AMERICAN WATER

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PFAS

Providing safe and reliable water is American Water's business. We are recognized as an industry leader and work cooperatively with the U.S. Environmental Protection Agency so that implementation of existing drinking water standards and development of new regulations will produce benefits for our customers.

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 are sources of PFAS in drinking water supplies near those locations.

From the Unregulated Contaminant Monitoring Rule 3 (UCMR3), perfluorooctanoic acid (PFOA) and perfluoroactane 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 or parts per trillion (ppt) for combined PFOA and PFOS. New Jersey was the first state to set a maximum contaminant level (MCL) for perfluorononanoic acid (PFNA) (13 ng/L). Additional states have proposed MCLs or have set guidance levels. The EPA released a PFAS Action Plan in February 2019, but is not expected to make a preliminary decision on whether they will seek to establish an MCL until the end of 2019.

> This is one of the most rapidly changing landscapes in drinking water contamination. We have invested time and effort on our own independent research, as well as engaging with other experts in the field to understand PFAS occurrence, fate and transport in the environment. We are also actively assessing treatment technologies that can effectively remove PFAS from drinking water, because we believe that investment in research is critical for addressing this issue.
>
> **Lauren Weinrich**
> Principal Scientist,
> Water Research and Development

HAS AMERICAN WATER HAD TO ADDRESS PFOA IN THE PAST?

Yes. We have successfully addressed PFOA in the past. Here are two examples:

- **Picatinny Arsenal, NJ:** Water samples that were taken in January 2018 at Picatinny Arsenal by our Military Services

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06-2019

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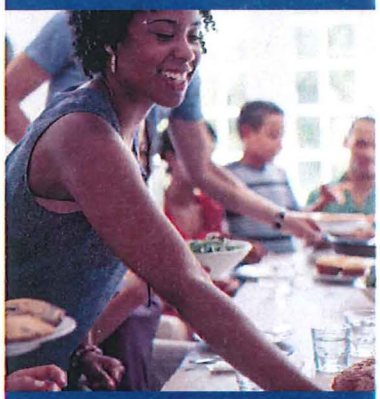

FOR MORE INFORMATION

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

Group detected levels of PFOA and PFOS that, when combined, exceeded the EPA's health advisory limits. American Water made recommendations to quickly remove PFOA/PFOS contaminants and were awarded a contract in April 2018 to install a temporary Granular Activated Carbon (GAC) system within 90 days. The American Water-led team kept the project ahead of schedule, completing the design, permitting, implementation, construction and treatment in just 38 days. Sample results were returned that showed PFOA/PFOS were at non-detect levels across the system, highlighting the effectiveness of the GAC treatment system.

- **Nut Plains, CA:** In October 2015, test results for combined PFOS and PFOA exceeded the EPA's health advisory limits. California American Water applied for grant funding for PFOS/PFOA treatment in July 2016, and in March 2017, the notice to proceed on construction of a treatment plant was issued. Four month's later, California American Water learned that it was denied state grant funding for PFOA/PFAS due to lack of state guidance on the contaminant. However, the company continued with construction, and in September 2017, California American Water placed its new PFAS treatment unit on Nut Plains Drive in Rancho Cordova into operation.

WHAT IS AMERICAN WATER DOING TO ADDRESS PFAS AND 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 continually conduct studies to evaluate new monitoring and treatment technologies.
- We are piloting ion exchange resins along side granular activated carbon (GAC) to compare PFAS removal and media performance.
- American Water's research group is actively involved in externally-funded projects related to the detection, occurrence and removal of PFAS.
- American Water continues to improve analytical method detection limits for PFAS.
- GAC has been installed to remove PFAS compounds from five 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 that includes 14 PFAS compounds at reporting limits of 5 ng/L and method detection limits of 2 ng/L. A revision to method 537.1 is underway that will add four additional compounds. In addition, our in-house team of research scientists and engineers is actively involved in two major studies being funded by external agencies that will evaluate method modifications to hopefully 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 staff 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 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 a 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 may be impacted by short chain and next generation PFAS compounds.

news releases

FOR IMMEDIATE RELEASE
April 1, 2019

Contact: Caryn Shinske (609) 984-1795
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AFFIRMING NATIONAL LEADERSHIP ROLE, NEW JERSEY PROPOSES STRINGENT DRINKING WATER STANDARDS FOR PFOA AND PFOS

(19/P021) TRENTON – The Department of Environmental Protection today formally proposed stringent, health-based drinking water standards for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS), chemicals that have been linked to various health problems and are extremely persistent in the environment.

Under rules published in the *New Jersey Register*, the DEP proposes maximum contaminant levels, or MCLs, of 14 parts per trillion for PFOA and 13 parts per trillion for PFOS. The rules also propose these levels as formal ground water quality standards for the purposes of site remediation activities and discharges to ground water.

"New Jersey is leading the way in addressing an issue of national importance by setting the first drinking water standards in the nation to protect the public from the health risks of these chemicals," Commissioner Catherine R. McCabe said. "We will continue to take strong actions to protect the health of our residents and the quality of our drinking water supplies."

The publication of the rule proposal starts a 60-day public comment period, which will include a public hearing on May 15. The standards will become effective following the DEP's review of comments and final rule adoption.

PFOA and PFOS were once widely used in many commercial and industrial applications and belong to a large class of chemicals known as perfluoroalkyl substances, or PFAS. New Jersey is the only state to have adopted an MCL for any PFAS, last year setting an MCL of 13 parts per trillion for perfluorononanoic acid, or PFNA.

Today's rule proposal publication follows a directive the DEP issued March 25 involving companies whose use and discharges of these chemicals polluted natural resources of the state, including drinking water, ground water, surface water, soil, aquatic sediments and fish.

The first of its kind in the nation, the directive makes clear that New Jersey expects DuPont (and its related companies), 3M, and Solvay to step up to their responsibilities for providing the DEP a detailed accounting of the use and discharge of these chemicals, as well as replacement PFAS chemicals such as GenX, and for paying the costs of remediating contamination and compensating the public for harm to natural resources.

In addition, the DEP and the Office of the Attorney General last week announced the filing of Natural Resource Damage lawsuits involving four DuPont facilities – the Chambers Works plant in Carney's Point and Pennsville, Salem County; the Parlin site in Sayreville, Middlesex County; the Repauno site in Gibbstown, Gloucester County; and the Pompton Works site in Pompton Lakes, Passaic County.

