

City of Portsmouth

Department of Public Works



Portsmouth Water System PFAS Sampling Update July 2, 2019

Water Supply Sampling of PFAS

The City of Portsmouth's water supply staff continue to monitor all of our public water supply sources for Perfluorinated compounds (PFAS) every six months. The water samples for the April 2019 round of sampling were analyzed using the detection limits proposed by the New Hampshire Department of Environmental Services (NHDES) as part of the rulemaking process to set Maximum Contaminant Levels (MCLs) for four PFAS compounds. The following information provides that detail:

Env-Dw 712.28 Laboratory Methods, Sampling Protocols, and Method Reporting Limits for PFC Contaminants.

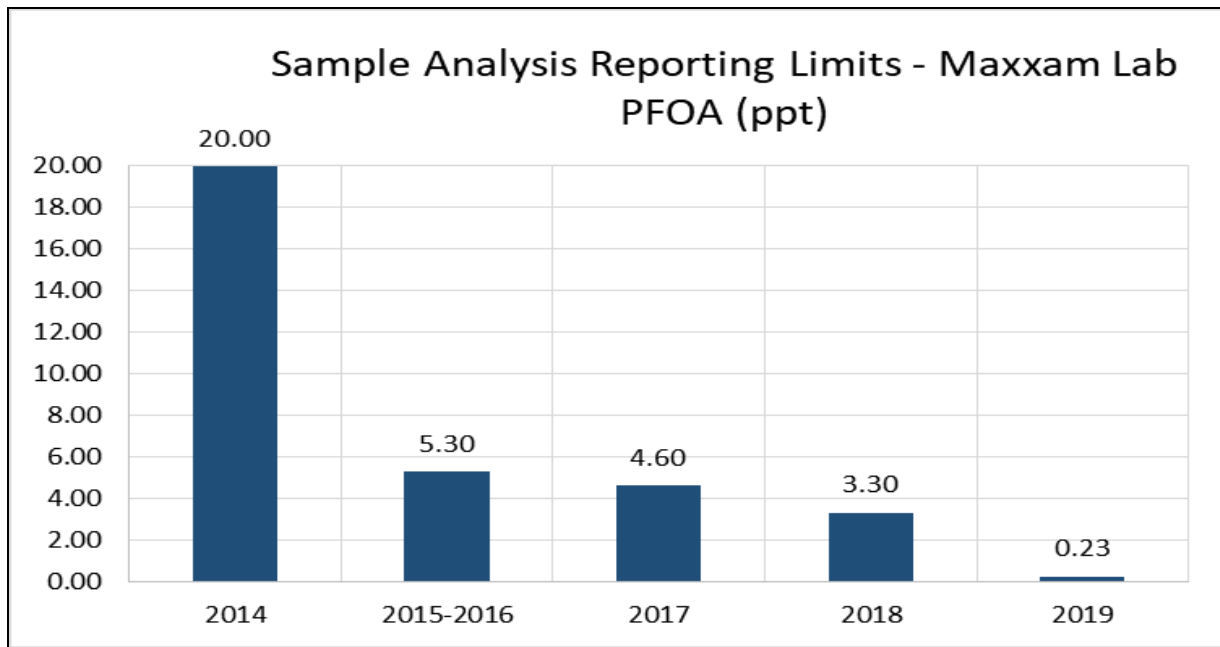
(c) Method reporting limits for PFC contaminants shall not exceed those set forth in Table 712-2, below:

- Perfluorooctanoic acid (PFOA) 2 ng/L (ppt)
- Perfluorooctane sulfonic acid (PFOS) 2 ng/L (ppt)
- Perfluorononanoic acid (PFNA) 2 ng/L (ppt)
- Perfluorohexane sulfonic acid (PFHxS) 2 ng/L (ppt)

The following table summarizes the most recent monitoring results, in Parts-per-Trillion (ppt) for the City of Portsmouth water sources utilizing this laboratory method and reporting limits. The table also includes the Maximum Contaminant Levels (MCLs) as currently proposed by the New Hampshire Department of Environmental Services on June 28, 2019.

