

Update on Spring 2019 State Water Board Directives for Soil and Water Samples at Likely Per- and Poly-Fluoroalkyl Substance (PFAS) “Hot Spot” Locations

Focus on where Water-Repellent and Heat Retardant Chemicals were used

Overview

In April 2019, the State Water Board issued [specific orders](#) to airports, landfills and adjacent water systems, identified as potential PFAS source locations.

The State Water Board requested testing to determine if chemicals that for decades were widely used in grease and stain-resistant coatings for consumer products and in firefighting foams can be detected, and if so, for the findings to be provided to the Board.

The contaminants PFOA and PFOS are fluorinated organic chemicals that are part of a larger group referred to as per- and poly-fluoroalkyl substances (PFAS). PFOS and PFOA are manmade compounds that were introduced in the 1940's and extensively produced and studied in the United States. These substances, which have been synthesized for water and grease resistance, are also found in carpets, clothing, furniture fabrics, food paper packaging, and other materials (e.g., cookware) designed to be waterproof or non-stick.

Data from more than 600 water system sites, nearly 250 locations such as airports and military installations with fire training areas and municipal solid waste landfills within California are being reported to the State Water Board by August 2019 and will continue to be collected into 2020. More water system data of other types of sources at industrial sites and wastewater treatment systems will be collected. The assessment of this data will be used to determine the prevalence of PFAS constituents. This is a prolonged undertaking; additional analysis will be conducted in the coming years.

The State Water Board is developing a web portal for the public to view the sample location data. This web portal is expected to be available by the end of the summer 2019 on the State Water Board's [PFAS website](https://www.waterboards.ca.gov/pfas/) (<https://www.waterboards.ca.gov/pfas/>).

Determining Scope of PFOA/PFOS Contamination Will Lead to More Information

The purposes of the Board's actions include the following:

- Ascertaining the extent of the contamination in the state's surface and groundwater;
- Collaborating with public health experts and researchers to establish exposure limits that protect the public and the environment;

- Educating the public about the products known to contain the compounds, locations where they are most commonly found, and the potential health risks from short and long-term exposure;
- Determining standards for drinking water and other reuses such as irrigation and groundwater recharge;
- Establishing screening levels for cleanup in the subsurface;
- Working with responsible parties to cleanup or remove contaminated drinking water sources, ground water and soil.

The Board is committed to transparency and sharing all collected data. A Frequently Asked Questions page focused on drinking water systems impacts will be expanded to include all component pieces of the State Water Board's efforts to document all the pertinent elements of the ongoing study. Some of the most commonly asked questions about background, health effects, regulatory guidance values, and treatment and remediation of PFAS are described in detail on the State Water Board's PFAS website.

Work to Date Has Focused on Drinking Water Systems

While consumer products are a significant source of these chemicals, the State Water Board's Division of Drinking Water (DDW) is taking aggressive action because the public is commonly exposed to these contaminants by consuming water. The fact that PFAS tend to accumulate in groundwater is of increasing concern. The DDW updated its [guidelines for testing and reporting](#) whether the harmful compounds are present in public water systems. If testing reveals chemicals that exceed the response level in drinking water, the water agency is encouraged to remove the water source from service or provide treatment. The DDW will update the response levels in the fall.

Impacts on Public Health a Growing Concern

Exposure to PFOA and PFOS can cause serious health issues, including low infant birth weights, immune deficiencies, thyroid and liver problems and some cancers. PFAS are persistent in the environment – meaning they don't break down – and many also accumulate and persist in the human body. Though PFOS and PFOA are no longer manufactured in the United States, they are still present in imported carpets, leather, clothing, rubber, plastics, paper and packaging. Because of their presence and persistence in many drinking water supplies, they remain a serious source of exposure decades after their release into the environment.

Determining Clean Up Strategies Based on Risk of Exposure

Groundwater contamination is typically localized and associated with industrial facilities that manufactured or used these chemicals in other products or at airfields or military sites that used the chemicals for firefighting.

More information about the recent activities undertaken by the Board is available at our [PFAS website](https://www.waterboards.ca.gov/pfas/) (<https://www.waterboards.ca.gov/pfas/>).

(This fact sheet was last updated on August 23, 2019)