

**PFAS ASSESSMENT AND SOURCE  
REDUCTION ACTIVITIES  
2024 ANNUAL REPORT**

**A REPORT TO  
THE HONORABLE GLENN YOUNGKIN, GOVERNOR,  
AND  
THE GENERAL ASSEMBLY OF VIRGINIA**

**Virginia Department of Environmental Quality**

**October 2024**

Executive Summary..... 2

Introduction and Background on DEQ’s PFAS Actions..... 3

    Previous PFAS Initiatives ..... 3

    PFAS Directives Pursuant to the 2024 Acts of Assembly ..... 4

Staffing Activities ..... 5

Assessment and Monitoring Activities..... 5

PFAS Expert Advisory Committee Activities ..... 5

    Establishment of the PFAS Expert Advisory Committee..... 5

    Meetings of the PFAS Expert Advisory Committee..... 6

Appendix A: Chapters 316 and 343 of the 2024 Acts of Assembly (HB1085, SB243)..... 7

Appendix B: Chapter 276 of the 2023 Acts of Assembly (HB 2189) ..... 11

Appendix C: Invited Members of the Expert Advisory Committee..... 12

## Executive Summary

The 2024 Virginia General Assembly enacted legislation, effective July 1, 2024 codified as §§ 62.1-44.34:29 through 62.1-44.34:33 of the Code of Virginia, requiring the Virginia Department of Health (VDH) to transfer to the Department of Environmental Quality (DEQ) on a quarterly basis all validated monitoring results that indicate Per- and Polyfluroalkyl Substances (PFAS) Maximum Containment Level (MCL) exceedances. DEQ is then required to develop and implement a plan to prioritize and conduct PFAS assessments to identify significant sources of PFAS in the raw water for those public water systems. Other provisions of this law establish requirements for monitoring and self-reporting of PFAS from certain discharges.<sup>1</sup> The legislation also directs DEQ to establish the PFAS Expert Advisory Committee, which will assist DEQ and VDH in developing solutions to reduce and eliminate the discharge of PFAS.

Additionally, § 62.1-44.34:33 of the Code of Virginia requires DEQ to annually report by October 1 on activities related to PFAS assessments, self-reporting, and discharge monitoring to the Governor and the General Assembly. This first annual report provides information regarding DEQ's activities related to PFAS leading up to the recently enacted law and subsequent to its effective date. Important initial steps to meeting the agency's responsibilities have been met, including:

- 1) Two of three DEQ PFAS-related positions provided for in the most recent state budget have been filled. The last position is in recruitment and is expected to be filled within the next month.
- 2) The PFAS Expert Advisory Committee was identified and appointed by the DEQ Director.
- 3) The first of two meetings of the Expert Advisory Committee during calendar year 2024 is planned.
- 4) Initial monitoring data either conducted by or reported to VDH was transferred to DEQ on July 1, 2024.
- 5) DEQ has conferred with VDH on the data for drinking water systems with PFAS maximum contaminant level exceedances and is on track to issue notices to applicable facilities that may be required to implement monitoring and or self-reporting for PFAS by the December 1, 2024 deadline in the third enactment clause of the legislation.

---

<sup>1</sup> Appendix A Chapters 316 and 343 of the 2024 Acts of Assembly (HB1085, SB243)

## Introduction and Background on DEQ's PFAS Actions

PFAS substances are a class of persistent synthetic chemicals used worldwide in many consumer products, including shampoo, paints, fast food packaging, firefighting foam, and non-stick cookware, among other uses.<sup>2</sup> Manufactured beginning in the 1940s, PFAS include a group of more than 9,000 chemicals that are used in a variety of applications. Studies show the chemicals persist in the environment and human body. Distributed globally in the environment, PFAS can travel great distances in water systems.

### Previous PFAS Initiatives

Since 2020, the General Assembly has directed DEQ and VDH to undertake multiple initiatives to evaluate waterbodies and drinking water systems for the presence of PFAS. These initiatives, along with additional investigations and research into PFAS, are summarized below.

