PFAS in the Delaware River Basin: An Update from the DRBC

Public Webinar
June 15, 2026

Elizabeth Brown, Director of External Affairs & Communications
Jeremy Conkle, Ph.D., Senior Chemist/Toxicologist
Matthew Amato, Ph.D., Water Resource Scientist

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Welcome to the webinar!

Today's Agenda

- **Introduction & Logistics**
- PFAS Report Highlights
  - Key Findings
  - Web App Overview
  - Next Steps
- Stay Engaged
- Question & Answer session

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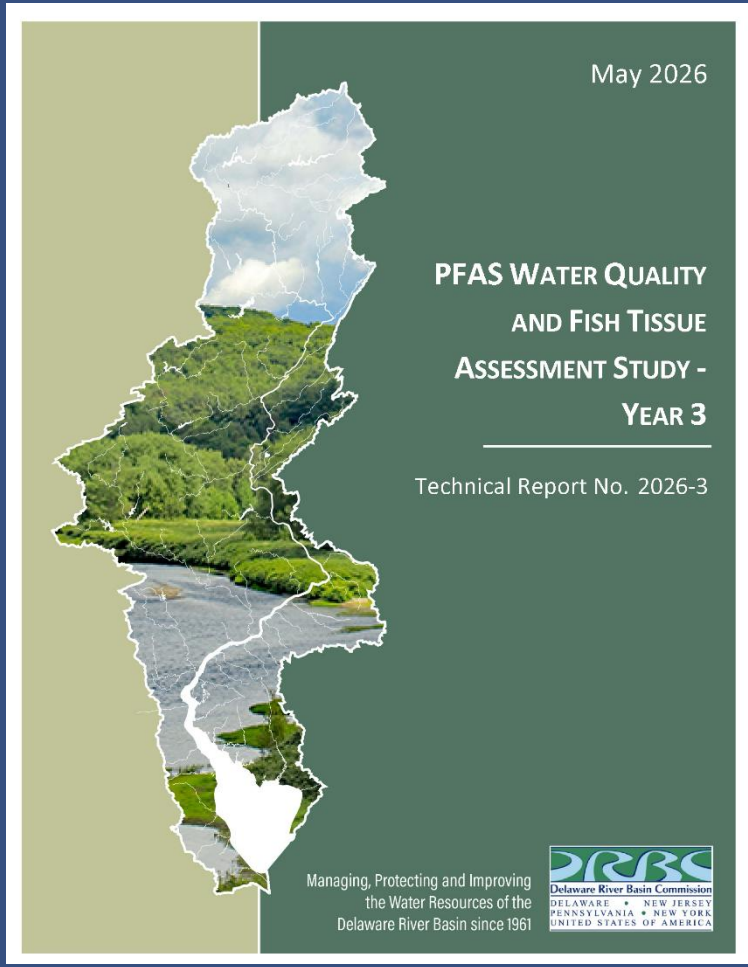
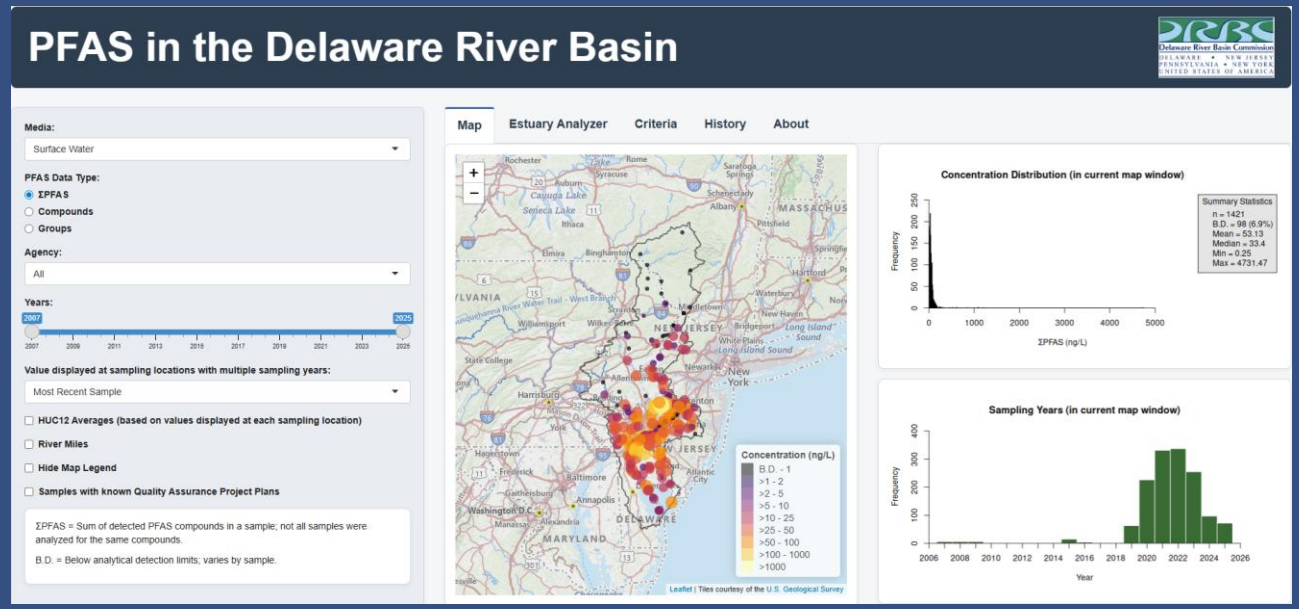
Today's Topic:
PFAS and the Delaware River Basin





