

Frequently Asked Questions about PFAS, PFOA and PFOS

With concern growing about the presence in some water supplies of a family of chemicals known as PFAS, the Metropolitan Water District of Southern California continues to ensure the region has a safe drinking water supply. Two of the most common PFAS, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), have not been detected in Metropolitan's source or treated waters. Metropolitan is supporting its member agencies as they assess whether PFOA and/or PFOS are present in their supplies and to what extent. Metropolitan stands prepared to handle any increased demands for its imported water to help offset the potential loss of any affected local supplies.

What are PFAS, PFOA and PFOS?

- Per- and Polyfluoroalkyl Substances (PFAS) are a family of chemicals used widely in products that resist heat, oils, stains and water.
- Products manufactured with PFAS include: non-stick cookware; fast-food packaging and pizza boxes; stain- and water-repellent fabrics, including clothing and carpets; and other products found under the brand names Scotchgard, Gore-Tex and Teflon. They also were used in fire-fighting foam (a major source of groundwater contamination at airports and military bases).
- PFAS were first developed in the 1940s and proliferated in the '50s and '60s. Today there are more than 4,500 PFAS.
- Though there are thousands of types of PFAS, two – **Perfluorooctanoic acid (PFOA)** and **Perfluorooctane sulfonate (PFOS)** – are the most commonly used, studied and regulated PFAS in the nation.
- Use of PFOA and PFOS in the United States was voluntarily phased out in the 2000s, though they are still used in products manufactured in other countries. However, many other types of PFAS continue to be used in the United States.
- PFAS are extremely stable in the environment and in the human body, meaning that they don't break down and can accumulate over time. This has caused some scientists to give them the name "Forever Chemicals."
- New technology allowing chemists to detect PFAS at very low levels (parts per trillion, or ppt) has resulted in the increased detection of PFAS. They have been found in soil, air, groundwater, wastewater effluent and landfills. They also have been found in the blood of 95 percent of people tested.

Are PFOA and PFOS harmful?

- PFOA is a possible human carcinogen, and based on limited evidence it can cause testicular and kidney cancer, according to the International Agency for Research on Cancer.
- If people ingest PFAS, through food or water that contain them, the PFAS can accumulate in the body. They stay in the body for long periods of time and the level of PFAS may accumulate to the point where people experience adverse health effects.

- High concentrations in the body of PFOA and PFOS have been linked in studies to:
 - Pregnancy-induced hypertension/pre-eclampsia
 - Liver damage
 - High cholesterol
 - Thyroid disease
 - Decreased response to vaccines
 - Decreased fertility
 - Lower birth weight
- High concentrations in the body of PFOA have also been linked in studies to increased risk of asthma.

How are we exposed to PFOA and PFOS? Are they in our water?

- People can become exposed to PFOA and PFOS in a variety of ways, including through consumer products that contain the chemicals, food exposed to the chemicals, and drinking water that has been impacted by the chemicals.
- Groundwater impacted by PFOA and PFOS is a growing concern.
- The chemicals, which originated in manufactured products, are found at or near manufacturing sites, landfills, and firefighting training sites (where they were used in firefighting foams), such as airports and military bases. Because of their resiliency and inability to break down in the environment, and their extensive usage in global consumer products, these chemicals have sometimes accumulated near those sites, entering the water cycle through runoff and wastewater, leading to elevated levels in wastewater discharges and groundwater.
- PFOA and PFOS have not been detected in Metropolitan's source or treated water.
- They have been detected by some of Metropolitan's member agencies in their groundwater supplies.
- The State Water Resources Control Board's Division of Drinking Water has started requiring monitoring of groundwater near airports and landfills and other sites known to be impacted. More than 600 wells across the state are being monitored, about half of which are in Southern California. Additional required monitoring is on the horizon.
- Although the chemicals need to be addressed at their source, the potential for these chemicals to end up in groundwater is a major concern. The process to address groundwater affected by these chemicals is underway.

Who do I contact to find out if PFAS is in my drinking water?

- You should contact your water provider. Please check your recent water bill for contact information.

What is the government doing to protect us from PFOA and PFOS?

