

CITY OF NAMPA - PFAS FACTS AND QUESTIONS

1. WHAT ARE PFAS?

PFAS is an acronym for per- and polyfluorinated alkyl substances. PFAS represent a large group of man-made substances first created in the 1940s and have been extensively used for surface coatings in textiles, resins, non-stick cookware, paper and other products to act as either a water or grease/oil repellent. PFAS products surround our everyday lives and are found in several products ranging from nail polish and water-resistant clothing to sunscreen. PFAS is also common in fire-fighting foams used by fire fighters and military personnel.

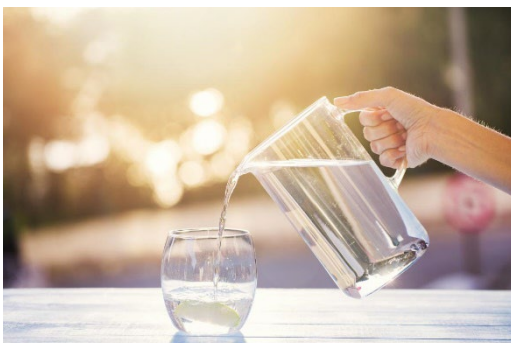


2. ARE PFAS HARMFUL?

Some PFAS compounds, like PFOA and PFOS, are now being phased out but have been used for many years and have been associated with negative health outcomes. These health outcomes include changes in the body's hormones, increased risk of cancer, thyroid disease, decreased fertility and higher cholesterol¹.

PFAS is persistent in the environment and can accumulate in the human body over time. The National Health and Nutritional Examination Survey (NHANES) and the Centers for Disease Control and Prevention (CDC) have designed studies to measure blood PFAS since 1999. Study results indicate a widespread exposure with nearly all participants' blood in the study testing positive for PFAS compounds. Since the decreased widespread production of PFOS/PFOA in 2002 and based on regional exposure potentials from those originating manufacturers, blood PFAS levels have declined by 70-85% in a twenty-year span.²

3. IS THE CITY WATER SAFE TO DRINK?



In 2021, the City of Nampa Waterworks Division took approximately 700 water samples and monitored for over 75 contaminants including disinfectant byproducts, organics, inorganics, microbiological and radioactive contaminants. These samples were taken from 15 groundwater wells which draw from the western Snake River

Plain Aquifer serving over 100,000 customers. All test results met or surpassed current State and Federal drinking water standards.

Nampa has tested drinking water wells serving the city for specifically PFAS compounds since 2014 with no detections to-date. The most recent drinking well survey was conducted in January 2022, where thirteen wells were analyzed with zero PFAS detections. Currently, there are no regulatory guidelines for PFAS in drinking water for the State of Idaho; therefore, *the water is considered safe to drink by Idaho standards.*

However, there are suggested health advisories for PFAS. In June 2022, the US EPA refined a health advisory of combined PFOS+PFOA at 70 parts per trillion (ppt) or one part per trillion parts, reducing the compounds to 0.004 ppt for PFOA and 0.02 ppt for PFOS. Future Nampa PFAS ground well testing will verify adherence to this refined health advisory as the previously established method detection limitations improve through new laboratory technology.

WHAT DOES PARTS PER BILLION (PPB) AND PARTS PER TRILLION (PPT) CONCENTRATIONS MEAN IN SIMPLE TERMS?

Parts per billion (ppb) and parts per trillion (ppt) are the most commonly used terms to describe very small amounts or trace levels of chemicals in our drinking water. One ppb equals 1,000 ppt. Parts per billion is also equivalent to micrograms per liter ($\mu\text{g/L}$) while parts per trillion is equal to nanograms per liter (ng/L).

Examples:

- 1 ppb is equal to one penny out of \$10 million dollars, whereas 1 ppt is equal to one penny out of \$10 billion dollars
- 1 ppb is the equivalent of one second in nearly 32 years, whereas 1 ppt is equal to one second in nearly 32,000 years

4. IS THE WATER SAFE FOR BATHING, BRUSHING TEETH, WASHING DISHES?

Based on the current national understanding of PFAS and the City of Nampa Waterworks ground well PFAS monitoring, daily activities such as bathing, brushing teeth, and washing dishes are not a significant risk for exposure to PFAS.