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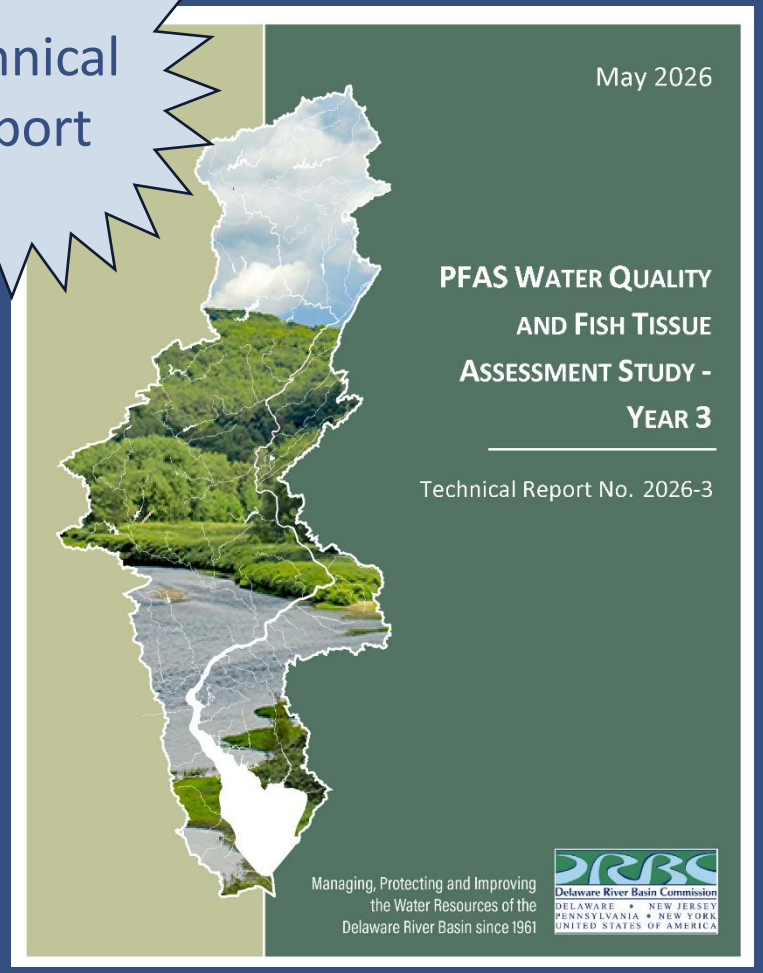
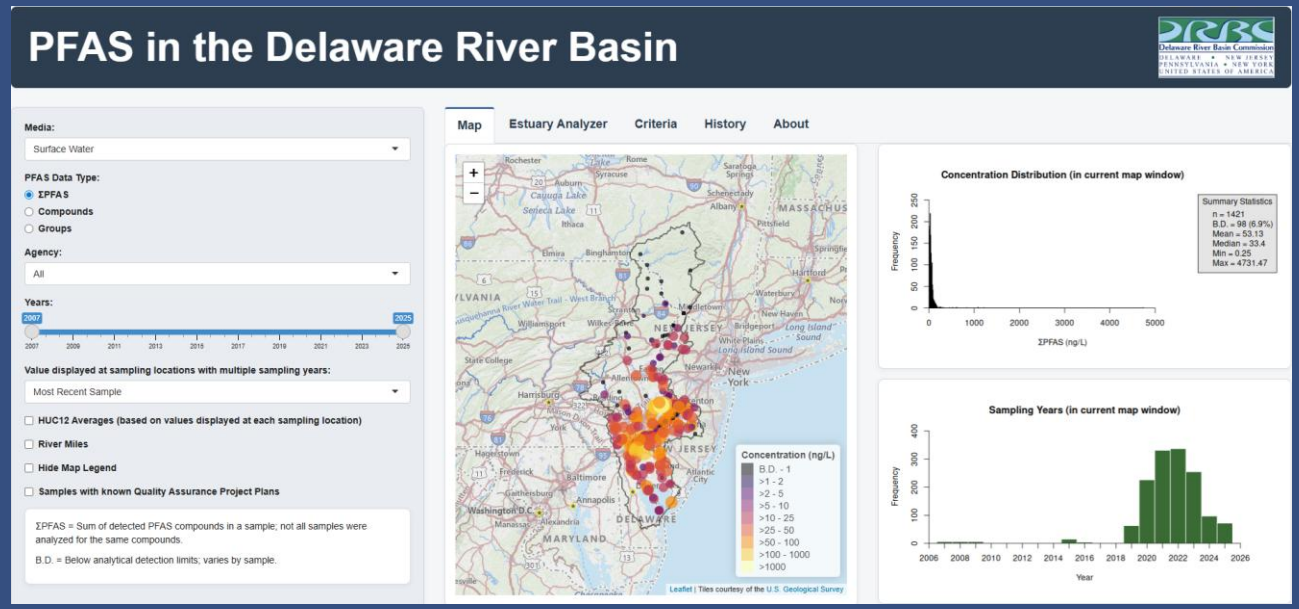
Technical Report





