

FREQUENTLY ASKED QUESTIONS (FAQ):

PFAS in Drinking Water

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Overview of New Jersey MCLs for PFOA, PFOS, and PFNA

Q: What are PFOA, PFOS, and PFNA?

Perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), and perfluorononanoic acid (PFNA) are per- and polyfluoroalkyl substances (PFAS), previously referred to as perfluorinated compounds (PFCs), that are man-made and used in industrial and commercial applications. PFOA was used as a processing aid in the manufacture of fluoropolymers used in non-stick cookware and other products, as well as other commercial and industrial uses, based on its resistance to harsh chemicals and high temperatures. PFOS is used in metal plating and finishing as well as in various commercial products. Both PFOA and PFOS have been used in aqueous film forming foams for firefighting and training, and both compounds are found in consumer products such as stain resistant coatings for upholstery and carpets, water resistant outdoor clothing, and grease proof food packaging. PFNA has been historically used as a processing aid in the manufacturing of high-performance plastics that are resistant to harsh chemicals and high temperatures. Although the use of PFOA, PFOS, and PFNA has decreased substantially, contamination is expected to continue indefinitely because these substances are extremely persistent in the environment and are soluble and mobile in water.

Q: What action is the Department taking?

To date, the Department of Environmental Protection (Department) has adopted rule amendments (i) establishing drinking water maximum contaminant levels (MCLs) and specific ground water quality standards for PFOA, PFOS, and PFNA (ii) expanding testing of private wells subject to sale or lease for PFOA, PFOS, and PFNA under the Private Well Testing Act (PWTA), (iii) adding PFOA, PFOS, and PFNA to New Jersey's List of Hazardous Substances, and (iv) expanding the New Jersey Pollutant Discharge Elimination System (NJPDES) permit application testing requirements/pollutant listings and requirements for discharges to ground water to include PFOA, PFOS, and PFNA.



Q: Why is the Department regulating PFOA, PFOS, and PFNA?

Currently, there are no federal drinking water standards for PFOA, PFOS, or PFNA. These compounds have been detected in drinking water supplies in New Jersey and pose serious health threats to consumers. PFOA, PFOS, and PFNA accumulate in the human body, and exposure to low concentrations of the contaminants in drinking water increases concentrations in human blood serum that persist for many years after exposure ends. The adopted rule amendments set forth monitoring requirements to ensure public community water systems and public nontransient noncommunity water systems consistently monitor water, are in compliance with the MCLs, and treat water systems to remove the contaminants to below New Jersey standards, as necessary. All newly constructed drinking water wells will also be tested for PFOA, PFOS, and PFNA. These requirements will reduce exposure to these contaminants in drinking water, as well as have a positive social impact, by protecting consumers from the health effects associated with PFOA, PFOS, and PFNA.

Of an estimated State population of 8.9 million, about 1.8 million people rely on ground water from about 3,375 public water supply wells, and about 1.2 million people rely on ground water from about 385,000 private domestic potable wells. The ground water quality standards for PFOA, PFOS, and PFNA ensure that scientifically-based standards to protect, maintain, and restore ground water quality are in place. The ground water quality standards also establish minimum standards for the remediation of contaminated ground water.

The additions of PFOA, PFOS, and PFNA to the List of Hazardous Substances require owners and operators of major facilities that handle PFOA, PFOS, or PFNA to implement the discharge prevention and control requirements of the Spill Compensation and Control Act (Spill Act), N.J.S.A. 58:10-23.11 et seq., and the Discharge of Petroleum and Other Hazardous Substances (DPHS) rules, N.J.A.C. 7:1E. In addition, adding PFOA, PFOS, and PFNA to the List of Hazardous Substances make available hazardous substance-based funding sources, such as the Spill Compensation Fund (Spill Fund), for the cleanup and removal of PFOA, PFOS, and PFNA discharges under the Spill Act, and enable payment of eligible damage claims regarding PFOA, PFOS, and PFNA discharges pursuant to the Processing of Damage Claims Pursuant to the Spill Compensation and Control Act rules, N.J.A.C. 7:1J.

Adding requirements for PFOA, PFOS, and PFNA to the NJPDES Rules, N.J.A.C. 7:14A, require ground water discharge permittees to monitor for these pollutants and, if the contaminants are detected above the applicable ground water quality standard(s), the permittee will be required to remove the pollutant(s) from its waste stream or provide treatment to meet the ground water quality standard(s).

Q: What rules have been amended to date? What are the changes?

 Safe Drinking Water Act (SDWA) Rules (N.J.A.C. 7:10) - The SDWA Rules incorporate the National Primary Drinking Water Regulations (National Regulations) by reference, including all siting requirements, filtration and disinfection requirements, maximum contaminant

levels (MCLs), monitoring and analytical requirements, reporting requirements, public notification requirements, and recordkeeping requirements for public water systems. As allowed by the National Primary Drinking Water Regulations (National Regulations), the SDWA Rules establish New Jersey-specific requirements in certain respects, including the establishment of State-specific MCLs and monitoring requirements.

- The Department has adopted MCLs of 0.014 micrograms per liter (μ g/l, or 14 parts per trillion, ppt) for PFOA, 0.013 μ g/l (13 ppt) for PFOS, and 0.013 μ g/l (13 ppt) for PFNA.
- The Department is requiring that public community water systems' annual consumer confidence reports (CCRs) include information on PFOA, PFOS, and PFNA. The CCRs inform customers about the quality of their drinking water.
- 2. Discharges of Petroleum and Other Hazardous Substances (DPHS) Rules (N.J.A.C. 7:1E, Appendix A) Appendix A of the DPHS Rules lists all substances that, in addition to petroleum and petroleum products, are considered hazardous substances under the Spill Act. The Spill Act establishes a comprehensive scheme to control the transfer and storage of hazardous substances and provides strict liability for cleanup and removal costs (including the costs of remediation and natural resource damages) resulting from any discharge of a hazardous substance. Under a related statute, the Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58:10B-1 et seq., any person liable under the Spill Act, including the discharger of a hazardous substance or a person in any way responsible for a hazardous substance that is discharged, is required to remediate the discharge of the hazardous substance. The Spill Act also provides a fund for compensating businesses and other persons damaged by a discharge of a hazardous substance, provided the person meets certain criteria.
 - The addition of PFOA, PFOS, and PFNA to the List of Hazardous Substances designate
 these compounds as hazardous substances and give the Department additional
 authority under the Spill Act to respond to a discharge or threat of a discharge of
 these substances and compel a person in any way responsible to do so.
 - The addition of PFOA, PFOS, and PFNA to the List of Hazardous Substances provide an affirmative obligation under the Industrial Site Recovery Act, N.J.S.A. 13:1K-6 et seq., for owners and operators of industrial establishments to report, investigate, and remediate these substances.
- 3. Ground Water Quality Standards (GWQS) (N.J.A.C. 7:9C) The GWQS establish the designated uses for all ground waters of the State, classify the ground waters based on their designated uses, and specify the ground water quality criteria that must be met to support the designated uses. Ground water quality standards serve as the minimum standards for the remediation of contaminated ground water, in accordance with the Remediation Standards, N.J.A.C. 7:26D, and are used to set effluent limits for discharges to ground water under the NJPDES Rules, N.J.A.C. 7:14A.

