EPA
MID-ATLANTIC REGION

You have arrived at:

CUTTING "FOREVER" SHORT: TAKING ACTION ON PFAS TODAY

Welcome!

We will get started soon.

EPA MID-ATLANTIC REGION
2024 VIRTUAL SUMMIT

Empowering Communities for Environmental Equity

Friendly Reminders Before We Get Started

Please mute yourself and turn off your webcam during presentations.

If you encounter technical difficulties during the meeting, you can:

- ✓ Send a chat message directly to Host or IT Support
- ✓ Email epamidatlsummit@michaeldbaker.com with the subject line “Zoom Support“ and make sure you let us know what session you are in.

This session is being recorded and will be made available after the summit.

Presenters

U.S. EPA Region 3

- William Richardson, Chief, Drinking Water Section, EPA Region 3
- Laura Mohollen, Chief, Superfund Technical Support Branch, EPA Region 3

WV Department of Environmental Protection

- Scott Mandirola, Deputy Cabinet Secretary, WVDEP
- Casey E. Korbini, Deputy Director for Remediation Programs, WVDEP

WV Rivers Coalition

- Autumn Crowe, Interim Executive Director, WV Rivers Coalition

Maryland Department of the Environment

- Naomi R. (Nony) Howell, Manager, Wastewater Permits, MDE
- Yen-Der Cheng, Chief, Municipal Surface Discharge Division, MDE

Final PFAS National Primary Drinking Water Regulation

EPA United States Environmental Protection Agency

Overview and Key Messages

- PFAS exposure over a long period of time can cause cancer and other illnesses that decrease quality of life or result in death.
- PFAS exposure during critical life stages such as pregnancy or early childhood can also result in adverse health impacts.
- PFAS pollution can have disproportionate impacts on small, disadvantaged, and rural communities already facing environmental contamination.
- EPA is taking a signature step to protect public health by establishing legally enforceable levels for several PFAS known to occur individually and as mixtures in drinking water.
- The final rule will reduce PFAS exposure for approximately 100 million people, prevent thousands of deaths, and reduce tens of thousands of serious illnesses.

Safe Drinking Water Act: Developing the NPDWR

What are the best available, peer-reviewed science and supporting studies?

What is the level at which no known or anticipated adverse effects on the health of persons occur and which allows for an adequate margin of safety?

What is the MCL that may be achieved with the use of best available technologies, taking cost into consideration?

What are the impacts of policy alternatives?

Do the benefits of the rule justify, or not justify, the costs?

Regulatory Levels: Summary

Chemical	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)
PFOA	0	4.0 ppt
PFOS	0	4.0 ppt
PFHxS	10 ppt	10 ppt
HFPO-DA (GenX chemicals)	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS	Hazard Index of 1	Hazard Index of 1

*Compliance is determined by running annual averages at the sampling point

Costs and Benefits

- By reducing exposure to PFAS, this final rule will:
  - Save **thousands of lives.**
  - Prevent **tens of thousands of serious illnesses**, including cancers, liver disease, heart attacks, and strokes.
  - Reduce immune impacts and developmental impacts to pregnant people, children and babies.
- The benefits are quantified by considering the costs of illness such as lost wages, medical bills, and the value of every life lost.
- The quantifiable health benefits of this rule are estimated to be **$1.5 billion** annually.
- There are also many other substantial health impacts that will be avoided which EPA does not have data to quantify.

Costs and Benefits

- EPA estimates that between about 6% and 10% of the 66,000 public drinking water systems subject to this rule may have to take action to reduce PFAS to meet these new standards.
- Compliance with this rule is estimated to cost approximately $1.5 billion annually.
- These costs include water system monitoring, communicating with customers, and if necessary, obtaining new or additional sources of water or installing and maintaining treatment technologies to reduce levels of the six PFAS in drinking water.
- EPA considered all available information and analyses for costs and benefits, quantifiable and non-quantifiable, of this rule and determined that the **benefits justify the costs**.

Implementation: Timeframes for Water Systems

Within **three years** of rule promulgation (2024 – 2027):

- Initial monitoring must be complete

Starting **three years** following rule promulgation (2027 – 2029):

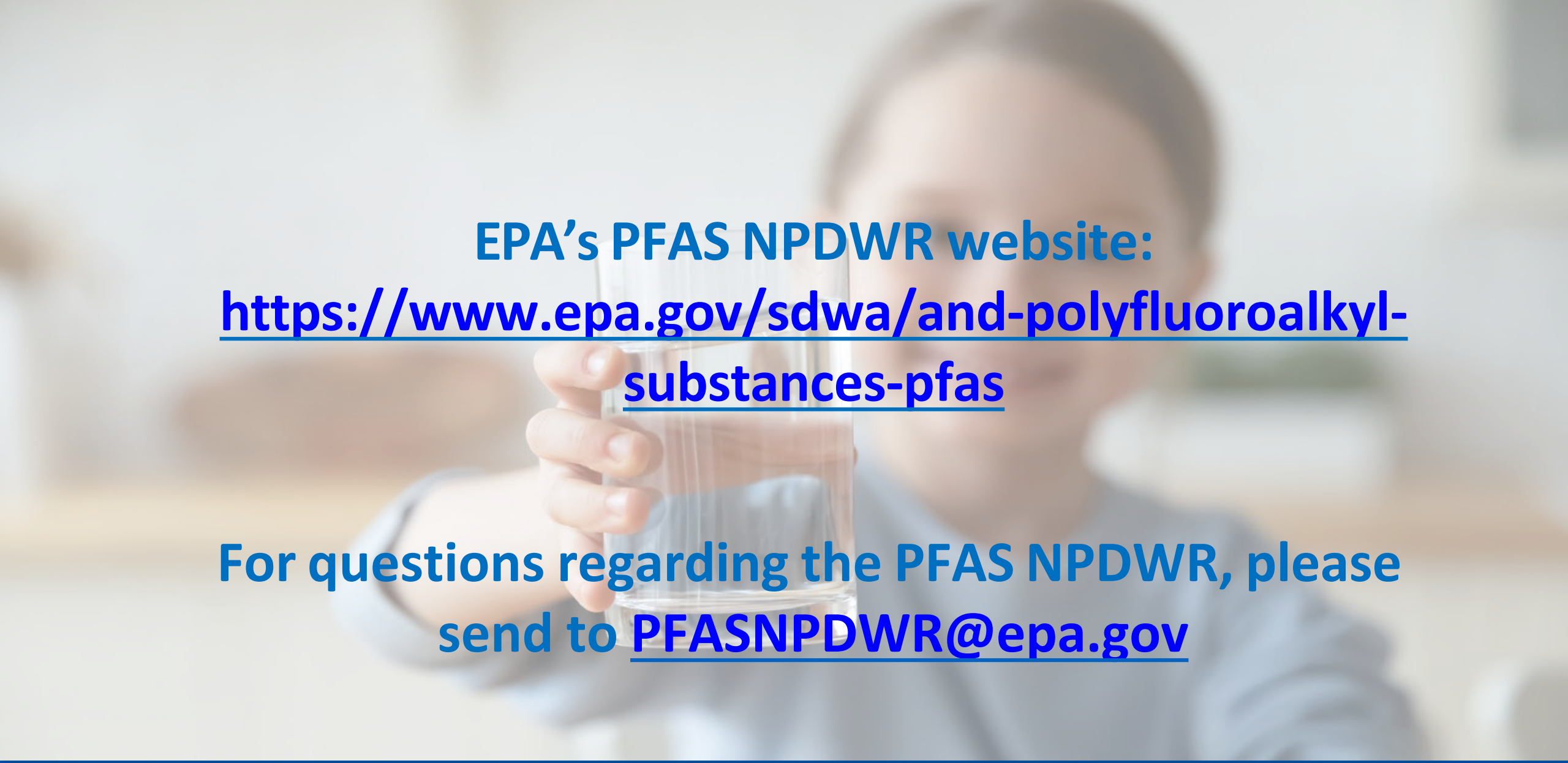
- Results of initial monitoring must be included in Consumer Confidence Reports (i.e., Annual Water Quality Report)
- Regular monitoring for compliance must begin, and results of compliance monitoring must be included in Consumer Confidence Reports
- Public notification for monitoring and testing violations

Starting **five years** following rule promulgation (starting 2029)

- Comply with all MCLs
- Public notification for MCL violations

PFAS Funding and Technical Assistance

- PFAS contamination can have a disproportionate impact on small, disadvantaged, and rural communities, and there is federal funding available specifically for these water systems.
- The Bipartisan Infrastructure Law (BIL) dedicates $9 billion specifically to invest in communities with drinking water impacted by PFAS and other emerging contaminants. $1B of these funds can be used to help private well owners.
- An additional $12 billion in BIL funding is available for general drinking water improvements.
- EPA's free WaterTA supports communities to identify water challenges, develop plans, build technical, managerial and financial capacity, and develop application materials to access water infrastructure funding.