The lawsuits cite harm the use of a variety of chemicals at these sites has had on natural resources and specifically cite the harm caused by PFAS chemicals at the Chambers Works and Parlin sites.

Natural Resource Damage claims seek compensation to the public for the lost benefit, use and enjoyment of natural resources such as ground water, streams, lakes and wetlands. Two of the complaints focus on PFAS contamination around the Chambers Works and Parlin sites.

The durability of PFAS chemicals made them attractive and very profitable for many commercial and industrial applications. PFOA was used in the manufacture of nonstick cookware and food packaging. It was also used to make upholstered furniture, carpets, shoes and clothing resistant to soil, stains, and water. PFOS was used in a variety of applications, including firefighting foams.

While thousands of PFAS chemicals have been developed and used over the years, some of the most common were PFOA and PFOS. Because of their durability, these chemicals do not break down in the environment or in people. Scientific research shows that they pose a variety of human health risks, even at low exposure in drinking water. These chemicals accumulate in people over years of exposure and remain in the body for many years.

While scientists continue to study the health effects of PFAS, a growing body of studies show that PFOA, PFOS and other types of PFAS may impact liver and immune system function, decrease immunity response to vaccines, and cause delays in growth and development of fetuses and infants. Exposure to PFOA and PFOS may also increase the risk of cancer.

Following up on concerns raised by detection of PFOA in tap water and supply wells of a public water system near the Chambers Works plant, in 2006 New Jersey became the first state to conduct statewide studies of PFAS in drinking water. The next year, the DEP set a PFOA guidance level of 40 parts per trillion for water systems to follow.

The DEP also has in place a formal groundwater remediation standard of 13 parts per trillion for PFNA and recently put in place interim groundwater cleanup standards of 10 parts per trillion for PFOA and PFOS, pending setting of formal standards that will match drinking water standards.

Pending adoption of formal drinking water MCLs, the DEP has been working with water systems to address PFAS contamination to protect public health. Moreover, the DEP and the Drinking Water Quality Institute, an advisory panel comprised of the state's leading drinking water experts, have been thoroughly evaluating the growing body of scientific evidence into the impacts these chemicals have on health and the environment.

After rule adoption, all public water systems must begin quarterly monitoring for PFOA and PFOS within the first quarter of 2021. However, the proposed rules include a provision that will allow public water systems to submit monitoring data for PFOA and PFOS prior to 2021. Treatment technologies exist to effectively remove these contaminants.

The DEP will use the data provided by water systems to determine if monitoring frequency can be reduced to an annual basis. All results of testing will be made public through federally required Consumer Confidence Reports that water systems send to customers and post to their websites. The data also will be available at the DEP's Drinking Water Watch website.

The proposed rules also will require private-well owners to test for PFAS as part of real estate transactions and periodically for rental properties starting 18 months after rule adoption. This will allow enough time to address the technical complexities of sampling and analysis for these parameters and to ensure that there is sufficient laboratory testing capacity.

The DEP is now taking public comment on the proposed rules and will hold a public hearing on May 15 in the first-floor hearing room at the DEP's headquarters, 401 E. State Street, Trenton 08625. For directions, visit www.state.nj.us/dep/where.htm

Written comments may be submitted at the public hearing. It is requested but not required that anyone who testifies at the public hearing provide a copy of their comments to the stenographer.

To view the proposed rules, visit www.nj.gov/dep/rules/

The DEP encourages emailing of comments by May 31 at www.nj.gov/dep/rules/comments

Paper comments may be sent to:

Ryan H. Knapick, Esq.
Attn: DEP Docket Number: 02-19-03
Office of Legal Affairs
Department of Environmental Protection
401 East State Street, 7th Floor
Mail Code 401-04L
PO Box 402
Trenton, New Jersey 08625-0402

For a news release and a link to the March 25 statewide PFAS directive, visit www.nj.gov/dep/newsrel/2019/19_0018.htm

For a news release on the DuPont Natural Resource Damage lawsuits, visit www.nj.gov/oag/newsreleases19/pr20190327a.html

For more information about the potential health effects of PFAS exposure, visit:
www.nj.gov/health/ceohs/documents/pfas_drinking%20water.pdf

For more information about these chemicals and other contaminants of emerging concern, visit https://nj.gov/dep/srp/emerging-contaminants/

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SOLUTIONS THAT WORK

"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.

QUESTIONS?

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New Jersey American Water
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10-2017

ADDRESSING CARNEYS POINT'S WATER QUALITY NEEDS

RANNEY WATER TREATMENT PLANT, SALEM COUNTY

In 2007, New Jersey American Water acquired the water system that supplies potable water for household, commercial and industrial use, and fire protection throughout Carneys Point Township and Penns Grove Borough in Salem County, New Jersey. The water system has an average daily demand of 1.2 million gallons per day (MGD) and a maximum day demand of 1.5 MGD.

The primary source of supply is from groundwater supply located within Carneys Point Township. Levels of Perfluoroocatanoic Acid (PFOA) were detected in the water supply. PFOA is a synthetic compound used in the manufacture of several commercial products such as cookware, carpet and all-weather clothing. Although the risks of PFOA consumption by humans are not yet well understood, studies have shown that PFOA can produce developmental effects in lab animals. Consequently, the NJDEP established an interim health based guidance level of 0.040 µg/L in 2008.

Elevated levels of iron and manganese were also detected in the raw water supply. The iron and manganese were being managed via chemical sequestration in accordance with NJDEP rules and regulations. However, the sequestration process was determined to be of concern in combination with treatment for PFOA.

The company developed an operational plan to minimize the use of the affected wells, but to continue to consistently provide high water quality to customers for the longterm, New Jersey American Water determined the need to construct a new water treatment facility. After evaluating several options, it was decided to construct a new 2.2 MGD treatment facility for all six Ranney and Layton Station wells to treat for PFOA, iron and manganese in the drinking water.

SUMMARY

Since the completion of this $11.4 million improvement project, the New Jersey American Water system in Carneys Point Township and Penns Grove Borough has consistently met the NJDEP established interim health based guidance level of 0.040 µg/L.