The majority of PFAS exposure studies associate exposure through consumption rather than skin absorption. Diet is the primary contributor to total exposure followed by drinking water, then airborne inhalation.³



5. WHAT ARE THE SOURCES OF PFAS TO WASTEWATER TREATMENT FACILITIES?



Wastewater treatment facilities potentially receive PFAS from two major sources—industries and residential customers contributing to the sewer system. Industrial sources range from metal finishing, electroplating, semiconductor assembly, and plastic molding operations. Residential sources can come from any number of PFAS associated material that is washed such as carpets, select waterproof fabrics, personal care products, and non-stick cookware.

IS THE EPA GOING TO ESTABLISH A NATIONAL DRINKING WATER REGULATION FOR PFAS?

The EPA is developing a proposed National Drinking Water Regulation for publication by the end of 2022 for two prominent PFAS chemicals: PFOA and PFOS. Currently, there is only a drinking water health advisory for PFOA and PFOS. Additional PFAS compounds will also be evaluated for proposed regulatory actions with an anticipated finalization of the EPA rule by the end of 2023. This final rule will include an enforceable standard, or a Maximum Contaminant Level for prevalent PFAS compounds. Water regulations are under constant review at the state (IDEQ) and national (EPA) level to identify any potential for substantial danger to human and environmental health ensuring the highest water quality and safe-use applicability standards for the public.

6. WHAT IS NAMPA DOING ABOUT PFAS?

Nampa staff is actively working to provide clarity and direction for citizens and staff towards emerging constituents prior to federal regulation implementation. This is to include technical memorandums, PFAS testing plans, assessing grant funding opportunities, and addressing elected officials and citizens through informative presentations.



The Waterworks Division is participating in the fifth Unregulated Contaminant Monitoring Rule study regarding drinking water analyzed in drinking wells used around Nampa. Nampa's Waterworks Division has tested for PFAS compounds as early as 2014 and has not had a positive detection.

The Wastewater Division is conducting voluntary PFAS source assessments of industrial users, residential sectors, Phyllis Canal, Indian Creek, and the wastewater treatment facilities influent, effluent, and biosolids. This study will be completed prior to U.S. Environmental Protection Agency wastewater PFAS rulemaking to establish a baseline and direct mitigation efforts in a targeted cost-effective approach.

RESOURCES

The City of Nampa is committed to providing safe drinking water for its citizens and ensuring treated wastewater meets or exceeds the quality standards established by the DEQ/EPA.

For additional information regarding PFAS, please follow the links below:

<https://www.epa.gov/pfas>

<https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024>

<https://www.epa.gov/pfas/pfas-resources-data-and-tools>

<https://www.deq.idaho.gov/water-quality/drinking-water/pfas-and-idaho-drinking-water/>

https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html

<https://www.cdc.gov/nchs/nhanes/>

<https://lottcleanwater.org/projects/reclaimed-water-infiltration-study/>

<https://www.cityofnampa.us/297/Water-Quality>

¹ <https://www.atsdr.cdc.gov/pfas/health-effects/index.html>

² <https://www.atsdr.cdc.gov/pfas/activities/assessments/final-report.html>

<https://www.niehs.nih.gov/health/topics/agents/pfc/index.cfm>

Elizabeth G. Radke, J. Michael Wright, Krista Christensen, Cynthia J. Lin, Alexandra E. Goldstone, Courtney Lemeris, and Kristina A. Thayer. 2022. [Epidemiology Evidence for Health Effects of 150 per- and Polyfluoroalkyl Substances: A Systematic Evidence Map](#). Environmental Health Perspectives 130:9 <https://doi.org/10.1289/EHP11185>

³ Oddný Ragnarsdóttir, Mohamed Abou-Elwafa Abdallah, Stuart Harra. Dermal Uptake: An Important Pathway of Human Exposure to Perfluoroalkyl Substances?, Environmental Pollution, Volume 307, 2022, <https://doi.org/10.1016/j.envpol.2022.119478>.