



Fact Sheet

Frequently Asked Questions: Per- and Poly-fluoroalkyl Substances (PFAS) Water Monitoring

The contamination of drinking water systems with per- and polyfluoroalkyl substances (“PFAS”) has become an increasing concern due to the tendency of PFAS to accumulate in groundwater. Scientific studies indicate that exposure to PFAS can lead to significant health effects, especially in women who are pregnant or likely to become pregnant and children. Of all PFAS compounds, perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) have been the most extensively produced and studied in the United States. Additional targeted testing needs to be completed to further identify the magnitude of the potential issue here in California.

From 2013 to 2015, the federal third Unregulated Contaminant Monitoring Rule required all large water systems (water systems serving over 10,000 people) to collect and analyze more than 12,000 drinking water samples for PFOS and PFOA. In addition, some water systems serving less than 10,000 people reported approximately 400 drinking water results for PFOS and PFOA.

Pursuant to Health and Safety Code section 116400, DDW has issued orders to public water systems requiring testing for PFOA and PFOS. A public water system received an order because it may be at risk for potential contamination by PFAS due to its proximity to adjacent facilities known to use, produce, or store PFAS or because of proximity to a public water system whose water supply is contaminated by PFAS. A list of public water systems and sources that are required to be sampled are located at the link below.

The State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW) information can be found at [DDW PFOA PFOS](#)

The State Water Resources Control Board, Division of Water Quality information can be found at ...https://www.waterboards.ca.gov/water_issues/programs/pfas/

If a public water system received an order to conduct water quality monitoring for PFAS, what is the public water system required to do? The water system source(s) listed in the order are considered at risk to potential contamination by PFAS. The order state that at least four quarters of quarterly monitoring for each source listed. The first quarter result must be submitted by July 1, 2019.



Samples must be analyzed using a laboratory accredited by the California Environmental Laboratory Accreditation Program (ELAP) for analysis of PFAS using either EPA Method 537.1 or EPA Method 537 Revision 1.1. The laboratory must conduct a complete analysis for all PFAS analytes under the method for which it is accredited. EPA Method 537.1 will provide results for 18 PFAS and EPA Method 537 Revision 1.1 will provide results for 14 PFAS. All results must be reported to DDW electronically by the tenth day of the month following completion of the analysis.

What are PFAS used for and how am I exposed to them?

Part of a family of chemicals known as PFAS, PFOA and PFOS were routinely used in grease-proof coatings for food packaging, stain-resistant coatings for carpets, clothing and furniture, and as an ingredient in coatings for not-stick cookware. In addition, these compounds have been used in fire-retarding foams and various industrial processes.

While consumer products are a large source of exposure to these chemicals for most people, drinking water has become an increasing concern due to their persistence in the environment and tendency to accumulate in groundwater. Groundwater contamination is typically localized and associated with an industrial facility where these chemicals were manufactured or used in other products, airfields which used the chemicals for firefighting, or in areas near landfills which accepted items containing PFAS.

If a water system detects PFOA or PFOS in the source water, what is required to be done?

On July 13, 2018, pursuant to Health and Safety Code section 116455, the State Water Board established a notification level for PFOA at 0.000014 milligrams per liter (mg/L) or 14 parts per trillion (ppt) and PFOS at 0.000013 mg/L or 13 ppt, and specified EPA Method 537 Rev. 1.1 as the analytical method. The response level for PFOA and PFOS is a total concentration of 70 ppt for both contaminants, which is approximately five (5) times the individual notification level. When possible, DDW recommends removing the source from service or providing treatment when the concentration exceeds the response level.

Notification levels are health-based advisory levels established by the DDW for chemicals in drinking water that lack maximum contaminant levels. When chemicals are found at concentrations greater than their notification levels, notification requirements apply which are listed below. The level at which DDW recommends removal of a drinking water source from service or having treatment provided is the response level.

Health and Safety Code section 116455 requires notification of a local agency of source contamination exceeding a notification or response level established by the State Water Board. Notification procedures for both are the same and described in section 116455(b). The notification can be completed by letter to the local agency(s). The notification is required once, but the DDW recommends if a source that exceeds a notification level continues to be used, annual notification to the local agency(s) is highly recommended.

When using EPA Method 537 Rev 1.1, 14 PFAS are analyzed and using EPA Method 537.1 18 PFAS are analyzed. Are there Notification Levels for other PFAS?

No, there are only notification levels for PFOA and PFOS. No maximum contaminant levels exist for any PFAS constituents. Also, there are no detection limits for reporting established for any of the constituents.

Does a laboratory have to have state ELAP accreditation to conduct the testing required by the order?