- The Department has established specific ground water quality standards of 0.014 micrograms per liter (μ g/l, or 14 parts per trillion, ppt) for PFOA, 0.013 μ g/l (13 ppt) for PFOS, and 0.013 μ g/l (13 ppt) for PFNA.
- The specific ground water quality standards for PFOA and PFOS replaced the interim specific ground water quality standards for PFOA and PFOS of 0.01 μ g/l (10 ppt) each, which were established by the Department on March 13, 2019. The specific ground water quality standard for PFNA replaced the existing specific ground water quality standard for PFNA of 0.01 μ g/l (10 ppt), which was established on January 16, 2018.
- 4. **Private Well Testing Act (PWTA) Rules (N.J.A.C. 7:9E)** The PWTA Rules establish testing requirements for individual private wells prior to sale or lease of real property to ensure that purchasers and tenants of properties are aware of the quality of their drinking water.
 - The Department is requiring private wells subject to sale or lease to test for PFOA, PFOS, and PFNA starting December 1, 2021.
- 5. New Jersey Pollutant Discharge Elimination System (NJPDES) Rules (N.J.A.C. 7:14A) The NJPDES Rules establish the requirements for a permit or approval from the Department and set limits. The rules also establish the monitoring requirements for NJPDES permits, which are organized by industrial category, pollutant type, and testing method.
 - The Department has added PFOA, PFOS, and PFNA to the Permit Application Testing Requirements/Pollutant Listings and the Requirements for Discharges to Ground Water.
 - Affected dischargers to ground water are subject to monitoring for PFOA, PFOS, and PFNA.
 - Applicable clean-up activities are subject to limits established through the ground water quality standards.

Q. What are the health risks of PFOA, PFOS, and PFNA?

There is considerable information on health effects of PFOA, PFOS, and PFNA in humans and animals. In laboratory animals, PFOA and PFOS caused toxicity to the liver and immune system, neurological and behavioral effects, changes in hormone levels, and effects on metabolism. In laboratory animals, effects of PFNA include weight loss, effects on metabolism, and toxicity to the liver, immune system, kidney, and male reproductive system. These three contaminants also caused decreased growth and development of the fetus and newborn animal. PFOA and PFOS caused tumors in animal studies.



Some studies of the general population, communities with PFAS contaminated drinking water, and exposed workers suggest that exposure to PFAS increases the risk of a number of health effects. Health effects from PFAS are observed even within the general population without exposure to PFAS from contaminated drinking water.

From human health studies, the most consistent findings for PFOA, PFOS, and PFNA are increased cholesterol, increased uric acid levels for PFOA and PFOS, as well as increases in some liver enzymes for PFOA and PFNA. PFOA and PFOS are associated with decreased antibody response to vaccinations, and PFOS is also associated with an increased risk of childhood infections. In a large study of communities with drinking water exposure, PFOA was associated with clinically-defined high cholesterol, kidney and testicular cancer, thyroid disease, ulcerative colitis, and pregnancy-inducted hypertension, and it was associated with kidney cancer in a recent large study of the U.S. general population. Exposure to PFAS before birth or in early childhood may result in health effects including decreased birth weight, decreased response to vaccinations, and increased risk of infectious disease.

PFOA and PFOS caused tumors in rodents, while PFNA has not been tested for this effect. In humans, PFOA exposure was associated with a higher incidence of kidney cancer in both the general population and in a community with substantial levels of PFOA in drinking water, and with testicular cancer in the community with contaminated drinking water.

A New Jersey Department of Health fact sheet on PFAS in drinking water is available at https://www.nj.gov/health/ceohs/documents/pfas_drinking%20water.pdf.

Q: What are Maximum Contaminant Levels (MCLs) and to whom do they apply?

An MCL is the highest allowable concentration of a contaminant in water delivered to a user of a public drinking water supply. MCLs apply to public water systems, including public community and public noncommunity water systems. Public community and public noncommunity water systems are required to routinely monitor for contaminants for which MCLs have been established and to take any action necessary to bring the water into compliance with an MCL. Public community water systems are systems that have at least 15 service connections used by year-round residents, or regularly serve at least 25 year-round residents. Public noncommunity water systems include public nontransient noncommunity and public transient noncommunity water systems. Public nontransient noncommunity water systems do not serve year-round residents, but do serve at least 25 of the same individuals for more than six months of any calendar year. Examples include schools and office parks that have their own water source (i.e., their own well) and are not part of a public community water system. Transient noncommunity water systems include locations where people do not remain for long periods of time (i.e., campgrounds, gas stations).

Q. What is the scientific basis of the Maximum Contaminant Levels (MCLs) for PFOA, PFOS, and PFNA?

The primary basis of the MCLs is toxicology studies of PFOA, PFOS, and PFNA in laboratory animals, with support provided by data from human epidemiology studies. For PFOA, the MCL of 0.014 μ g/l (14 ppt) is based on liver toxicity, with consideration of more sensitive effects on the developing fetus. For PFOS, the MCL of 0.013 μ g/l (13 ppt) is based on immune system toxicity – decreased



immune system response to a foreign antibody, analogous to decreased vaccine response in humans. For PFNA, the MCL of 0.013 μ g/l (13 ppt) is based on liver toxicity, with consideration of potentially more sensitive effects, including effects on the developing fetus.

The new MCLs also consider the increase in blood serum PFOA, PFOS, and PFNA levels that will result from exposure to these levels in drinking water over time. They are intended to minimize increases in exposure and blood serum levels due to drinking water. See next question and response.

Q. Since everyone is exposed to PFOA, PFOS and PFNA, why is there such a focus on controlling exposure through drinking water?

Ongoing exposures from even low drinking water levels for PFOA or PFOS, and even lower levels for PFNA, are greater than typical exposures in the general population from sources such as food and consumer products. Since human health effects are associated with even low-level exposures to PFOA, PFOS, and PFNA, it is important to minimize increases in exposure from drinking water. Exposure to PFAS through household uses of water such as showering, bathing, laundry, dishwashing, and rinsing produce is not significant.

Q: How can I find out if PFOA, PFOS, or PFNA is in my drinking water?

