

**REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**EXECUTIVE OFFICER SUMMARY REPORT
APRIL 14, 2021**

ITEM 4

SUBJECT

Informational Item: PFAS – From Detection to Protection: Methods for Finding and Removing ‘Forever Chemicals’ in Groundwater, Wastewater, and Drinking Water. (*Daniel Boyd*)

STAFF RECOMMENDATION

This is an informational item and the Board will not take an action.

KEY ISSUES

Per- and polyfluoroalkyl substances (PFAS) is a family of over 5,000 chemicals that are persistent in the environment and are very mobile in water. Within the broader PFAS classification, the perfluoroalkyl acids–perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA)–were manufactured for the longest time, are the most widespread in the environment, and have been studied extensively.

1. The State Water Resources Control Board’s (State Water Board) Environmental Laboratory Accreditation Program (ELAP) is charged with accrediting environmental testing laboratories for compliance with the requirements of California state regulatory agencies, including the State Water Board PFAS investigative orders.
2. Because PFAS are not amenable to bioremediation or conventional chemical treatment, conventional sorbents such as granular activated carbon (GAC), ion exchange resins (IX), and other novel adsorbents have become an effective response measure for addressing PFAS contamination in water.

PRACTICAL VISION

Chapter 4 of the San Diego Water Board Practical Vision, *Proactive Public Outreach and Communication*, focuses on implementing the core values of leadership, communication, and transparency. This item provides an opportunity for the San Diego Regional Board and the public to learn about ELAP, the analytical test methods available for testing PFAS, and the methods approved by the Division of Drinking Water (DDW) and Division of Water Quality (DWQ) for their PFAS investigative orders.

DISCUSSION

The purpose of this item is to provide information to the Board and public regarding current efforts to address PFAS in groundwater and surface waters, analytical methods available for testing PFAS, and risks associated with PFAS in drinking water.

Representatives from ELAP and Orange County Water District (OCWD) will present information to the Board regarding their PFAS efforts. Additionally, the Office of Environmental Health Hazard Assessment, DDW, and DWQ will be in attendance to answer questions regarding the risks associated with PFAS and other inquiries.

Per- and Polyfluoroalkyl Substances

PFAS is a family of over 5,000 human-made and generally unregulated chemicals that have been produced since mid-century for the manufacture of a wide range of industrial and household products. They are mobile, persistent, and bioaccumulative. The State Water Board has issued PFAS investigative orders to landfills, airports, chrome platers, and publicly owned treatment works. Additional investigative orders are being prepared for bulk fuel storage terminals and refineries later in 2021, and work is ongoing with the Department of Defense (DoD) to investigate sources of PFAS at military installations.

Under Assembly Bill 756, if a water system receives a State Water Board order for testing and finds that the PFOA or PFOS concentration exceeds the response level (RL), the system is required to take the water source out of service, provide treatment, or notify its customers in writing. In February 2020, the State Water Board announced a reduction in the RLs for PFOA and PFOS in drinking water that trigger responses by local water systems. The current RLs for PFOA and PFOS are 10 parts per trillion (ppt) and 40 ppt, respectively.

Environmental Laboratory Accreditation Program

ELAP is responsible for implementing the California Environmental Laboratory Accreditation Act (ELAA). California enacted the ELAA to ensure the competency of laboratories producing data for regulatory compliance purposes. ELAP-accredited laboratories have demonstrated capability to analyze environmental samples using only the methods listed on ELAP's accreditation offerings. ELAP will inspect a laboratory's quality system, staff, facilities and equipment, test methods, records, and reports to ensure competency. The inspection indicates the laboratory has the capability to provide accurate, defensible data. ELAP requires the approval of specific analytical methods from other State Water Board programs including DDW and DWQ. DDW has approved U.S. Environmental Protection Agency Method 537.1 as a validated analytical method for detecting PFAS compounds in drinking water samples. DWQ has approved non-drinking water samples for PFAS analysis using DoD Table B-15 of Quality Systems Manual, version 5.1, or later. The ELAP presentation will provide background information about the program and the framework for how the analytical test methods are identified and approved for regulatory purposes.

Orange County Water District Studies

OCWD is the public agency that manages a portion of the Santa Ana River and the Orange County Groundwater Basin (OCGB). OCWD provides groundwater to 19 municipal and special water districts that serve ~2.5 million residents in northern and central Orange County. PFAS have been detected in the OCGB. Due to exceedance of PFAS RLs, several groundwater production wells have been taken offline. The OCWD has undertaken two study projects to address this problem: a treatment study and a planning study. The treatment study incorporates bench- and pilot-scale performance tests to evaluate treatment products such as GAC, IX, and reverse osmosis or nanofiltration. Based on the results of the treatment study and a pre-design planning study that selected adsorbent-based treatment (GAC and IX), the parties involved are currently

in the process of designing ten different municipal PFAS treatment systems.

LEGAL CONCERNS

None.

PUBLIC NOTICE

The agenda notice for today's meeting was posted on the San Diego Water Board's website and sent to subscribers to the email list for Board meetings. This satisfies the Bagley-Keene Open Meeting Act requirements to publish the meeting notice and agenda.

SUPPORTING DOCUMENTS

None.