EPA's PFAS NPDWR website:
https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas

For questions regarding the PFAS NPDWR, please send to PFASNPDWR@epa.gov

Designation of PFOA and PFOS as CERCLA Hazardous Substances

EPA is designating PFOA and PFOS, including their salts and structural isomers, as hazardous substances under CERCLA…

Significant evidence demonstrates that:

When released into the environment, these chemicals may present substantial danger to public health and the environment.

Legal Authority

CERCLA Section 102

- Authorizes the EPA Administrator to designate "hazardous substances" that, *when released into the environment, may present substantial danger to the public health or welfare or the environment.*

- First time EPA has used CERCLA Section 102 authority to designate a hazardous substance.
- Currently, there are over 800 CERCLA hazardous substances.
- CERCLA incorporates by reference "hazardous substances" listed or identified under the CWA, CAA, RCRA, and TSCA.

Impacts of Designation of PFOA and PFOS as CERCLA Hazardous Substances

Prior to Designation– "Pollutants and Contaminants" ***(Limited)***	**After - Hazardous Substances Designation**
Does not require: • Release reporting; • Federal Land Transfer Requirements; and • DOT regulations	Requires: • Release reporting; • Federal Land Transfer Requirements; and • DOT regulations
EPA must make a finding that a release, or threat of release, "may present an imminent and substantial danger" before responding.	Finding not needed before responding.
EPA does not have the authority to compel Potentially Responsible Parties (PRPs) to clean up or pay for clean up	EPA has this authority.

Benefits of CERCLA Designation

- Human health benefits due to reduced exposure to PFOA and PFOS.
- Allows EPA to address contamination sooner.
  - Earlier responses will reduce risks.
  - Cost savings from addressing sooner.
  - Incidental cleanup of co-contaminants.
  - Increase in property values near cleanup sites.
- Reporting releases enables more efficient decisions in responding to releases, improving data and transparency.
- Entities take greater precaution to prevent environmental releases to avoid reporting requirements and liability.

What The Designation Does NOT Do

Does **NOT**:

- Require facilities to proactively sample, test, monitor, or clean up PFOA and PFOS
- Impose requirements on any facility (e.g., how to manage contaminated waste or wastewater)
- Add any site to the NPL or require that EPA reexamine existing sites
- Require any response action
- Impose liability

Enforcement Discretion Policy

EPA will exercise enforcement discretion as it does regarding other hazardous substances.

- The Agency will focus on "holding responsible those who **significantly contributed** to the release of PFAS into the environment …."
- **“EPA does not intend to pursue entities** where equitable factors do not support seeking response actions or costs under CERCLA," including **farmers, water utilities, airports, or local fire departments.**

Resource Conservation and Recovery Act Proposed Rules

Proposal to List Nine Per- and Polyfluoroalkyl Compounds as Resource Conservation and Recovery Act Hazardous Constituents

EPA is proposing to amend its RCRA regulations to add nine PFAS compounds as hazardous constituents.

These PFAS would be added to the list of substances identified for consideration in facility assessments and, where necessary, further investigation and cleanup through the corrective action process at hazardous waste treatment, storage, and disposal facilities.

Proposal to Clarify Authority to Address Releases of Hazardous Waste at Treatment, Storage, and Disposal Facilities

EPA is proposing to modify the definition of hazardous waste as it applies to cleanups at permitted hazardous waste facilities.

This modification would assure that the EPA's regulations clearly reflect EPA's and authorized states' authority to require cleanup of the full range of substances that RCRA, including PFAS and other emerging chemicals of concern.

EPA is currently reviewing public comments received on these proposed rules.

COMMUNITY ENGAGEMENT IN WEST VIRGINIA FOR PFAS ACTION PLANS

EPA Mid-Atlantic Region 2024 Virtual Summit
May 16, 2024

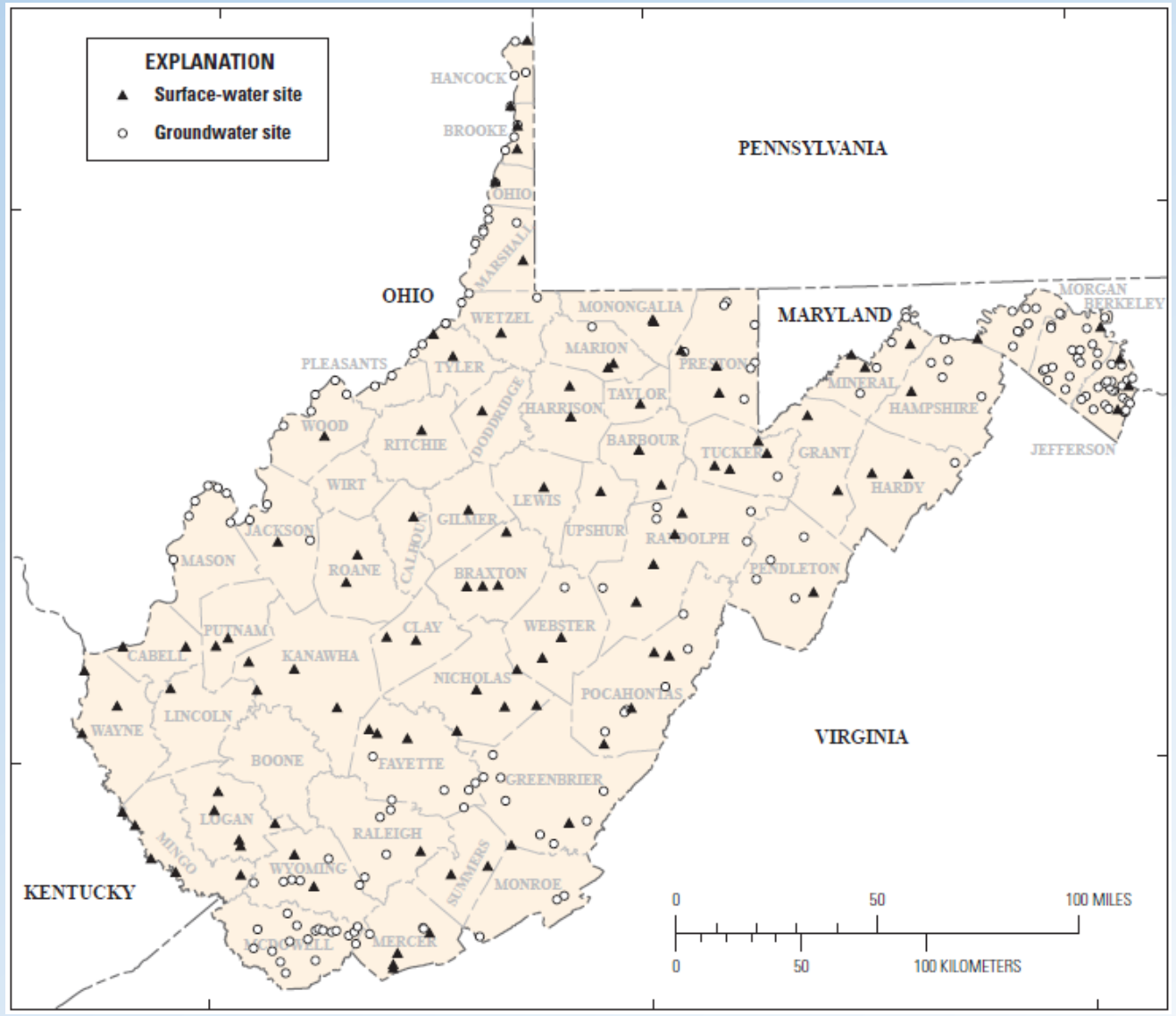
STATEWIDE SAMPLING AND PFAS PROTECTION ACT (HB 3189)

May 2024 Update

It is imperative to identify the remaining sources of PFAS detected in the raw water sources for public water systems so that these sources of pollution can be properly addressed, minimizing the impacts to public drinking water systems.

