

Emerging Constituents Program Task Force

January 22, 2024

ATTENDEES:

Babcock Laboratories , Allison Mackenzie*	Riverside Public Utilities , Drew Faherty*
Chino Basin Watermaster , Justin Nakano*	Riverside Public Utilities , Greg Herzog*
City of Beaumont , Kevin Lee*	RWQCB , Cindy Li*
City of Beaumont , Thaxton Van Belle*	RWQCB , Eric Lindberg*
City of Redlands , Kimberly Tra*	RWQCB , Julio Lara*
City of Redlands , Paul Mariscal*	RWQCB , Jayne Joy*
City of Rialto , Nicole Hemmans*	RWQCB , Maile Gee*
City of Rialto , Toyasha Sebbag*	RWQCB , Pamela Ybarra*
City of Riverside , Bobby Gustafson*	SAWPA , Bruce Whitaker*
City of Riverside , Nicole Greenwood*	SAWPA , Gil Botello*
City of Riverside , Jon Colón*	SAWPA , T. Milford Harrison*
EVWMD , Lenai Hunter*	SAWPA , Jeff Mosher*
EVMWD , Sudhir Mohleji*	SAWPA , Rachel Gray*
EMWD , Anthony Budicin*	SAWPA , Ian Achimore*
EMWD , Doug Edwards*	SAWPA , Melissa Bustamonte*
EMWD , Erin Guerrero*	SAWPA , Rick Whetsel*
IEUA , Bonita Fan*	SAWPA , Haley Gohari*
IEUA , Stephen Parker*	SBMWD/RIX JPA , Marissa Flores-Acosta*
IRWD , Jim Colston*	SWRCB , Wendy Linck*
JCS , Stacy Nicola*	SWRCB DDW , Darrin Polhemus*
JPW Communications , Leslie Spring*	SWRCB DDW , Oliver Pacifico*
Kahn, Soares, & Conway, LLP , Theresa (Tess) Dunham*	WMWD , Jennifer McMullin*
Metropolitan Water District of Southern California , Ai Jia*	WMWD , Lyndy Lewis*
OCWD , Jason Dadakis*	WSP , Chris Stransky*
OCWD , Lisa Haney*	YVWD , Ashley Gibson*
OCWD , Patrick Versluis*	Yorba Linda WD , Rosanne Weston*

*Participation via conference call

Introductions

The Emerging Constituents (EC) Program Task Force (Task Force) meeting was called to order at 2:31 p.m. in a virtual Zoom Meeting. Brief introductions were made.

Approval of October 24, 2023 Meeting Notes

Meeting notes were approved as posted.

Upcoming Process for Development of the PFAS Maximum Contaminant Level - Darrin Polhemus, State Water Board Division of Drinking Water

Darrin Polhemus, of the State Water Resources Control Board's (SWRCB) Division of Drinking Water (DDW), provided a verbal report on their process for the development of the PFAS Maximum Contaminant Levels (MCLs). Mr. Polhemus provided an overview of process accomplished so far. Monitoring orders were issued near sites that were suspected to be contaminated with the PFAS compounds or were near areas of higher likelihood to have presence of PFAS (like airports and landfills). The monitoring orders assist in providing data and a higher level of understanding of the presence of the emerging contaminant (extent, concentration, treatment processes, etc.) and assists with determining the notification levels (NLs), response levels (RLs) and, ultimately, MCLs. The monitoring data is presented on their website and is available for review. Next, efforts will be focused on monitoring in disadvantaged communities' water systems that will assist with expanding the current level of knowledge, including providing input on areas that may or may not be near hot spots, which could indicate the source being more widespread in consumer products.

The PFAS compounds vary widely, in short chains and long chains, with unique compounds numbering into the thousands, with only about 30-50% of the compounds being visible to current laboratory processes.

Mr. Polhemus mentioned results so far show some advantages utilizing a resin-based ionic exchange process since the resins can be reformulated and adjusted to manage the treatment for these types of compounds.

There are generally two pathways for MCLs to be established by the SWRCB:

1. Office of Environmental Health Hazard Assessment (OEHHA) establishes a Public Health Goal (PHG), and the PHG informs SWRCB's/DDW's process for adopting an MCL which includes evaluations of economic impact of monitoring and treatment processes when establishing the MCL.
2. The United States Environmental Protection Agency sets an MCL and the SWRCB would adopt that MCL recognizing the federal regulation level is established (and would be a requirement under the Safe Drinking Water Act).

The SWRCB DDW will be focused on continuing to determine how to efficiently and effectively manage the class of compounds. There will be continued efforts to determine the best method for monitoring and treatment moving forward.

PFAS-Related Aquatic Toxicology Data Overview - Chris Stransky, WSP

Chris Stransky, of WSP (formerly Wood/Wood Environmental), provided a presentation titled *PFAS – Aquatic Toxicology Data and Overview*. Mr. Stransky provided an introduction to PFAS:

- Over 3,000 PFAS compounds on the global market.
- PFOS and PFOA (breakdown chemicals from precursors) among the most studied due to their prevalence and toxicity.
- Underlying mechanisms of PFOA toxicity to aquatic animals, and fish in particular, appear to be related to oxidative stress, apoptosis, thyroid disruption, and development-related gene expression.
- Causing reproductive failure, effects on growth, developmental toxicity; androgen, estrogen and thyroid hormone disruption; immune system disruption; and neuronal and developmental damage.