Similar treatment has been instituted at other New Jersey American Water facilities as needed so that all the company's systems are in compliance with this guidance.

The company is currently evaluating all its systems and developing treatment plans to meet the new maximum contaminant level (MCL) issued by the NJDEP.

TREATMENT OF PFOA

Construction of the project included installation of granular activated carbon (GAC) in packed bed pressure vessels to adsorb a variety of dissolved organic compounds that may be present in water. GAC adsorption is the primary technology currently being used to treat for PFOA from drinking water.

Several factors can influence the performance of GAC contactors to absorb PFOA, the most significant of which is empty bed contact time (EBCT). EBCT is associated with the time in which the water is in contact with the carbon media. The amount of contact time and bed depth must be sufficient to ensure the desired level of treatment with a manageable frequency of media change-outs. The typical EBCT for GAC absorbers treating volatile or synthetic organic compounds is 10 to 20 minutes. The presence of other competing compounds can also have a significant impact on the lifespan of the media.

TREATMENT OF IRON/MANGANESE

Pilot testing indicated that use of GAC as a filter media for the removal of precipitated iron would likely have a negative impact on the effectiveness of the GAC for adsorption of organic compounds such as PFOA. Even if a chemical sequestrant was added upstream of the GAC would reduce iron and manganese fouling, the pilot testing indicated that it would significantly shorten the adequate bed service life of the carbon contactors for PFOA adsorption. Thus, prior to treatment for PFOA through the GACs, an oxidation/filtration system was installed for treatment of iron and manganese. This method involves adding an oxidant to the water to convert reduced iron and manganese to an oxidized precipitate that can be treated via filtration through pressurized vessels containing granular media.

DISINFECTION

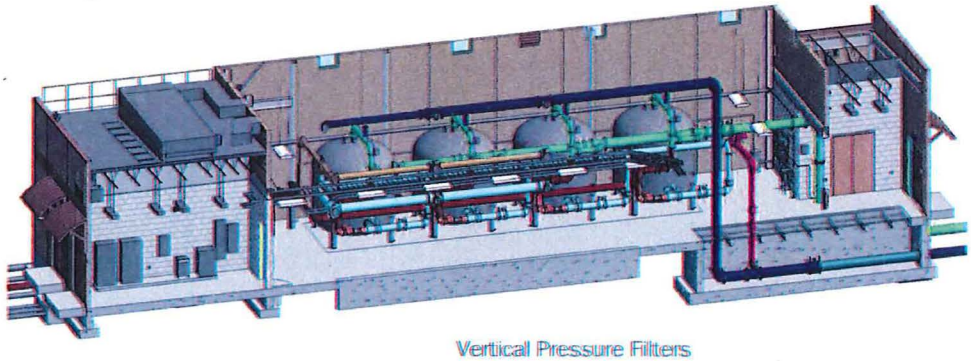
Sodium hypochlorite stored on-site within a secondary spill containment is used to oxidize iron and manganese ahead of the greensand filters and to provide final disinfection prior to discharge to the distribution system. The sodium hypochlorite it generated on-site utilizing electricity and salt, thereby avoiding the need for bulk deliveries of the disinfectant.

Filter Gallery

The chlorine residual is continuously monitored to ensure that an adequate level of disinfection is achieved. Analyzer samples are frequently discharged to waste. The project team evaluated the waste generated by analyzer samples, redesigned the process and constructed the facilities to recycle the analyzer samples resulting in a 75 percent reduction in sanitary waste generated from the facility.

RESIDUALS HANDLING

During normal operation of the facility, the greensand filters are backwashed on a periodic basis. Each greensand system backwash cycle includes the backwashing and rinse to waste of all four (4) filters. The total backwash wastewater volume generated per cycle is approximately 42,664 gallons. The backwash wastewater is directed to one of two 56,000 gallon backwash wastewater holding tanks. The backwash wastewater holding tanks are above grade glass-lined steel bolted tanks. The backwash wastewater is permitted to settle for a period of 3-5 hours. After the settling period, decant pumps recycle supernatant back to the head of the plant. The remaining residuals are then transferred to a 20,500 gallon sludge storage tank. The residuals will be stored in the sludge holding tank and ultimately trucked off site for disposal (typically re-used for land application). No process wastewater is discharged to the sanitary sewer as part of this project.



Vertical Pressure Filters

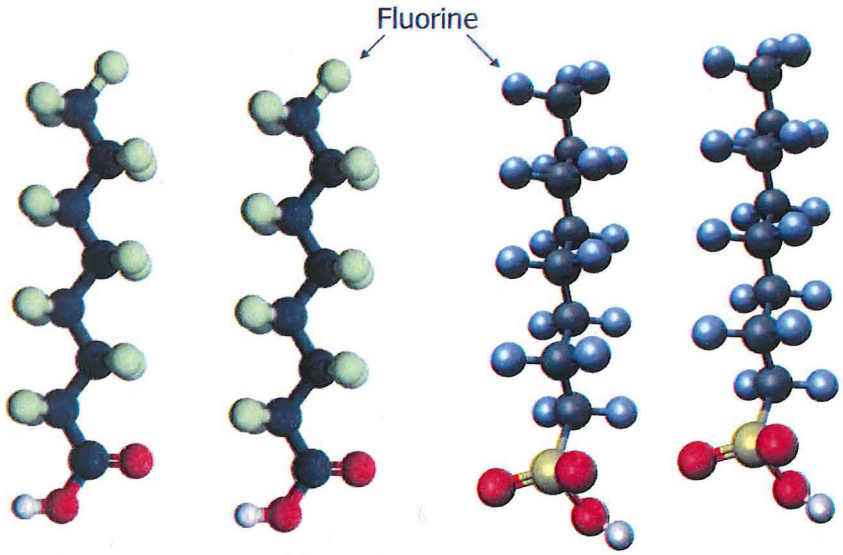
EPA Activities on Per- and Polyfluoroalkyl Substances (PFAS)

15th Annual EPA Drinking Water Workshop
| August 28, 2018

Outline

- What are Per- and Polyfluoroalkyl Substances (PFAS)?
- How are PFAS used?
- What is EPA doing about it?

