

2023 ANNUAL REPORT

# POTOMAC RIVER BASIN DRINKING WATER SOURCE PROTECTION PARTNERSHIP

A COALITION OF WATER UTILITIES AND STATE,  
INTERSTATE, AND FEDERAL AUTHORITIES  
WORKING TOGETHER TO AMPLIFY REGIONAL  
SOURCE WATER PROTECTION SINCE 2005.



Coordinated by the Interstate  
Commission on the Potomac  
River Basin

[WWW.POTOMACDWSPP.ORG](http://WWW.POTOMACDWSPP.ORG)

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# MESSAGE FROM THE CO-CHAIRS

**DWAYNE ROADCAP, VIRGINIA  
DEPARTMENT OF HEALTH &  
KISHIA L. POWELL, WSSC WATER**

Everyone needs clean, safe, and affordable drinking water regardless of geography. The Potomac River is a water source shared by millions in the region, and protecting it is a significant responsibility. For more than 19 years, the Potomac River Basin Drinking Water Source Protection Partnership (DWSP) has assembled a group of professionals dedicated to this mission.

In 2023, we faced regional drought conditions, and members of the DWSP responded with collaborative efforts to share information, monitor water levels, and communicate with various stakeholders. This level of cooperation has been essential in tackling watershed threats of all types — per- and polyfluoroalkyl substances (PFAS), salt and de-icing materials, microplastics and other pollutants that pose public health risks.

We greatly appreciate the leadership of the Interstate Commission on the Potomac River Basin (ICPRB) and thank all our partners for their participation and support. In 2024, we look forward to continuing the legacy of source water protection that has defined this group and is serving to safeguard this vital water source.



# PFAS VARIABILITY IN THE POTOMAC RIVER

Members of the DWSPP were awarded funding from The Water Research Foundation's Tailored Collaboration program to address critically important research for "Understanding the Factors Affecting PFAS Variability in the Potomac River Watershed."

## PROJECT DESIGN AND OBJECTIVES

Starting in 2024, this project will address the region's goal to discern the prevalence, levels of PFAS, and factors that affect PFAS variability in the region's primary source water.

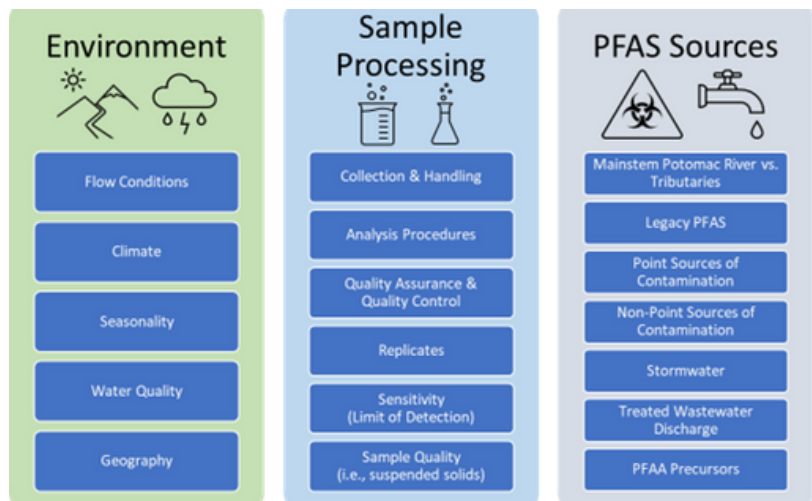
The project will consist of four research tasks:

- Identify and prioritize PFAS sampling locations;
- Measure PFAS and precursor concentrations in Potomac River samples over 12 months;
- Determine statistical relationships between PFAS/precursors compounds and factors (Figure below) responsible for variability; and
- Prioritize potential mitigation strategies and best management practices to limit PFAS contamination in the Potomac River.

The project team will host a series of workshops throughout the project, which will serve as a mechanism for the project team to communicate goals and milestones, share data and key findings, and receive guidance from key stakeholders.

## THE RESEARCH TEAM

Dr. Bradley Schmitz (Principal Investigator, Loudoun Water, and Contaminants of Emerging Concern workgroup chair), Dr. Priscilla To and Laura O'Donnell (co-PI, WSSC Water), and Dr. Christina Davis (co-PI, ICPRB) will collaborate with researchers from the Johns Hopkins University/Stantec Alliance and George Mason University.



