

Agenda Item: {{section.number}}A

December 4, 2023

TO: THE ENGINEERING, OPERATIONS, AND WATER RESOURCES COMMITTEE

Director Gracie Torres

Director Fauzia Rizvi

FROM: Tim Barr, Deputy General Manager

APPROVE AN AMENDMENT TO THE PROFESSIONAL SERVICES CONTRACT WITH HAZEN AND SAWYER FOR THE DESIGN OF THE PRE-POLYFLUOROALKYL SUBSTANCE REMOVAL PROJECT AT THE WESTERN WATER RECYCLING FACILITY (SPECIFICATION W-308)

RECOMMENDATION:

Staff requests that the Engineering, Operations, and Water Resources Committee recommend the Board of Directors:

1. Authorize the General Manager to execute an amendment to increase the professional services contract and associated purchase order with Hazen and Sawyer of Irvine, California in the amount of \$168,144 for the Design of Per-and Polyfluoroalkyl substance removal at the Western Water Recycling Facility from \$1,574,559 to \$1,742,703.

EXECUTIVE SUMMARY:

The design phase of the Per-and Polyfluoroalkyl Substance Removal Project at the Western Water Recycling Facility is in progress. The design process is guided by a series of bench test evaluations. Utilizing the bench test results, the filter media were selected for the next phase of the project, the Pilot Study. Due to algae blooms during the study, the pilot had to be suspended and the test equipment cleaned and disinfected. The algae challenge requires that the continuing pilot study include additional equipment and therefore additional funding.

BUDGET IMPACT:

In 2021, the total estimated cost of Per- and Polyfluoroalkyl Substance Removal Project was \$7,154,300 with expected grant offsets in the amount of \$4,700,000. The initial design budget of \$2,166,667 approved by the Board in Fiscal Year 2022-2023 under the WWRF Treatment System Improvement Fund 324 is sufficient to cover the proposed cost increase. Once the project is bid

and ready for construction award, any additional Project budget need will be brought forward to the Board for approval.

DETAIL:

Western Municipal Water District (Western Water) is pursuing a proactive step to remove Per- and Polyfluoroalkyl Substance (PFAS), Total Organic Carbon (TOC), and other Contaminants of Emerging Concern (CEC) from the Western Water Recycling Facility's (WWRF) effluent. On November 16, 2022, the Board of Directors awarded the Professional Services Contract with Hazen and Sawyer in the Amount of \$1,574,559 for the Design of the PFAS Removal Project at the WWRF.

Western Water was awarded \$1.7 million in grant funding from the California Department of Water Resources Urban and Multi-Benefit Drought Relief Program for the development of a PFAS treatment system at WWRF. This grant has no requirements for matching funds; however, per the grant guidelines, construction of the Project is to be completed by June 30, 2025, and Project Administration must be completed by December 31, 2025. In addition, Western Water received Congressional Funding for PFAS Treatment in the amount of \$3M. Together, these grants will offset the cost of the Project by a total of \$4.7M.

The Design of the PFAS Removal Project at the WWRF is in progress. A purchase order was issued to Hazen and Sawyer for design on December 7, 2022. The bi-weekly sampling of PFAS, TOC, and CEC has been performed for six months and was completed on May 27, 2023. The Rapid Small Scale Column Test (RSSCT) also known as "bench testing" has also been completed to evaluate PFAS and TOC removal using various media types. Based on results of the bench testing, three experiments were selected for the Phase 2 Pilot Study and on April 4th and 5th, the Pilot System was assembled and connected to the WWRF's filtration system. Due to an algae bloom that developed within three weeks, the Pilot has been shut down, cleaned, scrubbed, and disinfected.

Coincidentally in May when the Pilot System was ready to be put back in service, there was a large spike of PFAS concentration in the filter effluent. The PFOA concentration spiked from 200 ng/l to 1,300 ng/l; consequently, the pilot study could not be continued at that time. The following has been performed to reduced PFAS concentration in the sewer system:

- It was confirmed that the high concentration of PFAS is coming from the March Air Reserve Base (MARB) area.
- Western Water collaborated with MARB and in August MARB eliminated a significant source of PFAS concentration by severing the Aqueous Film Forming Foam (AFFF) waste drain line direct connection to the sewer collection system at the 429 Lift Station.
- Weekly and biweekly PFAS and TOC sampling have been scheduled to track the concentration levels. Initial results indicate that although PFAS concentration is currently trending downward, it is still much higher than the desired level.
- Discussions with MARB regarding remediation of the sewer system are ongoing.

Hazen and Sawyer have recommended procuring a portable Coagulation/Flocculation/Filtration Pilot System (PCFFPS) for three months to enhance the reduction of dissolved nutrients that control algae growth, particularly phosphorus. Once this system is in place, the pilot can be restarted.

Reason for Action:

The algae challenge requires temporarily securing additional equipment and therefore additional funding.

Solution:

Approve an amendment to increase the professional services contract with Hazen and Sawyer in the amount of \$168,144 for the PCFFPS.

STRATEGIC PRIORITIES REFERENCE:

This Project aligns with Western Water's Strategic Priority of Resource Management.

PROPOSED DATE OF ACTION:

If approved by the Committee, this item is scheduled for consideration by the full Board of Directors at their meeting on December 20, 2023.

LEGAL COUNSEL REVIEW:

Not applicable.

Respectfully submitted by:

Tim Barr, Deputy General Manager

Attachment:

1. Hazen and Sawyer Amended Piloting Scope for PFAS Treatment