Per- and Polyfluoroalkyl Substances (PFAS)

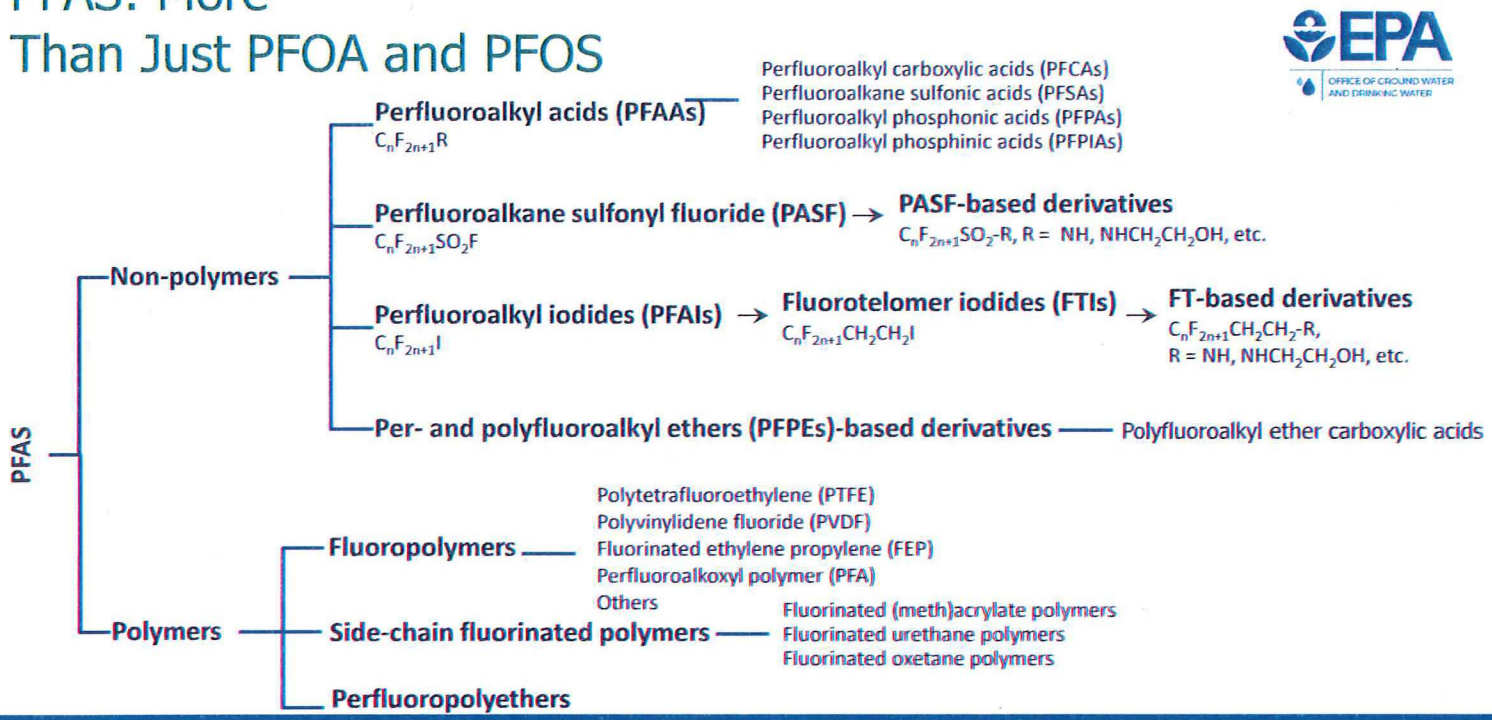


Perfluorooctanoic acid (PFOA) *Perfluorooctanesulfonic acid (PFOS)*

A class of man-made chemicals

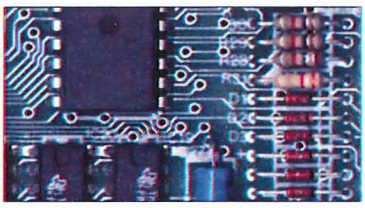
- Chains of carbon (C) atoms surrounded by fluorine (F) atoms
  - Water-repellent (hydrophobic)
  - Stable C-F bond
- Some PFAS include oxygen, hydrogen, sulfur and/or nitrogen atoms, creating a polar end

PFAS: More Than Just PFOA and PFOS



Used in Homes, Businesses & Industry

- Food contact surfaces such as cookware, pizza boxes, fast food wrappers, popcorn bags, etc.
- Polishes, waxes, and paints
- Stain repellants for carpets, clothing, upholstered furniture, etc.
- Cleaning products
- Dust suppression for chrome plating
- Electronics manufacturing
- Oil and mining for enhanced recovery
- Performance chemicals such as hydraulic fluid, fuel additives, etc.



Sources of PFAS in the Environment

- Direct release of PFAS or PFAS products into the environment
  - Use of aqueous film forming foam (AFFF) in training and emergency response
  - Release from industrial facility
- Chrome plating and etching facilities
- Landfills and leachates from disposal of consumer and industrial products containing PFAS
- Wastewater treatment effluent and land application of biosolids

Potential Reasons for Concern

- Known or suspected toxicity
- PFAS and/or breakdown products are persistent in the environment
- Persistence in biota vary greatly across PFASs and species
- Used by a variety of industries
- Found in a variety of consumer products
- Most people have been exposed to PFAS

Dietary Exposure

- In areas where drinking water has been contaminated, ingestion is a primary route of exposure to PFAS.
- In some states, the consumption of certain types of fish and shellfish caught from contaminated bodies of water has led to public health advisories for some PFAS, particularly PFOS*.
- Some States such as New Jersey, Michigan, and Minnesota have guidelines for PFAS that provisionally recommend maximum frequencies at which specific fish species caught in those water bodies can be eaten with no adverse effects on health.
- Communities living on subsistence economy may not have food habits that reflect those of the general population.