## PARTICIPATING UTILITIES & ORGANIZATIONS

In addition, the project will include 8 other utility collaborators: DC Water (DC), Fairfax Water (VA), Town of Leesburg (VA), City of Hagerstown (MD), Washington Aqueduct (DC), Frederick County (MD), Berkeley County (WV), and City of Rockville (MD). The Metropolitan Washington Council of Governments is also contributing research funding and participating as a non-utility partner.





# EARLY WARNING & EMERGENCY RESPONSE

**WORKGROUP CHAIRS: JULIE KARCESKI, WSSC WATER & DOUG GRIMES, FAIRFAX WATER**

The Early Warning and Emergency Response workgroup coordinated with the US Environmental Protection Agency (EPA) to conduct a two-day oil spill exercise in October 2023. The first day consisted of case studies and practical demonstrations: booming around an intake, oil diversion techniques, etc.

On the second day, EPA ran multiple oil spill-based scenarios for a full-day tabletop exercise. Numerous utilities, government entities, and other technical experts from the region were in attendance. The EPA is writing an after action report, and recommendations will be incorporated into the regional spill response plan.

# REACHING OUT

**WORKGROUP CHAIR: VIRGINIA VASSALOTTI, EPA REGION 3**

The Reaching Out Workgroup (ROW) focuses on recruiting new members and providing educational outreach support to the DWSPP. In 2023, the ROW hosted a Small Systems Roundtable meeting in Romney, WV. This meeting focused on funding opportunities, emergency preparedness and response, and emerging contaminants. Additionally, the workgroup developed a social media guide for Source Water Protection Week, which is celebrated the last week in September.



## **SPECIAL THANKS TO LISA RAGAIN FOR HER LEADERSHIP!**

In 2023, Lisa stepped down from her workgroup chair role after 8 years. Over the years, she has helped the DWSPP stay updated on current source water protection issues and keep connected with key partners. The DWSPP appreciates her passion, creativity, and leadership as the workgroup chair, and is thankful to still have her participate as a workgroup member.







# CONTAMINANTS OF EMERGING CONCERN

**WORKGROUP CHAIR: BRADLEY SCHMITZ, LOUDOUN WATER**

## **PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)**

Members of the workgroup submitted a proposal and were awarded funding from the Water Research Foundation's Tailored Collaboration program to determine the factors affecting PFAS variability in the Potomac River (see project summary on page 3).

## **MICROPLASTICS**

ICPRB published a whitepaper titled "[Considerations for monitoring microplastics in the non-tidal Potomac River](#)." Loudoun Water and ICPRB partnered to collect samples along the Potomac River, which were sent to Rutgers University for analysis. These preliminary results will provide the region with a 'first glimpse' of potential microplastic pollution in the Potomac River and may serve as the centerpiece for considering further research/analysis of microplastics in the watershed.

## **UNREGULATED CONTAMINANT MONITORING RULE (UCMR5)**

Many utilities in the region have begun collecting and processing samples for 29 PFAS compounds and lithium. Only a small number of sample results are currently available, and many utilities have not yet initiated sampling. Starting in 2024, summaries of Potomac River Basin water utility monitoring results will be prepared and distributed, along with summary statistics.

# AGRICULTURAL ISSUES

## WORKGROUP CHAIR: PAM KENEL, LOUDOUN WATER

In 2023, the Agricultural Issues workgroup continued its partnership with state Natural Resources Conservation Service (NRCS) offices.

In Maryland, ICPRB prepared updated watershed assessments for Upper, Middle, and Lower Little Pipe Creek watersheds in Frederick and Carroll Counties as part of the National Water Quality Initiative (NWQI). Pipe Creek watersheds were recommended for the implementation phase in 2024. Additionally, in partnership with Maryland Department of the Environment (MDE) and EPA Region 3, MD NRCS expanded

priority source water protection watersheds from about 5% of the state to over 25% of the state, incentivizing farmers and producers in these watersheds to implement priority agricultural conservation practices.

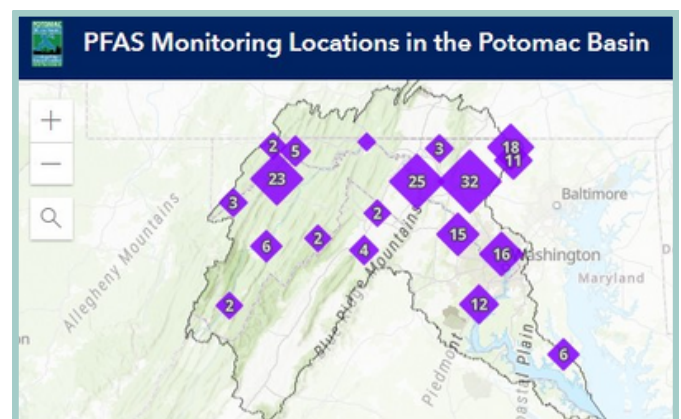
In West Virginia and Virginia, the workgroup continued dialogue with State Conservationists and State Technical Committees to identify priority source water protection watersheds. The workgroup continues to explore opportunities to leverage the [Land Prioritization Project and Map](#) to advance land conservation.