Your public water utility regularly tests for water quality. You can access your utility's water quality information through the Drinking Water Watch website, located here. This is a database that is searchable by water system ID number, system name, or (if you don't know the ID number or name) by county and municipality, to identify all systems serving that area. Information on which utilities serve your area can also be found at this site. Additionally, a list of public water systems with PFOA, PFOS, and/or PFNA MCL violations is available here.

Q: Should I drink bottled water when I learn PFAS are in my drinking water?

If a public water utility notifies you that PFOA, PFOS, or PFNA exceeds the NJ MCL, they are required to promptly take actions to reduce these levels. The New Jersey Department of Health has specific recommendations for specific sensitive populations, including infants, children, individuals who are pregnant, nursing, or may become pregnant in the future, who have PFAS above the New Jersey drinking water standard in their water supply (see below for additional information). Older children and adults who wish to reduce exposure to PFAS while the water utility is taking actions to reduce levels can consider switching to bottled or home filtered water for drinking and cooking. PFAS are not removed from water by boiling. PFOA, PFOS, and PFNA build up in the body over time, and it takes many years for the levels of these PFAS in your body to decrease after exposure has ended. Anyone concerned about their health should consult with their personal healthcare provider.

Q. Are infants and children at higher risk than adults?

Infants and children consume more water per body weight than older individuals, so their exposure may be higher than adults when drinking water is contaminated with PFAS. They are also considered to be more sensitive to the effects of PFAS.



In humans, exposure to PFAS before birth or in early childhood may result in health effects including decreased birth weight, decreased response to vaccinations, and increased risk of infectious disease. In laboratory animals, PFOA, PFOS, PFNA and many other PFAS cause developmental delays.

The New Jersey Department of Health advises that infant formula and other beverages for infants, such as juice made from concentrates, should be prepared with bottled water when PFOA, PFOS, or PFNA are elevated above New Jersey's MCL in drinking water. Bottled water should also be used when giving infants plain water.

Q. Should someone who has been exposed to PFOA, PFOS, or PFNA above New Jersey's MCL in drinking water breastfeed her infant?

PFOA, PFOS, and PFNA are present in breast milk and are transferred to nursing babies. Although PFAS are present in breast milk, the New Jersey Department of Health advises that breast feeding should continue, even if the mother has been exposed to contaminated drinking water, since the benefits of breast feeding are well established (see

https://www.nj.gov/health/ceohs/documents/pfas drinking%20water.pdf).

Individuals who are pregnant, nursing, or may become pregnant may choose to use home water filters or bottled water for drinking and cooking to reduce exposure. However, certain PFAS, including PFOA, PFOS, and PFNA, are slowly excreted from the body. Therefore, risk reduction will not be immediate, as exposure to the fetus and nursing infant is influenced by the mother's past exposure.

Q: Where can I get more information about home water filters?

Water treatment devices utilizing granular carbon filters, reverse osmosis, ion exchange resins and other specialized treatment media are technologies that can reduce the level of PFAS in drinking water. If a water treatment device is used, it is important to follow the manufacturer's guidelines for maintenance and operation. The National Sanitation Foundation (NSF) International, an independent and accredited organization, certifies products proven effective for reducing PFOA and PFOS below the EPA Lifetime Health Advisory level (70 ppt), but these products are not certified for removal to the lower NJ MCLs of 14 and 13 ppt. Some studies have found that some treatment devices were able to reduce PFAS to lower levels. However, water quality conditions, concentrations of PFAS in the water, and operational conditions were shown to affect the effectiveness of these devices.

For more specific information regarding the effectiveness of these treatment devices, the Department recommends visiting the NSF International website, http://www.nsf.org/. NSF International is a non-profit organization that provides information to consumers and ranks drinking water treatment devices for their inherent effectiveness for specific contaminants.



Q: What is the relationship between Maximum Contaminant Levels (MCLs) and ground water quality standards?

The GWQS require that, where an MCL has been promulgated by the Department, the health-based level for the MCL is the specific ground water quality criterion for the same constituent.

Q: Why are there sometimes inconsistencies between ground water quality standards and Maximum Contaminant Levels (MCLs) for the same constituents?

The health-based level is only one of the factors considered in deriving each standard; therefore, the MCL and the ground water quality standard for the same constituent may not always be identical. MCLs and ground water quality standards are promulgated under different regulatory and statutory authority and mandates. While the Department is required to consider risk to human health in deriving both standards, consideration must also be given to analytical capabilities of laboratories, treatment capabilities, and costs of treatment in developing an MCL. Only human health risk (ground water quality criteria) and analytic capabilities (measured as practical quantitation levels, or PQLs) are considered in deriving the ground water quality standards.

Q: What is the relationship between the ground water quality standards and the remediation standards for PFOA, PFOS, and PFNA?

Most of the ground water quality standards at N.J.A.C. 7:9C are adopted by reference as part of the Remediation Standards at N.J.A.C. 7:26D-2.2. Ground water quality standards serve as the minimum standards for remediation of contaminated ground water.

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Water System Specific Questions on New Jersey MCLs

Q: What does our public drinking water system need to do to comply with New Jersey MCLs? Public community and public noncommunity water systems were required to comply with monitoring requirements for PFOA and PFOS beginning first quarter 2021 and take steps to eliminate PFOA and PFOS from the water delivered to customers if PFOA or PFOS is found at levels exceeding the maximum contaminant levels (MCLs). Similarly, public community and noncommunity water systems are required to comply with existing monitoring requirements for PFNA and take steps to eliminate PFNA from the water delivered to customers if PFNA is found at levels exceeding the maximum contaminant levels (MCLs).

Q: What are the monitoring requirements for PFOA, PFOS, and PFNA in New Jersey? The New Jersey monitoring requirements for PFOA and PFOS set by the 2020 rule amendments follow those set for PFNA and the existing federal volatile organic compound (VOC) monitoring



framework under the National Primary Drinking Water Regulations (National Regulations). The new requirements are as follows:

- Water systems must initially perform four consecutive quarters of sampling for a contaminant at each point of entry (POE) from which they deliver water into their distribution systems, unless data have been grandfathered by the Department. See question below on grandfathered data.
- If a water system detects the analyte in the initial four quarterly samples, and the results are reliably and consistently below the maximum contaminant level (MCL), the system may reduce its sampling frequency to an annual basis. The annual sample must be taken during the quarter in which the highest sample concentration was previously detected.
 - Once on annual sampling, if the system collects three annual samples with no detections, it can be placed on triennial sampling.
- If a water system has a sample result that is reliably and consistently above the MCL, the water system must continue sampling quarterly.
- If a water system is treating for PFOA, PFOS, or PFNA it must continue to monitor quarterly to ensure that the treatment is properly removing the contaminant(s).
- MCL violations are determined by the running annual average of four consecutive quarters
 of results. Violations may also be issued if PFOA, PFOS, or PFNA are found at a level which
 would cause the running annual average to exceed the MCL regardless of the following
 quarters of results.
- Monitoring schedules will be posted on the Department's Drinking Water Watch web page, located at https://www9.state.nj.us/DEP WaterWatch public/index.jsp.