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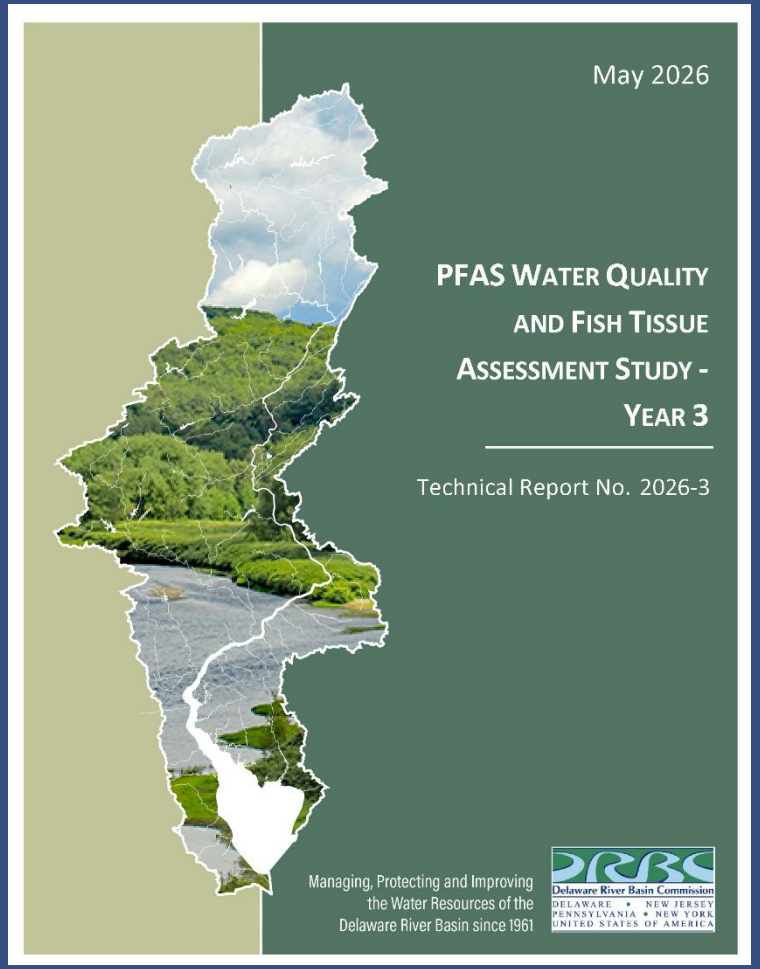