*See summary: EPA 823-N-16-003, August 2016, *Fish and Shellfish Program Newsletter*

EPA's Current PFAS Activities

- **Issues related to PFAS involve most EPA Programs and Regions**
- **Four broad goals:**
  - Fill data gaps related to human health toxicity to inform public concerns and risk mitigation
  - Establish validated methods for measuring many PFAS in different media
  - Reduce environmental exposures
  - Assure accurate and timely risk communications

EPA's PFAS Coordinating Committee

- **EPA announced cross-Agency effort to address PFAS in December 2017**
- **Focus on near-term actions to support states, tribes and local communities, including:**
  - Fill data gaps related to toxicity of additional PFAS compounds
  - Develop analytical methods to expand the capacity for analysis of PFAS compounds in drinking water and other contaminated media
  - Provide treatability information for PFAS compounds in contaminated media
  - Expand tools for proactive risk communication with communities impacted by PFAS compounds
- **EPA's Office of Water is leading these efforts**
  - Includes members from EPA's air, chemicals, land, water, enforcement, and research offices as well as EPA regions to enhance cooperation with partners at the state and local level

Current PFAS Activities in Water

- **Published Drinking Water Health Advisories (HA) in 2016 for PFOA and PFOS**
  - HAs are non-regulatory information for federal, state and local officials to consider when addressing drinking water contamination
  - Identified 0.07 µg/L (70 ppt) as the HA level for PFOA and PFOS combined and provided information about treatment and monitoring

Current PFAS Activities in Water

- **Evaluating PFOA and PFOS for regulatory determination under the Safe Drinking Water Act (SDWA)**
  - PFOA and PFOS are on the fourth Contaminant Candidate List (CCL 4) published in November 2016. OW is assessing PFOA and PFOS against the three SDWA regulatory determination criteria
    - *May have an adverse effect on the health of persons*
    - *Is known to occur or there is a substantial likelihood that it will occur in public water systems with a frequency and at levels of public health concern*
    - *In the sole judgment of the Administrator, regulating the contaminant presents a meaningful opportunity for health risk reductions for persons served by public water systems*
  - From 2013 to 2015, EPA collected nationally representative data on the occurrence of six PFAS in public water systems (including PFOA and PFOS)

Current PFAS Activities for Waste Sites

- **EPA Federal Facility Superfund Program**
  - Actively engaged PFAS activities at 58 Federal Facility NPL Sites
  - It is anticipated that this number will grow since there are known or suspected contaminations of PFAS at many of the 140 DoD Federal Facility NPL Sites
  - PFAS detections in groundwater range from non-detect (based on analytical method limitations) or slightly exceeding the Drinking Water Health Advisory of 70 ppt (PFOA and PFOS combined) to 2,000,000 ppt
  - Drinking water has been potentially impacted at 22 of these Federal Facility NPL sites

Current PFAS Activities for Waste Sites

- **Office of Superfund Remediation and Technology Innovation (OSRTI)**
  - 29 known impacted non-Federal NPL sites
  - 100s of potential NPL sites (e.g., 100 metal plating sites, 300 landfills)

- **Regional Assistance**
  - OLEM offices hold site-specific consultations with EPA Regions on investigations of PFAS contamination
  - OSRTI/FFRRO provides ongoing technical assistance on PFAS issues and also coordinates with the Regions on their needs and priorities on PFAS issues
  - Develop cleanup recommendations for PFOA/PFOS contaminated groundwater

Current PFAS Activities in Chemical Use

- **PFOA Stewardship Program**
  - Eight companies participated in the program and successfully eliminated production of PFOA
  - Resulted in phase-out of PFOA and related PFAS, including potential PFOA precursors, by these companies by the end of 2015
- **EPA's New Chemicals Program**
  - Since 2000 have reviewed hundreds of pre-market alternatives for PFOA and related chemicals
  - Most were approved with restrictions and data-generation requirements

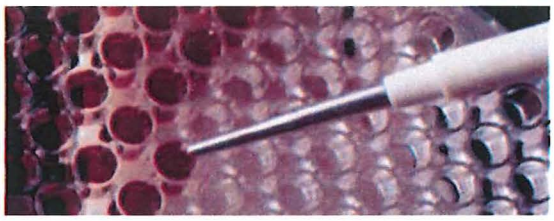
Current PFAS Activities in Chemical Use

- **Significant New Use Rule (SNUR)**
  - Proposed on January 21, 2015, to require manufacturers, importers, and processors of PFOA and related chemicals (including as part of articles), to notify EPA at least 90 days before starting or resuming new uses of these chemicals in any products
  - Notification provides EPA opportunity to conduct risk assessment/management for the new use
- **Gen X**
  - EPA is revising the GenX risk assessment originally done for its pre-market approval, based on data received by the company and other information arising from the NC situation

Current PFAS Research Activities

EPA
OFFICE OF GROUND WATER AND DRINKING WATER

- **Human Health/Toxicity**
  - Understand human health toxicity
  - Inform risk mitigation activities
  - Chemical library and high throughput toxicity testing



- **Analytical Methods**
  - Establish validated methods for measuring PFAS in different environmental media

- **Site Characterization/Exposure**
  - Develop sampling methods to characterize sources and contaminated sites
  - Identify and estimate human exposure to PFAS from different sources
- **Treatment/Remediation**
  - Identify/evaluate methods to reduce PFAS exposures
  - Identify/evaluate methods to treat and remediate drinking water and contaminated sites

EPA's PFAS National Leadership Summit

- **Included representatives from over 40 states, tribes, and territories; 13 federal agencies; congressional staff; associations; industry groups; and non-governmental organizations.**
- **EPA provided the opportunity for the public to join in a portion of the meeting via streaming online and is asking the public to send written input to EPA**
  - visit https://www.regulations.gov/ enter docket number: OW-2018-0270
- **During EPA's PFAS National Leadership Summit, participants worked together to:**
  - Share information on ongoing efforts to identify PFAS in communities and characterize risks from PFAS
  - Identify specific near-term actions, beyond those already underway, that are needed to address challenges currently facing states and local communities
  - Develop risk communication strategies that will help communities to address public concerns with PFAS

EPA's PFAS Summit/Engagement

- **EPA announced four actions the Agency will take following the Summit:**
  - EPA will initiate steps to evaluate the need for a maximum contaminant level (MCL) for PFOA and PFOS.
  - EPA is beginning the necessary steps to propose designating PFOA and PFOS as "hazardous substances" through one of the available statutory mechanisms, including potentially CERCLA Section 102.
  - EPA is currently developing groundwater cleanup recommendations for PFOA and PFOS at contaminated sites and will complete this task by fall of this year.
  - EPA is taking action in close collaboration with our federal and state partners to develop toxicity values for GenX and PFBS by this summer.

