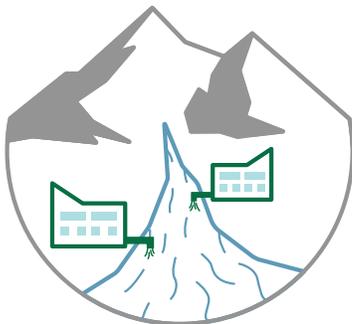




PFAS in Orange County

What are they, how do they impact us and what's being done?



PFAS have been detected in the Orange County Groundwater Basin, entering via the Santa Ana River (SAR) whose flows infiltrate into the basin. PFAS inputs to the SAR include treated wastewater discharges and stormwater runoff from upstream communities in San Bernardino and Riverside counties. Chemical manufacturers are the original source of PFAS chemicals. Despite playing no role in releasing PFAS into the environment, cities and water agencies must find ways to remove it from groundwater.

Impacts to Orange County

Orange County Water District (OCWD) and the water retailers it serves provide safe and dependable drinking water that continually meets all state and federal drinking water standards. Acceptable levels for PFAS compounds have been recently lowered by state regulators. **In order to meet California's Response Levels for PFAS in drinking water, dozens of wells have been taken out of service.** Additional wells are likely to be taken offline as testing is expanded. This loss of wells will impose unbudgeted costs on retail water agencies in OCWD's service area that depend on groundwater for 77% of their supply. Agencies will now have to purchase more costly imported surface water to replace PFAS contaminated supplies. The cost of purchasing imported water may place a burden on ratepayers of up to \$20 per monthly water bill.

OCWD Actions to Address PFAS

OCWD is proactively and swiftly addressing PFAS in the Orange County Groundwater Basin.

In December 2019, OCWD launched the nation's largest pilot project to develop and implement effective treatment technologies with the goal to get local groundwater supplies back online as soon as possible. Now in the second phase, the project will test even more novel adsorbents just emerging in the market, to determine which applications are best suited for treatment and continue to validate results from the first phase.

OCWD's board of directors implemented a PFAS treatment policy that includes constructing treatment facilities for 10 impacted water producers and bringing these treatment systems online within two years to restore our drinking water supply. OCWD will fund 100% of design and treatment costs and 50% of operation and maintenance costs.

OCWD and 10 of Orange County's public water agencies filed a lawsuit against 3M Company, E.I. DuPont de Nemours, Inc., DuPont de Nemours and Company, Chemours Company, Corteva, Inc., and DECRA Roofing Systems, Inc. for the manufacture and sale of PFAS that have contaminated groundwater, drinking water, and real property in Orange County. Through their lawsuit, OCWD and the public water agencies seek to protect

What Are They?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of manmade chemicals that includes perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). Most people have been exposed to these chemicals through consumer products, such as Teflon pans, stain resistant carpets and fast food packaging, but drinking water can be an additional source of exposure in communities where these chemicals have entered water supplies.

Estimated Costs of PFAS
to Orange County over 30 Years

\$1 BILLION

**As of July 2020 these costs are based on preliminary data and will likely increase.*

ratepayers and ensure that the associated costs, including but not limited to treatment and replacement water, are borne by the companies that developed and manufactured PFAS.

Federal and State PFAS Regulations

Over the past several years, the science on PFAS and its impacts to the environment and public health have prompted regulatory actions. In 2016, the United States Environmental Protection Agency established a 70 part per trillion (ppt) combined Lifetime Health Advisory for PFOA and PFOS.

In February 2020, the California Division of Drinking Water issued two advisory levels for PFOA and PFOS in drinking water supplies and is pursuing advisory levels for seven additional PFAS in 2020.

The **Notification Level (NL)** for PFOA is 5.1 ppt and the NL for PFOS is 6.5 ppt. The NL is the level at which water agencies are to notify local elected officials and governing bodies of the presence of PFOA or PFOS in local water supplies.

The **Response Level (RL)** for PFOA is 10 ppt and the RL for PFOS is 40 ppt. The RL is the level that the state recommends the water not be served.

In January 2021, the Office of Environmental Health Hazard Assessment (OEHHA) publicly released its drinking water Notification Level (NL) recommendation for an additional PFAS, Perfluorobutane Sulfonic Acid (PFBS), in drinking water to the SWRCB Division of Drinking Water (DDW). There are currently no anticipated impacts of PFBS to Orange County groundwater.

The proposed NL for PFBS is 0.5 parts per billion (ppb) and the proposed RL is 5 ppb.

OCWD, cities and retail water agencies in Orange County take seriously the duty to provide reliable high-quality drinking water to residents throughout Orange County and will continue to meet and exceed all state and federal drinking water standards and regulations.

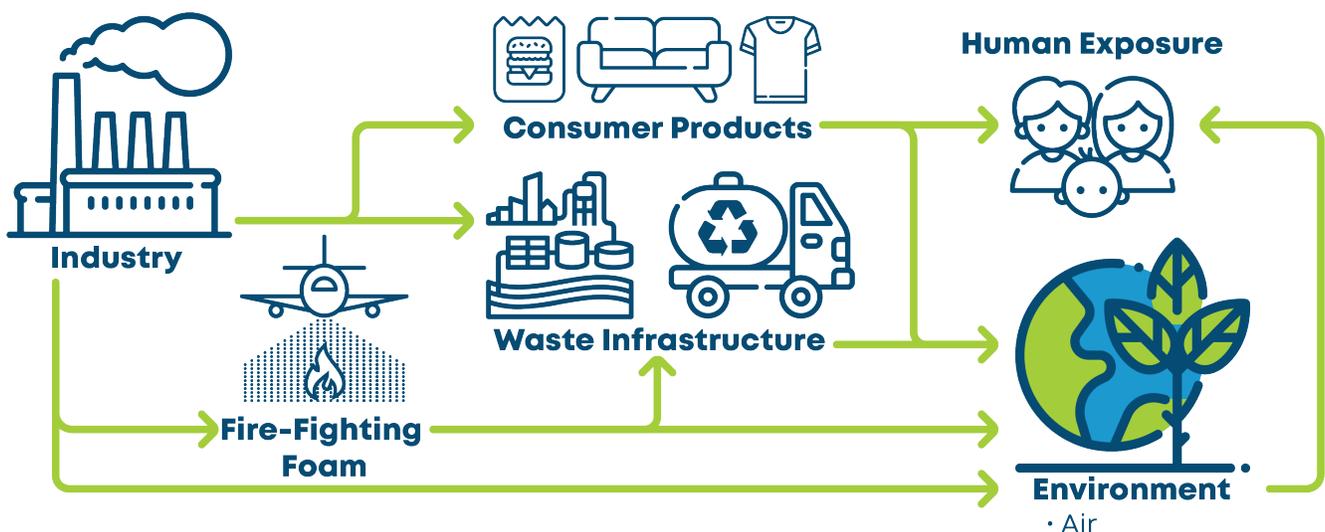
Additional Info

www.ocwd.com

www.epa.gov/pfas

www.fda.gov/food/chemicals/and-polyfluoroalkyl-substances-pfas

www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/PFOA_PFOS



* Diagram references generally-recognized sources of PFAS and is not meant to depict Orange County's PFAS contamination or sources.