



Draft

CITY OF SANTA BARBARA COUNCIL AGENDA REPORT

AGENDA DATE: October 24, 2017

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department

SUBJECT: Approval Of Purchase Order For Large Venturi Water Meters

RECOMMENDATION: That Council:

- A. Find it to be in the City's best interest to waive the formal bidding process as authorized by Municipal Code Section 4.52.070(L), Best Interest Waiver, and approve the purchase of Venturi water meters manufactured by Primary Flow Signal, Inc.;
- B. Approve the addition of Primary Flow Signal Venturi meters to the Water Resources Standard Equipment list, which was approved by Council on November 22, 2016;
- C. Authorize the General Services Manager to issue a Purchase Order to Primary Flow Signal, Inc., for \$167,648.23, plus an approximate 10 percent contingency of \$16,800, for the purchase of three Venturi meters; and
- D. Authorize the transfer of \$185,000 of appropriations from the Drought Fund to the Water Meter Replacement Program in the Water Capital Fund.

DISCUSSION:

Over the past year the City's water system losses have been calculated at being approximately one percent, which is extremely low, and suspect, considering the typical industry standard for water loss in a municipal water system is between five and ten percent. Water system losses are caused by many different factors including; water main breaks; fire hydrant flows for fire emergencies; fire hydrant flushing related to system maintenance; losses associated with leaky pipe joints; and related appurtenances; and inaccurate metering (under metering).

Staff takes water system losses seriously and has initiated several efforts to minimize and manage water losses. A few such efforts include the annual water main replacement program, the ongoing water meter replacement program, adoption of technology for no discharge water system flushing, and the use of sounding equipment to detect leaks. Having implemented all these efforts, staff feels the next step is replacement of three of

the City's largest production meters, which measure large volumes of the City's raw and treated water going into the system. These three meters include the 20-inch Gibraltar Penstock meter, 36-inch Cater Influent meter, and 30-inch South Coast Conduit (SCC) meter, which have all been in service for over 30 years. These three meters are critical elements for water accounting for the City's water system and neighboring water agencies. These three meters also play a key role in required state reporting. As a result of the drought, the state has undertaken an effort to overhaul the reporting and regulations for acceptable system losses. As early as 2019, it is anticipated that the state will institute requirements for better large metering accuracy and calibration. Changing out these meters will put the City in a good position for complying with anticipated state regulations, while also helping address the City's current water system losses.

Replacing the City's three large production meters needs to be expedited, as it is critical to maintaining accurate water accounting. The replacement work must be done during the winter, when system demand is at its lowest and water delivery can be temporarily interrupted. For example, the Cater Influent meter will require a full shutdown of the entire treatment plant to perform the replacement work. This can only be done in the winter, when water demands of the City, and Montecito and Carpinteria Valley Water Districts are at their lowest.

Considering the lengthy time period associated with the City's formal bidding process, compounded by the ten weeks required to design and fabricate the meters, the effort to replace the meters would normally be delayed until the 2018/2019 winter. Staff believes it is in the best interest of the City to expedite the purchase of these water meters and begin design and fabrication of the meters, while concurrently bidding the installation effort. This approach will enable that the three meters will be installed this winter.

Staff has investigated options for replacing the City's large production meters and has determined that a Venturi style meter would best serve the City. Venturi meters have a proven track record, and are commonly used as large production meters throughout the water industry. Venturi meters are robust and have no moving parts. They measure water flow by creating a quick narrowing of the pipe, constricting the flow, which increases the velocity and subsequently creates a unique pressure drop or vacuum, known as the Venturi effect. The flow rate is calculated by measuring the corresponding change in pressure. Venturi meters are equipped with electronic equipment, which provides instantaneous and constant flow rate reads based on the change in pressure.

The existing Gibraltar Penstock and Cater Influent meters are similar to Venturi meters, but lack the appropriate geometry to be true Venturi meters, which makes them more susceptible to inaccurately metering flows, especially when the flow fluctuates. While the SCC is a true Venturi meter, it is 30 years old and considering it is an important accounting meter and the state's upcoming program for improving meter accuracy, it is prudent that this meter is upgraded with a newly calibrated Venturi meter.

Staff has searched Venturi meter manufacturers and has determined Primary Flow Signal, Inc (PFS) as the preferred Venturi meter manufacturer. PFS has manufactured

approximately 10 other Venturi meters serving the Cater Water Treatment Plant (Cater), which have performed well for many years. PFS is long-established and well-respected in the water metering field. PFS is ISO 9001 certified and uses only ASME certified welders for their products. PFS provides Venturi meters for water agencies throughout the United States, including San Diego County Water Authority, Las Vegas Valley Water District, Southern Nevada Water Authority, East Bay Municipal Utility District, Western Municipal Water District, and Casitas Municipal Water District.

Considering Cater's successful history with PFS Venturi meters, PFS's high regard in the water industry, the extensive number of large water agencies using PFS Venturi meters, and that PFS can manufacture and deliver the meters to meet this winter's construction window, staff recommends that Council find it in the City's best interest to waive the formal bid process, as authorized by Municipal Code Section 4.52.070(L), Best Interest Waiver, and approve the purchase of PFS Venturi meters; and, authorize the General Services Manager to issue a Purchase Order to PFS for \$167,648.23, plus a 10 percent contingency of \$16,800, for the purchase of three Venturi meters. Staff also recommends Council approve adding PFS Venturi meters to the Water Resources Standard Equipment list, which Council approved on November 22, 2016. Staff also recommends that Council authorize the transfer of \$185,000 of appropriations from the Drought Fund to the Water Meter Replacement Program in the Water Capital Fund.

BUDGET/FINANCIAL INFORMATION:

With the recommended transfer of funds there will be sufficient appropriated funds in the Water Capital Fund to cover the costs of this project. Additionally costs will be recovered through a Joint Power's Agreement, whereby Montecito and Carpinteria Valley Water Districts will charged 80 percent of the cost to purchase and install the SCC meter and approximately 40 percent of the cost to purchase and install the Cater Influent meter.

SUSTAINABILITY IMPACT:

Replacing these three large production meters will enable the City to better account for water production, which will help account for system-wide water losses. It will put the City in a good position for complying with anticipated state regulations. Such continued improvements in water accounting supports Water Resources' commitment of promoting water conservation and being accountable to state regulators, neighboring water agencies, and water customers.

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SUBMITTED BY: Rebecca J. Bjork, Public Works Director

APPROVED BY: City Administrator's Office