Q: What will this cost my municipality?

The implementation of the rule amendments to the New Jersey Safe Drinking Water Act (SDWA) will, in some cases, result in treatment for public community water systems and public nontransient noncommunity water systems. Treatment costs will vary widely depending on factors such as system size, the number of wells or sources that require treatment, water chemistry, ambient organic matter, and the degree of contamination.

Q: How is the Department letting people know about PFOA, PFOS, and PFNA in the water? The Department has developed a PFAS specific webpage (found here) as a central location to house information on PFAS activities across the Department's program areas. Visitors can find additional resources about PFAS in drinking water and the environment, New Jersey specific regulations, and the Department's current and anticipated activities. The Department is also engaged in regular outreach to water systems, local and county officials, and laboratories to keep stakeholders



informed about the Department's implementation of PFAS MCLs and related activities. Information on drinking water quality is available through the Department's Drinking Water Watch web page (https://www9.state.nj.us/DEP WaterWatch public/index.jsp) and through each public community water system's Consumer Confidence Report, a Federal reporting requirement that must be sent to customers every year by June 30 for the preceding year. When there is an MCL violation, the water system is required to provide public notification within 30 days of the Department issuing a Notice of Noncompliance.

Q: How should I let my customers know if PFOA, PFOS, or PFNA has been detected in the water system?

Water systems will be required to notify customers of detections through the Consumer Confidence Report. Customers should also be referred to the Drinking Water Watch web page (https://www9.state.nj.us/DEP WaterWatch public/index.jsp) for the latest test results. When an MCL violation is issued by the Department, water systems are required to provide public notification within 30 days regarding the levels of the contaminant found in the drinking water and how the water system is addressing the contaminant. The water system must take steps to eliminate PFOA, PFOS, and/or PFNA from the water delivered to customers and has one year from the MCL violation to come into compliance with the MCL.

Q: How can I protect the customers of my water system from PFOA, PFOS, or PFNA?

There are several ways to reduce PFOA, PFOS, and PFNA concentrations in the drinking water supply. Some water systems have stopped using the contaminated source (well water), and instead rely on their other sources to provide water to customers or have purchased water from a neighboring water system that does not have PFOA, PFOS, or PFNA above the relevant MCL. Some systems, however, will need to install treatment for the removal of PFOA, PFOS, and/or PFNA. The DWQI recommended granular activated carbon, or an equally efficient technology, be considered for the treatment of PFAS. Granular activated carbon has successfully been used to reduce these PFAS below their respective MCLs.

Q: Will enforcement actions be taken against the water system for exceedances of the Maximum Contaminant Level (MCL) for PFOA, PFOS, or PFNA?

The Department will issue a Notice of Noncompliance to a water system if there is a violation of the final PFOA, PFOS, or PFNA MCL. The Department issues violations for any drinking water standard that is exceeded, based on the average of four consecutive quarterly samples.

Q: What timeline do water systems have to comply with the new requirements?

Public community water systems and nontransient noncommunity water systems (e.g., a school with its own well) were required to begin monitoring for PFOA and PFOS in the first calendar quarter of 2021. An MCL violation determination will be based on the average of four consecutive quarterly results. If the average of the four results is reliably and consistently less than all three MCLs, the monitoring schedule can be reduced to one sample a year, and further reduced to once every three years if PFOA, PFOS, and PFNA are non-detectable. If the average of the four quarterly



results are greater than the MCLs, the Department will issue a Notice of Noncompliance and the one-year clock for compliance begins (see above). Many water systems voluntarily take sources out of service prior to being issued a Notice of Noncompliance.

Q: What resources does the Department provide for testing?

The Department does not provide resources for testing. It is the responsibility of the water system to test its system water using a NJ certified drinking water laboratory.

Q: What treatment can be used to remove PFAS?

Granular activated carbon or an equally efficient technology was recommended by the Drinking Water Quality Institute (DWQI). Granular activated carbon has been shown to be effective at reducing PFOA, PFOS, and PFNA to below the MCLs in drinking water. Anion exchange resins and high-pressure membrane treatments, such as nanofiltration and reverse osmosis have also been found to be effective at removing PFAS.

Q: Will our water system have to remediate?

Public community or nontransient noncommunity water systems with exceedances of the MCLs are required to take steps to eliminate or reduce levels of PFOA, PFOS, and/or PFNA to below the MCLs. This can include treatment or use of alternative water sources.

Q: What financial resources are available to public water systems with detections above the Maximum Contaminant Level (MCL)?

Financial resources are available to community water systems and nonprofit noncommunity water systems with PFOA, PFOS, or PFNA through the Drinking Water State Revolving Fund (DWSRF) loan program. In general, the base package consists of a blended interest rate of 50% of the NJ I-Bank's (formerly NJ Environmental Infrastructure Trust) Market Rate for allowable costs for eligible publicly-owned water systems, and a blended interest rate of 75% of the NJ I Bank market-rate loan for eligible privately-owned water systems. Eligible small systems serving 10,000 people or fewer may apply for a loan for up to \$1 million at a blended Interest Rate of 50% of I-Bank's AAA Market Interest Rate for 50% of project costs. For more information on the Water Bank loan program, see www.nj.gov/dep/wiip.

USEPA also announced \$1 billion in grant funding through the Bipartisan Infrastructure Law to address PFAS and other emerging contaminants in drinking water, specifically in small or disadvantaged communities. This funding from the Emerging Contaminants in Small or Disadvantaged Communities Grant Program is the first of \$5 billion through the Bipartisan Infrastructure Law that can be used to reduce PFAS in drinking water in communities facing disproportionate impacts. USEPA will be issuing guidance later this year detailing eligible uses for the funds and providing more information on how water systems can apply to states for this funding.



This new program complements \$3.4 billion in funding that is going through the Drinking Water SRFs and \$3.2 billion through the Clean Water SRFs that can also be used to address PFAS in water in 2022. Water systems are encouraged to contact the Department's SRF program at waterbankinfo@dep.nj.gov or through the website www.nj.gov/dep/wiip to learn more about how to apply for funds and for eligible uses to reduce PFAS.

In addition to funding resources through the DWSRF loan program, public water systems that document that they have been damaged by discharges of PFOA, PFOS, or PFNA may be eligible for funding by filing a claim with the Spill Compensation Fund. Please see the Processing of Damage Claims Pursuant to the Spill Compensation and Control Act rules, N.J.A.C. 7:1J (http://www.nj.gov/dep/rules/rules/njac7_1j.pdf) for eligibility requirements.

