceed the General Manager's authority. An increase in change order authority is requested in order to complete the construction efficiently and at the lowest overall cost.

Details

Background

The Jensen plant was placed into service in 1972 and has a treatment capacity of 750 million gallons per day (mgd). The Jensen plant treats water from the West Branch of the State Water Project and delivers it to Metropolitan's Central Pool and to exclusive service areas in the western portion of the distribution system. The plant is located in the community of Granada Hills.

Since 2005, residual solids collected from the Jensen plant's sedimentation basins have been thickened on site and transported via a solids transfer system to two nearby lagoons at LADWP's Aqueduct Filtration Plant. At the

lagoons, additional dewatering is performed by decanting water from the top of the lagoons as the solids settle, and draining the water that percolates down into the underdrain system. The Jensen plant may also discharge solids to a city of Los Angeles sanitary sewer. However, sewer disposal is expensive and the quantity is limited by the discharge permit.

In February 2013, Metropolitan's Board authorized an agreement with LADWP that enables Metropolitan to utilize four solids lagoons on LADWP property for a period of 50 years. In order to take advantage of the lagoons, they must be refurbished. In November 2013, the Board authorized a reimbursable agreement with LADWP in an amount not to exceed \$5 million for Metropolitan to design and refurbish the four existing lagoons. This reimbursable agreement was increased by \$1 million in February 2016, providing a new not-to-exceed total of \$6 million.

Under the use agreement, LADWP is responsible for refurbishing the four existing lagoons for Metropolitan's use, and for construction and operation of a new groundwater control system to eliminate the need for construction dewatering and to ensure proper long-term lagoon operation. Per the reimbursable agreement, Metropolitan is conducting this work on behalf of LADWP. LADWP will reimburse Metropolitan for its costs including labor, equipment, materials, other services, and the Metropolitan-awarded construction contract.

In January 2015, Metropolitan's Board awarded a \$3,067,900 construction contract to Zusser Company, Inc. to refurbish the four lagoons. The work includes on-site screening of underdrain rock; disposal of potentially hazardous materials; installation of crushed rock; refurbishment of existing decant valve structures; installation of pipes, duct bank, and manholes equipped with submersible pumps; and installation of turbidity meters, piezometers, and electrical panels. The construction contract was developed in close collaboration with LADWP. This work will support long-term operation of the lagoons by Metropolitan, and will isolate the four lagoons from other lagoons that are used by LADWP.

Refurbishment of Solids Lagoon for the Jensen Plant – Increase in Change Order Authority (No funds required)

The lagoon refurbishment contract is currently approximately 90 percent complete. However, the contractor has incurred additional costs and the work will extend beyond the original completion date due to delays caused by differing site conditions and by heavy winter rains, as discussed below.

- **Differing site conditions** – During the course of construction, the contractor encountered several deviations from the original record drawings that had formed the basis for the new work's design drawings. The estimated additional cost to address these site conditions is \$380,000. Some examples of additional work resulting from the deviations include:
 - Changes to decant pipe tie-ins at four lagoons – For three lagoons, existing decant pipelines were not found in the expected locations. As a result, the contractor conducted additional potholing, excavation, and shoring to install additional decant piping. Staff anticipates that similar decant piping work will be required for the fourth lagoon, which will soon get underway.
 - Modification of two manhole decant pumping systems – The existing manholes were not constructed as shown on the record drawings. As a result, the contractor modified the bottoms of the manholes, changed the locations of pipe connections, and installed additional supports for the decant pumping systems.
 - Additional electrical and control junction boxes – Existing utilities were not located as shown on the record drawings, so the location of a new underdrain manhole was changed to avoid the existing utilities. As a result, the contractor will be required to install additional electrical and control junction boxes and extend a ductbank to the new manhole location.
- **Weather-related impacts** – While the construction was underway, the lagoons remained in use as the sole destination for residual solids generated by the Jensen plant, and as a secondary basin for the Aqueduct Filtration Plant. Contract milestones and constraints were identified in the specifications to enable two lagoons to remain in service at all times, while refurbishment was underway at the two other lagoons. Due to

the frequent heavy rains experienced over the past winter, the durations for solids dewatering and removal extended significantly. In addition, due to high flows through the Aqueduct Filtration Plant, the lagoons were used to support its operation on several occasions. As a result of these conditions, the lagoons were not available to the contractor for refurbishment as specified in the contract. The total duration of delays associated with these issues will exceed 120 days.

High groundwater levels due to the heavy rains also affected the refurbishment of two lagoons, as unanticipated construction dewatering was needed. The estimated additional cost to resolve all of the weather/water-related issues is \$270,000.

Metropolitan's Administrative Code authorizes the General Manager to execute change orders on construction contracts in an aggregate amount not to exceed five percent of the initial contract amount or \$250,000, whichever is greater. If changes occur on a construction contract that will exceed this total, additional authorization from the Board is required.

The lagoon refurbishment contract has experienced issues that will exceed the General Manager's Administrative Code authority. As a result, an increase in change order authority is requested in order to complete the construction efficiently and to avoid delays in completing the work.

The General Manager's original authority to execute change orders for the lagoon refurbishment contract is \$250,000. To date, staff has executed a total of \$120,000 in change orders. In order to fully resolve the issues described above and complete the work without further delays, staff recommends that the change order authority be increased by \$400,000, for a new maximum amount of \$650,000.

This action authorizes an increase in the General Manager's authority to execute change orders for the contract to refurbish LADWP lagoons from \$250,000 to an aggregate amount not to exceed \$650,000. No additional funds are requested, as all Metropolitan costs will be reimbursed by LADWP. In addition, no amendment to the existing reimbursable agreement with LADWP is needed, as the amount of that agreement is sufficient to complete the work. See [Attachment 1](#) for the Location Map.

Project Milestone

July 2017 – Completion of refurbishment of the solids lagoons

Policy

Metropolitan Water District Administrative Code Section 8121(a): General Authority of the General Manager to Enter Contracts (Contracts over \$250,000)

Metropolitan Water District Administrative Code Section 8123: Authority of the General Manager to Amend Contracts

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves administrative activities that will not result in direct or indirect physical changes in the environment (Section 15378(b)(5) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is not defined as a project under CEQA pursuant to Section 15378(b)(5) of the State CEQA Guidelines.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination that the proposed action is not defined as a project under CEQA, and Authorize increase of \$400,000 in change order authority for the contract with Zusser Company, Inc. to refurbish solids lagoons for the Jensen plant, up to an aggregate amount not to exceed \$650,000.

Fiscal Impact: None. All costs will be fully reimbursed by LADWP.

Business Analysis: This option will allow the lagoon refurbishment work to be completed expeditiously, and will provide the Jensen plant with a cost-effective, long-term method for solids handling.

Option #2

Do not authorize an increase in change order authority at this time, and direct staff to revisit the amount negotiated with the contractor for the additional work.

Fiscal Impact: None

Business Analysis: This option is unlikely to result in lower costs for the extra work performed, and may cause further project delays.

Staff Recommendation

Option #1



Gordon Johnson
Manager/Chief Engineer,
Engineering Services
3/27/2017
Date



Jeffrey Kightlinger
General Manager
3/30/2017
Date

Attachment 1 – Location Map

Ref# es12650681

