

City of Sacramento

Legislation Text

File #: 2020-00766, **Version:** 1

Title:

Agreement: Pilot Plant Project with Water Quality Treatment Solutions (WQTS) (Two-Thirds Vote Required)

File ID: 2020-00766

Location: Citywide

Recommendation:

Pass a Motion authorizing the City Manager or the City Manager's designee to: 1) suspend competitive bidding in the best interests of the City, for the purchase of a Drinking Water Treatment Pilot Plant which mimics the configuration of the City's water treatment plants; and 2) authorizing the City Manager or the City Manager's designee to execute an Agreement with Water Quality Treatment Solutions (WQTS) in an amount not-to-exceed \$375,000

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Presenter: None

Attachments:

- 1-Description/Analysis
- 2-Agreement

Description/Analysis

Issue Detail: The Department of Utilities, Water Quality Laboratory and R&D section of the Water Division is responsible for ensuring the City's water treatment processes meet all applicable regulations and standards. The purchase of a drinking water treatment pilot plant which mimics the current configuration of the City's water treatment plants will assist City Staff in optimizing the treatment process. This purchase will also provide Staff a tool for long term evaluation of modifications to coagulation and flocculation, such as the use of new coagulants or changes to related mechanical and physical processes. Additionally, it will give Staff the ability to investigate other process improvements, such as disinfectant optimization, chemical changes to minimize sludge production, the study of filter loading rates, and consideration of alternative disinfectants.

The pilot plant is a modular, skid-mounted design and will be used at both the Sacramento River Water Treatment Plant (SRWTP) and the E. A. Fairbairn Water Treatment Plant (FWTP) as needed. The configuration of the pilot plant includes a fully automatic operating system with extensive instrumentation and Supervisory Control and Data Acquisition (SCADA) capabilities. The pilot plant will also serve as a training resource for Plant Operators, a research tool for the Water Quality Laboratory and R&D section, and will expand the City's knowledge of the operation, engineering, and design of drinking water treatment plants.

Policy Considerations: City Council approval is required for service agreements of \$250,000 or more per City Code 3.64.020.

Economic Impacts: None

Environmental Considerations: The activity described in this report has been determined to not be a project pursuant to the California Environmental Quality Act (CEQA). CEQA Guidelines Section 15378(b). The activity is a continuing administrative or maintenance activity, such as the purchases of supplies or personnel related actions and will not result in direct or indirect physical changes in the environment [CEQA Guidelines section 15378 (b)] and is not subject to CEQA (CEQA Guidelines Section 15060(c)(3)).

Sustainability: In alignment with the DOU Strategic Goal of Reliability, a pilot plant will enable the City to conduct offline testing of proposed process modifications before they are implemented full-scale at the treatment plants.

Commission/Committee Action: Not Applicable

Rationale for Recommendation: Staff recommends suspending competitive bidding in the best interests of the City for the purchase of a drinking water treatment pilot plant which mimics the current configuration of the City's water treatment plants.

City Code Section 3.56.230 allows the City Council to suspend competitive bidding when the City Council determines that it is in the best interest of the City. Suspending competitive bidding is recommended due to greatly reduced cost and specialized work. In 2010, the City hired WQTS Inc. to design a pilot plant for the City; the design was 80% completed. As stated above, WQTS can complete the pilot plant for \$375,000. In recent review with industry experts, building a comparable pilot plant from scratch, including design and construction, would cost the City between \$2 and \$4 million.

Lacking a pilot-scale plant, the City of Sacramento is currently limited to choosing between bench-scale testing or full-scale testing when evaluating changes to the water treatment process. Due to small sample volume and uncertainties associated with extrapolating results, bench-scale testing

limits our ability to apply testing results to the full-scale treatment process. Testing new or unproven treatment processes at full-scale is an unacceptable risk to public health.

The purchase of a drinking water treatment pilot plant which mimics the current configuration of the City's water treatment plants will assist City Staff in optimizing the treatment process. This purchase will also provide Staff a tool for long term evaluation of modifications to coagulation and flocculation such as the use of new coagulants or changes to related mechanical and physical processes.

Financial Considerations: The proposed Agreement with WQTS has a maximum one-year term for a not-to-exceed amount of \$375,000. Sufficient funding is available in the Drinking Water Quality Program (Z14001500, Fund 6005) to execute the agreement in the amount of \$375,000.

There are no general funds allocated or planned for this project.

Local Business Enterprise (LBE): WQTS is not an LBE. The minimum LBE participation requirement is waived as the City is suspending competitive bidding and utilizing an alternate procurement method to select a vendor.

Background: Installation of a pilot scale treatment process is necessary due to a changing drinking water regulatory environment, the City's desire to optimize the treatment process, ever changing water quality of the source water and the need for evaluation of new technologies. Lacking a pilot-scale plant, the City of Sacramento is currently limited to choosing between bench-scale testing (limited applicability to the full-scale process) or full-scale testing (unacceptable risk to public health) when evaluating changes to the water treatment process. In alignment with the DOU Strategic Goal of Reliability, a pilot plant will enable the City to conduct offline testing of proposed process modifications before they are implemented full-scale at the treatment plants.

As DOU embarks on a long-term project to expand and upgrade the SRWTP, the purchase of a pilot scale treatment process gains greater importance. Pilot units can be utilized as individual treatment processes or in tandem as partial or full treatment trains to evaluate and optimize full-scale treatment. Pilot plant testing can be used to establish operational expectations, performance ranges, and design criteria for full scale treatment and will allow investigation of alternative treatment processes, examination of potential process modifications, and validation of process capabilities to meet regulatory requirements.