Assessment Endpoints for the Aquatic Community	Measures of Effect
<p>Aquatic Life: Survival, growth, and reproduction of freshwater and estuarine/marine aquatic life (i.e., fish, amphibians, aquatic invertebrates)</p>	<p>For effects from Acute exposure (short term):</p> <ol style="list-style-type: none"> 1. LC50, EC50, or IC50 concentrations in water 2. NOEC and LOEC concentrations in water <p>For effects from Chronic exposure (longer term, sublethal):</p> <ol style="list-style-type: none"> 1. EC10 concentrations in water 2. NOEC and LOEC concentrations in water; <i>Only used when an EC10 could not be calculated for a genus.</i>

NOEC = No observed effect concentration, LOEC = Lowest observed effect concentration
 LC, EC, or IC50 = Median lethal, effect, or inhibition concentration.
 EC10 = 10% Effect Concentration

Mr. Stransky shared that for aquatic life, the assessment endpoints are survival, growth and reproduction of freshwater, and estuarine/marine aquatic life, which consider the effects of the acute exposure (short term) and effects of chronic exposure (long term). SAWPA conducted a Santa Ana River Watershed - focused study in 2019, and the results demonstrated a maximum treated effluent level for PFOS of 0.231 µg/L (parts per billion) across 27 sites, which is much lower than the 8.4 µg/L being recommended by the EPA in the draft criteria for PFOS. Mr. Stransky then provided a review of information regarding Human Health Fish Tissue Guidelines for PFAS regarding recommendations for the consumption of fish based on PFAS concentrations (below).

- Currently 8 states have developed consumption risk guidelines for PFAS with New Jersey and Minnesota having the most conservative values.
- No State of CA guidance for the consumption of fish based on PFAS
- State thresholds vary because they may include not only an analysis of risk from the contaminant, but often also a risk-benefit analysis balancing toxicity of the contaminant with the known benefits of consuming fish. Thresholds may also vary because they evaluate different studies and endpoints or use different factors and assumptions (e.g., body weight and consumption rate).
- USEPA human health fish tissue benchmark of 68 ppb ww PFOS

Mr. Stransky shared that there is more work to be done to evaluate the topics regarding human health and impacts of fish consumption and effects as it goes up the food chain. Toxicity work continues with the more common PFAS/PFOA compounds.

[PowerPoint Presentation](#)

Regulatory Report and Updates – Tess Dunham, KSC

There were no updates to provide to the Task Force under this Agenda Item at this time.

General Update on PFAS and Microplastics – Maile Gee, Regional Board

Maile Gee, of the Regional Water Quality Control Board, provided a PowerPoint presentation titled *Updates on Per- and Polyfluoroalkyl Substances (PFAS) Site Cleanup Investigations at Chrome Plating and Bulk Fuel Storage Facilities in the Santa Ana Region*.

a. Site Cleanup Program - Region 8 PFAS Investigations

Ms. Gee reminded the Task Force of the orders from 2019 from the SWRCB to chrome plating facilities and the subsequent orders in 2021 to bulk fuel terminals. Ms. Gee reported that out of the 46 Chrome Plating Facilities:

- 29 facilities submitted initial questionnaires,
- 16 facilities submitted required work plans,
- 6 facilities submitted final reports,

- 7 facilities were non-responsive; and,
- 11 facilities have received No Further Action letters.

Ms. Gee reported that alongside the summary provided above, there are continuous responses with work plans, questionnaire responses and reports. An order completion letter has also been issued to Omni Metal Finishing with additional investigation required.

Ms. Gee reported that out of the 20 Bulk Fuel Terminal Facilities:

- 4 facilities submitted work plans,
- 12 facilities submitted other types of responses,
- 4 facilities were non-responsive,
- 1 new facility initiated a voluntary PFAS investigation,
- 3 facilities were sent Notices of Violation due to being non-responsive; and,
- 8 facilities have received No Further Action letters.

Ms. Gee reported that one Order Completion letter has been issued to the CALNEV facility and next steps are being evaluated for additional investigation.

Next steps for the RWQCB will be to continue to review and respond to work plans, monitoring report and investigation results produced, as well as continuing to address non-responsive sites, in response to the State-wide Investigation Orders.

b. ITRC Microplastics Toolkit Workgroup Update

Ms. Gee shared that approximately 650 comments have been received on the Interstate Technology & Regulatory Council (ITRC) Microplastics Toolkit. The comments are being reviewed and will be incorporated into the Toolkit. Revisions are anticipated to occur in March 2024.

Mid-Year Update on EC Task Force Outreach Efforts – Leslie Spring, JPW Communications

Leslie Spring, of JPW Communications, provided a PowerPoint presentation titled *SAWPA Report and Look Ahead*. Updates include a change in look and feel of the posts on social media, making it more eye-catching and relatable to draw in users and promote engagement. In the spring of 2023, JPW Communications, SAWPA and EC PR Task Force members discussed the plan for the social media campaign moving forward to include: (1) Continue new visual identity and more personable approach, (2) integrate partners into content as much as possible, and (3) maximize videos to deepen engagement. Website analysis shows increases in engagement from previous engagement statistics with an increased engagement rate of 36.94% for September to December of 2023. Ms. Spring also shared a sample video with the Task Force to demonstrate the types of media being focused on within the social media efforts.

[PowerPoint Presentation](#)

Schedule Future Meeting

The next Emerging Constituents Program Task Force will be scheduled via doodle poll and will be distributed to the Task Force members through email at a later date.

Adjournment

Meeting adjourned at 3:27 p.m.