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Private Well Owners Specific Questions

Q: What is required under the new amendments to the Private Well Testing Act?

Starting December 1, 2021, the amendments to the PWTA Rules, N.J.A.C. 7:9E, require all wells that are sampled as part of a real estate transaction, and all wells sampled in order to comply with the lessor requirements of the PWTA, to be analyzed for PFOA, PFOS, and PFNA. The PWTA Rules require the testing of untreated water, even if the treatment is installed.

Q: I am selling my house. How much is it going to cost me to sample for these new compounds? The Department estimates the average cost of the analysis (EPA Method 537 and EPA Method 537.1) for the group of PFAS that includes PFOA, PFOS, and PFNA is approximately between \$600.00 and \$900.00 total per water sample.

Q: Will the lab tell me my water test results?

The laboratory is required to report any test results to the person who requested the test, on a New Jersey Private Well Water Test Reporting Form

(https://www.state.nj.us/dep/watersupply/pdf/pwta-reporting-form-fill.pdf) provided by the Department. The reporting form will show how the well water results compare with State and federal drinking water standards. For PWTA parameter standards, visit https://www.state.nj.us/dep/watersupply/pwta/pwta_list.htm. For all drinking water standards, visit https://www.state.nj.us/dep/watersupply/pdf/dw-standards.pdf.



Q: If the well water does not meet one or more of the drinking water standards, can the property sale be completed? Does the water have to be treated before the property is sold or rented? The PWTA does not prohibit the sale of property if the water fails one or more drinking water standards. The PWTA mainly ensures that all parties to the real estate transaction know the facts about the well water so that they can make well-informed decisions. It is possible that mortgage companies, local health departments, or purchasers may require treatment of the water in some cases.

Q: If a well fails to meet one or more of the standards, will the Department make that information public?

No. The laboratory is required to provide a copy of the test results on the New Jersey Private Well Test Reporting Form to the person who requested the testing. In addition, the laboratory is required to report the water test results to the Department electronically. The Department in turn notifies the local health authority of test results that exceed the standards. Both the Department and the local health authority are required to keep the address of tested wells confidential. In some situations, the local health authority has the discretion to notify nearby well owners of the reported presence of a PWTA parameter in a private well so the nearby well owner can test for the parameter of concern if desired. Lastly, the Department may provide general compilations of water test results data collected from private well owners that may be identified by county and municipality or other appropriate areas of delineation.

Q: What are the types of home drinking water treatment devices available, and which are generally effective for PFAS contaminants?

If you learn that PFAS are present in your water and wish to avoid exposure, home water treatment devices are available that can reduce levels of these contaminants. Water treatment devices utilizing granular carbon filters, reverse osmosis, ion exchange resins and other specialized treatment media are technologies that can reduce the level of PFAS in drinking water. If a water treatment device is used, it is important to follow the manufacturer's guidelines for maintenance and operation.

NSF International, an independent and accredited organization, certifies products proven effective for reducing PFOA and PFOS below the EPA Lifetime Health Advisory level (70 ppt), but these products are not certified for removal to the lower NJ MCLs of 14 and 13 ppt. Some studies have found that some treatment devices were able to reduce PFAS to lower levels. However, water quality conditions, concentrations of PFAS in the water, and operational conditions were shown to affect the effectiveness of these devices.

For more specific information regarding the effectiveness of these treatment devices, the Department recommends visiting the National Sanitation Foundation (NSF) International website, http://www.nsf.org/. NSF International is a non-profit organization that provides information to consumers and ranks drinking water treatment devices for their inherent effectiveness for specific contaminants.



Q: If the well water does not meet one or more of the drinking water standards, what type of assistance from the State is available for treatment?

Generally, homeowners are responsible for installation and maintenance costs that are incurred concerning their potable private well water. However, there are two State programs that may be available to homeowners for financial assistance if specific eligibility requirements are met.

The New Jersey Housing and Mortgage Finance Agency (NJHMFA) has a Potable Water Loan Program that is available to owners of single-family residences whose source of potable water from a private well exceeds an MCL. In addition, the loan program covers iron and manganese although these contaminants do not have Primary Drinking Water Standards. This resource is available for PFOA and PFOS with the adoption of MCLs for these contaminants. This resource is also available for PFNA, for which an MCL was adopted in 2018. For further information, please contact the NJHMFA Hotline at 1-800-NJHOUSE (1-800-654-6873) or it may be reached at: P.O. Box 18550, 637 South Clinton Avenue, Trenton, N.J. 08650-2085 or on the web at: https://www.nj.gov/dca/hmfa.

The Spill Compensation Fund administered by Environmental Claims Administration within the Department offers help to innocent parties suffering from direct or indirect damages resulting from the human-caused discharge of a hazardous substance. There are specific eligibility requirements and guidelines for filing claims with the Spill Compensation Fund. For more information, please see the Processing of Damage Claims Pursuant to the Spill Compensation and Control Act rules, N.J.A.C. 7:1J (http://www.nj.gov/dep/rules/rules/njac71j.pdf) for eligibility requirements or contact the NJDEP-Environmental Claims Administration at 609-984-2076 or visit its website at https://www.nj.gov/dep/srp/finance/eca.htm. You may write to the ECA: NJDEP-ECA/Spill Fund, Mail Code 401-06J, P.O. Box 420, 401 E. State Street, Trenton, N.J. 08625-0420.

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USEPA Health Advisories for PFAS

Q: Does USEPA have drinking water standards for PFAS?

Currently, there are no federal drinking water standards for PFAS. On June 15, 2022, USEPA released four drinking water health advisories for per- and polyfluoroalkyl substances (PFAS). These replace the health advisories for PFOA and PFOS of 70 ppt issued by USEPA in 2016. The interim health advisories are intended to provide information to states and public water systems until the National Primary Drinking Water regulation for PFAS takes effect. EPA has also established final lifetime drinking water health advisories for GenX chemicals and PFBS.

The health advisories are summarized below:

- Interim updated health advisory for PFOA = 0.004 ppt
- Interim updated health advisory for PFOS = 0.02 ppt
- Final health advisory for GenX chemicals = 10 ppt



Final health advisory for PFBS = 2,000 ppt

Additional information about these Health Advisories can be found here.

Q: What are GenX chemicals and PFBS?

PFAS made up of fewer carbon atoms, such as hexafluoropropylene oxide (HFPO) dimer acid and its ammonium salt (together referred to as "GenX chemicals") and perfluorobutane sulfonic acid and its related compound potassium perfluorobutane sulfonate (together referred to as "PFBS"), were developed to replace PFOA and PFOS, respectively, and are used to make various consumer products and in industrial applications because they have similar desired properties and characteristics but are more quickly eliminated from the human body than PFOA and PFOS.

Q: What Is a Health Advisory?