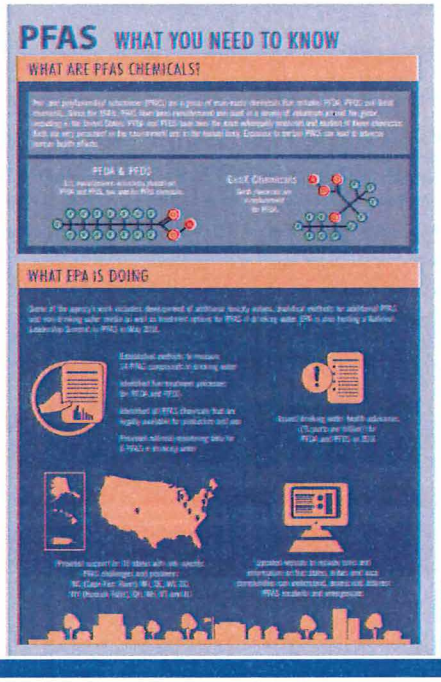
EPA's PFAS Community Engagement

- **EPA's Community Engagement**
  - Following the Summit, EPA traveled to communities impacted by PFAS to further engage on ways the agency can best support work occurring at state, local and tribal levels
    - June 25-26: Portsmouth, NH
    - July 25: Horsham, PA
    - August 7-8: Colorado Springs, CO
    - August 14: Fayetteville, NC
    - September 5: Leavenworth, KS

- **EPA plans to develop a PFAS Management Plan using information gained from the Summit, community engagements, and public docket**

Risk Communication

- **Case Studies**
  - In collaboration with ECOS and ASTHO, EPA worked with States to compile case studies of risk communication around PFAS
- **EPA's PFAS Website**
  - One central location for information on PFAS and EPA actions to address PFAS
  - Infographic on PFAS and PFAS factsheet
  - Links to state programs and site-specific resources
- **Risk Communication Strategy**
  - Part of PFAS National Management Plan to help states, tribes, and local officials communicate PFAS issues to the public



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Input may be submitted to the public docket at:
https://regulations.gov
docket number: OW-2018-0270

Q&A on PFOA and PFOS

Q: What are PFOA and PFOS?
Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are per- and polyfluoroalkyl substances (PFAS), previously referred to as perfluorinated compounds, or 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. PFOS was previously used as a major ingredient in aqueous film forming foams for firefighting and training, and PFOA and PFOS are found in consumer products such as stain resistant coatings for upholstery and carpets, water resistant outdoor clothing, and grease proof food packaging. Although the use of PFOA and PFOS 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?
The Department of Environmental Protection (DEP or Department) is proposing rule amendments (i) establishing drinking water maximum contaminant levels (MCLs) and specific ground water quality standards for PFOA and PFOS, (ii) expanding testing of private wells subject to sale or lease for PFOA, PFOS, and perfluorononanoic acid (PFNA) under the Private Well Testing Act (PWTA), (iii) adding PFOA and PFOS 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 DEP regulating PFOA and PFOS?
Currently, there are no Federal drinking water standards for PFOA or PFOS, which have been detected in drinking water supplies in New Jersey and pose serious health threats to consumers. PFOA and PFOS 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 proposed 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 to remove the contaminants as necessary. All newly constructed drinking water wells will also be tested for PFOA and PFOS. This requirement will reduce exposure to these contaminants in drinking water and have a positive social impact by protecting consumers from the health effects associated with PFOA and PFOS.

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 proposed ground water quality standards for PFOA and PFOS will ensure that current and scientifically based standards to protect, maintain, and restore ground water quality are in place. The ground water quality standards also serve as minimum remediation standards for the cleanup of contaminated ground water.

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

Adding requirements for PFOA, PFOS, and PFNA to the NJPDES rules will 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 are being amended? What are the changes?

1. **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 Regulations, the SDWA rules establish New Jersey-specific requirements in certain respects, including the establishment of state-specific MCLs and monitoring requirements.

    - The DEP is proposing MCLs of 0.014 micrograms per liter (µg/l, or 14 parts per trillion, ppt) for PFOA and 0.013 µg/l (13 ppt) for PFOS.

    - The DEP is proposing that public community water systems' annual consumer confidence reports (CCRs) include information on PFOA and PFOS. The CCRs inform customers about the quality of their drinking water.

2. **Discharges of Petroleum and Other Hazardous Substances (DPHS) Rule (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, 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 and PFOS to the List of Hazardous Substances will designate these compounds as hazardous substances and will give the DEP 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 and PFOS to the List of Hazardous Substances will provide an affirmative obligation under the Industrial Site Recovery Act 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 remediation standards for the cleanup of contaminated ground water, in accordance with N.J.A.C. 7:26D and E, and are used to set effluent limits for discharges to ground water under N.J.A.C. 7:14A.

   - DEP is proposing specific ground water quality standards for PFOA and PFOS of 0.014 micrograms per liter (µg/l, or 14 parts per trillion, ppt) and 0.013 µg/l (13 ppt), respectively.

   - The proposed specific ground water quality standards for PFOA and PFOS will replace the interim specific ground water quality standards for PFOA and PFOS of 0.01 µg/l (10 ppt) each, which were established by the Department on March 13, 2019.

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.

   - Under the proposed rules, private wells subject to sale or lease will be required to be tested for PFOA, PFOS, and PFNA.

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.

   - PFOA, PFOS, and PFNA will be added to the Permit Application Testing Requirements/Pollutant Listings and the Requirements for Discharges to Ground Water.

   - Affected dischargers to ground water will be subject to monitoring for PFOA, PFOS and PFNA.

   - Applicable clean-up activities will be subject to limits established through the ground water quality standards.

Q. What are the health risks of PFOA and PFOS?
There is considerable information on health effects of PFOA and PFOS 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. These chemicals also caused decreased growth and development of the fetus and newborn animal. Both PFOA and PFOS caused tumors in animal studies.

From human health studies, the most consistent findings for PFOA and PFOS are increased cholesterol and uric acid levels, as well as increases in some liver enzymes for PFOA. Both contaminants 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.

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 proposed Maximum Contaminant Levels (MCLs)?
The proposed MCLs are intended to be protective for lifetime exposure to PFOA or PFOS from consuming drinking water. The proposed MCLs are primarily based on toxicology studies of PFOA and PFOS in laboratory animals. For PFOA, the MCL of 0.014 µg/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 µg/l/13 ppt is based on immune system toxicity – decreased immune system response to a foreign antibody, analogous to decreased vaccine response in humans.

