



# CITY OF SANTA BARBARA

## COUNCIL AGENDA REPORT

**AGENDA DATE:** June 30, 2015

**TO:** Mayor and Councilmembers

**FROM:** Water Resources Division, Public Works Department

**SUBJECT:** Contract For Influent Flow Monitoring And Sampling Services At The El Estero Wastewater Treatment Plant

### RECOMMENDATION:

That Council authorize the Public Works Director to execute a City Professional Services contract with Utility Systems, Science and Software, Inc., in the amount of \$129,630 for flow monitoring and sampling services for the El Estero Wastewater Treatment Plant, and authorize the Public Works Director to approve expenditures of up to \$19,444 for extra services that may result from necessary changes in the scope of work.

### DISCUSSION:

#### BACKGROUND

The El Estero Wastewater Treatment Plant (El Estero) treats an average of approximately seven million gallons of wastewater each day. However, plant influent measurements such as flow and loading (a concentration of constituents) into El Estero are not directly monitored. Rather, flow and loading measurements are taken on the confluent line, which is located downstream of the Influent Pump Station and includes recycled flows from several other plant processes.

In 2012, Council authorized the City to enter into a contract with V&A Consulting Engineers, Inc., (V&A) to install flow meters and samplers on El Estero's four influent lines. V&A was selected through a Request for Proposals process and was the only respondent. The hardware (meters and samplers) was procured in 2012, and the installation was completed in 2013. V&A's contract also included equipment maintenance and flow monitoring services. However, staff encountered maintenance problems associated with the meters and samplers and questioned the validity of the samples and accuracy of the flow data collected. As a result, the City terminated its remaining contract with V&A in June 2014.

At the same time, Council authorized the Public Works Director to execute a contract with Utility Systems, Science and Software Inc., (US3) to evaluate and verify the accuracy of the existing flow metering and sampling equipment, calibrate the flow meters and samplers to accurately collect and record the desired data, and provide ongoing routine maintenance of the meters for a year.

Over the last 12 months, US3 evaluated the City's existing system and, as a result, installed new custom flow meter communication equipment between the samplers and flow meters, which provided improved accuracy and consistency of samples. US3 identified maintenance issues with the sampling tube locations and relocated the tubing mounts to minimize future maintenance. US3 performed quarterly maintenance to clean the flow meter sensors and check the sampler tubing. From this work effort with US3, the City has been successful in implementing flow-paced sampling and analyzing the samples for desired constituents on each of El Estero's four influent lines.

#### PROJECT DESCRIPTION

US3 will continue to provide flow monitoring and sampling maintenance, and data delivery services. In addition, El Estero's current influent meters are in-line flow meters that require confined space entry to access and maintain. Staff has found that, over time, debris in the wastewater stream accumulates on the in-line flow metering equipment and interrupts the operation of the sensors, causing the meters to require a high-level of maintenance and reduced flow measurement accuracy. US3 will replace the existing meters with a different type of meter that does not make contact with the wastewater, thereby increasing the consistency and accuracy of the measured flows, and reduces maintenance costs.

#### SOLE SOURCE SELECTION

Staff recommends that Council authorize a sole source contract with US3 to provide flow monitoring and sampler maintenance, and data delivery services to the City for the next three years.

US3, with their expertise in flow monitoring and sampling, and firsthand knowledge of El Estero's current configuration, would be able to continue maintenance of the existing integrated software and hardware system. Measuring and sampling El Estero's four influent lines has proven to be very complex, and US3 has successfully provided Staff with the ability to implement a continuous flow-paced monitoring and sampling program. Additionally, Staff is familiar with US3's data management software. Changing providers poses significant challenges and risks to continuing the program with the current configuration of flow meters, samplers, and communication equipment.

In addition to their performance at El Estero, US3 has also successfully provided flow monitoring and sampling services for the Collection System Rate Study, which was competitively bid in 2013, and will be performing ongoing hydrogen sulfide monitoring services for the City's Hydrogen Sulfide Reduction Study.

Staff has reviewed the costs and scope of work for the proposed three-year maintenance agreement and determined that it is consistent with the cost of similar services in previous flow monitoring and sampling contracts.

#### FUNDING

The following summarizes all estimated total Project costs:

#### ESTIMATED TOTAL PROJECT COST

Flow Metering and Sampling Maintenance (by Contract)	\$129,630
Extra Services	19,444
Project Management (by City)	60,000
<b>TOTAL PROJECT COST</b>	<b>\$209,074</b>

There are sufficient appropriated funds in the Wastewater Operating Fund Budget to cover these costs.

The extra services funding recommendation of \$19,444, or 15 percent, is above the 10 percent extra services typically recommended for this professional service contract due to the unpredictable nature of metering and sampling wastewater flows.

**PREPARED BY:** Christopher J. Toth, Wastewater System Manager/BR/mh

**SUBMITTED BY:** Rebecca J. Bjork, Public Works Director

**APPROVED BY:** City Administrator's Office