



Agenda Item No. \_\_\_\_\_  
File Code No. \_\_\_\_\_

# CITY OF SANTA BARBARA

## COUNCIL AGENDA REPORT

### ITEM 5C

**AGENDA DATE:** April 19, 2016

**TO:** Mayor and Councilmembers

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

**SUBJECT:** Purchase Order For Zero Discharge Water Distribution System Flushing Services

#### **RECOMMENDATION:**

That Council authorize the General Services Manager to execute a Sole Source Purchase Order with ValveTek Utility Services, Inc., as authorized by Municipal Code Section 4.52.070 (k), in the not-to-exceed amount of \$498,952 for zero discharge water distribution system flushing services.

#### **DISCUSSION:**

##### Background

The Water Resources Division maintains approximately 300 miles of water distribution mains. Standard industry practice is to annually clean the water mains by flushing the system to remove sediment and biofilm that naturally builds up in the system. An effective water main flushing program is fundamental to maintaining water quality in the water distribution system and helping to ensure customer satisfaction.

The Water Resources Division has historically conducted an annual flushing program using conventional methods, whereby water is systematically flushed from fire hydrants and de-chlorinated before flowing to storm drains. The flushing program was suspended in 2013, because of the ongoing drought. As a result, many water customers in the downtown area have recently experienced water quality issues such as off-colored and/or poor tasting and smelling water. While the water is safe to drink, these aesthetic water complaints are the result of not regularly flushing the distribution system.

Staff has investigated effective water-conserving technologies for flushing the water distribution system. Staff contacted ValveTek Utility Services, Inc. (ValveTek), which offers the patented No-Des technology as a unique solution for flushing water mains that can be done without discharging water. The process involves filtering water at a scouring velocity of five feet per second through a mobile filtration unit, and returning the water back into the water distribution system. ValveTek is currently the only domestic certified

company authorized to flush water mains using the patented No-Des water filtering technology. ValveTek has successfully cleaned other water systems, including at San Jose Water and the cities of Pasadena, Manhattan Beach, and Huntington Beach. The No-Des technology has been recognized by the State Water Resources Control Board (SWRCB) as an approved method for flushing water distribution systems. Staff has looked at other technologies, but none have the water-conserving capabilities of the No-Des technology.

On March 4, 2016, ValveTek demonstrated the No-Des water distribution flushing technology in an Eastside neighborhood that was prioritized by staff for cleaning. Water customers in the demonstration area were notified in advance of the work. ValveTek's demonstration flushed approximately 1.5 miles of the water distribution system and conserved over 100,000 gallons of water that would have been lost using conventional flushing methods. Staff received no customer calls about water quality concerns or service disruptions during the flushing demonstration.

#### Project Description

The City's water mains in the "Low Zone," or the City's lower elevations (see Attachment) have the greatest need for flushing. The Low Zone is comprised of approximately 140 miles of water main and is the area that has received the greatest number of complaints from water customers. Additionally, the Low Zone needs to be flushed in advance of reactivating the Charles E. Meyer Desalination Plant, anticipated for October 2016.

While the impacts of introducing desalinated water to the water distribution system are not fully known, staff anticipates that pushing the desalinated water into the system will stir up scaling or sediments in the pipes. Flushing the Low Zone in advance of the desalination plant being put into service would help minimize water quality concerns.

Staff recommends that Council 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 (k), and to authorize the Public Works Director to issue a purchase order with ValveTek for water distribution system flushing services in a not-to-exceed amount of \$498,952. The system maintenance work would include flushing the Low Zone and having ValveTek available on an on-call basis to respond to water quality complaints related to putting the desalination plant into service.

The City would reserve the right to obtain a competitive quote for water main flushing maintenance, in the event that a new domestic company who is certified and authorized to flush water mains using a comparable technology becomes available, provided that they can offer an economical alternative for the Water Resources Division.

#### Community Outreach

Various forms of public notification would be used to inform water customers, including: press releases, individual residential/business postcards and/or door hangers, Next Door

posts, City website announcements, and City News in Brief articles. In addition, staff would comply with any SWRCB notification requests.

Cost and Funding

Staff has received an acceptable proposal from ValveTek to flush 140 miles of water main in the Low Zone for a rate of \$3,900 per day, which includes labor, equipment, traffic control, and related costs to successfully perform the flushing work, plus an estimated \$500 per day for filter element replacements. The anticipated flushing rate is 1.5 miles per day, with the base bid work to be completed in 94 days. Staff recommends including an additional 20 days for ValveTek to provide on-call services during startup of the desalination plant. There are sufficient appropriated funds in the Water Fund to cover these costs.

**ESTIMATED PROJECT COST**

| <b>Item</b>  | <b>Quantity</b> | <b>Cost</b>      |
|--|-----------------|------------------|
| Base Bid: \$3,900/day                                    | 94 day          | \$366,600        |
| Filter Sets for Base Bid: \$156/set (3 sets/day)         | 282 sets        | \$43,992         |
| On-call services for Desal Plant Start-up: \$3,900/day   | 20 days         | \$78,000         |
| Filter Sets for On-call services: \$156/set @ 3 sets/day | 60 sets         | \$9,360          |
| Mobilization   | 1 event         | \$1,000          |
| <b>ESTIMATED PROJECT COST</b>                            |                 | <b>\$498,952</b> |

Costs and quantities are based on cleaning 1.5 miles of pipe per day.

**SUSTAINABILITY IMPACT:**

ValveTek’s No-Des technology provides a sustainable water distribution system flushing alternative to conventional methods which waste hundreds of thousands of gallons of water. Additionally, ValveTek’s No-Des technology can improve the taste, odor and appearance of the City’s drinking water.

**ATTACHMENT:** Low Zone Water Distribution System Flushing Area Map

**PREPARED BY:** Catherine Taylor, Water System Manager/MW/mh

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

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