




BOARD MEMORANDUM

November 10, 2014

To: CMSA Commissioners and Alternates
From: Brian Thomas, Engineering Manager
Approved: Jason Dow, General Manager 
Subject: **Sludge Thickening System Replacement Project – Construction Contract Award (CMSA Contract No. 15-01)**

Recommendation: Award the construction contract for the Sludge Thickening System Replacement Project to Mountain Cascade Inc. for the low bid amount of \$1,780,250, and authorize the General Manager to execute the contract agreement.

Summary: The Board adopted the Sludge Thickening System Replacement Project (Project) contract documents and authorized the General Manager to advertise the Project for public bidding at the September 2014 meeting. The notice inviting bids was issued on September 11, 2014 and bids were opened on November 6, 2014. Nine responsive bids were received and reviewed by staff. A bid summary is attached for reference. The apparent lowest, responsive, responsible bidder is Mountain Cascade Inc. of Livermore, CA, for the total bid amount of \$1,780,250.

Fiscal Impact: The Agency's 10-year Capital Improvement Program (CIP) allocates a total \$2,871,400 in FY 15 and FY 16 for the Project's construction phase of work. The engineer's estimate of probable construction cost was \$2,631,000. All of the bids received were below the engineer's estimate, with the lowest bid being \$850,750 below the engineer's estimate and \$1,091,150 below the CIP budget amount.

Background: Wastewater solids that are removed in the primary and secondary clarification tanks are transported to the Agency's solids handling facilities for anaerobic digestion, conditioning, and dewatering. Solids removed from the secondary clarifiers, primarily comprised of settled microorganisms called waste activated sludge (WAS), need to be thickened prior to digestion to reduce the hydraulic loading on the digesters. Since the treatment plant began operation in 1985, Dissolved Air Flotation Tanks (DAFs) thickened the WAS by utilizing air compressors, polymer feed equipment, supply pumps, and process tanks. WAS is typically thickened from 0.5% solids concentration to approximately 4.5% solids.

The two DAFs and their supporting mechanical systems are operating beyond their original planned service lives and require frequent maintenance. The tanks are not covered and are a

significant source of wastewater odors. HDR Engineering evaluated several different thickening technologies to replace the DAFs during the Project's predesign work. Ultimately, the Agency's Project team selected Rotary Drum Thickeners (RDTs) due to their compact size, proven operations and maintenance history, low power usage, odor containment, and demonstrated thickening performance with CMSA WAS through manufacturer bench scale testing.

The Project's scope of work includes the replacement of the two existing DAF thickeners with two RDTs, and modifications to piping and polymer supply systems to connect to the new RDTs.



Existing DAFs



RDT example

Attachments
- 11/6/2014 Bid Opening Summary

BID OPENING

PROJECT: Sludge Thickening System Replacement Project

CMSA CONTRACT #: 15-01

DATE: 11/06/2014 TIME: 1:30pm

<u>BIDDER</u>	<u>AMOUNT BID</u>
<u>ANDERSON PACIFIC ENG. CONST.</u>	<u>\$ 1,951,000.00</u>
<u>MYERS & SONS CONSTRUCTION</u>	<u>2,135,000.00</u>
<u>OVERAA</u>	<u>1,852,000.00</u>
<u>PACIFIC INFRASTRUCTURE</u>	<u>2,178,000.00</u>
<u>GSE CONSTRUCTION</u>	<u>1,988,700.00</u>
<u>WEST BAY BUILDERS</u>	<u>1,894,000.00</u>
<u>WM LYLES</u>	<u>2,179,000.00</u>
<u>MT. CASCADE</u>	<u>1,780,250.00</u>
<u>WESTERN WATER CONSTRU</u>	<u>2,222,000.00</u>
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BIDS OPENED/RECORDED BY: Kate Bromiley

BIDS READ BY: [Signature]