WV PFAS Study Area

- Data collected from May 2019 to May 2021
- 279 environmental samples
- GW and SW sites are not evenly distributed throughout the state



USGS Raw Water Study Statistics

- **PFOA + PFOS 37 sites had hits above the PQL (13%), 100 sites had hits above MDL but below the PQL (36%), total=137 (49%), all are above the HA**

- **PFOA HA 0.004ppt -29 sites had hits above the PQL (10%), 94 sites had hits above the MDL but less than the PQL (34%). Total=123 (44%)**

- **PFOS HA 0.02ppt - 16 sites had hits above PQL (6%), 30 sites had hits above the MDL but less than PQL (11%), total=46 (16%)**

- **GEN X (HFPO-DA) HA 10ppt - 3 sites had hits above the PQL (1.1%) none above the HA, 26 sites had hits above the MDL but below the PQL (9%), total =29 (10%)**

- **PFBS HA 2000ppt**
- **12 sites had hits above the PQL (4.3%) none above HA, 64 sites had hits above the MDL but below the PQL (23%), total=76 (27%)**

- **General statistics on the 28 PFAS compounds tested for**
- **166 sites have hits above the MDL for PFOA, PFOS, PFBS or Gen X (59%)**
- **48 sites had a hit above the MDL for a PFAS other than PFOA, PFOS, GEN X or PFBS**
- **214 sites had a hit of some PFAS above the MDL (77%)**

Results of Finished Drinking Water Study at 37 Intakes in 2022

- **19 hits above the new MCL(17 ground water and 2 surface water)(6 PFOA)(12 PFOS)(1 GENX)**
- **9 hit below 4.0 ppt**
- **27 hits above the new Health Advisory**
- **7 have Hazard Index above 1.0**

The PFAS Protection Act: HB 3189 Passed in 2023

1. DEP shall initiate a study to test the finished drinking water for the 100 sites with PFAS hits above the HA that have not been tested

2. Industries which manufacture, use, or have used PFAS chemicals in their production process must report the use to DEP, and the DEP is required to add quarterly monitoring of the chemical to the discharge

3. Requires DEP to develop action plans to identify and address the sources of PFAS in raw water

4. After EPA establishes a recommended WQS for PFAS, DEP shall propose adopting appropriate criteria by rule

5. Water companies must report findings of PFAS in UCMR5 to the customers

1. DEP shall initiate a study to test the finished drinking water for the 100 sites with PFAS hits above the HA that have not been tested (initiate by December 2023)

- DEP has initiated a contract with USGS to test 106 additional finished water samples, testing will begin as soon as EPA approves the QAQPP, expected shortly.
- To be consistent with EPA UCMR5 requirements all samples will be run by method 533 and 537.1.
- The cost of the study is $446,000 for collection and running 106 samples twice, once by each method. USGS is contributing $45,000, so DEP cost is $401,000

2. Industries which manufacture, use, or have used PFAS chemicals in their production process must report the use to DEP, and the DEP is required to add quarterly monitoring of the chemical to the discharge (December 31, 2023)

- A letter was sent to all NPDES permit holders on August 28th to notify them of their reporting responsibility under HB 3189.

- Facilities reported to the DEP on time. Six companies reported the manufacture or use of PFAS and a letter has been sent notifying them that quarterly monitoring will be added to their NPDES permit, as per the Act.

3. Requires DEP to develop action plans to identify and address the sources of PFAS in raw water (for the first 37 by July 1, 2024)

- WVDEP in partnership with 20 NGO's lead by WV Rivers has applied for and received a $1 million grant for public outreach and participation with the communities to gather information to write action plans. The grant was delayed and was officially awarded in April.

- WV Rivers and DEP met by phone in April and began planning schedule for outreach to identified communities.

4. After EPA establishes a recommended WQS for PFAS, DEP shall propose adopting appropriate criteria by rule

- In EPA's PFAS Strategic Roadmap, EPA has stated that the human health water quality recommended criteria is expected to be finalized in fall of 2024.

5. Water companies must report findings of PFAS in UCMR5 to the customers

- UCMR5 data is beginning to be received by the Bureau of Public Health and water companies will be reporting that data to customers as required by EPA regulations.

EPA ENVIRONMENTAL JUSTICE GOVERNMENT-TO-GOVERNMENT

2024-2027 Grant

Community Engagement

Pilot Project in

Environmental Justice Communities

Overburdened with PFAS

Contamination in Drinking Water

EPA EJG2G Program

Program Overview:

Provides funding at the state, local, territorial, and tribal level to support government activities that lead to measurable environmental or public health impacts in communities disproportionately burdened by environmental harms.

West Virginia EJG2G Project

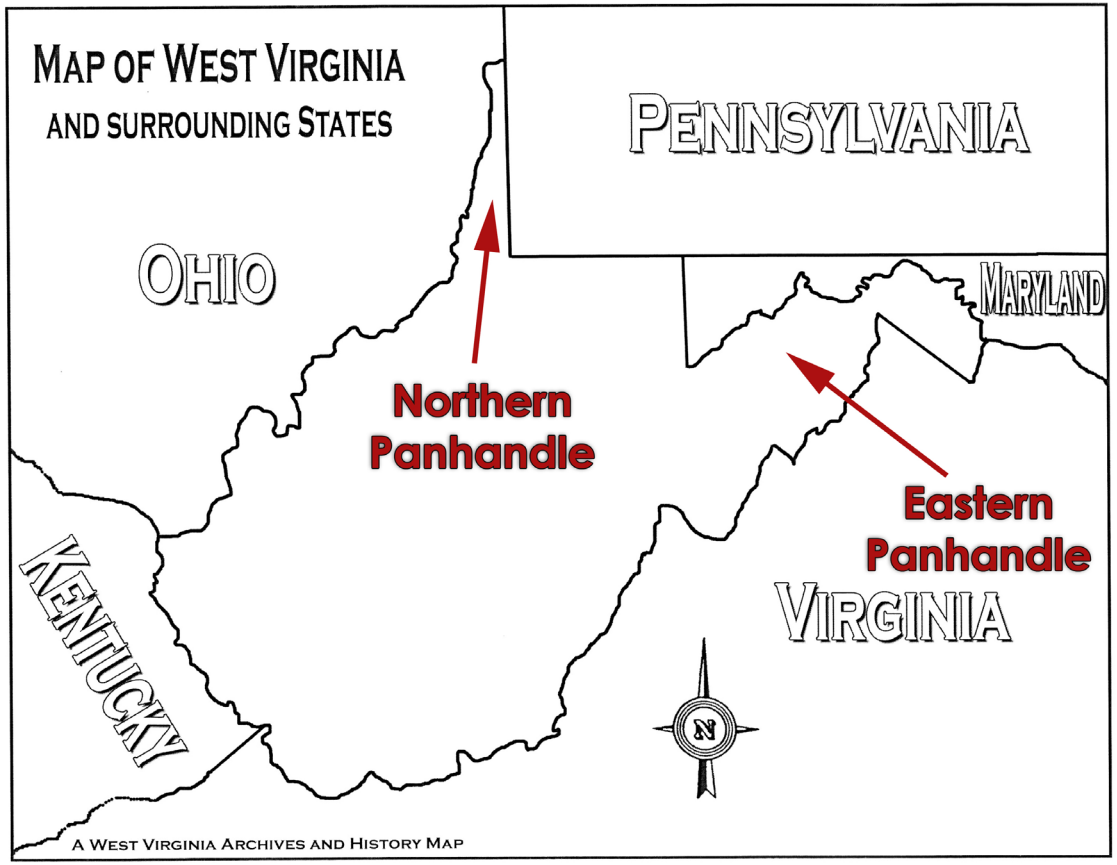
Project Summary:

Conduct a community engagement pilot project while completing 15 PFAS Action Plans focused on 11 identified communities located in the Eastern and Northern Panhandles.

West Virginia EJG2G Project

FUNDING: $1,000,000

PERIOD: 3 years



West Virginia EJG2G Project

Planned Activities

- Design and implement community engagement process.
- Identify and confirm sources of PFAS contamination.
- Develop PFAS Action Plans.
- Refine and replicate community engagement process in other communities.

West Virginia EJG2G Project

Expected Outcomes

- Increased understanding of PFAS, its sources, and its potential impacts in affected communities.
- Increased representation of community members in decision-making.
- PFAS sources identified and action plans prepared for 15 initial water systems.
- Refined community engagement model integrated into additional PFAS Action Plans.
- Reduced levels of PFAS contamination across West Virginia.
- Improved public health for all West Virginians.

