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File #: 2026-4894 **Agenda Date:** 5/13/2026 **Agenda Item No:** 7.

FROM: Robert Thompson, General Manager
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SUBJECT:

LIQUID CHROMATOGRAPH-TRIPLE QUADRUPOLE MASS SPECTROMETER (LC-MS/MS)

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

Approve a Sole Source Purchase Order to Agilent Technologies for the purchase of a replacement Liquid Chromatograph-Triple Quadrupole Mass Spectrometer (LC-MS/MS) System for a total amount not to exceed $453,000.

BACKGROUND

The LC-MS/MS System is the industry-standard technology for the analysis for per- and poly-fluoroalkyl substances (PFAS) and Contaminants of Emerging Concern (CECs) in wastewater samples as required by Orange County Sanitation District's (OC San) National Pollutant Discharge Elimination System (NPDES) Permit and for various special projects. The system will replace an existing system which has reached end-of-life status.

Inventory of Triple-Quadrupole Instruments:

Instrument	Purchase Date	Estimated Replacement Date	Used to Analyze
Liquid Chromatograph / Mass Spectrometer	**April 2016**	**June 2026**	**PFAS and CECs in liquid and solid samples**
Gas Chromatograph / Mass Spectrometer	September 2020	September 2030	Pesticides in ocean sediment and fish tissue
Gas Chromatograph / Mass Spectrometer	June 2023	June 2033	Persistent organic pollutants in sediment
Gas Chromatograph / Mass Spectrometer	April 2025	April 2035	Persistent organic pollutants in NPDES compliance samples
Inductively Coupled Plasma / Mass Spectrometer	June 2025	June 2035	Metals in wastewater, ocean sediment, and fish tissue

RELEVANT STANDARDS

- Comply with environmental permit requirements
- Maintain a proactive asset management program
- Ensure the public's money is wisely spent
- Maintain a culture of improving efficiency to reduce the cost to provide the current service level or standard

PROBLEM

This request is to sustain and enhance the laboratory's analytical capacity and capability for PFAS and CECs in wastewater and other environmental matrices. It is anticipated that regulatory monitoring requirements for these contaminants, particularly PFAS, will increase in both scope and frequency in the coming years. The current LC-MS/MS instrument is at the end of the manufacturer-supported serviceable life of 10 years. Beyond this point, the manufacturer no longer guarantees the availability of spare parts or ability of trained technicians to continue servicing the instrument. Should a catastrophic failure of a key part occur, the current instrument may be rendered permanently inoperable.

PROPOSED SOLUTION

Approve a Sole Source Purchase Order to Agilent Technologies for an industry-standard LC-MS/MS system to replace in kind the existing aged LC-MS/MS system. Purchasing the LC-MS/MS system will equip OC San with a more robust system that uses the most current technology, will be supported for a minimum of 10 years, and will enable OC San to continue to meet the demands of our NPDES permit as well as support a variety of key special projects.

TIMING CONCERNS

Regulatory actions (such as OC San's renewed NPDES permit) may impact PFAS and CEC testing frequency requirements, and the number of compounds to be tested is likely to expand with the new permit. Method development and validation for a new instrument can take a significant amount of time; therefore, having the instrument onboard ahead of any anticipated regulatory impacts is important to ensure timely compliance with updated requirements. OC San will also perform PFAS characterization studies within our sewer shed; therefore, having the new instrument installed and validated before these efforts would increase OC San's ability to generate high-quality, reliable data.

RAMIFICATIONS OF NOT TAKING ACTION

Without the replacement LC-MS/MS system, OC San would continue to use the existing system as long as possible. When the current system fails, we will use a contract laboratory at a minimum cost of $450 per sample until a replacement has been purchased and installed. Past projects have involved over 100 samples analyzed over several months to a year. Sub-contracting such samples on short notice would be even more costly than the standard rate, and there is no guarantee that contract labs would be capable of handling such large sample quantities. Furthermore, OC San has experienced issues with data quality, analytical sensitivity, and turnaround times when samples have been sub-contracted in the past.

PRIOR COMMITTEE/BOARD ACTIONS

December 2016 - Approved Agilent Technologies as an OEM Sole Source provider for Liquid Chromatography Mass Spectrometry Equipment.

ADDITIONAL INFORMATION

OC San is utilizing the OEM Sole Source process for this procurement. Agilent Technologies has been identified as an OEM supplier for LC-MS/MS equipment, as ratified by OC San's Board in December of 2016.

The total cost of $453,000 includes the LC-MS/MS system, installation and training, sales tax, and freight.

CEQA

N/A

FINANCIAL CONSIDERATIONS

This request complies with authority levels of OC San's Purchasing Ordinance. This item has been budgeted (Budget Update FY 2025-2026, Page A-16, Capital Equipment) and the budget is sufficient for the recommended action.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

N/A