

Per and Polyfluoroalkyl Substances (PFAS)

What are PFAS?

Per and polyfluoroalkyl substances (together, PFAS) are a class of man-made chemicals used in common product applications such as waterproof and stain proof fabrics, nonstick cookware, some food packaging materials, and fire suppression foams.

How do PFAS Enter Waterways?

PFAS can enter lakes, rivers, or groundwater as part of some industrial releases, wastewater treatment plant discharges, and fire-fighting foam use. Runoff from military bases, domestic airports and biosolids land application sites can also contribute PFAS to waterways.

Are PFAS Regulated?

Currently there are no federally enforceable drinking water limits for PFAS. However, in 2016 the US Environmental Protection Agency's (EPA) established health advisories for two PFAS that recommend a maximum combined concentration of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) to 70 parts per trillion (ppt). These advisories are not regulatory limits, they provide technical guidance to state agencies and public health officials.

Are PFAS Found in Town of Cary Drinking Water?

In November 2017, the Town began regularly testing our drinking water for the presence of 39 PFAS compounds and has only found the presence of seven. A summary of our 2018 detected PFAS is shown in the table below. Notably, the combined concentration of PFOA and PFOS ranged from 0 ppt to 6.3 ppt - which is significantly less than the federally established health advisory of 70 ppt.

Summary of 2018 Test Results

	Average (ppt)	Range (ppt)
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	1	0 - 10
Perfluorobutanesulfonic acid (PFBS)	1.2	0 - 2.8
Perfluorobutanoic acid (PFBA)	16	8.4 - 23
Perfluoroheptanoic acid (PFHpA)	9.2	3.2 - 17
Perfluorohexanoic acid (PFHxA)	21.1	6.4 - 38
Perfluorooctanoic acid (PFOA)	3.1	0 - 6.3
Perfluoropentanoic acid (PFPeA)	24	8.3 - 41
Total PFOA + PFOS	3.1	0 - 6.3

The Cary/Apex Water Treatment Process and PFAS

Cary operates an advanced water treatment facility with multiple-barrier processes such as ozonation and powdered activated carbon treatment in addition to the conventional water treatment processes of sedimentation and filtration. As a result of our testing, Cary increased and consistently feeds powdered activated carbon which has been effective at reducing PFAS in drinking water.

Because We Often Get Asked...

- Human health effects related to exposure to low concentrations of PFAS have not yet been clearly established by the scientific community. For more information, see references below.
- Boiling water does not remove PFAS.
- Bottled water quality can vary. We recommend that you contact the bottled water manufacturer for information about contaminant levels.
- Our results, to date, do not indicate a need for home treatment of Cary water. Installing a home filtration system is a personal choice and may or may not further reduce PFAS found in Cary's water. Types of home filtration systems to consider:
 - A reverse osmosis (RO) "point-of-use" (POU) water filtration system installed in the kitchen for cooking and drinking.
 - National Sanitation Foundation (NSF) certified filtration devices that meet NSF Protocol P473 (certified to reduce PFOA and PFOS to below 70 parts per trillion). For details, visit <http://info.nsf.org/Certified/DWTU/> or call 1-800-673-8010.

If home treatment is used, it is important to follow the manufacturer's guidelines for maintenance and operation.

References

- [EPA Fact Sheet](#)
- [EPA information on Drinking Water Health Advisories for PFOA and PFOS](#)
- [American Water Works Association](#)
- [American Water Works Association Perfluorinated Compounds Treatment and Removal](#)
- [American Water Works Association Perfluorinated Compounds Prevalence and Assessment in Drinking Water](#)
- [American Water Works Association Perfluorinated Compounds Resources for Identifying and Managing PFCs](#)
- [Center for Disease Control Per- and Polyfluorinated Substances \(PFAS\) Factsheet](#)
- [State of North Carolina Department of Health and Human Services Division of Public Health PFAS Fact Sheet](#)

Questions?

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