Starting in late 2021, DEQ began monitoring for PFAS in streams, rivers, and reservoirs across the Commonwealth to understand the prevalence of these substances and to identify potential locations where PFAS concentrations are elevated relative to baseline concentrations. DEQ has supported investigative PFAS studies in the Middle Chickahominy River watershed, in the Roanoke River for the PFAS compound GenX, and in the watershed of the Occoquan Reservoir. These studies have been performed where elevated PFAS levels had been identified in source waters for public water supplies. In addition to supporting these focused investigations, DEQ has also added PFAS analyses to several statewide monitoring networks to determine the occurrence of PFAS in various media across the state.

Funding was appropriated by the General Assembly in 2022 for DEQ to conduct surface water and groundwater sampling for PFAS throughout the Commonwealth. This resulted in water column monitoring for PFAS at over 200 long-term water quality monitoring and probabilistic monitoring stations. Since 2023, fish tissue and sediment monitoring has been conducted at approximately 120 routine fish tissue monitoring sites to better understand potential human health exposure through fish consumption. More information on DEQ's PFAS monitoring efforts is available on the agency's website: [Per- and Polyfluoroalkyl Substances \(PFAS\) | Virginia DEQ](#), and all PFAS data are available to the public in a statewide dashboard: [Statewide PFAS Sampling Dashboard \(arcgis.com\)](#).

DEQ conducted a survey of selected facilities in the spring of 2022 to gather existing information and data related to PFAS to begin to understand the potential for PFAS compounds in wastewater discharges throughout the Commonwealth. DEQ used Standard Industrial Classification (SIC) codes to identify discharges that may be associated with PFAS.

The voluntary survey requested general facility information from all recipients and asked questions specific to the following categories of dischargers: 1) Publicly Owned Treatment Works; 2) Water Treatment Plants; 3) Industrial dischargers – both direct and indirect

---

<sup>2</sup> PFAS are defined by the Virginia Code § 62.1-44.34:29 as “any fluorinated substances that contain at least one fully fluorinated methyl or methylene carbon atom and any precursors of such substances.”

(significant industrial users - SIUs); and 4) Facilities covered by the Industrial Stormwater General Permit.

Section 62.1-44.15:5.3 of the Code of Virginia, created pursuant to Chapter 276 of the 2023 Virginia Acts of Assembly (HB 2189), directed the State Water Control Board to adopt regulations that require any industrial user of publicly owned treatment works that receive and clean, repair, refurbish, or process items that the industrial user knows or reasonably should know use PFAS chemicals, defined in the statute, to test wastestreams for PFAS prior to and after cleaning, repairing, refurbishing, or processing such items. The Code requires the results of such tests to be transmitted to the receiving publicly owned treatment works within three days of receipt of the test results by the industrial user of the publicly owned treatment works. A Final Exempt Amendment to 9VAC25-31-805 was approved by the State Water Control Board on June 22, 2023 to incorporate these requirements which became effective on July 1, 2023. Appendix B of this report provides a copy of HB 2189.

Outside of DEQ's efforts to understand PFAS, VDH is also working to characterize PFAS in the Commonwealth. VDH undertook a study between 2021 and 2023 to collect data on the occurrence in PFAS in Virginia's drinking water supplies. The results of the study sampled 274 of Virginia's drinking water providers and found 16 providers serving a retail population of 2.5 million persons were contaminated at levels determined by the U.S. Environmental Protection Agency (EPA) to be detrimental to human health. More information about VDH's study is available at their website [Per- and Polyfluoroalkyl Substances \(PFAS\) in Drinking Water| Virginia Department of Health](#).

On April 10, 2024, the EPA issued the first legally enforceable drinking water standards for PFAS. The standards require public drinking water systems to complete initial compliance monitoring by 2027, followed by ongoing compliance monitoring. The water systems that have exceedances of PFAS in their finished drinking water have until 2029 to implement solutions that reduce PFAS below EPA's maximum contaminate level.