Yes. Accreditation for all analytes under the approved methodology is required. Currently, 9 labs are accredited for EPA 537 Rev 1.1 and have the capability to run 14 analytes. Only recently did DDW issue orders to approve EPA 537.1 (18 analytes) for accreditation which will become available to laboratories by ELAP on April 3, 2019.

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/PFOA_PFOS.html

What's the difference between receiving state ELAP accreditation to test drinking water in accordance with EPA Method 537 and federal (EPA) certification to test drinking water in accordance with EPA Method 537?

Technically there is no federal certification program for laboratories. Instead a federal program called UCMR 3 was established where EPA authorized select labs to run EPA method 537 for select PFAS analysis in drinking water. The UCMR 3 EPA certification is not allowed to be substituted for ELAP accreditation.

Are sampling instructions available for PFAS sampling?

Obtaining representative samples and maintaining their integrity are critical elements of any monitoring program. PFAS are a large group of synthetic chemicals widely used in industrial processes and consumer products. PFAS are detected at a very low level, in the parts per trillion. Reducing or preventing cross-contamination during sampling is very important. DDW recommends you carefully read your laboratory instructions prior to sampling. If your laboratory does not have special instructions, DDW has some recommended planning and instructions located here:

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/PFOA_PFOS.html

This guidance recommends the collection of both a Field Sample and Field Duplicate. If the laboratory analyzes the Field Duplicate for any reason, the results must be reported EDT.

What does "confirmed detection" mean as used in Health and Safety Code section 116455

If testing of a sample results in the detection of PFOA or PFOS above the notification level, the water system has an option to conduct a confirmation sample within 30 days of being notified of the result by the laboratory. If the water system collects and analyzes a confirmation sample, all results will be averaged within that quarter to determine if the confirmed detection is greater than the notification level. A result below the laboratory method reporting limit will be

assigned a value of zero when averaging. If a confirmation sample is not collected, notification pursuant to Health and Safety Code section 116455 is required.

If a positive result for a source is followed by a result less than the laboratory method reporting limit, a second confirmation sample may be taken by the water system within 14 days of the first repeat sample. A positive initial result will be disregarded if two additional samples do not show the presence of the organic chemical, as set forth in section 64445.1 of title 22 of the California Code of Regulations: Repeat Monitoring and Compliance – Organic Chemicals, (c)(1).

What does “delivered by the public water system” refer to in Health and Safety Code section 116455

“Delivered by the public water system” means water being served to the customers of the water system. Public water systems that provide treatment (example, blending, granular activated carbon, ion exchange or reverse osmosis treatment) can also sample the treated or delivered water to determine notification requirements. Sources listed in the water system order must be sampled. Treated water sampling is an option to each water system in conjunction with the source water sampling. If treated water samples are collected, the local DDW district office should be contacted for additional instructions.

Will the orders be available on the DDW website?

No, orders will not be posted but a spreadsheet listing all sources required to be sampled will be posted on the PFAS webpage.

How will results of the PFAS sampling be made public?

All constituents required to be sampled by public water systems are to be included in the annual Consumer Confidence Report required by Health and Safety Code section 116455.

The State Water Board will also provide a map of the sampling completed to date by the end of the summer, 2019. The map along with a spreadsheet of all available data will be made available to the public.

What are the potential health concerns caused by PFAS in drinking water?

PFOA and PFOS are environmentally persistent, and readily absorbed but not readily eliminated from the human body. Effects associated with long term exposure are developmental and immune toxicity. PFOA and PFOS are also listed as possibly carcinogenic to humans. For further information please visit: [OEHHA](https://oehha.ca.gov/proposition-65/cnr/chemicals-listed-effective-november-10-2017-known-state-california-cause)
<https://oehha.ca.gov/proposition-65/cnr/chemicals-listed-effective-november-10-2017-known-state-california-cause>

If as a public water system customer, how can I sample my water for PFAS? DDW recommends you contact your water system for assistance. If the water system cannot assist you, DDW recommends using an accredited laboratory. ([Laboratory map](#))
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/PFOA_PFOS.html
https://www.waterboards.ca.gov/drinking_water/certlic/labs/

Will there be financial assistance from the State Water Board available for a water system that has a source over the notification level for PFOA or PFOS?

The State Water Board's Division of Financial Assistance (DFA) has determined that elevated levels of PFOA or PFOS which exceeds the notification level is eligible for funding through DFA. The applicant will need to contact DFA for more specific information.

State Water Resources Control Board
Division of Financial Assistance – Drinking Water State Revolving Fund
P.O. Box 944212, Sacramento, CA 94244-2120
Tel No: 916-327-9978
Email: DrinkingWaterSRF@waterboards.ca.gov

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