COMMUNITY ENGAGEMENT PROCESS

Design and Implementation

Community Engagement

Pilot Project in

Environmental Justice Communities

Overburdened with PFAS

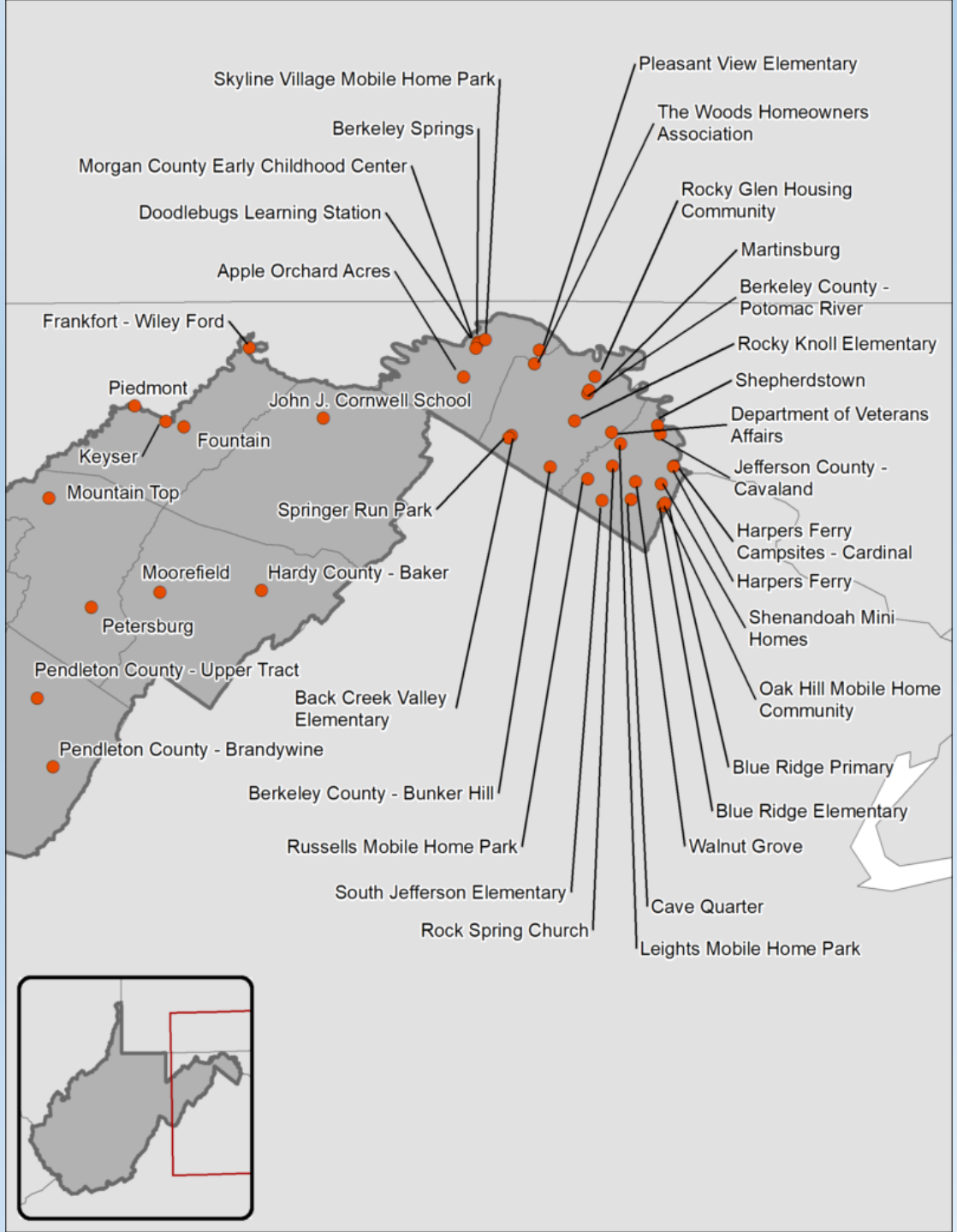
Contamination in Drinking Water

Community Based Organization:

WV Rivers Coalition is the Community Based Organization on WVDEP's recently awarded EPA's Environmental Justice Government-to-Government (EJG2G) grant.

Goal: Develop and pilot a community engagement process to inform PFAS Action Plans for 15 water systems in 11 communities that will identify and address sources of PFAS in raw water sources of public drinking water systems.

WEST VIRGINIA RIVERS

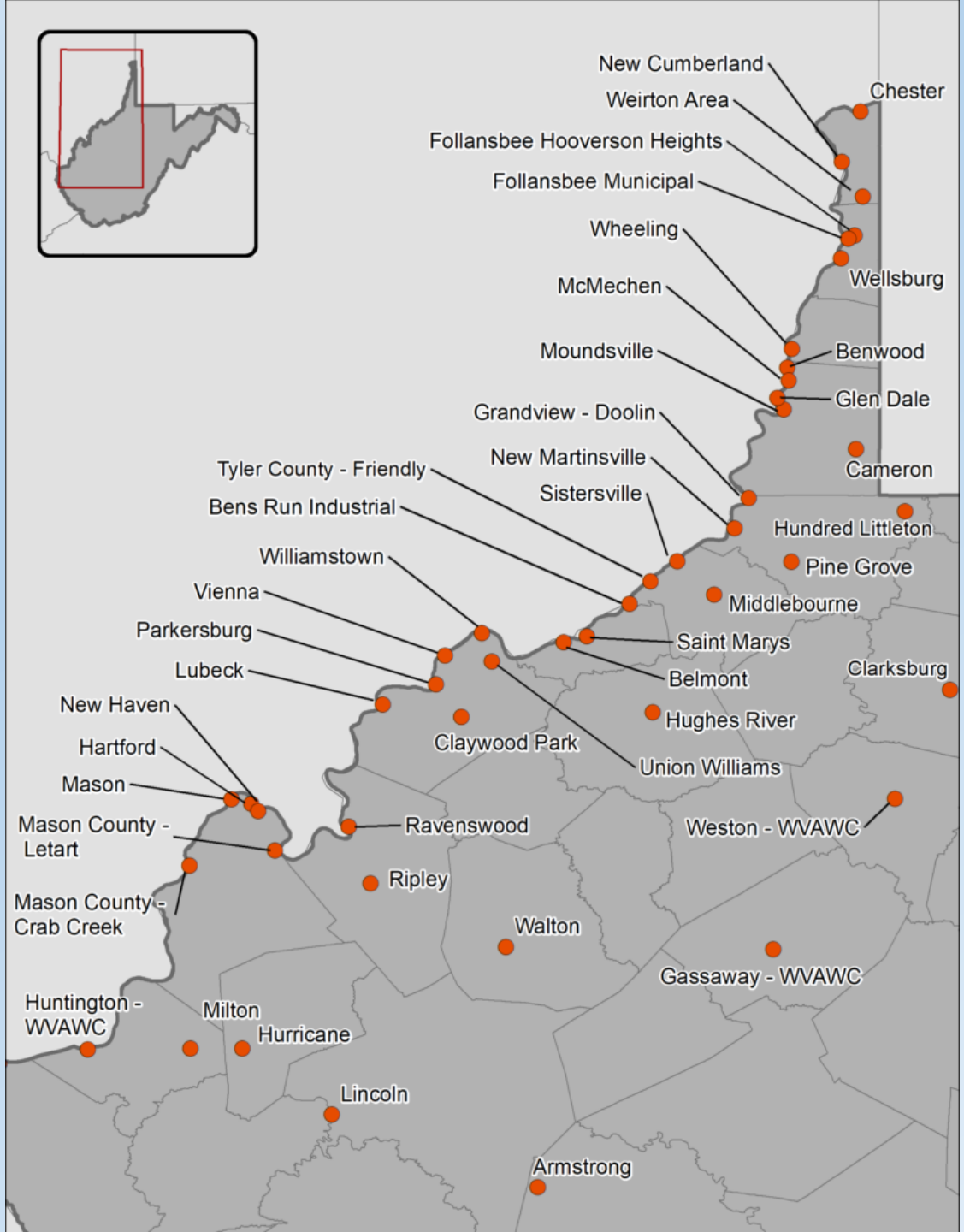


Target Communities in Eastern Panhandle

PFAS Action Plans:

- Berkeley Springs
- Charles Town
- Harpers Ferry
- Kearneysville
- Martinsburg
- Summit Point

WEST VIRGINIA RIVERS



Target Communities in Northern Panhandle

PFAS Action Plans:

- Bentwood
- Chester
- Follansbee
- Glen Dale
- Weirton

WEST VIRGINIA RIVERS

Partnering Organizations

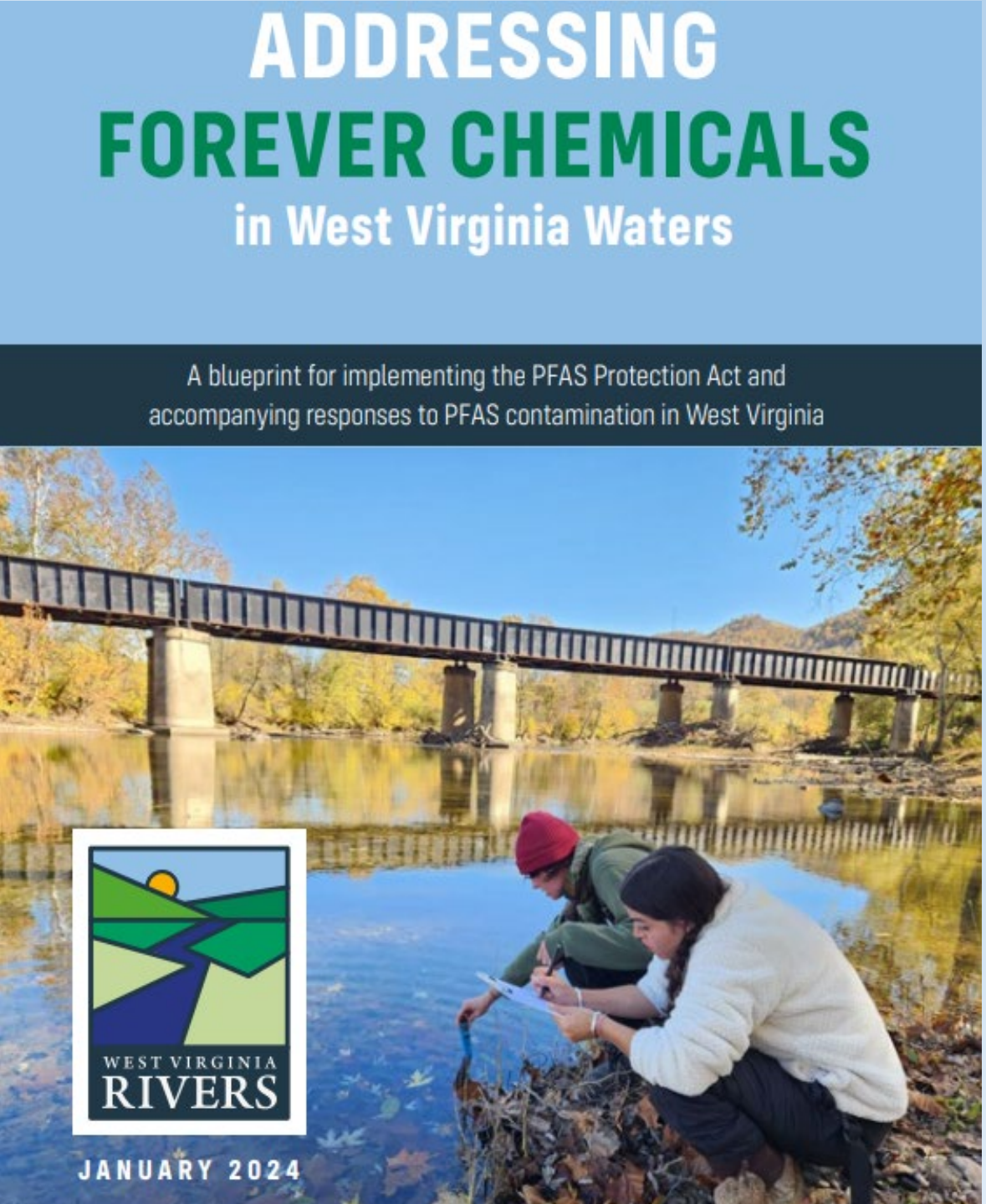
1. Shepherdstown Shares
2. Robert C. Byrd Center for Congressional History and Education at Shepherd University
3. Potomac Valley Audubon Society
4. Potomac Riverkeeper Network
5. Miss Tiffany's Childhood Education House
6. Ohio Valley Environmental Advocates
7. Jefferson County Vision
8. Jefferson County NAACP
9. Jefferson County Health Department
10. Berkley County Solid Waste Authority
11. Town of Harpers Ferry
12. Fairshake Environmental Legal Services
13. Elks Run Watershed Group
14. Eastern Panhandle Chapter of Sierra Club
15. Eastern Panhandle Green Coalition
16. Eastern Panhandle Central Labor Council, AFL-CIO
17. Downstream Project
18. Defensoras de la Cuenca
19. Blue Ridge Watershed Coalition

WEST VIRGINIA RIVERS

Activities

- Research innovative and inclusive methods of community engagement
- Convene a design committee with project partners
- Solicit input on community engagement process design
- Education and outreach to community members
- Use local knowledge to determine possible sources of PFAS

WEST VIRGINIA RIVERS



PFAS Protection Act Implementation

WV Rivers Coalition published a PFAS Blueprint, which provides considerations for WVDEP in the implementation of the PFAS Protection Act.

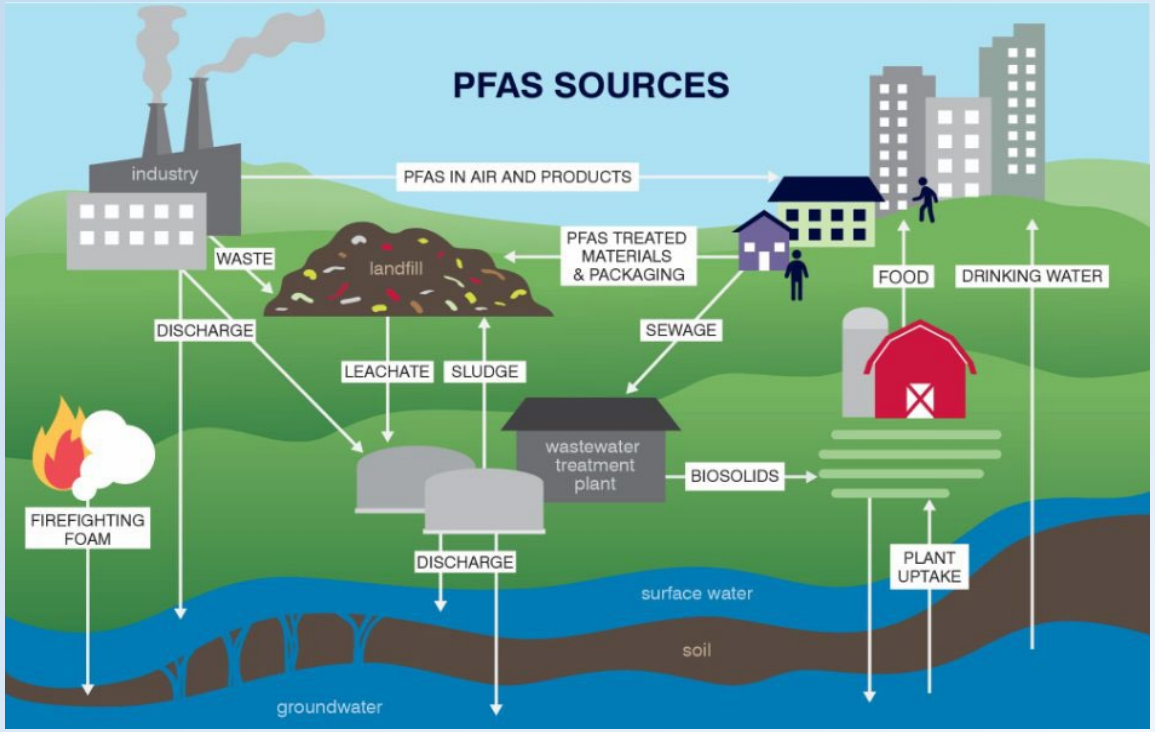
The sections include:

- An Introduction to PFAS
- Developing PFAS Action Plans
- Policy Recommendations
- Stakeholder & Community Engagement

WEST VIRGINIA RIVERS

Community Engagement Process

- Deploy Community Ambassadors
- Education and Outreach in the Communities
  - Film screenings
  - Child care provided
- Host Community Meetings
- Evaluate Effectiveness
- Tweak process if needed
- Replicate in other communities



WEST VIRGINIA RIVERS

QUESTIONS?

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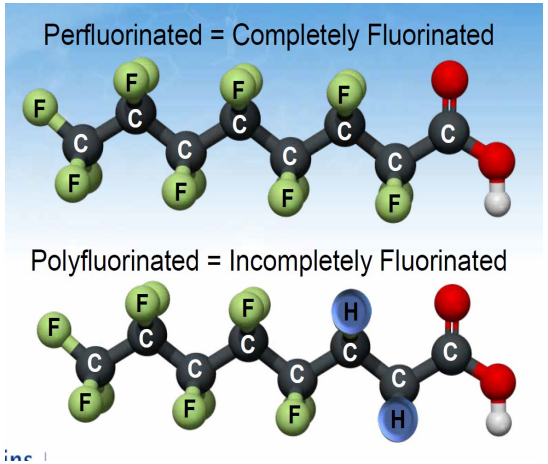
Maryland
Department of
the Environment