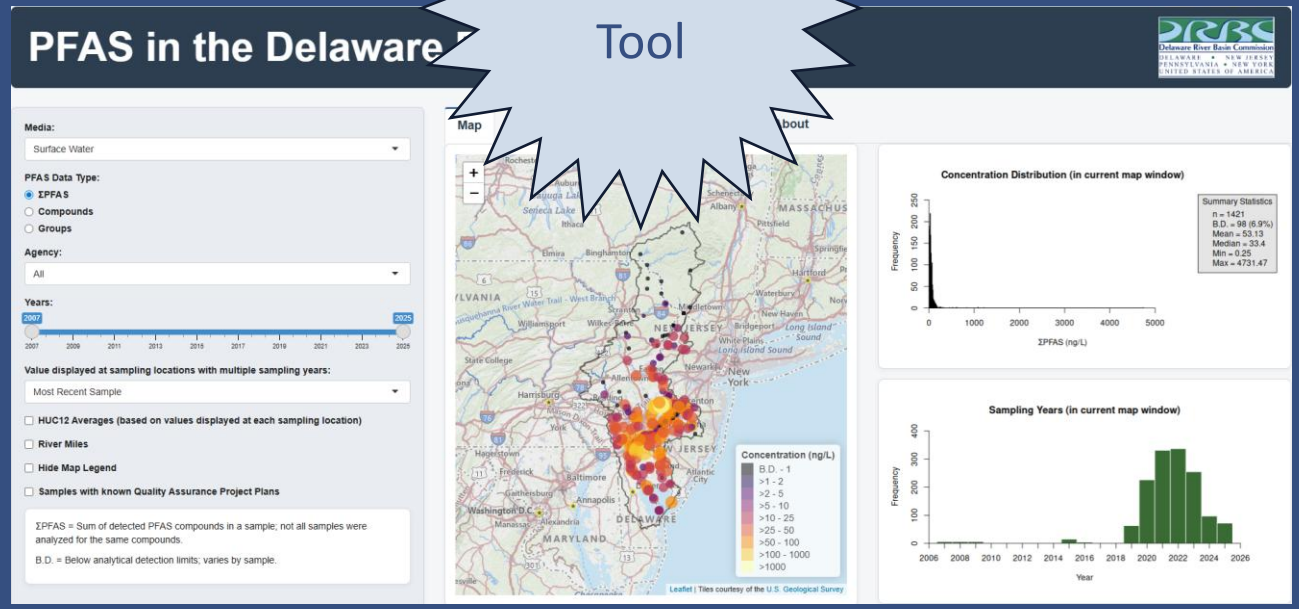
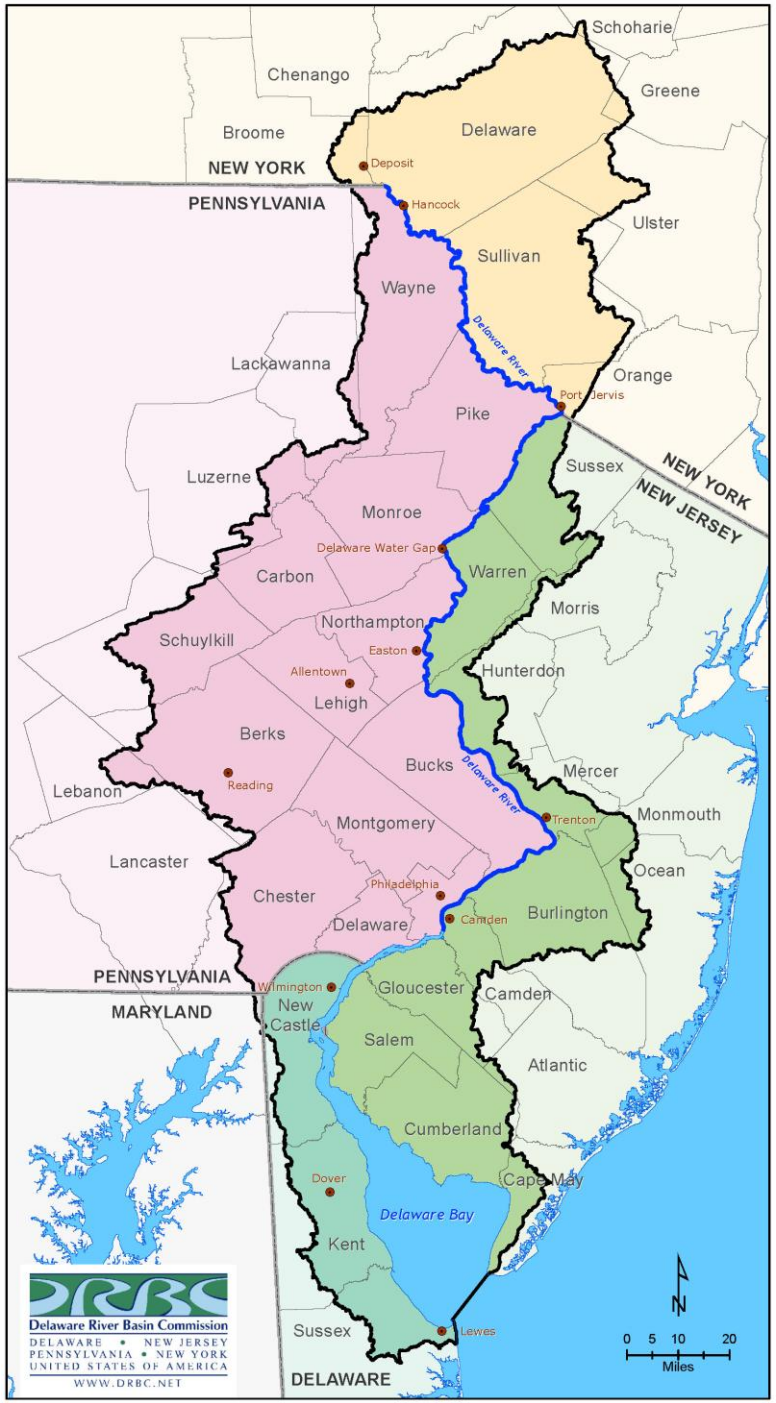