#### PFAS Directives Pursuant to the 2024 Acts of Assembly

The General Assembly passed HB 1085/SB 243 on February 28, 2024, which were signed by Governor Youngkin on April 2, 2024 and became effective on July 1, 2024. This law requires VDH to transfer to DEQ on a quarterly basis all validated monitoring results that indicate PFAS MCL exceedances. DEQ is then required to develop and implement a plan to prioritize and conduct PFAS assessments to identify significant sources of PFAS in the raw water for those public water systems. Other provisions of this law establish requirements for monitoring and self-reporting of PFAS from certain discharges. The legislation also directs DEQ to establish the PFAS Expert Advisory Committee, which will assist DEQ and VDH in developing solutions to reduce and eliminate the discharge of PFAS. The text of the bills is presented in Appendix A.

## Staffing Activities

Three positions to support DEQ's activities related to PFAS were funded in the Commonwealth's Budget for the 2024 – 2026 Biennium. The three positions, a Data Analyst, Permit Writer, and Program Coordinator, were advertised at the start of July when the budget became effective. The Permit Writer and Program Coordinator recruitments were successfully filled, and the new staff joined DEQ on August 25, 2024. Recruitment for the Data Analyst position is on-going.

## Assessment and Monitoring Activities

The initial data transfer by VDH to DEQ occurred on July 1, 2024. The data transfer included VDH's initial monitoring from 2021 – 2023 pursuant to Chapter 611 of the 2020 Acts of Assembly (HB 586) and self-reported PFAS measurements from Fauquier, Loudoun, Orange, and Washington counties. VDH is expected to transfer data again at the start of the fourth calendar quarter on October 1, 2024.

DEQ has not required self-reporting or monitoring from any facility under the authority granted in § 62.1-44.34:31 and § 62.1-44.34:32 of the Code of Virginia. However, notices of such activity will be sent by December 1, 2024, for the MCL exceedances that VDH notified DEQ of on July 1, as required by the third enactment clause in Chapters 316 and 343 of the 2024 Acts of Assembly (HB 1085, SB 243).

## PFAS Expert Advisory Committee Activities

An expert advisory committee was established pursuant § 62.1-44.34:33 of the Code of Virginia to assist DEQ and VDH in “identifying:

- (i) PFAS sources through PFAS assessments and associated monitoring and reporting,
- (ii) public and private lab testing capacity issues, and
- (iii) options for reducing PFAS in source waters causing exceedances of PFAS MCLs.”

The members of committee appointed by the DEQ Director are required to “include:

- (i) representatives of public drinking water and wastewater system owners,
- (ii) representatives of public health organizations,
- (iii) potential PFAS source categories,
- (iv) conservation organizations with expertise in water treatment, water science, or PFAS chemistry, and
- (v) other experts as determined by the Department.”

## Establishment of the PFAS Expert Advisory Committee

Potential members of the expert advisory committee were identified in consultation with VDH. The members of the Expert Advisory Committee that were appointed by the DEQ Director, Mike Rolband, are provided in Appendix C.

#### Meetings of the PFAS Expert Advisory Committee

No meetings of the PFAS Expert Advisory Committee were held during the three months of time between the law going into force and the due date of October 1 for this report. Two meetings of the committee are anticipated by the end of 2024.

## Appendix A: Chapters 316 and 343 of the 2024 Acts of Assembly (HB1085, SB243)

An Act to amend the Code of Virginia by adding in Chapter 3.1 of Title 62.1 an article numbered 13, consisting of sections numbered **62.1-44.34:29** through **62.1-44.34:33**, relating to Department of Environmental Quality; PFAS; identification; monitoring; PFAS Expert Advisory Council established; report.

[HB1085] [SB 243]

Approved April 2, 2024

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Chapter 3.1 of Title 62.1 an article numbered 13, consisting of sections numbered **62.1-44.34:29** through **62.1-44.34:33**, as follows:

### Article 13.

#### *Per- and Polyfluoroalkyl Substances.*

§ **62.1-44.34:29**. *Definitions.*

As used in this article, unless the context requires a different meaning:

"Committee" means the PFAS Expert Advisory Committee established in § **62.1-44.34:33**.

"EPA" means the U.S. Environmental Protection Agency.

"HFPO-DA" means hexafluoropropylene oxide dimer acid.

"PFAS" means per- and polyfluoroalkyl substances, which are any fluorinated substances that contain at least one fully fluorinated methyl or methylene carbon atom and any precursors of such substances. "PFAS" includes HFPO-DA, PFBS, PFHxS, PFNA, PFOA, and PFOS.