- **Federally**, the U.S. EPA has set a drinking water health advisory of 70 parts per trillion (ppt) for the individual or combined concentration of PFOA and PFOS. If that level is exceeded, the EPA recommends agencies assess the contamination, inform consumers, and limit exposure. The EPA has also established an action plan for the cleanup,

monitoring, research, enforcement and communication of risks associated with PFOA and PFOS.

- **In California**, the Division of Drinking Water has required monitoring for PFOA and PFOS in some high-impact areas and set notification and response levels for the chemicals.
 - The DDW recently lowered the notification level for PFOA to 5.1 ppt and for PFOS to 6.5 ppt. If this level is exceeded:
 - Wholesale water agencies must notify governing bodies and water systems directly supplied with the water;
 - Retail agencies must notify their governing body and the governing bodies of any local agencies (i.e., city and/or county) whose jurisdictions include areas supplied with their drinking water; and
 - The SWRCB recommends retail agencies notify customers through their consumer confidence reports.
 - The response level is 70 ppt for a combined concentration of PFOA and PFOS – consistent with the EPA’s health advisory. If this level is exceeded:
 - The Division of Drinking Water recommends removal of the drinking water source from service.
 - If an agency does not remove the source, the Division of Drinking Water recommends the agency notify the local governing body, notify customers directly and tell them the reason for continued use of the source, issue a press release and conduct regular sampling.
- Regulation of PFAS in water is becoming stricter both nationally and in California:
 - The Division of Drinking Water is expected to lower California’s response levels for PFOA and PFOS in fall 2019.
 - A new California law, passed in July 2019 and effective in January 2020, requires the state to increase required monitoring for PFOA and PFOS and creates a separate customer notification procedure unique to PFAS.
 - The EPA is also advancing the process to establish a Maximum Contaminant Level (MCL) for PFOA and PFOS. An MCL is the maximum level of a contaminant allowed in drinking water delivered through a public water system and includes an enforcement mechanism.
 - The California Legislature and U.S. Congress are both considering a variety of additional legislation related to PFAS detection and exposure.
- While testing exists to detect PFOA, PFOS, and about 16 other PFAS, tests to detect many other PFAS remain in development.

Can PFOA and PFOS be removed from the water?

- If a water agency detects PFOA or PFOS in its water at unacceptable levels, it can:
 - Remove the supply from service;
 - Blend it with other, unaffected supplies; or
 - Treat it using activated carbon, reverse osmosis or ion exchange.
- Metropolitan stands prepared to handle any increased demands for its imported water to help offset the potential loss of any affected local supplies.

What about my home water treatment device – will it remove PFAS?

- The EPA has conducted studies on the effectiveness of several reverse osmosis and granular activated carbon devices for removal of PFAS. A summary of these studies can be found at www.onlinelibrary.wiley.com/doi/epdf/10.1002/aws2.1131.
- The National Sanitation Foundation, an independent accredited organization that tests and certifies products to protect and improve human health, has conducted studies on filters that can remove PFOA and PFOS. A [list of NSF-certified products](#) for reduction of PFOA and PFOS can be found under the water and wastewater section of their website at www.nsf.org/certified-products-systems or by contacting them at info@nsf.org or 1.800.673.8010.
- A summary of in-home treatment devices for removing PFAS can also be found at the New Hampshire Department of Environmental Services website: www4.des.state.nh.us/nh-pfas-investigation/?page_id=171.

I saw in a report there was a high level of PFOA – above 70 ppt – detected in a well near me. Why haven't I been notified?

- Your water agency may have removed the contaminated source from its supplies, blended it with other supplies to reduce the concentration of the chemical, or treated the contaminated water to remove the chemical.
- Metropolitan provides a safe and reliable supply of water to its member water agencies across Southern California and has not detected PFOA or PFOS in its supplies.

Where can I learn more?

- EPA: www.epa.gov/pfas
- California Division of Drinking Water: www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/PFOA_PFOS
- Orange County Water District: <https://www.ocwd.com/what-we-do/water-quality/pfoapfos/>
- PFAS and Drinking Water State Revolving Fund: https://www.epa.gov/sites/production/files/2019-03/documents/pfas_fact_sheet_and_case_studies_final.pdf