Interactive Tool



The Delaware River Serves over 14 million people in four states



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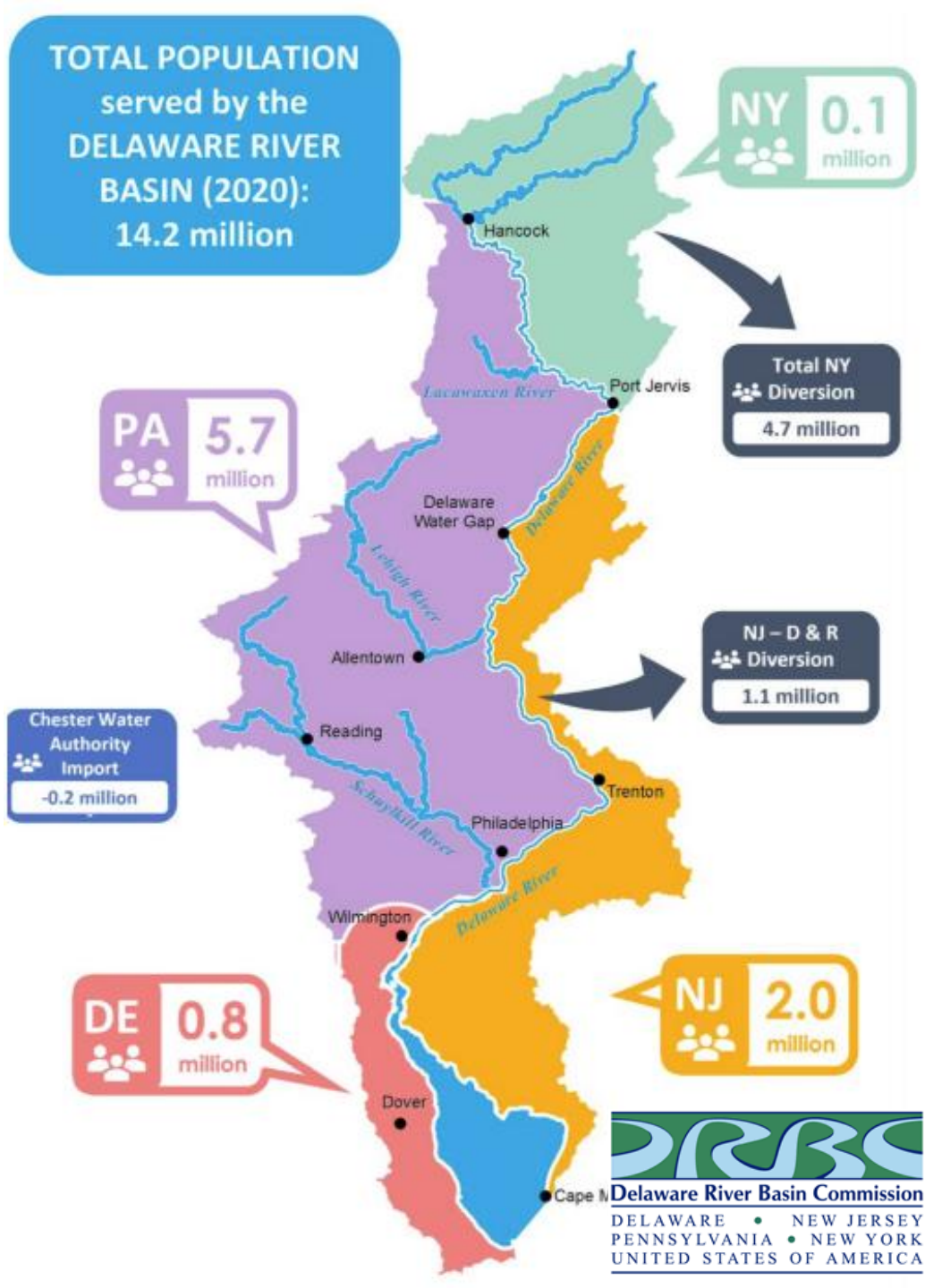
The Delaware River Basin is **highly managed** to meet competing needs

- 14+ million people
- $21+ billion in economic value
- 330-mile river
- Free-flowing mainstem
- Unique habitats & communities
- Interstate boundary



The Delaware River Basin Commission is a federal-interstate government agency

Our Mission

Manage, protect, and improve the water resources of the Delaware River Basin.

Our Vision

Provide trusted, effective, and coordinated management of the Basin's shared water resources.

DRBC focuses on PFAS as part of its water quality mission.

