



**BOARD OF DIRECTORS
EAST BAY MUNICIPAL UTILITY DISTRICT**

375 - 11th Street, Oakland, CA 94607

Office of the Secretary: (510) 287-0440

Notice of Time Change

PLANNING COMMITTEE MEETING

10:45 a.m.

Tuesday, June 11, 2019

Notice is hereby given that the Tuesday, June 11, 2019 Planning Committee Meeting of the Board of Directors has been rescheduled from 9:15 a.m. to 10:45 a.m. The meeting will be held in the Training Resource Center of the Administration Building, 375 - 11th Street, Oakland, California.

Dated: June 6, 2019

A handwritten signature in cursive script that reads "Rischa S. Cole".

Rischa S. Cole

Secretary of the District



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AGENDA

**Planning Committee
Tuesday, June 11, 2019
10:45 a.m.
Training Resource Center**

(Committee Members: Directors Linney {Chair}, McIntosh and Mellon)

ROLL CALL:

PUBLIC COMMENT: The Board of Directors is limited by State law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.

DETERMINATION AND DISCUSSION:

1. Updates on Emerging Contaminants and Regulations for Wastewater (White)

ADJOURNMENT:

Disability Notice

If you require a disability-related modification or accommodation to participate in an EBMUD public meeting please call the Office of the Secretary (510) 287-0404. We will make reasonable arrangements to ensure accessibility. Some special equipment arrangements may require 48 hours advance notice.

Document Availability

Materials related to an item on this agenda that have been submitted to the EBMUD Board of Directors within 72 hours prior to this meeting are available for public inspection in EBMUD's Office of the Secretary at 375 11th Street, Oakland, California, during normal business hours, and can be viewed on our website at www.ebmud.com.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: June 6, 2019

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

FROM: Eileen M. White, Director of Wastewater *Eileen M. White*

SUBJECT: Updates on Emerging Contaminants and Regulations for Wastewater

INTRODUCTION

This memo addresses two of the more significant emerging contaminants of concern for wastewater, perfluoroalkyl and polyfluoroalkyl substances (PFAS) and microplastics, and associated policies and regulations either promulgated or under development. Staff will report on the latest available information about PFAS and provide an update on recent developments in microplastics at the June 11, 2019 Planning Committee meeting.

DISCUSSION

PFAS

PFAS refers to a group of over 3,000 synthetic chemicals, of which perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are of the most concern and most studied. PFAS have been manufactured in the United States (U.S.) since the early 1940s. Due to their water repellent properties, thermal resistance and chemical stability, a wide range of domestic and commercial uses for PFAS have been found in non-stick cookware, stain-resistant textiles, cleaning products and aqueous film-forming foams (AFFFs). PFAS manufacturing and processing facilities, facilities using PFAS in the manufacture of other products, airports, and military installations are some of the contributors of PFAS releases into the air, soil and water. PFOS and PFOA have been voluntarily phased out by major manufacturers to reduce exposure risk to humans and the environment. Despite being phased out, PFAS are still persistent in the environment and have been detected at trace levels in human blood. Some PFAS are volatile and can be carried long distances through the air, which may lead to contamination far from the source of the PFAS emission. PFAS have been detected even in wildlife in the Arctic region.

Human exposure and uptake of PFAS occur through eating or drinking contaminated food or liquid (including water) and breathing in or touching products treated with PFAS, such as carpets or clothing. Food can be contaminated by the migration of PFAS from packaging, and some foods such as fish, meat, eggs and leafy vegetables may contain PFAS due to bioaccumulation and crop uptake. The U.S. Environmental Protection Agency (EPA) has identified PFAS as toxic

to human reproductive systems. As of November 10, 2017, the California Office of Environmental Health Hazard Assessment (OEHHA) included these compounds on the Proposition 65 list.

A key first step to better understand the prevalence of PFAS in wastewater and its impact on the environment and human health is the availability of standardized analytical methods that allow accurate and reproducible identification and quantification. Currently there is no approved procedure for wastewater or biosolids sample collection or analysis. EPA scientists are in the process of validating method SW-846 8328 which can be used for non-drinking water analysis, including solids, and expect to promulgate it in the summer of 2019.

Regulatory focus for PFAS has been primarily on drinking water. PFAS in wastewater and biosolids are not currently regulated in California or at the federal level. The District is working with Bay Area Clean Water Agencies (BACWA), at the local level, and California Association of Sanitation Agencies at the state level to monitor regulatory developments.

In October 2014, the San Francisco Estuary Institute (SFEI), under the Regional Monitoring Program (RMP), coordinated a study of PFAS in wastewater effluent discharges to San Francisco Bay. The District voluntarily participated in this study along with seven other Bay Area wastewater utilities. These studies were conducted using preliminary sampling techniques and analytical methods. Results published in 2016 showed the District's Main Wastewater Treatment Plant effluent had PFOS and PFOA concentrations each at less than 15 parts per trillion (ppt). In contrast, in May 2016 EPA established Health Advisory Levels of 70 ppt PFOA and PFOS each in drinking water. Additionally, in July 2018, the State Water Resources Control Board (SWRCB) issued drinking water notification levels for PFOS and PFOA at 13 ppt and 14 ppt, respectively.

Microplastics

Although microplastics-related research has accelerated in the past year, there is still no standardized analytical method or definition for microplastics. Generally, particles smaller than five millimeters (mm) are considered microplastics; however, the lower range is not well-defined.

The District continues to engage in microplastics-related science and policy development. The District laboratory contributed a manuscript on the determination of microplastics in wastewater, published in the Analytical Methods Journal in 2017. The article has since been cited 28 times by other researchers. A team lead by EPA Region 9 is using this work as the foundation for the development of a standard method for microplastics measurement in wastewater; District staff was also invited to serve on the advisory panel for this effort. The draft method is currently under review by the American Society for Testing and Materials. District staff has also contributed a chapter on method development to the International Water Association publication titled *Microplastics in Water and Wastewater*; the book is scheduled for release in September 2019.

The District is currently participating in a microplastics study through the RMP and coordinated by SFEI and Five Gyres Institute; the scope of the study is establishing baseline microplastics concentration in the San Francisco Bay water, fish tissue, and stormwater, as well as wastewater effluent. In 2017, the District contributed wastewater samples for this study. The final report on this project is expected in September 2019. This study is informing the parallel policy development efforts coordinated by Five Gyres Institute; as a stakeholder and representative of BACWA, District staff is engaged in the policy development as well.

In 2018, California passed SB-1263, which requires a Statewide Microplastics Strategy to be administered by the Ocean Protection Council. The core of the strategy is development of standardized methods for sampling, detecting, and characterizing microplastics. The state Legislature has also amended the California Safe Drinking Water Act by enacting SB-1422. This bill requires the SWRCB on or before July 1, 2020, to adopt a definition for microplastics, and on or before July 1, 2021, to adopt a standard methodology for testing of drinking water for microplastics. The bill further requires water utilities to monitor drinking water for four years and report results to the State and to the public.

NEXT STEPS

Staff will continue to monitor developments in science and policy related to PFAS and microplastics. Staff will continue to engage in the RMP at several levels, the Emerging Contaminants Workgroup which recommends which emerging contaminants warrant in-depth studies, the Technical Advisory Committee which makes recommendations to the Steering Committee for allocating limited funds among multiple study proposals, and the Steering Committee which makes the final decision for funding projects.

ARC:EMW:na