# WATER QUALITY

## WORKGROUP CHAIR: NIFFY SAJI, FAIRFAX WATER

The [PFAS in the Potomac River Basin website](#) and [interactive monitoring map](#) were published in April 2023. It provides background and current information for PFAS in the Potomac River Basin, including a review of federal regulations and the regulatory status in each state in the basin: Virginia, Maryland, Pennsylvania, and West Virginia. The interactive monitoring map provides sampling locations for PFAS in the Potomac River Basin.

The Water Quality workgroup also updated the utility laboratory capabilities spreadsheet. This spreadsheet contains a list of source water parameters for which utilities collect data and/or possess analytical capabilities.



# URBAN & INDUSTRIAL ISSUES

**WORKGROUP CHAIR: GREG PRELEWICZ, FAIRFAX WATER**

## CLEAN WATER ACT TOOLS

Applying Clean Water Act tools and resources to protect the source is one of the top priorities of this workgroup. The Urban and Industrial Issues workgroup continued its long-standing practice of tracking and commenting on regional NPDES permits. At February's quarterly meeting, Rebecca Christopher, US EPA discussed federal efforts to address PFAS through NPDES permitting.

## EMERGING CONTAMINANTS (PFAS & SALINIZATION)

The workgroup demonstrated the use of a consistent methodology to find PFAS source information using EPA ECHO, WaterSuite, and PFASProject.com. An example, applying this approach for UCMR5 PFAS source information, is available to DWSPP members.

The workgroup is collaborating with the Water Research Foundation PFAS Project team and EPA Region 3 to consider how to use information on regional land use, potential PFAS sources, and hydrology, together with GIS tools and on-the-ground river knowledge, to select representative sites for sampling PFAS.

Workgroup members initiated and continued conversations with EPA about the need for PFAS monitoring at CERCLA sites in the Potomac River Basin.

On many levels and with many partners, workgroup members contributed to ongoing efforts to reverse freshwater salinization from sources such as road salts (pictured below).





# ABOUT US

**Mission:** To serve as a cooperative and voluntary partnership working towards the goal of improved source water protection of the Potomac River in recognition of the vital role of the river in supplying drinking water to millions of people within the Potomac watershed and in support of the multi-barrier approach to safeguarding the drinking water supply for public health.



## Government Agencies

- District of Columbia Department of Energy & Environment
- Interstate Commission on the Potomac River Basin
- Maryland Department of the Environment
- Pennsylvania Department of Environmental Protection
- United States Environmental Protection Agency, Region 3
- United States Geological Survey
- Virginia Department of Environmental Quality
- Virginia Department of Health
- West Virginia Department of Health and Human Resources
- West Virginia Department of Environmental Protection

## Water Suppliers

- Berkeley County Public Service Water District, WV
- City of Frederick, MD
- City of Hagerstown, MD
- City of Rockville, MD
- Corporation of Harpers Ferry, WV
- DC Water
- Fairfax Water
- Frederick County, MD
- Loudoun Water
- Town of Leesburg, VA
- Town of Romney, WV
- Town of Shepherdstown, WV
- Washington Aqueduct
- Washington County, MD
- WSSC Water

## ONLINE LIBRARY

### DWSP Meetings - in 2023, quarterly meetings focused on different themes

- February 1 (virtual) - [Evaluating Sources & Mitigation of PFAS / PFAS and NPDES Permitting](#)
- May 3 (in-person and virtual) - Agricultural Efforts ([meeting minutes](#) and [presentations](#) available)
- August 2 (virtual) - [Spill Response](#)
- November 1 (in-person) - [Annual Meeting](#) (Strategic Conservation Plan, HABs, & Source Water in a Changing Climate, Tour at GMU Potomac Science Center)

### Special Events & Presentations in 2023

- May 9 - Small Systems Roundtable in Romney, WV
- September 24-30 - Source Water Protection Week
- Oct 24-25 - Oil Spill Exercise

Email  
[partnership@icprb.org](mailto:partnership@icprb.org)  
 to join DWSP!