"PFAS maximum contaminant level" or "PFAS MCL" means any maximum contaminant level for any PFAS chemical or mixture of PFAS chemicals (i) established by the EPA as a national primary drinking water regulation or (ii) for the interim period of time between the EPA's proposal and final agency action for adopting a national primary drinking water regulation, the EPA's proposed level, provided that the EPA's proposed level may be used only for nonregulatory purposes of self-reporting of manufacturing or use, monitoring, and PFAS assessments as provided in this article.

"PFBS" means perfluorobutane sulfonate.

"PFHxS" means perfluorohexane sulfonate.

"PFNA" means perfluorononanoic acid.

"PFOA" means perfluorooctanoic acid.

"PFOS" means perfluorooctane sulfonate.

"Public water system" means a system that provides piped water for human consumption and (i) serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents or (ii) regularly serves at least 25 of the same persons over six months of the year.

"VDH" means the Virginia Department of Health.

"VPDES" means the Virginia Pollutant Discharge Elimination System.



§ **62.1-44.34:30**. PFAS assessments for identification of sources of PFAS in public water supplies.

A. For every public water system, VDH shall assist the Department by on a quarterly basis transferring to the Department all validated monitoring results available to VDH under federal regulations or otherwise in VDH's possession that indicate PFAS MCL exceedances, including data generated by VDH's independent PFAS monitoring activities or submitted by public water systems to VDH.

B. For every public water system for which VDH has notified the Department pursuant to subsection A or the public water system has directly demonstrated to the Department that PFAS in finished water has been detected above any PFAS MCL using Method 533, Method 537.1, or other EPA-approved method for drinking water, the Department shall develop and implement a plan to prioritize and conduct PFAS assessments for identifying significant sources of PFAS in such public water system's raw water source or sources. Such prioritization plan shall be developed within six months of the initial notification by VDH pursuant to subsection A and updated annually thereafter.

C. In developing its prioritization for conducting PFAS assessments, the Department shall consider (i) data and other information available from VDH regarding public water supplies, including but not limited to applicable PFAS data; (ii) any data or other information submitted directly to the Department by public water systems on a voluntary basis; (iii) information from consultation with VDH and public water systems with finished water monitoring results above any PFAS MCL; and (iv) other data or information the Department considers useful for setting priorities, including studies published in the scientific literature.

D. In conducting PFAS assessments, the Department shall consider the results of the self-reporting process required pursuant to § **62.1-44.34:31**, the results of any effluent or instream monitoring required pursuant to § **62.1-44.34:32** or otherwise conducted by or available to the Department, and other PFAS-related data or information the Department deems useful for identifying significant sources.

E. In its reports of PFAS assessments, the Department shall identify potential regulatory and nonregulatory options for addressing each significant source of PFAS. The goal of such assessments shall be to protect public health by reducing significant sources of PFAS in raw water sources of public water systems and to ensure, to the maximum extent practicable, that the costs of public water systems are minimized.

§ **62.1-44.34:31**. Self-reporting of PFAS manufacture and use for PFAS assessment.

A. For purposes of a PFAS assessment following notification to the Department pursuant to subsection B of § **62.1-44.34:30**, the Department shall require any facility, if deemed by the Department to be a potential source of PFAS in the public water system's raw water source, that discharges to a surface water under a VPDES permit or that discharges to a publicly owned treatment works under an industrial pretreatment program permit to report to the Department, within 90 days after being directed by the Department, its manufacture or use of PFAS as provided in this section on a form provided by the Department. Such report shall include the chemical name and the Chemical Abstracts Service (CAS) number, if known or reasonably ascertainable, the amount manufactured or used in the preceding 12 months, and any additional information reasonably required by the Department to ascertain sources and quantities of PFAS manufactured or used.

B. For every facility that reports the use or manufacture of one or more PFAS in accordance with subsection A and that discharges to a publicly owned treatment works, the Department shall forward the information provided by the facility to such publicly owned treatment works within 30 days of receipt. Such reporting requirement shall not change the duty or discharge permits of a publicly owned treatment works.

