CITY OF CONCORD

New Hampshire's Main Street™

REPORT TO MAYOR AND CITY COUNCIL

DATE: April 16, 2024

To: Mayor and City Council

From: Earle M. Chesley, P. E., General Services Director

Subject: National PFAS Standards for Drinking Water

Recommendation

Accept this report for information

Background

On April 10, 2024, the United States Environmental Protection Agency (EPA) issued new federal drinking water standards for six poly- and perfluoroalkyl substances (PFAS), commonly referred to as "forever chemicals". In 2019, the State of New Hampshire, through legislative action, established standards for four of these substances to be administered through the New Hampshire Department of Environmental Services.

Discussion

Since the issue of PFAS chemicals potentially being present in drinking water first arose, the General Services Department initiated testing for several of these substances in the City's active water supply in 2016.

With the adoption of state standards for four of these substances in 2019, all public water systems in New Hampshire have had to test and to comply with the State's established Maximum Contaminant Levels (see chart below). All State regulated compounds have been not detected at the primary water source, Hutchins Street Treatment plant, however, one well (#4) of our four wells at the Pembroke Wellfield tested positive for PFOA at 4.92 parts per trillion on October 3, 2019; the most recent result was 4.82 parts per trillion (ppt) from a sample collected on October 11, 2023. The Pembroke Wellfield is only used as an emergency supply and was last

used in 2003. The well field operation requires 2 wells on at a time that would consequently dilute the PFOA concentration to 2.41 ppt which is below the new EPA standard.

The new EPA drinking water standards adds one additional PFAS substance and a mixture of two PFAS substances at levels more stringent than those set by the State in 2019. All water systems must now meet the newly established standards within five years, and begin testing for them in 2026.

At this time, the City of Concord's water system is presently in full compliance with these newly established more stringent EPA standards. Monitoring will continue as the rule requires periodic testing to confirm there has been no contamination over time. Continued commitment to watershed management that his historically been practiced in the community now has increased importance.

Chemical	Current NH Standard	New Enforceable Federal Regulation (Maximum Contaminant Level (MCL))	Maximum Contaminant Level Goal (MCLG)**
PFOA	12 ppt	4.0 ppt*	0
PFOS	15 ppt	4.0 ppt*	0
PFNA	11 ppt	10 ppt	10 ppt
PFHxS	18 ppt	10 ppt	10 ppt
HFPO-DA (GenX chemicals)	None	10 ppt	10 ppt
Mixture of two or more: PFNA, PFHxS, HFPO-DA, and PFBS	Not Applicable	Hazard Index of 1	Hazard Index of 1

$$\text{Hazard Index} = \left(\frac{[\text{GenX}_{water}]}{[10\text{ ppt}]}\right) + \left(\frac{[\text{PFBS}_{water}]}{[2000\text{ ppt}]}\right) + \left(\frac{[\text{PFNA}_{water}]}{[10\text{ ppt}]}\right) + \left(\frac{[\text{PFHxS}_{water}]}{[10\text{ ppt}]}\right)$$

Where GenX_{water} = monitored concentration (ppt) of GenX Chemicals
PFBS_{water} = monitored concentration (ppt) of PFBS
PFNA_{water} = monitored concentration (ppt) of PFNA
PFHxS_{water} = monitored concentration (ppt) of PFHxS

*The federal MCL proposed for PFOA and PFOS is 4.0 ppt, meaning any result above 4.05 ppt would exceed the federal MCL.
**Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.

Cc Marco Philippon, Water Superintendent