



NEW JERSEY
AMERICAN WATER

WE KEEP LIFE FLOWING™

Providing safe and reliable water service is New Jersey American Water's business. We are proud to have served as a partner to the DEP over the years in its efforts to help ensure the safety of drinking water across the state.



FOR MORE INFORMATION

For more information, customers can contact the US Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.



PFAS

WHAT ARE PFAS?

Per- and Polyfluoroalkyl substances (PFAS) are a large group of manufactured organic chemicals that are used in a variety of products for their nonstick properties (e.g., Teflon, Scotchgard), as well as in industrial applications such as firefighting. Aqueous Film Forming Foam (AFFF) usage at military bases and airports may be sources of PFAS in drinking water supplies near those locations. From the Unregulated Contaminant Monitoring Rule 3 (UCMR3), perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) were detected in numerous public water systems. PFOA has been phased out of production, but replacement compounds, such as "GenX," have been developed and are increasingly being detected in the environment. There are thousands of PFAS compounds. The compounds have most commonly been detected in groundwater but have also been detected at elevated concentrations in surface waters.

WHAT ARE THE ISSUES I MAY HAVE HEARD ABOUT?

PFAS have been linked to various toxicological issues and are highly persistent in the environment. The U.S. Environmental Protection Agency (EPA) has set a non-enforceable Health Advisory Level of 70 nanograms per liter (ng/L) or parts per trillion (ppt) for combined PFOA and PFOS. New Jersey was the first state to set a maximum contaminant level (MCL) for PFAS with a regulation of perfluorononanoic acid (PFNA) (13 ng/L) in 2018, followed by PFOA (14 ng/L) and PFOS (13 ng/L) in 2020.

HAS NEW JERSEY AMERICAN WATER HAD TO ADDRESS PFAS IN THE PAST?

Yes. We have successfully addressed PFAS in the past. Here are three examples:

- Short Hills Well Station:** New Jersey American Water has installed a cutting-edge temporary treatment system that uses anionic exchange resins to remove PFAS from the source water at our Short Hills Well Station. Different than Granular Activated Carbon, these resins are specifically designed to remove PFAS with less maintenance over time. This new technology not only removes PFAS contaminants that are already regulated, but also has shown the ability to remove shorter-chain PFAS more effectively than Granular Activated Carbon.



New Jersey American Water was awarded the 2020 Governor's Environmental Excellence Award for the Short Hills Well Station Project.



QUALITY. ONE MORE WAY WE KEEP LIFE FLOWING.

- **Green Brook and Charles Street Stations:** At times, the best action to take in response to finding PFAS presence is to remove ground water sources from service, though it is not always possible. When confronted with just such an issue with our Green Brook and Charles Street Stations, New Jersey American Water found a different way to address PFAS detections. The Green Brook and Charles Street Ground Water Stations were converted to booster stations, bringing treated surface water from our Canal Road and Raritan-Millstone Water Treatment Plants into service areas that previously received only ground water.
- **Springfield Station:** New Jersey American Water constructed a new treatment system for PFAS removal from the Springfield Well Field. The new treatment system consists of four anion exchange resin vessels housed in the existing treatment building on the site, chemical feed system upgrades including sodium bisulfite, sodium hypochlorite, and ammonium sulfate constructed in the existing chemical rooms, and new low lift pumps installed to accommodate new head conditions through the new treatment system. This proactive and innovative approach earned New Jersey American Water the New Jersey Alliance for Action's Leading Infrastructure Project Award in February 2021.

WHAT IS NEW JERSEY AMERICAN WATER DOING TO ADDRESS PFAS AND HELP PROTECT OUR CUSTOMERS?

- American Water has a cross-functional team focused on the scientific and regulatory framework related to PFAS detection and emerging technologies for removal.
- Selecting the most efficient and cost effective PFAS removal process(es) is strongly dependent on background water matrix composition and targeted PFAS. American Water's engineering and research teams regularly conduct studies to evaluate new monitoring and treatment technologies.
- American Water's research group is actively involved

New Jersey American Water, as the state's largest investor-owned water utility, has always taken its responsibilities in providing safe drinking water to its customers very seriously, and demonstrated this again in its proactive response to detections of PFOA in limited parts of its distribution system.

Michele Putnam

DEP's Acting Assistant Commissioner for Water Resources Management in 2017

in externally funded projects related to the detection, occurrence, and removal of PFAS.

- American Water's Central Laboratory scientists are cutting edge and have the newest EPA approved methods for measuring PFAS, accredited and certified in New Jersey.
- Granular Activated Carbon and Anion Exchange Technology have been installed to remove PFAS compounds from seven locations that have elevated source water levels.

EXPERTISE

Our Central Laboratory, located in Belleville, IL, is an EPA accredited lab with high throughput, fast turnaround time, and expanded capability for PFAS. The Central Laboratory is NELAC certified to perform EPA method 537 and 537.1 that includes 18 PFAS compounds at reporting limits of 5 ng/L and method detection limits of 2 ng/L. The lab is currently demonstrating EPA Method 533 that includes compounds in Method 537.1 as well as short-chain PFAS for a total of 25 PFAS. In addition, our in-house team of research scientists and engineers is actively involved in two major studies being funded by external agencies and are evaluating PFAS method modifications to expand the number of compounds we can effectively measure.



HOW AMERICAN WATER HAS CONTRIBUTED TO THE BODY OF SCIENCE ON PFAS

American Water is active in several external collaborations that are helping us stay at the forefront of regulatory and monitoring strategies:

- American Water scientists are members of the technical advisory workgroup for Safe Drinking Water Act Processes and New Contaminants of the American Water Works Association, which has been actively contributing to the fast-paced changes related to detection and regulatory strategies for PFAS.
- American Water experts frequently collaborate with other leaders, state and federal regulators in departments of environmental protection, EPA, CDC, American Water Works Association, Water Research Foundation, universities and other organizations to better understand issues related to PFAS and public health.
- American Water is both a co-Principal Investigator and utility participant in the Water Research Foundation project, entitled "Investigation of Treatment Alternatives for Short-Chain Poly and Perfluoroalkyl Substances."
- American Water is using new analytical capabilities in our research labs to determine which of our systems maybe impacted by short chain, replacement and next generation PFAS compounds.
- American Water regularly participates as invited speakers in learning programs and at local and national conferences to improve understanding and best practices for addressing PFAS and other contaminants.