Drinking water health advisories provide information on contaminants that can cause human health effects and are known or anticipated to occur in drinking water. USEPA's health advisories are non-enforceable and non-regulatory and provide technical information to states agencies and other public health officials on health effects, analytical methods, and treatment technologies associated with drinking water contamination.

Q: What is the basis for EPA's new Health Advisories?

The interim updated health advisories for PFOA and PFOS are based on human studies in populations exposed to these chemicals. EPA has concluded that human studies have found associations between PFOA and/or PFOS exposure and effects on the immune system, the cardiovascular system, human development (e.g., decreased birth weight), and cancer. The interim health advisories are based on decreased antibody response to vaccines in children, which was determined by EPA to be the most sensitive non-cancer effect. The interim health advisories do not consider cancer effects because EPA's assessment of cancer effects is still in progress. The final health advisories for GenX chemicals and PFBS are based on effects in laboratory animals from oral exposure to these chemicals. GenX chemicals caused adverse effects on the liver, the kidney, the immune system, and developmental effects, as well as cancer, in laboratory animals. PFBS caused adverse effects on the thyroid, reproductive system, development, and kidney in laboratory animals.

Q: Is USEPA going to establish a national drinking water regulation for PFOA, PFOS and additional PFAS?

USEPA is developing a proposed National Drinking Water Regulation for publication by the end of 2022 for PFOA and PFOS. As USEPA undertakes this action, the agency is also evaluating additional PFAS and considering regulatory actions to address groups of PFAS. USEPA has stated that it anticipates finalizing the rule by the end of 2023. The proposal will include both non-enforceable Maximum Contaminant Level Goals (MCLGs) and enforceable standards, or Maximum Contaminant



Level (MCL) or Treatment Technique. At that time, USEPA may update or remove the interim health advisories for PFOA and PFOS.

The MCLG is the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, allowing an adequate margin of safety. For more information visit: https://www.epa.gov/sdwa/how-epa-regulates-drinking-water-contaminants.

Q: Funding to Address PFAS in Drinking Water

USEPA also announced \$1 billion in grant funding through the Bipartisan Infrastructure Law to address PFAS and other emerging contaminants in drinking water, specifically in small or disadvantaged communities. This funding from the Emerging Contaminants in Small or Disadvantaged Communities Grant Program is the first of \$5 billion through the Bipartisan Infrastructure Law that can be used to reduce PFAS in drinking water in communities facing disproportionate impacts. USEPA will be issuing guidance later this year detailing eligible uses for the funds and providing more information on how water systems can apply to states for this funding.

This new program complements \$3.4 billion in funding that is going through the Drinking Water SRFs and \$3.2 billion through the Clean Water SRFs that can also be used to address PFAS in water this year. Water systems are encouraged to contact the Departments SRF program at waterbankinfo@dep.nj.gov or through the Department's website www.nj.gov/dep/wiip to learn more about how to apply for funds and for eligible uses to reduce PFAS.

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Drinking Water Facts:

Per- and Polyfluoroalkyl Substances (PFAS) in Drinking Water

Updated April 2024

General information

PFAS are a large group of manmade chemicals which repel water and oil and are resistant to heat and chemical reactions. Because of these properties, they have important industrial and commercial uses and have been used since the 1940s. PFAS are used in the production of some non-stick cookware, in waterproof and stain proof coatings, in "leak-proof" coatings on food packaging materials, in fire-fighting foams, and other applications.

PFAS can enter drinking water through industrial release to water, air, or soil; discharges from sewage treatment plants; land application of contaminated sludge; leaching from landfills; and use of certain firefighting foams. These chemicals do not break down in the environment.

Four types of PFAS have been found in the blood (serum) of greater than 98% of the United States population. These long-chain PFAS build up and stay in the human body for many years. The levels decrease very slowly over time after exposure is reduced or stopped.

- **PFOS**: perfluorooctane sulfonate
- PFOA: perfluorooctanoic acid
- PFNA: perfluorononanoic acid
- PFHxS: perfluorohexane sulfonate

Exposure to PFAS

PFOA, PFOS, and PFNA dissolve in water. If drinking water is contaminated, it is a primary source of exposure to PFAS as compared with other common exposure sources. Other sources of exposure to these PFAS include food, food packaging, consumer products, house dust, indoor and outdoor air, and workplaces where PFAS are used or made. Exposure in drinking water is primarily from ingestion of the water and food prepared with the water. These PFAS are not removed from water by boiling. Exposure to these PFAS from showering, bathing, laundry, dishwashing, and rinsing produce is not significant.

Health effects of PFAS

Studies of the general population, communities with PFAS-contaminated drinking water, and exposed workers indicate that exposure to PFAS increases the risk of a number of health effects. Health effects from PFAS are observed within the general population even without exposure to PFAS from contaminated drinking water.

The most consistent human health effect findings for PFOA and PFOS – the most well studied of the PFAS types – are increases in serum cholesterol, uric acid levels, decreased birth weight, and decreased antibody response following vaccination, as well as increased blood levels of some liver enzymes for PFOA. Although not as well studied, PFNA appears to increase blood levels of cholesterol and some liver enzymes. Human health effects of these PFAS are generally consistent with the toxicity of PFAS observed in laboratory animals.

PFOA and PFOS caused tumors in rodents, while PFNA has not been tested for this effect. In humans, PFOA exposure was associated with a higher incidence of kidney cancer in both the general population and in a community with substantial levels of PFOA in drinking water, and with testicular cancer in the community with contaminated drinking water.

The Centers for Disease Control and Prevention's Agency for Toxic Substance Disease Registry (CDC/ATSDR) is conducting the "PFAS Multi-site Study," to learn more about the relationship between PFAS exposure and health outcomes. This work is taking place across seven U.S. communities exposed to PFAS-contaminated drinking water. Work is ongoing, and results are pending. To learn more visit bit.ly/ATSDR-PFAS

Page 1



Impact of PFAS on children

Infants and children consume more water per body weight than older individuals, so their exposure may be higher than adults when drinking water is contaminated with PFAS. They may also be more sensitive to the effects of PFAS.

In humans, exposure to PFAS before birth or in early childhood may result in health effects including decreased birth weight, decreased response to vaccinations, and increased risk of infectious disease. In laboratory animals, some PFAS, including PFOA, PFOS, PFNA, and others, cause developmental delays.

Can I have my blood tested for PFAS?

Laboratory tests are available to measure PFAS in blood serum, but this is not a routine test. Health insurance may not cover the cost of this testing. While pursuing this type of specialized testing is a personal decision between you and your doctor, it is important to understand what testing can and cannot tell you.

What blood testing can tell you -

 Blood test results can be compared to national monitoring data collected from a representative sample of the U.S. population. The table below provides the most recently available (2017-2018) blood serum levels of the four PFAS most commonly detected in the U.S. population.

