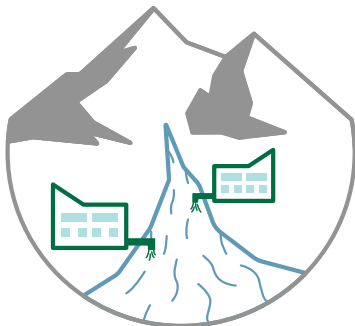




# PFAS in Orange County

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



PFAS have been detected in the Orange County Groundwater Basin, entering primarily 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 their local water supplies.

## 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. The state of California has established advisory levels for several PFAS compounds. **Due to exceedances of the state's advisory Response Levels, several dozen wells have been temporarily taken out of service while treatment facilities are constructed. Additional wells may be impacted by future state or federal PFAS regulations.** Agencies will have to temporarily purchase more costly imported surface water to replace PFAS contaminated supplies, which could increase ratepayers' monthly water bills.

## 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 test 14 different types of treatment media, including granular activated carbon, ion exchange, and novel alternative adsorbents, with the goal of identifying reliable and cost-effective solutions to remove PFAS from water. The project will continue to test additional adsorbents just emerging into the marketplace.

**OCWD's board of directors implemented a PFAS treatment policy** that enables constructing treatment facilities to restore the impacted drinking water supply. OCWD is funding 100% of design and construction costs, with operation and maintenance costs shared 50/50 with the retail water agency. By 2024, 36 treatment facilities will be online for 11 currently impacted water agencies and 58 currently impacted wells will be restored.

**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, and Corteva, 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 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.

## What Are They?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of manmade chemicals that are used to make carpets, clothing, fabrics for furniture, food packaging, cookware, and other materials to make them non-stick and/or resistant to water, oil, and stains. They are also used in a number of industrial processes and firefighting activities.

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.*

## Federal PFAS Advisories

In March 2023, the U.S. EPA (EPA) announced the proposed National Primary Drinking Water Regulation (NPDWR) for six PFAS including perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorononanoic acid (PFNA), hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX Chemicals), perfluorohexane sulfonic acid (PFHxS), and perfluorobutane sulfonic acid (PFBS). The proposed PFAS NPDWR does not require any actions until it is finalized. EPA anticipates finalizing the regulation by the end of 2023. The proposed rule would require public water systems to monitor for these PFAS, notify the public of the levels of these PFAS, and reduce the levels of these PFAS in drinking water if they exceed the proposed standards.

Summary of EPA's proposed regulations:

Chemical	Proposed MCLG	Proposed MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFNA, PFHxS, PFBS, HFPO-DA (GenX Chemicals)	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index

\* Note: 1 ppt is roughly equivalent to one drop of water in 20 Olympic-sized pools.

## State PFAS Advisories

OCWD and its PFAS-impacted retailers comply with state advisory levels for PFOA, PFOS, PFBS, PFHxS established by the State Water Resources Control Board's Division of Drinking Water (DDW).

Current state advisory levels are:

Chemical	Notification Levels (NL)	Response Level (RL)
PFOA	5.1 ppt	10 ppt
PFOS	6.5 ppt	40 ppt
PFBS	500 ppt	5,000 ppt
PFHxS	3 ppt	20 ppt

\*Note: GenX has not been detected in the Basin; PFBS has been detected, but at levels far below all current state advisories and the new federal HA.

The NL is the level at which water agencies are required to notify local elected officials and governing bodies of the presence of contaminants in local water supplies. NLs are precautionary health-based advisory levels established by DDW while further research and analysis are conducted by the state to determine the necessity of setting an enforceable drinking water maximum contaminant level (MCL).

The RL is the level at which the state recommends the water not be served to the public without treatment or blending to reduce contaminants.

The state has issued draft Public Health Goals (PHGs) for PFOA and PFOS. Once the PHGs are finalized, DDW will use them as the basis for developing statewide enforceable drinking water regulations, a process which should take approximately two years.

## Additional Info

[pfas.ocwd.com](https://pfas.ocwd.com)

[www.epa.gov/pfas](https://www.epa.gov/pfas)

[www.fda.gov/food/chemicals-and-polyfluoroalkyl-substances-pfas](https://www.fda.gov/food/chemicals-and-polyfluoroalkyl-substances-pfas)

[www.waterboards.ca.gov/pfas/](https://www.waterboards.ca.gov/pfas/)