



October 10, 2018

TO: LOCSD Utility Advisory Committee
FROM: Jose Acosta, Utility Systems Manager *JJA*
SUBJECT: **Agenda Item 7 – 10/17/2018 Utility Advisory Committee Meeting**
Review of Board Item Regarding Purchase of Replacement Well Meters

DISCUSSION

President
Vicki L. Milledge

Vice President
Marshall E. Ochylski

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Charles L. Cesena
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Renee Osborne

District Accountant
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Scott M. Jalbert

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District staff operates six groundwater wells for the production of potable water for the LOCSD water service area. The equipment to efficiently and properly operate these wells is inclusive of a meter that accounts for all water pumped.

The six wells are currently equipped with propeller meters, which vary in size, one 3" meter, four 4" meters, and one 6" meter. In speaking with staff, it has been determined that some of the meters have never been calibrated or had any maintenance performed. The following is a listing of locations, sizes, and approximate years the meters were installed:

<u>Location</u>	<u>Size</u>	<u>Approx. Year of Installation</u>
8 th Street Well	4" meter	early 1990's
3 rd Street Well	4" meter	1980's
10 th Street Well	4" meter	early 1990's
South Bay Lower Well	4" meter	early 1990's
South Bay Upper Well	3" meter	2013-2014
Palisades Well	6" meter	2015

Staff presented this information to UAC at a meeting earlier this year, while discussing the topic of "Production vs Consumption", and the disparity in these numbers. One of the concerns presented by staff was the aging of the well meters. Old meters can wear, diminish in internal components, and lose reliability in metering accurate water production figures.

Staff has recognized that with the possibility of inaccurate or unreliable metering, reports and figures could be skewed. Staff would like to replace, the four 4" meters at this time. These meters have been in service the longest, with no maintenance or inspection performed since the LOCSD has assumed responsibility of the water production facilities.

Currently the meters in place are propeller meters, which are reliable in accounting for water flows, but they also do provide the greatest risk for damage, inaccurate readings or obstruction of water flow. The propellers are known to wear, break off, lose functionality, and gradually decline in reliable metering.

There are other technologies on the market today that will provide reliable and accurate metering, with no internal moving parts and minimal maintenance. Another benefit of these newer technologies is the sample collection time rate. With a higher sample rate the more accurate the flow reading will be.

One technology that has been on the market for several years is Electromagnetic (MAG) metering. This technology works where a magnetic field is applied to the metering tube, which results in a potential difference proportional to the flow velocity perpendicular to the flux lines. The physical principle at work is electromagnetic induction.

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Another technology that was recently introduced to the District is Ultrasonic metering. Ultrasonic transit time meters measure the velocity of water by sending ultrasonic sound bursts through the water and measure how long it takes the sound wave to travel from one transducer to another. The time it takes the sound wave to travel in the direction of the flow is measured and then measured for how long it takes another sound wave to travel in the opposite direction of the flow. Both times are compared and the difference in time is proportional to velocity of water.

Based on the information received and reviewed by Staff, we are requesting the purchase of the Ultrasonic meters. Staff has contacted Vandenberg Village CSD, as they have these meters installed throughout their water production facilities as well as their residential and commercial metering system. They have had no issue with this technology and give high recommendations.

Attached is a copy of the bid received for Ultrasonic meters. The following vendors were contacted and their responses:

1. USA Bluebook
MAG Meters- \$9,164.13
Propeller Meters- \$11,925.13
2. National Meter
Mag Meters- \$9,692.57 and \$10,657.82
Propeller Meters- \$9,091.97
3. Aqua Metric
Mag Meters- \$25,990.00
Propeller Meters- \$9,976.00
4. Core and Main
Ultrasonic Meters- \$8,896.27

FINANCIAL IMPACT

The financial impact will be \$8,896.27. These well meters were not included in the 2018-19 fiscal budget. If the purchase is approved by the Board, funding for the purchase of the meters will come from Fund 500, Capital Improvement Reserves.

Attachments



Bid Proposal for OCTAVE METERS

CUSTOMER

LOS OSOS CSD

2122 9TH STREET STE 102
LOS OSOS, CA
Contact: JOSE ACOSTA

Job

OCTAVE METERS
Bid Date: 09/26/2018
Bid #: 721970

CONTACT

Sales Representative

Shannon Ulrich
(M) 661-316-8594
(T) 661-393-2288
(F) 661-393-0439
Shannon.Ulrich@coreandmain.com

Core & Main

19421 Colombo St
Bakersfield, CA 93308
(T) 661-393-2288

NOTES



Bid Proposal for OCTAVE METERS

LOS OSOS CSD
Bid Date: 09/26/2018
Core & Main Bid #: 721970

Core & Main
19421 Colombo St
Bakersfield, CA 93308
Phone: 661-393-2288
Fax: 661-393-0439

Seq#	Qty	Description	Units	Price	Ext Price
10	4	MM 4" OCTAVE METER W/O MODULE 1000 GAL O304-E1-D09	EA	1,939.10	7,756.40
20	4	#965-200-02 4-20 OUTPUT MODULE	EA	125.00	500.00
				Sub Total	8,256.40
				Tax	639.87
				Total	8,896.27

Branch Terms:

UNLESS OTHERWISE SPECIFIED HEREIN, PRICES QUOTED ARE VALID IF ACCEPTED BY CUSTOMER AND PRODUCTS ARE RELEASED BY CUSTOMER FOR MANUFACTURE WITHIN THIRTY (30) CALENDAR DAYS FROM THE DATE OF THIS QUOTATION. CORE & MAIN LP RESERVES THE RIGHT TO INCREASE PRICES UPON THIRTY (30) CALENDAR DAYS' NOTICE TO ADDRESS FACTORS, INCLUDING BUT NOT LIMITED TO, GOVERNMENT REGULATIONS, TARIFFS, TRANSPORTATION, FUEL AND RAW MATERIAL COSTS. DELIVERY WILL COMMENCE BASED UPON MANUFACTURER LEAD TIMES. ANY MATERIAL DELIVERIES DELAYED BEYOND MANUFACTURER LEAD TIMES MAY BE SUBJECT TO PRICE INCREASES AND/OR APPLICABLE STORAGE FEES. THIS BID PROPOSAL IS CONTINGENT UPON BUYER'S ACCEPTANCE OF SELLER'S TERMS AND CONDITIONS OF SALE, AS MODIFIED FROM TIME TO TIME, WHICH CAN BE FOUND AT: <https://coreandmain.com/TandC/>