PFAS	Mean (geometric)	50 th percentile	95 th percentile
PFOS	4.25	4.30	14.6
PFOA	1.42	1.47	3.77
PFNA	0.41	0.40	1.40
PFHxS	1.08	1.10	3.70

• For example, if your concentration is higher than the 95th percentile, this means your blood serum is higher than the concentration found in 95% of the U.S. population.

What blood testing cannot tell you -

- While exposure to PFAS can increase the risk of certain health effects, a blood test indicating that you have been exposed to PFAS cannot be used to predict whether you will experience health effects or if PFAS exposure caused any health problems you may have.
- Test results alone cannot be used to identify specific sources of exposure.
- There is no accepted treatment to reduce levels of PFAS in the blood. Levels decrease slowly over many years when exposure has been reduced or eliminated.

What are the NJ drinking water standards for PFAS?

In 2018, NJ became the first state to establish an **enforceable** drinking water standard for a PFAS chemical when it set a Maximum Contaminant Level (MCL) for PFNA. MCLs for PFOA and PFOS followed in 2020.

NJ MCLS for PFAS		
PFNA	13 ppt	
PFOA	14 ppt	
PFOS	13 ppt	

Abbreviations: ppt=parts per trillion; ppt = ng/L = nanograms per liter

A maximum contaminant level (MCL) is an **enforceable** drinking water standard which requires all public water systems to routinely monitor. If levels are found to be above the NJ MCL, the water utility **must** take actions to reduce levels below the MCL. Available water treatment technologies can effectively reduce levels of PFAS. Many systems that exceeded the NJ MCLs have since reduced PFAS concentrations to non-detectable levels. Your public water utility will monitor and report these levels on a regular basis. Water results are available on NJDEP's **Drinking Water Watch** website.

The NJ Drinking Water Quality Institute (DWQI), an advisory body composed of scientists and technical experts from academia, the water industry, environmental health, the NJ Department of Environmental Protection (NJDEP), and the NJ Department of Health (NJDOH) is responsible for developing NJ MCLs and recommending them to the NJDEP. The NJ PFAS MCLs are based on studies of effects on laboratory animals.

Until recently, there were no national PFAS drinking water standards. In April 2024, the U.S. Environmental Protection Agency (USEPA) finalized MCLs that incorporated data on health effects in human populations exposed to low levels of PFAS. These new MCLs will result in additional public health protection from exposure to these chemicals in drinking water. The USEPA MCLs will require NJ drinking water systems to reduce PFOA and PFOS concentrations to even lower levels in drinking water and will address three additional PFAS not currently regulated in NJ. More detail is provided on Page 3.

What are the USEPA drinking water standards for PFAS?

USEPA finalized National Primary Drinking Water Regulations (MCLs) for six PFAS in April 2024. These standards are **enforceable**.

PFAS Compounds	Final MCL	
PFOS	4.0 ppt	
PFOA	4.0 ppt	
PFHxS	10 ppt	
PFNA	10 ppt	
GenX (HFPO-DA)	10 ppt	
Mixture containing two or more of PFNA, PFHxS, PFBS, and GenX	Hazard Index = 1.0	

- Public water systems must monitor for these PFAS. They have <u>three years</u> to complete initial monitoring (by 2027) and then must continue ongoing compliance monitoring. Water systems must provide the public with their monitoring results beginning in 2027.
- If levels of PFAS are found to exceed the USEPA MCLs, water systems will have <u>five years</u> (by 2029) to implement solutions to reduce levels below the MCL. By 2029, water systems will have to provide notification to the public of a violation.
- State standards may not be higher (less strict) than federal standards. Now that the USEPA has established national MCLs, NJ public water systems will be required to comply with the lower USEPA MCLs by no later than 2027.
- Water systems in NJ are currently required to monitor for three PFAS and comply with NJ MCL standards. Many NJ water systems have now reduced PFAS to non-detectable levels. NJDEP and your public water system will have the most up to date PFAS monitoring data.

- The Hazard Index approach adopted by USEPA will regulate four additional PFAS as a mixture. USEPA has developed the following Health Based Water Concentrations (HBWCs) for the four PFAS included in the Hazard Index:
 - PFHxS -10 ppt
 - **PFNA** –10 ppt
 - **GenX** –10 ppt
 - **PFBS** -2000 ppt
- The <u>USEPA's Hazard Index MCL</u> applies to any mixture containing two or more of the four PFAS (listed above). For each of the four PFAS, the calculation first divides the results of the drinking water sample by the HBWC and then adds all the values for each PFAS. If the total value is greater than 1, it would be an exceedance of the final Hazard Index MCL.
- The USEPA MCLs of 4.0 ppt for PFOA and PFOS are set at the USEPA Practical Quantitation Levels, which are the levels that laboratory methods can accurately measure PFOA and PFOS in water.
- USEPA has concluded that PFOA and PFOS are likely human carcinogens and has set their Maximum Contaminant Level Goals (MCLGs; health-based levels) at zero.
- Additional information on USEPA MCLs is available: epa.gov/sdwa/and-polyfluoroalkylsubstances-pfas

Recommendations:

PFOA, PFOS, and PFNA build up in the body over time, and it takes many years for the levels of these PFAS in your body to decrease after exposure has ended. Since New Jersey has established MCLs, water systems across the state are taking action to reduce concentrations of these PFAS to levels below the NJ MCLs. Some utilities have achieved non-detectable levels since the NJ MCLs have been in place. You can find more information at the NJDEP website: dep.nj.gov/pfas/

If PFAS are detected in your drinking water:

Some water systems are still working on establishing treatment solutions to reduce PFAS concentration below the NJ MCL. If you learn that a PFAS is detected in your drinking water supply above a New Jersey MCL, until your water utility has reduced PFAS levels:

- For nursing (breastfed) babies: PFAS are present in breast milk and can be transferred to nursing babies. Despite this exposure, mothers who are breastfeeding should continue to nurse. The extensive information on the health benefits of breastfeeding suggests that benefits of breastfeeding outweigh potential risk of additional PFAS exposure.
- For all babies: Bottled water should be used when giving infants just water and preparing juice made from concentrate for infants.
- For pregnant women, nursing women and women considering or planning on having a child: Switching to bottled water or using a home water filter for drinking and cooking will reduce PFAS exposure. However, PFAS are slowly excreted from the body. Therefore, risk reduction will not be immediate, as exposure to the fetus and nursing infant is influenced by the mother's past exposure.
- For older children and adults: If a public water utility notifies you that a PFAS exceeds the NJ MCL, they are required to promptly take actions to reduce these levels. Individuals who wish to reduce exposure to PFAS while the water utility is taking actions to reduce levels can consider switching to bottled or home filtered water for drinking and cooking. However, it is important to note that bottled water and filter technologies are not certified to reduce PFAS below the NJ MCLs.

