

# PFAS: What You Need to Know

Recent media coverage about PFAS and their health effects has caused alarm about the safety of drinking water. This document provides information about PFAS that may be of interest to the public.

## ***What are PFAS?***

Per- and poly-fluoroalkyl substances (PFAS) are a large group of manmade chemicals that include PFOA, PFOS and many other chemicals that do not occur naturally in the environment. Dubbed the “forever chemical,” PFAS have been widely publicized because of the chemicals’ staying power in the environment and in our bodies – meaning they don’t break down and they can accumulate over time.

PFAS have been manufactured and used in a wide variety of applications around the world, both industrial and residential, since the 1940s. These chemicals are widely used because they are resistant to heat, water, and oil. PFAS are commonly found in every American household, and in products as diverse as non-stick cookware, furniture, clothing, cosmetics, lubricants, paint, carpets, pizza boxes, popcorn bags, and many others. PFOA and PFOS are two types of PFAS that are no longer manufactured in the United States, however they are still produced internationally and may be imported in consumer goods such as carpet, leather and apparel, textiles, paper and packaging, coatings, rubber and plastics.

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

## ***Are PFAS a health concern?***

Although there is some evidence that exposure to PFAS at certain levels can lead to adverse health outcomes in humans, health outcomes are still largely unknown. PFAS can be introduced into the body by eating or drinking contaminated food or liquid (including water), breathing in or touching products treated with PFAS, such as carpets or clothing. PFOA and PFOS are readily absorbed, but not readily eliminated from the human body. Health effects associated with long-term exposure include harmful effects to a developing fetus or infant; harmful effects to the immune system, thyroid and liver; and cancer.

The stability of PFAS means they are extremely persistent in our bodies and the environment. PFAS bioaccumulate and can increase to the point where adverse health effects are experienced. Some PFAS can last up to eight years in our bodies.

## ***What are the acceptable PFAS limits?***

In 2016, the EPA issued a health advisory level at 70 parts per trillion (ppt). Health advisories are non-enforceable and non-regulatory, and provide technical information to public health officials on the health effects, analytical methods, and treatment technologies associated with drinking water contamination. The health advisory level of 70 ppt offers a margin of protection for all Americans throughout their life from adverse health effects resulting from exposure to PFOA and PFOS in drinking water. The EPA advised municipalities that they should notify their customers of the presence if levels are over 70 ppt in community water supplies.

In July 2019, the California State Water Resources Control Board’s Division of Drinking Water established a response level of 70 ppt for the combined concentrations of PFOA and PFOS. Response levels are levels of the contaminant at which SWRCB recommends the drinking water system take the affected water source out of service.

In August 2019, notification levels were released to 5.1 ppt for PFOA and 6.5 ppt for PFOS. Notification levels are established when there are no maximum contaminant levels for a contaminant. If a notification level is exceeded, the drinking water system must notify the governing body where the drinking water customers reside.

[On February 6, 2020, the SWRCB lowered the response levels for PFOA and PFOS from 70 ppt combined to 10 ppt for PFOA and 40 ppt for PFOS based on a running four quarter average.](#)

## ***Are PFAS present in the City’s drinking water sources?***

Water from Lake Cachuma and Gibraltar Reservoir is treated at the Cater Water Treatment Plant (Cater) before being distributed to City customers.

From 2013 to 2015, the third Unregulated Contaminant Monitoring Rule (UCMR 3) required all large water systems (water systems serving over 10,000 people) to collect and analyze drinking water for PFOS and PFOA, including the City of Santa Barbara. In 2014, the City's Water Resources Laboratory (Laboratory) sampled the treated drinking water multiple times from the treatment plants and groundwater wells (one groundwater well was not in service at the time of sampling). All locations sampled as part of the UCMR3 monitoring did not detect PFAS, meaning the results were below the reporting limit.

In the latter half of 2019, the Laboratory sampled every drinking water source, both surface water and groundwater, for 17 PFAS including PFOA and PFOS. The City's drinking water sources remain undetected for PFOA and PFOS.

2019 PFAS Testing			
Location	PFOA (ppt)	PFOS (ppt)	Total PFAS (ppt)
Cater WTP Raw	ND (<2.0)	ND (<2.0)	ND (<5.0)
Cater WTP Tap	ND (<2.0)	ND (<2.0)	ND (<5.0)
Desal Plant Raw	ND (<2.0)	ND (<2.0)	ND (<5.0)
Desal Plant Tap	ND (<2.0)	ND (<2.0)	ND (<5.0)
HS Well Raw	ND (<2.0)	ND (<2.0)	ND (<5.0)
CY2 2 Well Raw	ND (<2.0)	ND (<2.0)	ND (<5.0)
CH Well Raw	ND (<2.0)	ND (<2.0)	ND (<5.0)
VC Well Raw	ND (<2.0)	ND (<2.0)	ND (<5.0)
Ortega GTP Tap	ND (<2.0)	ND (<2.0)	ND (<5.0)
A2 Well Raw	ND (<2.0)	ND (<2.0)	ND (<5.0)
HA Well Raw	ND (<2.0)	ND (<2.0)	ND (<5.0)
SR Well Raw	ND (<2.0)	ND (<2.0)	ND (<5.0)
LR Well Raw	ND (<2.0)	ND (<2.0)	ND (<5.0)

### ***How can I reduce my exposure to PFAS?***

There are several ways you can reduce exposure to PFAS. Reverse osmosis and activated carbon filters have been shown to reduce the levels of most fluorinated chemicals by a significant margin. This includes both large integrated filtration systems and smaller, less costly point-of-use filters. The City's two surface water treatment plants implore each of these technologies: the desalination facility uses reverse osmosis and the Cater Water Treatment Plant uses activated carbon filters. The City's groundwater wells have not shown any indication that PFAS levels are near the notification levels so additional treatment is not necessary at this time.

City customers can reduce exposure to PFAS by avoiding products that contain PFAS, such as stain-resistant clothing, some packaged foods, non-stick cookware and by

dusting more frequently and washing hands thoroughly before meals.

### ***What is the City doing about PFAS?***

PFAS, like other emerging contaminants, are the focus of active research and study, which means that new information is released as data becomes available. Although the most recent round of testing has shown no indication of PFAS in our water sources, the City will remain diligent about testing our water sources to understand if/where any contamination may be present.

### ***Where can I find more information about PFAS?***

The following are links to online resources regarding PFAS in water.

[State Water Resources Control Board, Division of Drinking Water - PFAS Resources](#)

[EPA - Per- and Polyfluoroalkyl Substances \(PFAS\)](#)

If you have questions about the City's water quality, please contact our Water Resources Laboratory staff at (805) 568-1004.