The proposed MCLs also consider the increase in blood serum PFOA or PFOS 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. Why are the proposed New Jersey PFOA and PFOS Maximum Contaminant Levels (MCLs) lower than the USEPA Health Advisories for PFOA and PFOS?
Scientists from DEP and the New Jersey Drinking Water Quality Institute (DWQI), New Jersey's drinking water advisory body, thoroughly reviewed the basis of the USEPA Health Advisories for PFOA and PFOS. These scientists concluded that the USEPA Health Advisories are not sufficiently protective of human health for two main reasons. First, USEPA did not consider the most sensitive health endpoints from animal studies when developing the Health Advisories. Additionally, the increases in blood serum PFOA and PFOS levels that would occur from exposure to drinking water at the Health Advisory level is excessive – they are well above the range of exposures associated with multiple human health effects.

Q. Since everyone is exposed to PFOA and PFOS, why is there such a focus on controlling exposure through drinking water?
Ongoing exposures from even low levels (e.g. less than 40 ppt) of PFOA or PFOS in drinking water 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 and PFOS, it is important to minimize increases in exposure from drinking water.

Q. Are infants and children at higher risk than adults?
Based on currently available human and animal studies, infants and children likely are more sensitive to the effects of PFOA and PFOS than adults. Additionally, infants and children consume more water on a body weight basis than adults, so they likely receive higher exposures than adults using the same drinking water.

The New Jersey Department of Health advises that infant formula and other beverages for infants, such as juice, should be prepared with bottled water when PFOA or PFOS are elevated in drinking water.

Q. Should a woman who has been exposed to PFOA or PFOS in drinking water breastfeed her infant?

Research studies show that PFOA and PFOS are present in breast milk at levels comparable or somewhat higher than the levels in the mother's drinking water. 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).

Women who are pregnant, nursing, or considering having children may choose to use home water filters or bottled water to reduce exposure. However, exposure to the fetus and nursing infants is influenced by past exposure to the mother. It will continue after the mother's drinking water exposure ends due to the slow excretion of PFOA and PFOS from the body.

Q: What is the relationship between Maximum Contaminant Levels (MCLs) and Ground Water Quality Standards?

The Ground Water Quality Standards require that, where an MCL has been promulgated by the Department, the health-based level for the MCL becomes the specific or interim 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: Why are the interim specific ground water quality standards for PFOA and PFOS different from the proposed specific ground water quality standards and Maximum Contaminant Levels (MCLs)?

The interim specific ground water quality standards are rounded to one significant figure and the proposed specific ground water quality standards and MCLs are not. Since the interim specific ground water quality standards were established prior to promulgation of MCLs for PFOA and PFOS, the interim specific ground water quality criteria were derived using the formulas and factors required in the GWQS, which also require that derived criteria must be

rounded to one significant figure. However, the GWQS also require that, where the Department is promulgating MCLs for the same constituent, the ground water quality criterion must be the same as the health-based level used to establish the MCL. Since the specific ground water quality standards and the MCLs for PFOA and PFOS are being promulgated at the same time, the specific ground water quality criteria for PFOA and PFOS are the health-based MCLs for those two constituents, which are not rounded to one significant figure.

Q: What is the relationship between the ground water quality standards and the remediation standards for PFOA and PFOS?
Most of the GWQS 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 remediation standards for cleanup of contaminated ground water. The interim specific ground water quality standards for PFOA and PFOS are already being implemented as remediation standards. Once the proposed specific ground water quality standards for PFOA and PFOS are adopted, they will replace the interim specific ground water quality standards as the remediation standards for PFOA and PFOS.

Q&A on PFOA and PFOS - Water System Specific Questions

Q: What does our public drinking water system need to do?
Based on the proposed rule, public community and public noncommunity water systems will be required to comply with new 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).

Q: What are the monitoring requirements for PFOA and PFOS?
The proposed monitoring requirements for PFOA and PFOS 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 proposed 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 or PFOS, 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.

- Monitoring schedules will be posted on the DEP's Drinking Water Watch web page, located at https://www9.state.nj.us/DEP_WaterWatch_public/index.jsp.

Q: On behalf of a water system, I submitted PFOA and PFOS data with my PFNA data. Can these data be "grandfathered?"
The analytical method used to test for PFNA in water also detects PFOA and PFOS. Water systems have been advised to sample for and report results for PFOA and PFOS with their required PFNA sampling to help offset sampling costs. The proposed amendments include a "grandfathering" provision that will allow water systems that begin monitoring for PFNA prior to 2021 to submit monitoring data for PFOA and PFOS. The Department will use this data to determine whether monitoring frequency can be reduced to an annual basis. The monitoring data must be collected after January 1, 2019, and reported to the Department on or before the effective date of the proposed amendments. Monitoring schedules will be posted on the Bureau'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 proposed amendments 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: Will monitoring be phased in like PFNA?
No. Under the proposed rule, monitoring for all affected water systems will begin in the first quarter of 2021.

Q: How is DEP letting people know about PFOA or PFOS in the water?

Through media outreach and web resources, the DEP is informing the citizens of New Jersey about the proposed new stringent maximum contaminant level (MCLs) for PFOA and PFOS in drinking water. Water systems and laboratories will be notified through separate letters and email notifications, as well as technical training on the proposed rule requirements. Information on water quality will be available through the DEP'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. If an MCL is exceeded, the water system is required to provide public notification within 30 days of DEP issuing a Notice of Noncompliance.

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

After adoption of the proposed amendments, 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 a maximum contaminant level (MCL) violation is issued by the DEP, 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.

Q: What actions can residents take if they are concerned about PFOA or PFOS in the public water that they receive?

If you learn that PFOA or PFOS is present in your water and wish to avoid exposure, home water treatment devices are available that can remove these contaminants. There are three major types of home drinking water treatment devices available to consumers for removing chemical contaminants. These treatment devices include filters, distillers, and softeners. The DWQI has identified granular activated carbon (GAC) filters as the best available technology for the removal of PFAS.

For more specific information regarding the effectiveness of these treatment devices, DEP 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: How can I protect the customers of my water system from PFOA or PFOS?

