

# RIVERSIDE PUBLIC UTILITIES

## Board Memorandum

**BOARD OF PUBLIC UTILITIES**

**DATE: MAY 23, 2022**

**SUBJECT: PER AND POLYFLUOROALKYL SUBSTANCES UPDATE**

**ISSUE:**

Consider receiving an update on Per and polyfluoroalkyl substances.

**RECOMMENDATION:**

That the Board of Public Utilities receive and file a Per and polyfluoroalkyl substances update.

**BACKGROUND:**

Per and polyfluoroalkyl substances (PFAS) are human-made chemicals. They are designed to repel oil and water. PFAS were widely used in the 1940s; the most extensively produced and analyzed PFAS compounds are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), but there are thousands of PFAS compounds. The compounds have been used in a wide variety of products from non-stick cookware, water repellent fabrics, cosmetics, cleaning supplies and fire-fighting foams. The chemicals are found in groundwater sources and wastewater effluent throughout the region. The United States Environmental Protection Agency (EPA) is in the process of regulating PFAS. The California State Water Resources Control Board (SWRCB) is also in the process of regulating PFAS. SWRCB regulations must be equal to or more stringent than the EPA regulations. The history of PFAS health advisories, notification and response levels can be summarized in the table below.

Constituent		PFOA	PFOS	PFBS
USEPA	Health Advisory Level	January-09	400 ppt	200 ppt
		November-16	70 ppt individual or combined	
SWRCB- DDW	Notification Level	July-18	14 ppt	13 ppt
		August-19	5.1 ppt	6.5 ppt
		March-20	500 ppt	
	Response Level	July-18	70 ppt combined	
		August-19	No Change	
		February-20	10 ppt	40 ppt
		March-20	5000 ppt	

## **DISCUSSION:**

Health Advisory, Notification, and Response Levels are an initial step(s) in the creation of Maximum Contaminant Levels. Maximum Contaminant Levels are legally enforceable State and Federal Regulations. In February 2020 the SWRCB asked the Office of Environmental Health Hazard Assessment (OEHHA) to recommend notification levels (NL) for 6 compounds: Perfluorohexane sulfonic acid (PFHxS), Perfluorohexanoic acid (PFHxA), Perfluoroheptanoic acid (PFHpA), Perfluorononanoic acid (PFNA), Perfluorodecanoic acid (PFDA), 4,8-dioxia-3H-perfluorononanoic acid (ADONA).

In March of 2022, OEHHA released their proposed NL for PFHxS. Their recommendation is summarized as follows: “This document presents a notification level (NL) recommendation by the Office of Environmental Health Hazard Assessment (OEHHA) to the State Water Resources Control Board (Water Board) for perfluorohexane sulfonic acid (PFHxS) in drinking water. OEHHA recommends that the Water Board establish a drinking water NL at 2 parts per trillion (ppt), equivalent to 2 nanograms per liter (ng/L), or at the lowest level at which the chemical can be reliably detected in drinking water using available and appropriate technologies. The NL recommendation is based on the noncancer effects of PFHxS, specifically, decreased thyroid hormone levels in male rats (NTP, 2019). There were insufficient data to evaluate the potential carcinogenicity of PFHxS.”

Notification Level (NL) Recommendation Documents provide information on health effects from contaminants in California drinking water. A recommended NL is a concentration of a contaminant in drinking water that would pose no significant health risk to individuals consuming the water on a daily basis. The Office of Environmental Health Hazard Assessment (OEHHA) recommends these health-based advisory levels to the Division of Drinking Water of the State Water Resources Control Board (Water Board) for chemicals in drinking water that lack regulatory or maximum contaminant levels (MCLs). Based on these recommendations and other considerations, the Water Board establishes NLs and Response Levels. Health and Safety Code Section 116455 requires drinking water systems to notify their governing body, and recommends notification to consumers, when a detected chemical exceeds its NL. If a chemical is present in a drinking water source at the Response Level – a concentration considerably greater than the notification level – the Water Board recommends that the drinking water system take the source out of service.

The SWRCB will take this report into consideration with other factors such as technological feasibility of current analytical methods, occurrence data and will release a notification level soon. RPU staff is monitoring regulatory updates and staying engaged with the PFAS regulation processes and work groups. If the NL is set at 2 ppt, as suggested, RPU will have to notify the governing bodies where this water is served (including consecutive systems) when PFHxS is detected and confirmed at its blend compliance point within 30 days. 2020-2021 RPU annual water quality report data for PFHxS ranges from 2.2 - 5.5 ppt.

RPU is wrapping up two projects directly related to PFAS. The first project is bituminous coal based granular activated carbon (GAC) full scale demonstration study, to determine if coconut or coal based GAC performs better for PFAS removal. The second project is working with a consultant to see what the best overall solution for PFAS reduction or removal is for RPU, so that when MCLs are set, RPU can install treatment which would bring the best treatment technology to the appropriate combination of sources to give us the most operational flexibility as possible.

## **STRATEGIC PLAN ALIGNMENT:**

The PFAS Update contributes to **Priority No. 4 - Environmental Stewardship** and **Goal 4.2 – Sustainably manage local water resources to maximize and advance water reuse to ensure safe, reliable and affordable water to our community.**

This item aligns with each of the five Cross-Cutting Threads as follows:

1. **Community Trust** – By being transparent and communicating this potential future impact, RPU can plan the best course of action to move forward.
2. **Equity** – This evolving regulation affects all customers supplied by RPU water; any planning effort or future remediation of PFAS compounds benefits all customers.
3. **Fiscal Responsibility** – RPU wants to provide high quality water at a low cost to our customers, treatment is expensive, and we do not want to act on notification levels, when MCLs may or may not be set higher than proposed notification levels.
4. **Innovation** – RPU is assessing the three best available technologies for PFAS treatment, and determining how and where they can be implemented, if necessary.
5. **Sustainability & Resiliency** – RPU's water supply must meet all State and federal regulations, keeping engaged with evolving regulations and their potential impact facilitates meaningful conversations on our best course of action to preserve our water resources for our generation and the next.

## **FISCAL IMPACT:**

There is no fiscal impact associated with this item at this time.

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### Attachments:

1. OEHHA Report
2. 2020 Water Quality Report
3. Presentation