PFAS	NH - Proposed MCL and AGQS	Madbury Treatment	Madbury Well 2	Madbury Well 3	Madbury Well 4	Portsmouth Well	Collins Well	Greenland Well
Date	06/28/2019	4/29/2019	4/29/2019	4/29/2019	4/29/2019	4/29/2019	4/29/2019	4/29/2019
PFOA	12 ppt	3	4	3	2	4	2	4
PFOS	15 ppt	<2	<2	<2	<2	4	3	3
PFHxS	18 ppt	<2	<2	<2	<2	6	2	2
PFNA	11 ppt	<2	<2	<2	<2	<2	<2	<2

These results show detections of compounds that, at times, were previously reported as Non-Detect (ND) in past updates. These detections do not necessarily mean an increase in any compound from when the last time they were sampled but simply that the laboratory methods for PFAS analysis continue to evolve and improve, allowing for lower and lower detection and reporting limits. The following chart shows a comparison of how those limits have gone down for one of the compounds, PFOA, from 20 ppt to 0.23 ppt, almost 100 times less than in 2014. Detection limits for all of the other PFAS compounds sampled also have lower levels.



Many other water systems throughout New Hampshire have experienced detections testing at these lower levels. According to data provided by the NHDES these systems include those on the Seacoast; Seabrook, Aquarion Water in Hampton, North Hampton and Rye, the Rye Water District, Dover and Rochester.

An update posted on the NHDES website on June 28, 2019 provided the following information regarding the proposed PFAS regulations:

Concord, NH – The New Hampshire Department of Environmental Services (NHDES) has filed a final rulemaking proposal to establish Maximum Contaminant Levels (MCLs)/drinking water standards and Ambient Groundwater Quality Standards (AGQS) for four per- and polyfluoroalkyl substances (PFAS): perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), perfluorononanoic acid (PFNA) and perfluorohexanesulfonic acid (PFHxS) to ensure greater protection of public health related to the consumption of drinking water. The rulemaking proposal was filed today with the New Hampshire Joint Legislative Committee on Administrative Rules (JLCAR) for consideration at

their July 18, 2019, meeting. If approved by JLCAR, the new rules are scheduled to become effective on October 1, 2019.

Using the most recent and best science available, NHDES is proposing the following drinking water standards that are protective for the most sensitive populations over a lifetime of exposure:

PFAS Final Proposed MCL and AGQS

PFOA 12 ppt

PFOS 15 ppt

PFHxS 18 ppt

PFNA 11 ppt

These MCLs are drinking water quality standards that non-transient public water systems (water systems serving the same 25 people more than 6 months per year) must comply with. An AGQS is the standard used to require remedial action and the provision of alternative drinking water at a contaminated site. It also dictates the conditions under which treated and untreated wastewater may be discharged to groundwater. Current law requires AGQSs be the same value as any MCL established by NHDES and also that they be at least as stringent as health advisories set by the U.S. Environmental Protection Agency (EPA). In 2016, NHDES adopted EPA's health advisory for PFOA and PFOS as an AGQS at 70 parts per trillion (ppt) individually or combined.

The NHDES website is providing updates and additional information regarding upcoming public meetings about these standards. This site can be accessed at:

<https://www4.des.state.nh.us/nh-pfas-investigation/>

Given all this information and the laboratory capabilities to detect at these lower levels, the City will now sample these water sources quarterly to assess any trend in the detected compounds and to also prepare for the pending MCLs. We have also put a formal request into the Air Force to have their consultant performing the monthly sampling of the Pease, Portsmouth and Collins wells have them analyzed using the NHDES recommended detection limits.

Additional information can be accessed at:

www.cityofportsmouth.com/publicworks/water/portsmouth-water-system-pfas-update

or by calling Al Pratt, Water Resources Manager, at: 603-520-0622 or Brian Goetz, Deputy Director of Public Works at: 603-766-1420.