- Emerging contaminants
- Chlorides
- Bacteria
- Dissolved oxygen
- Cyanotoxins
- Macroinvertebrates

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Webinar Logistics

- Submitted questions
- Q&A at end
- Additional resources
- DRBC introduction

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PFAS WATER QUALITY AND FISH TISSUE ASSESSMENT STUDY - YEAR 3

Jeremy L. Conkle, Ph.D., Sr. Chemist/Toxicologist
Elaine Panuccio, Sr. Water Resource Scientist
Jacob Bransky, Sr. Aquatic Biologist

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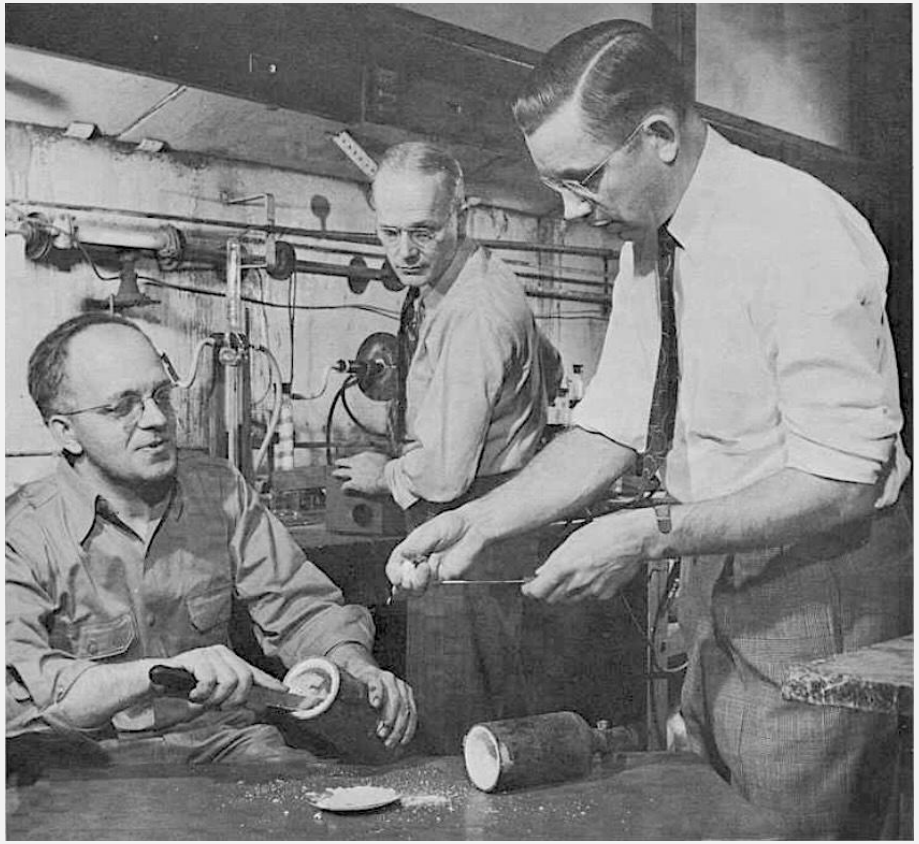
PFAS Started in the Delaware River Basin

THE DISCOVERY

An "Accident" Derived from Solid Research



DISCOVERY of fluorocarbon polymers in 1938 was made by Dr. Roy Plunkett (*right*),who holds the original patent. Technician Jack Rebok (*left*) helped. Chemist Robert McHarness did early fluorocarbon research. In photograph, Plunkett and Rebok re-enact the discovery at the Jackson Laboratory.

"The Wide World of Teflon"

E.I. du Pont de Nemours & Company, 1963

Hagley Museum & Library
Digital Archives

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PFAS: >13,000 Diverse Chemicals