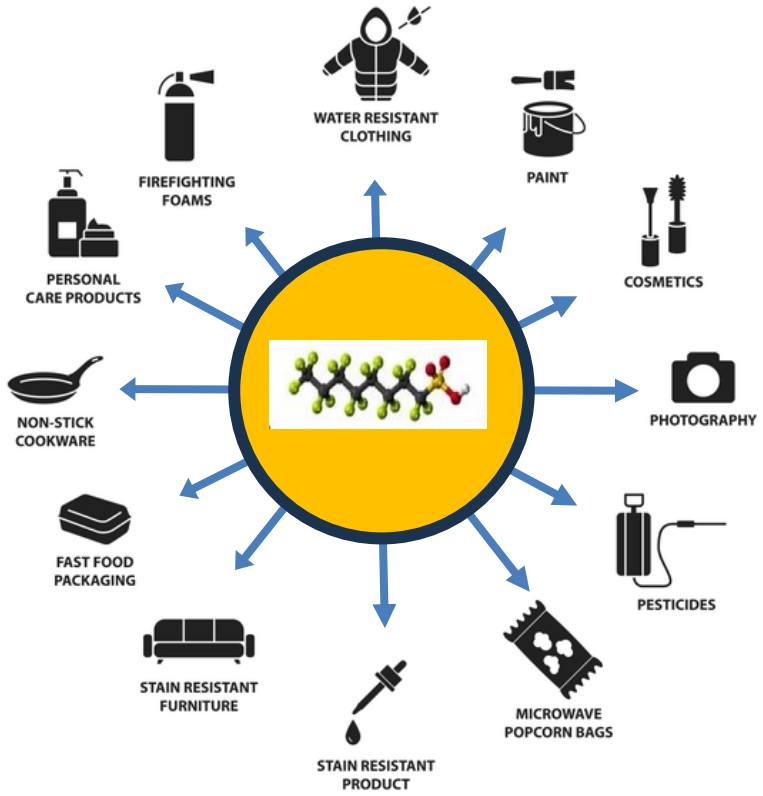
Maryland WWTP PFAS Survey



EPA Mid-Atlantic Region 2024 Virtual Summit

May 16, 2024

PFAS – THE "FOREVER CHEMICALS" USED IN DAILY LIVES



7,000 Human-Made Compounds

Heat-Resistant/Flame Retardant

Oil/Grease-Resistant

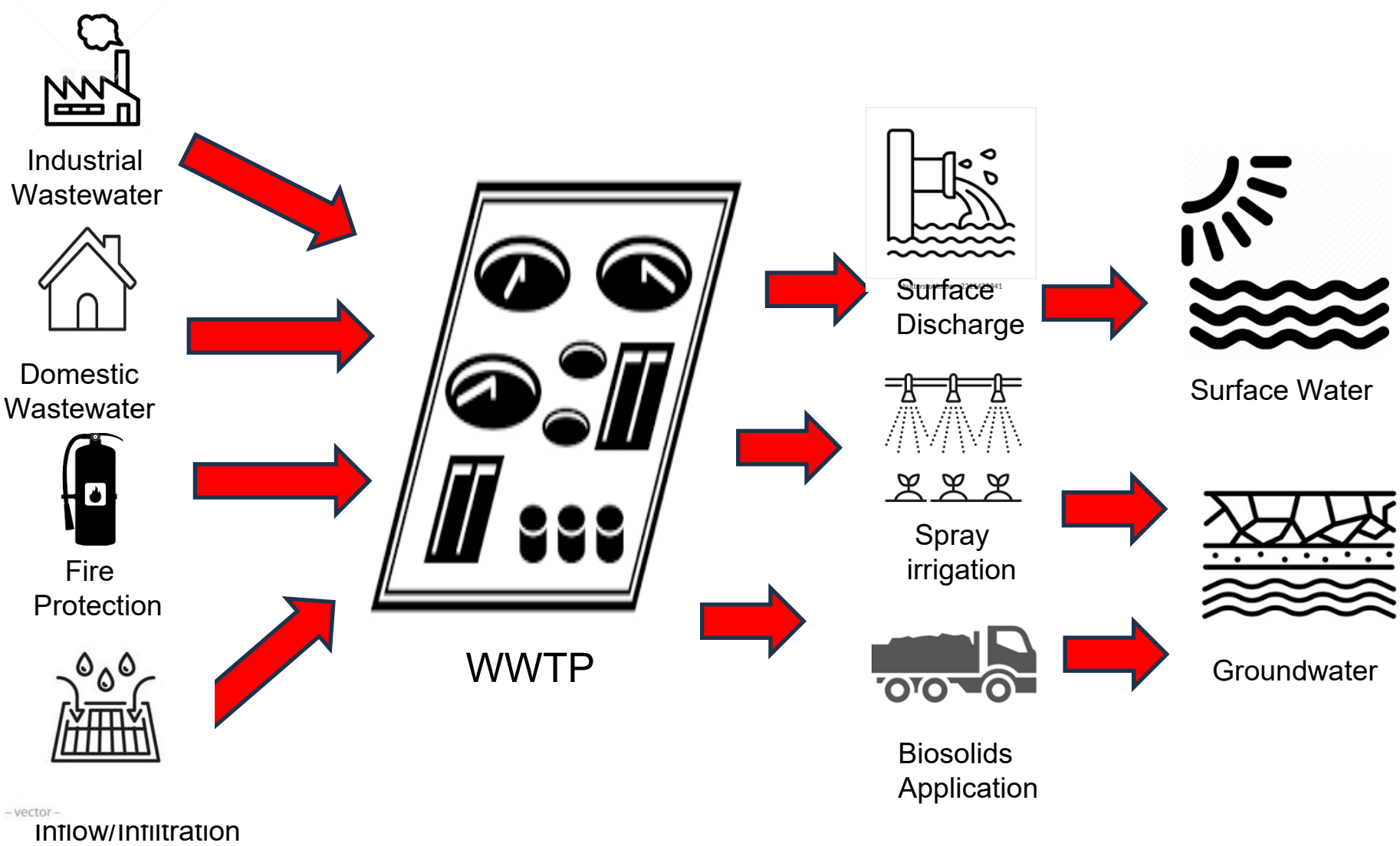
Water-Resistant

Highly Resistant to Degradation

Persistent in the Environment

PFOA and PFOS are terminus and stable end products

WWTP – A CRITICAL CONDUIT FOR THE PFAS ENTRY INTO THE ENVIRONMENT



FACILITY SELECTION CRITERIA FOR THE SURVEY

- Facilities receive wastewater from significant industrial users (SIU) whose production processes are potentially linked to PFAS.
- Facilities plan to reuse treated wastewater effluent as the source of potable water.
- Facilities implementing new sludge management and treatment processes that may potentially elevate PFAS levels in the effluent and biosolids.
- Facilities with practices, including effluent discharge and/or sludge disposals, that may directly impact the safety of water supply or agricultural/aquaculture products will be subject to increased scrutiny.

GOALS & APPROCHES

- Understand the levels and distribution of PFAS congeners within the treatment works of MD POTWs.
- Determine the **M**edian **B**aseline **L**evel (**MBL**) for PFAS chemicals for MD POTWs.
- Use the **MBL** as the benchmark to identify facilities with higher potential risks.
- Based on the evaluation, additional **monitoring requirements** and **future action plans** (for source tracking and mitigation) will be implemented in the NPDES discharge permit for facilities with higher risks.

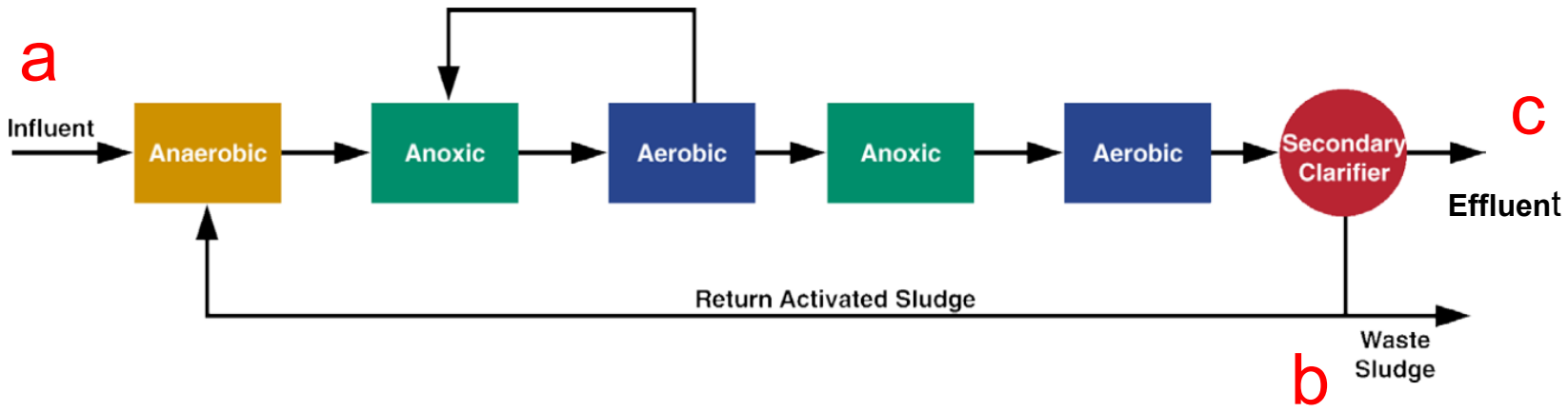
SAMPLE COLLECTION PHASES IN THE SURVEY

	# of sampling events	# of facilities	Comments
Volunteer (01/2020-)	**35**	**21**	1. Samples were collected by Utilities at the request of MDE for self-evaluation or during the permit renewal process. Most samples were collected at effluent and biosolids. 2. Analytical methods were EPA 533, 537.1 or 537M
MDE Round 1 (10/2022-04/2023)	**16**	**12**	1. Focus on facilities receiving flow from IU with activities that may produce PFAS containing wastewater. 2. Samples were collected at influent, effluent, flow recycle, and biosolids. 3. Some facilities were sampled twice to clarify/confirm results observed in the first sampling event. 4. Analytical Method (EPA 537M)
MDE Round 2 (04/2023-08/31/2023)	**69**	**69**	1. Focus on facilities that generate Class B biosolids or practice spray irrigation for effluent disposal. 2. Samples were collected at influent, effluent, and biosolids 3. Analytical Method (EPA1633)
Total	**120**	**102**	