C. Any portion of a report submitted to the Department pursuant to this section may be claimed as confidential by the submitter pursuant to § **62.1-44.21**, except claims of confidentiality for the name, address, and location of the facility. Any such claim must be asserted at the time of submission in the manner prescribed on the reporting form or instructions. If no claim is made at the time of submission, the Department may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in § **62.1-44.21**.

D. For purposes of this section, use of PFAS (i) means intentional use of PFAS or PFAS-containing substances as a product ingredient or as a production process aid or additive, such as wetting agents, fume suppressants,

photoresists, etchants, cleaners, coatings, surfactants, or flame retardants, and (ii) does not mean use of manufacturing equipment that contains PFAS.

**§ 62.1-44.34:32.** Monitoring of PFAS sources for PFAS assessments.

A. For the purpose of PFAS assessments required pursuant to § 62.1-44.34:30, the Department shall require, after three months' advance notice, the owner or operator of any of the following facilities, if deemed by the Department to be a potentially significant source of PFAS in the public water system's raw water source, to perform and promptly report the results as received of representative quarterly discharge monitoring for an initial characterization period of one year, provided, however, that the Department may discontinue remaining quarterly monitoring by a facility with proper monitoring results that are below the method detection level for the first two quarters:

1. Any facility subject to self-reporting pursuant to § 62.1-44.34:31;
2. Any facility manufacturing PFAS, any electroplating or metal finishing facility using PFAS, any semiconductor or circuit board facility using PFAS, any paper or packaging manufacturing facility using PFAS, and any textile mills, tanneries, or leather, fabric, or carpet treaters using PFAS;
3. Any other facility that the Department has a reasonable basis to believe may use or manufacture PFAS based on the facility or activity type;
4. Any centralized waste treatment industrial facility;
5. Any industrial launderers defined by NAICS 812332;
6. Any facility discharging groundwater remediation wastewaters pursuant to the VPDES General Permit Regulation for Discharges from Groundwater Remediation of Contaminated Sites, Dewatering Activities of Contaminated Sites, and Hydrostatic Tests; and
7. Any airport, air base, air station, fire training facility, landfill, or other facility or site that the Department has a reasonable basis to believe has significant soil or groundwater PFAS contamination significantly impacting finished water levels.

B. For purposes of this section, using or use of PFAS (i) means intentionally using or use of PFAS or PFAS-containing substances as a product ingredient or as a production process aid or additive, such as wetting agents, fume suppressants, photoresists, etchants, cleaners, coatings, surfactants, or flame retardants, and (ii) does not mean using or use of manufacturing equipment that contains PFAS.

C. For purposes of monitoring under subsection A, the applicable laboratory test method is Method 1633 or such other method approved by the EPA that may be allowed by the Department. Monitoring reports shall include all PFAS analytes measured by the test method. For purposes of this section, the Department shall not require, and the facility and its laboratory shall be exempt from, environmental laboratory certification or accreditation requirements specifically for use of Method 1633.

**§ 62.1-44.34:33.** PFAS Expert Advisory Committee; report.

A. The Department, in consultation with VDH, shall establish the PFAS Expert Advisory Committee to assist the Department and VDH in identifying (i) PFAS sources through PFAS assessments and associated monitoring and reporting, (ii) public and private lab testing capacity issues, and (iii) options for reducing PFAS in source waters causing exceedances of PFAS MCLs.

B. Members of the Committee shall be appointed by the Director and shall include representatives of public drinking water and wastewater system owners, representatives of public health organizations, potential PFAS source categories, and conservation organizations with expertise in water treatment, water science, or PFAS chemistry, and other experts as determined by the Department. Members of the Committee shall receive no compensation for their service and shall not be entitled to reimbursement for expenses incurred in the performance of their duties.

C. The Department shall convene the Committee at least two times per calendar year through June 30, 2027, and thereafter as the Department deems appropriate.

*D. The Department shall report annually by October 1 on its activities related to PFAS assessments, including the self-reporting process pursuant to § 62.1-44.34:31 and the discharge monitoring process pursuant to § 62.1-44.34:32, and on the activities of the Committee to the Governor and the General Assembly.*

2. That this act shall not be construed as limiting the authority of the Department of Environmental Quality, the Virginia Department of Health, or the owner or operator of any publicly owned treatment works to which any user discharges wastewater to require monitoring or reporting or otherwise regulate the discharge of any PFAS chemicals or other pollutants under other applicable legal authority.