Anyone concerned about their health should consult with their personal health care provider.

For health care providers:

Health care providers can find more information on clinical evaluation and management of patients from ATSDR at:

atsdr.cdc.gov/pfas/resources/info-for-health-professionals.html

For the general population:

Drinking water is an important exposure source to PFAS. Your public water system is required to monitor for PFOA, PFOS, and PFNA. If results exceed the NJ MCLs, the water utility must inform you. More information on where to find water results are in the section that follows. Monitoring for additional PFAS is required by 2027.

Bottled water sold in NJ is required to meet the NJ MCLs. Additionally, some water filters are certified to reduce PFAS concentrations below 20 ppt but these alternative drinking water sources are not ensured to have PFAS concentrations lower than the NJ MCLs. More information on where to find out about bottled water monitoring and home water filters can be found on Page 5.

How can I find out if PFAS are detected in my drinking water?

Public Water Users

NJ public water systems were required to begin monitoring for PFNA in 2020 and for PFOA and PFOS in 2021. These results are available on NJDEP's <u>Drinking Water Watch</u> website. This is a database that is searchable by water system ID number, system name, or (if you don't know the ID number or name) by county and municipality, to identify all systems serving that area. Information on which utilities serve your area can also be found at this site.

Some water systems have earlier results through the EPA Unregulated Contaminant Monitoring Rule (UCMR3). These UCMR3 results were reported in your annual Consumer Confidence Reports (CCRs) which may be available online or mailed to your home directly by your water provider. CCRs are also found on NJDEP Drinking Water Watch. UCMR5, which began in Jan. 2023 and is testing all PWS with >3300 users for 29 PFAS at low Reporting Levels and results will be reported as they become available.

Additionally, a list of public water systems with PFOA, PFOS, and/or PFNA MCL violations is available here: visit NJDEP DataMiner: njems.nj.gov/DataMiner/
[Search by Category > Water Supply and Geoscience > Scroll to "Public Water Systems with PFAS MCL Violations"]

Private Well Users

PFNA, PFOA, and PFOS have been added to the NJ Private Well Testing Act (NJ PWTA). The NJ PWTA is a consumer information law established in 2002 that requires private wells to be tested for a list of contaminants by a certified laboratory during real estate transfer. It also requires landlords to test well water supplied to tenants every five years and provide the results. The addition of PFAS to the NJ PWTA means that private wells at homes being sold in NJ were tested for these three PFAS (and other listed contaminants) starting December 1, 2021.

Well owners who are not selling their home may wish to contact a certified laboratory to have their well water tested. To find a list of certified laboratories visit NJDEP DataMiner: njems.nj.gov/DataMiner/ [Search by Category > Certified Laboratories > Scroll to "PFAS Drinking Water Certified Laboratories"]

Did You Know?

Bottled water sold in NJ is regulated by the NJ
Department of Health and is required to meet Safe
Drinking Water standards. N.J.A.C. 8:21-5.1 et. seq

How do I know that my bottled water does not exceed the NJ drinking water standards for PFAS?

Companies that sell bottled water in NJ were required to analyze for PFNA, PFOA, and PFAS annually. Bottled water companies are required to submit their annual monitoring results to NJDOH with the application for their annual license. More information on NJ's Bottled Water Program can be found here: nj.gov/health/ceohs/documents/phfpp/BWStandards.pdf

Where can I get more information about home water filters?

Water treatment devices utilizing granular or powdered activated carbon filters, reverse osmosis, ion exchange resins and other specialized treatment media are technologies that can reduce the level of PFAS in drinking water. If a water treatment device is used, it is important to follow the manufacturer's guidelines for maintenance and operation.

NSF International, an independent and accredited organization, certifies products proven effective for reducing PFOA and PFOS below the previous USEPA Health Advisory of 70 ppt (2020 standard version). Recently, the NSF standards have been updated to more stringent levels below 20 ppt (2022 standard version). When purchasing a filter, verify that the product is NSF/ANSI standard 53 and check for the standard version to know at which level the filter is certified to remove total PFAS (PFOA, PFOS, PFNA, PFHxS, PFHpA).

Please note, these products are not certified for removal to the lower NJ MCLs of 14 and 13 ppt or the lower USEPA MCLs.

Additional Questions

If high levels of PFAS were detected in my water, how will it affect fruits and vegetables in my garden?

For gardening or farming, certain plants may take up some PFAS from irrigation and soil. Unfortunately, there is not enough scientific data to predict how much will end up in any specific crop. For most people the risk from the occasional consumption of produce grown in soil or irrigated with water contaminated with PFAS is likely to be low. For families who grow a large fraction of their produce, the risk of exposure to PFAS may be higher and they can consider the following steps:

- Maximize use of water from an uncontaminated source for your garden.
- Wash your produce in clean water after you harvest it.
- Modify your soil with clean compost. Increasing the organic content of your garden soil can prevent the uptake of PFAS into plants.

If PFAS are present above the NJ MCL, what water should I give my pets?

Scientists are not certain of the health impacts to pets. If you are concerned, you may choose to give your pet bottled or filtered water until your water utility has reduced the concentrations of PFAS in the drinking water below the NJ MCL.

If PFAS are present above the NJ MCL, what water should I use in my humidifier?

In line with USEPA recommendations, bottled water or home filtered water should be used in your humidifier until levels of PFAS in your drinking water are reduced.

What water should I use in my continuous positive airway pressure (CPAP) machine?

Individuals should continue to follow existing medical guidance regarding the use of distilled water in CPAP machines as instructed by the manufacturer and their doctor.

Additional Resources

NJ Department of Environmental Protection -

- NJDEP PFAS: dep.nj.gov/pfas/
- Drinking Water: dep.nj.gov/pfas/drinking-water/
- Site Remediation Program: nj.gov/dep/srp/emerging-contaminants/
- New Jersey Drinking Water Quality Institute:
 state.nj.us/dep/watersupply/g boards dwqi.html

NJ Department of Health

Bottled Water:
 nj.gov/health/ceohs/documents/phfpp/BWStanda
 rds.pdf

NSF International -

 More info NSF certified home water filters, visit: <u>nsf.org/consumer-resources/water-guality/drinking-water/</u>

CDC ATSDR -

- PFAS Multi-site Study: atsdr.cdc.gov/pfas/activities/studies/multi-site.html
- Detailed summaries of the toxicology and epidemiology studies on PFAS: atsdr.cdc.gov/toxprofiles/tp200.pdf
- Health care provider guidance: <u>atsdr.cdc.gov/pfas/docs/PFAS-info-for-clinicians-508.pdf</u>

US Environmental Protection Agency -

 Final PFAS National Primary Drinking Regulation: epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas