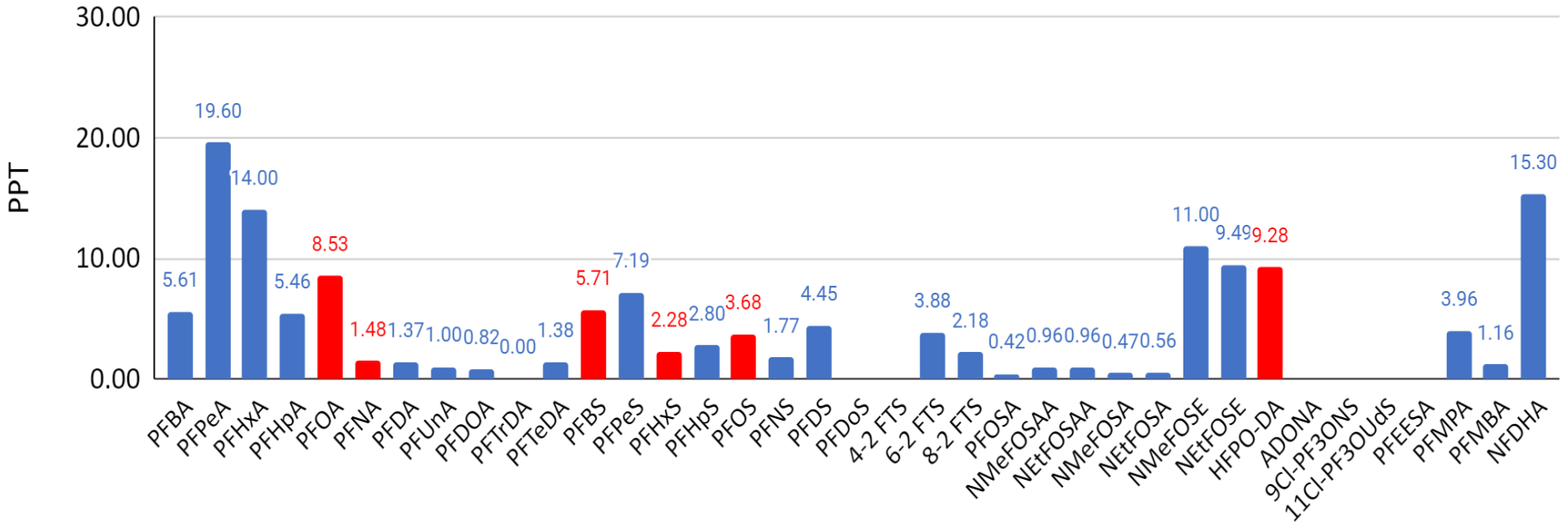
PFAS SAMPLE LOCATIONS IN WWTP

Establish PFAS baselines – “composite grab” samples taken from:

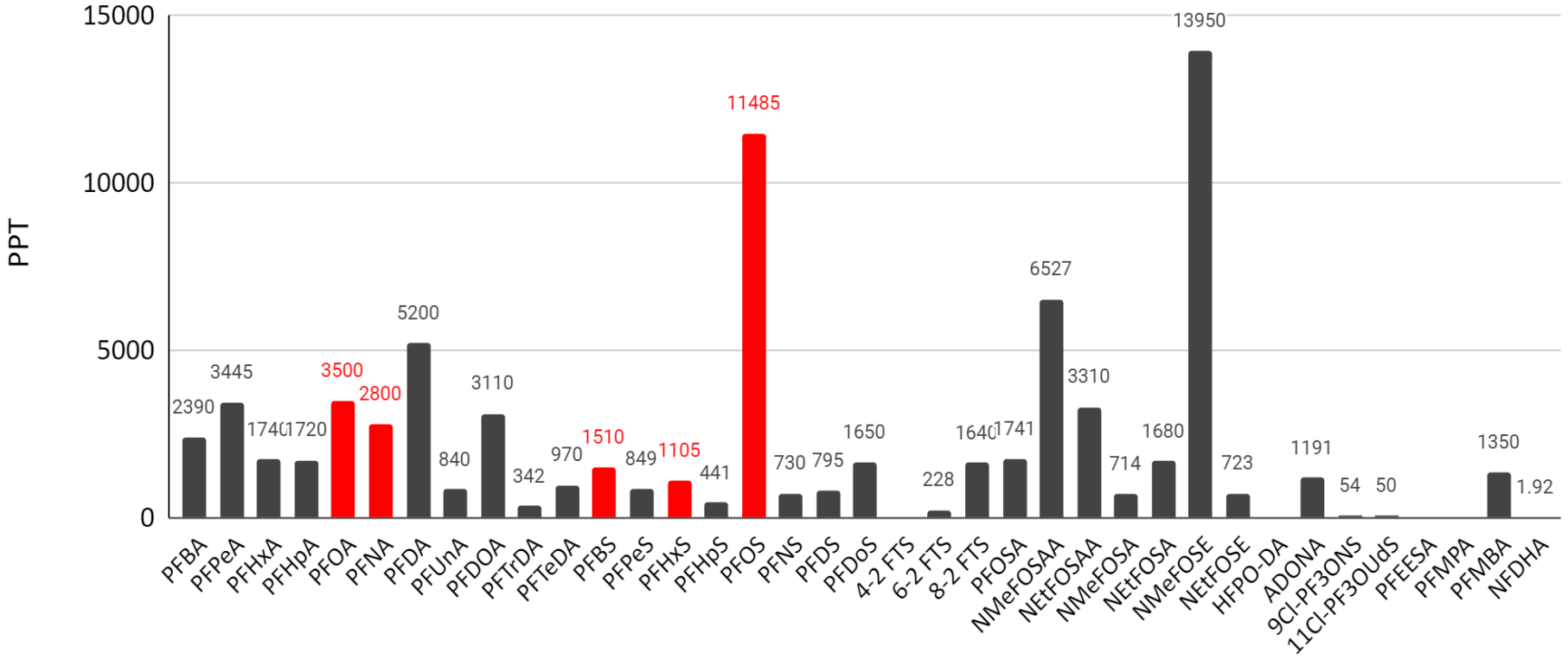
a. Influent
b. Sludge
c. Effluent



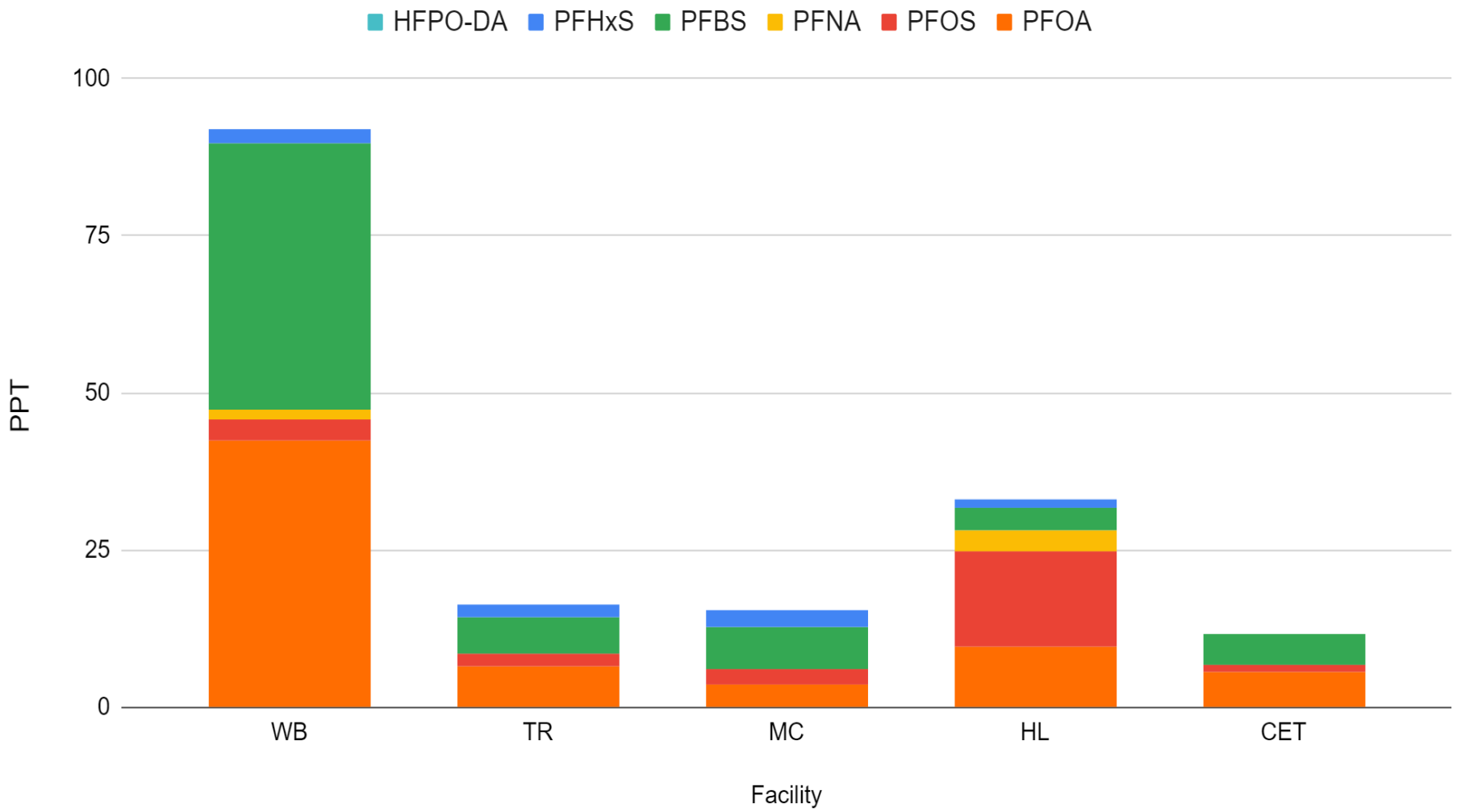
MD WWTP PFAS “MBL” – EFFLUENT



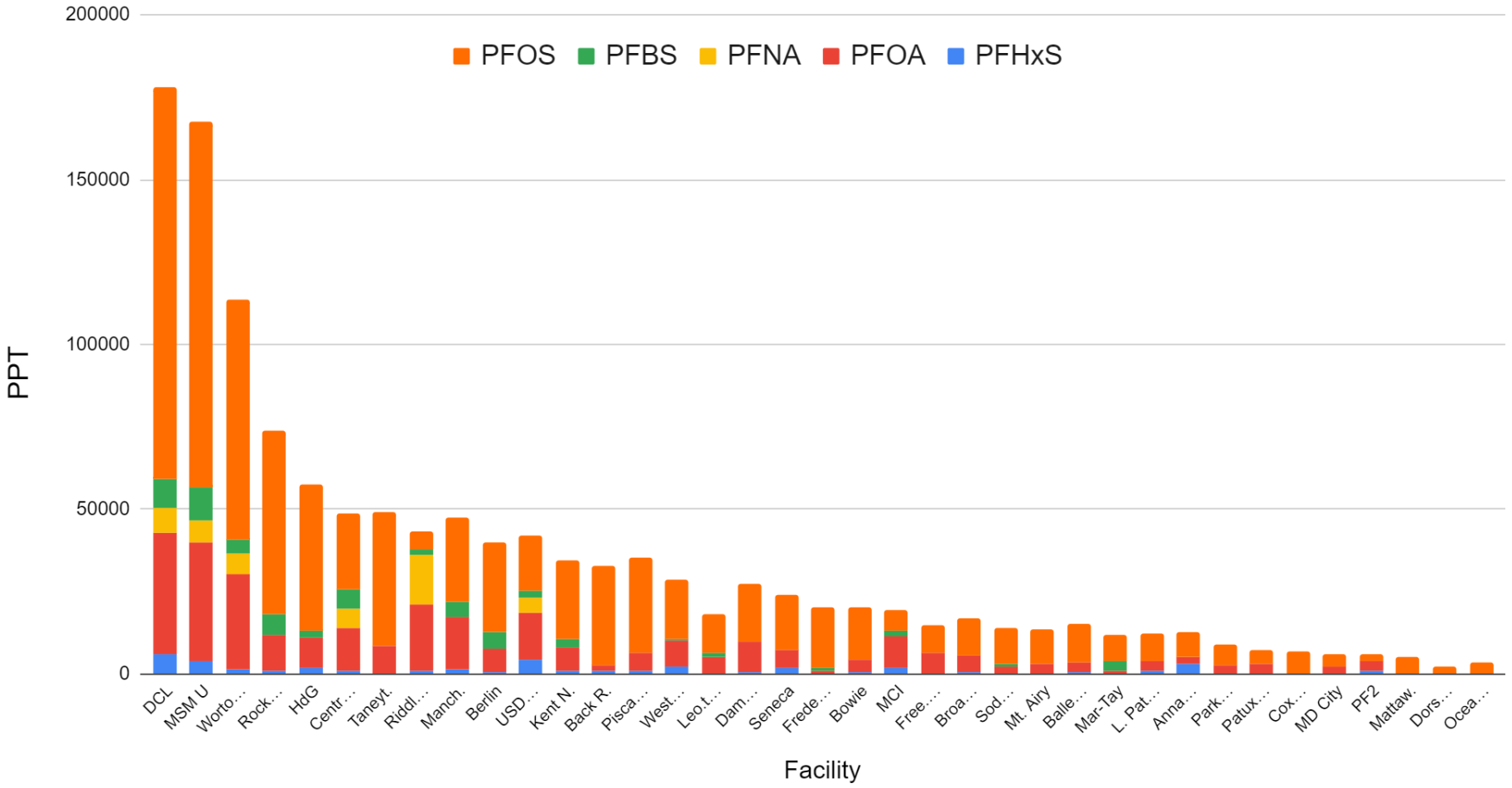
MD WWTP PFAS “MBL” - BIOSOLIDS



“NPDWR” REGULATED PFAS CONGENERS IN EFFLUENT FROM POTW WITH THE SPRAY IRRIGATION PRACTICES



NPDWR REGULAT PFAS CONGENERS IN CLASS-B BIOSOLIDS PRODUCED BY MD POTWs



NEW REQUIREMENTS IN THE DISCHARGE PERMITS

1. Based on the results of the Maryland PFAS survey, facilities in Maryland with discharge practices that may potentially impact the designated use of the receiving waters are required to conduct additional monitoring and source tracking.

2. To date, PFAS monitoring requirements have been incorporated into 16 NPDES permits issued to municipal wastewater treatment plants (WWTPs) in Maryland, with additional permits expected. Each facility must also prepare an 'Action Plan' to track and mitigate the sources of PFAS entering the treatment works if the PFAS levels in the collected samples exceed the goals or criteria set by the Maryland Department of the Environment (MDE) or the EPA.

3. A minimum of four quarterly monitoring samples are required to be collected from the treatment works, including influent, effluent, and biosolids. Additional sample collections from groundwater monitoring wells will be necessary if the facility practices spray irrigation.

NEXT STEP – SIU SOURCE TRACKING & MITIGATION

HB1153 & SB0956 - MILESTONES	
9/1/2024	THE DEPARTMENT SHALL, IN COLLABORATION WITH POTW AND SIGNIFICANT INDUSTRIAL USERS IN THE STATE, **IDENTIFY THE SIGNIFICANT INDUSTRIAL USERS THAT CURRENTLY AND INTENTIONALLY USE PFAS CHEMICALS**
1/1/2025	THE DEPARTMENT SHALL **DEVELOP PFAS MONITORING AND TESTING PROTOCOLS FOR SIGNIFICANT INDUSTRIAL USERS IDENTIFIED**
6/1/2025	THE DEPARTMENT SHALL COLLABORATE WITH THE PUBLICLY OWNED TREATMENT WORKS. **DEVELOP PFAS ACTION LEVELS FOR ADDRESSING PFAS CONTAMINATION FROM INDUSTRIAL DISCHARGE FOR PRETREATMENT PERMITS.**
9/1/2025	**MEASURE THE LEVELS OF ORGANIC FLUORINE PFAS CHEMICALS IN ITS INDUSTRIAL WASTEWATER** USING METHODS APPROVED BY THE DEPARTMENT
7/1/2026	**IMPLEMENT MEASURES TO REDUCE PFAS CHEMICALS FROM WATER DISCHARGED TO A POTW**

CONTACT INFORMATION

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