3. That for public water systems for which the Department of Environmental Quality has received notice on or before September 1, 2024, of PFAS detected above the threshold established in subsection B of § 62.1-44.34:30 of the Code of Virginia, as created by this act, the Department shall issue notice to applicable facilities by December 1, 2024, of required self-reporting under § 62.1-44.34:31 of the Code of Virginia, as created by this act, and required monitoring under § 62.1-44.34:32 of the Code of Virginia, as created by this act.

## Appendix B: Chapter 276 of the 2023 Acts of Assembly (HB 2189)

*An Act to amend the Code of Virginia by adding in Article 2 of Chapter 3.1 of Title 62.1 a section numbered **62.1-44.15:5.3**, relating to requirements to test for PFAS chemicals; publicly owned treatment works.*

[HB 2189]

Approved March 22, 2023

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Article 2 of Chapter 3.1 of Title 62.1 a section numbered **62.1-44.15:5.3** as follows:

§ **62.1-44.15:5.3**. *Requirements to test for PFAS chemicals; publicly owned treatment works.*

*A. As used in this section, "PFAS chemical" means (i) Perfluorooctanoic Acid (PFOA), (ii) Perfluorooctane Sulfonate (PFOS), (iii) hexafluoropropylene oxide dimer acid (HFPO-DA), (iv) perfluorobutane sulfonate (PFBS), or (v) any substance in a class of fluorinated organic chemicals containing at least two adjacent fluorinated carbon atoms, where one carbon atom is fully fluorinated and the other atom is at least partially fluorinated, excluding gases and volatile liquids, also referred to as perfluoroalkyl and polyfluoroalkyl substances, identified by a publicly owned treatment works in its pretreatment program for which there is an EPA approved testing method.*

*B. The pretreatment standards adopted by the Board shall require any industrial user of a publicly owned treatment works that receives and cleans, repairs, refurbishes, or processes any equipment, parts, or media used to treat any water or wastewater from any off-site manufacturing process that the industrial user knows or reasonably should know uses PFAS chemicals to test its wastestream for PFAS chemicals prior to and after cleaning, repairing, refurbishing, or processing such items. The results of such tests shall be transmitted to the receiving publicly owned treatment works within three days of receipt of the test results by the industrial user of the publicly owned treatment works.*

## Appendix C: Invited Members of the Expert Advisory Committee

<b>Name</b>	<b>Organization</b>
<b>Michael McEvoy</b>	Western Virginia Water Authority
<b>Jen Cobb</b>	Newport News Waterworks
<b>Jamie Bain Hedges</b>	Fairfax Water
<b>Jamie Mitchell</b>	Hampton Roads Sanitation District
<b>Brian Stieglitz</b>	Upper Occoquan Service Authority
<b>Ben Shoemaker</b>	Fauquier County Water & Sanitation Authority
<b>John J. Aulbach</b>	Aqua Virginia
<b>Erik Rosenfeldt</b>	Hazen and Sawyer
<b>Kyle Malone</b>	Micron Technology Inc.
<b>Jason Williams</b>	WM Atlantic Landfill
<b>Blake Waller</b>	DoD
<b>Ashley Pierce</b>	Virginia Division of Consolidated Laboratory Services
<b>JP Verheul</b>	Enthalpy Analytical
<b>Mitchell McAdoo</b>	US Geologic Survey
<b>Dr. Kirin Emler Furst</b>	George Mason University
<b>Dr. Kang Xia</b>	Virginia Polytechnic Institute & State University
<b>Robert Edelman</b>	Virginia Department of Health
<b>Bailey Davis</b>	Virginia Department of Health

<b>Dr. Heather Stapleton</b>	Duke University
<b>Chris Peot</b>	D.C. Water
<b>Alex Mitchum</b>	C&M Industries, Inc.
<b>Mark Romers</b>	Industries Turn-Around Corporation
<b>Rock Vitale</b>	Environmental Standards
<b>Lynn Gayle</b>	Farmer