There are several ways to reduce PFOA and PFOS 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 or PFOS above the relevant maximum contaminant level (MCL). Some systems, however, will need to install treatment for the removal of PFOA and/or PFOS. Granular activated carbon has successfully been used by NJ water systems to remove PFAS; however, the design and construction of a new treatment

facility takes time. Therefore, the New Jersey Safe Drinking Water Act allows water systems up to a year from the DEP issuing a Notice of Noncompliance to design and build a treatment facility.

Q: Will enforcement actions be taken against the water system for exceedances of the Maximum Contaminant Level (MCL) for PFOA or PFOS?
Following adoption of the proposed amendments, the DEP will issue a Notice of Noncompliance to a water system if there is a violation of the final PFOA or PFOS MCL. The DEP issues violations for any drinking water standard that is exceeded, based on the average of four consecutive quarterly samples.

Q: When would enforcement begin?
A water system has one year from a maximum contaminant level (MCL) violation to come into compliance with the MCL. If the water system cannot meet this deadline, it may request more time and a determination that extending the deadline will not result in an imminent threat to public health.

Q: What timeline do water systems have to comply with the new requirements?
Under the proposed amendments, public community water systems and nontransient noncommunity water systems (e.g. a school with its own well) are required to begin in the first calendar quarter of 2021. A maximum contaminant level (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 the MCL, the monitoring schedule can be reduced to one sample a year, and further reduced to once every three years if PFOA and PFOS is non-detectable. If the average of the four quarterly results are greater than the MCLs, the DEP 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 will DEP provide for testing?
The DEP 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?
Treatment using granular activated carbon was determined to be the best available technology by the DWQI and has been shown to remove PFAS from drinking water.

Q: Will our water system have to remediate?
Public community or nontransient noncommunity water systems with exceedances of the maximum contaminant levels (MCLs) will have to take steps to eliminate or reduce levels of PFOA and PFOS 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 or PFOS through the Drinking Water State Revolving Fund (DWSRF) loan program. In general, the base package consists of a 50% DEP interest-free loan and 50% NJ I Bank (formerly NJ Environmental Infrastructure Trust) market rate financing for allowable costs for eligible publicly-owned water systems, and a 25% DEP interest-free loan and 75% NJ I Bank market-rate loan for eligible privately-owned water systems. Eligible small system serving 10,000 people or fewer may apply for a loan for up to $1 million allocated as follows: 50% project costs as principal forgiveness, 25% DEP zero interest loan, and 25% NJ I Bank market rate loan. For more information on the Water Bank loan program, see https://www.state.nj.us/dep/dwq/mface_njeifp.htm.

In addition to funding resources through the DWSRF loan program, public water systems with detections above the MCL may be eligible for funding by filing a claim with the Spill Compensation Fund. Please see the following questions and responses.

Q: Can I file a Spill Compensation Fund claim for PFOA and PFOS?
For public supply wells, once maximum contaminant levels (MCLs) have been adopted for PFOA and PFOS and these substances are also included on the list of hazardous substances in N.J.A.C. 7:1E (DPHS), a public water purveyor that finds these compounds above the MCL in their water supply may be eligible to file a Spill Compensation Fund claim under the Spill Act. The claimant should review the regulations at N.J.A.C. 7:1J ("Processing of Damage Claims Pursuant to the Spill Compensation and Control Act"; http://www.nj.gov/dep/rules/rules/njac7_1j.pdf). Simply submitting a claim does not guarantee payment. There are many factors that the claimant must satisfy before the Spill Compensation Fund will approve a claim. Claims are also subject to the availability of funds. Also, the Spill Compensation Fund will provide reimbursement on eligible claims for only those damages that were incurred after the date of adoption of the MCLs and the inclusion of the compounds on the List of Hazardous Substances. Reimbursement will not be made for treatment that occurred prior to promulgation of the MCLs and listing as hazardous substances. As with all Spill Compensation Fund claims, the one-year statute of limitations will begin to run on the date the claimant knew or should have known that it incurred or will incur damages, but no sooner than the date when the MCLs are promulgated and the compound is listed as a hazardous substance. A claim may be submitted before all damages are quantified.

Q&A on PFOA, PFOS, and PFNA - Private Well Owners

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

Starting 18 months after adoption, the proposed amendments to the PWTA rules 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 regulations 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 cost of the analysis (EPA Method 537) for the group of PFAS that includes PFOA, PFOS, and PFNA is approximately $300.00 total per water sample. The Department expects the cost for sample analysis to decrease after the maximum contaminant levels (MCLs) are adopted, as more laboratories become certified by the Department for analysis of these contaminants and as market competition increases.

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 (pdf format) provided by the DEP. 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 DEP 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 DEP electronically. The DEP in turn notifies the local health authority of test results that exceed the standards. Both the DEP 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 DEP 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?

There are generally three major types of home drinking water treatment devices available to consumers for removing chemical contaminants. These treatment devices include filters, distillers, and softeners. The DWQI has identified granular activated carbon (GAC) filters as the best available technology for the removal of PFAS.

For more specific information regarding the effectiveness of these treatment devices, we recommend visiting the National Sanitation Foundation (NSF) International website. 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 Spill Compensation Fund administered by Environmental Claims Administration within the DEP offers help to innocent parties suffering from direct or indirect damages resulting from the human-caused discharge of a hazardous substance. A property owner may file a claim for reimbursement for most of the expenses incurred to install a treatment device for a potable well or to connect to a public water supply due to a human-caused hazardous substance in the well water. Claimants have one year from the date they learn they are damaged to file a claim. If the claim involves contamination in a private well, the contaminant must have a ground water quality standard and be listed on the List of Hazardous Substances. Anyone who purchases a property with known human-caused contamination in the water supply will not be eligible for filing for a Spill Compensation Fund claim. There are specific eligibility requirements and guidelines for filing claims with the Spill Compensation Fund. For more information, please contact the NJDEP-Environmental Claims Administration at 609-777-0101 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.

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 exceeds maximum contaminant levels (MCLs). In addition, the loan program covers iron and manganese although these contaminants do not have Primary Drinking Water Standards. This resource will be available for PFOA and PFOS contamination after final MCLs are promulgated for these contaminants. This resource is currently available for PFNA, which already has an MCL. 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.