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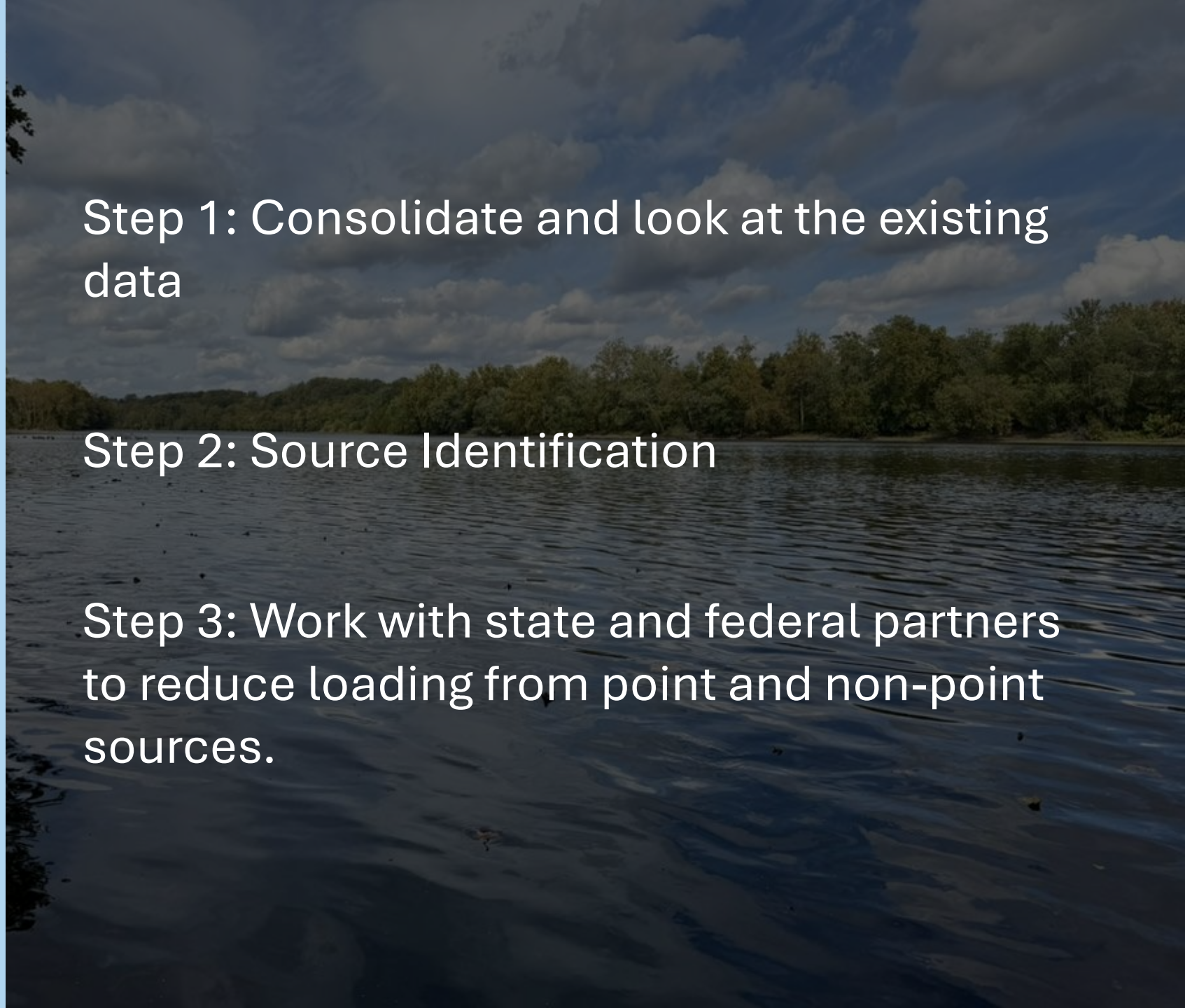
Pros

- ⊕ Extremely durable
- ⊕ Water/stain repellent
- ⊕ Non-stick/low friction
- ⊕ Smothering fires
- ⊕ Surfactants
- ⊕ Other industrial applications

Cons

- ⊖ Extremely durable
- ⊖ Ubiquitous
- ⊖ Mobile in water, but also sticky
- ⊖ Found in every human
- ⊖ Numerous health effects
- ⊖ Difficult/expensive to treat/remove

Long-term Goal: Reduce PFAS Loading to the Delaware River Basin



Step 1: Consolidate and look at the existing data

Step 2: Source Identification

Step 3: Work with state and federal partners to reduce loading from point and non-point sources.

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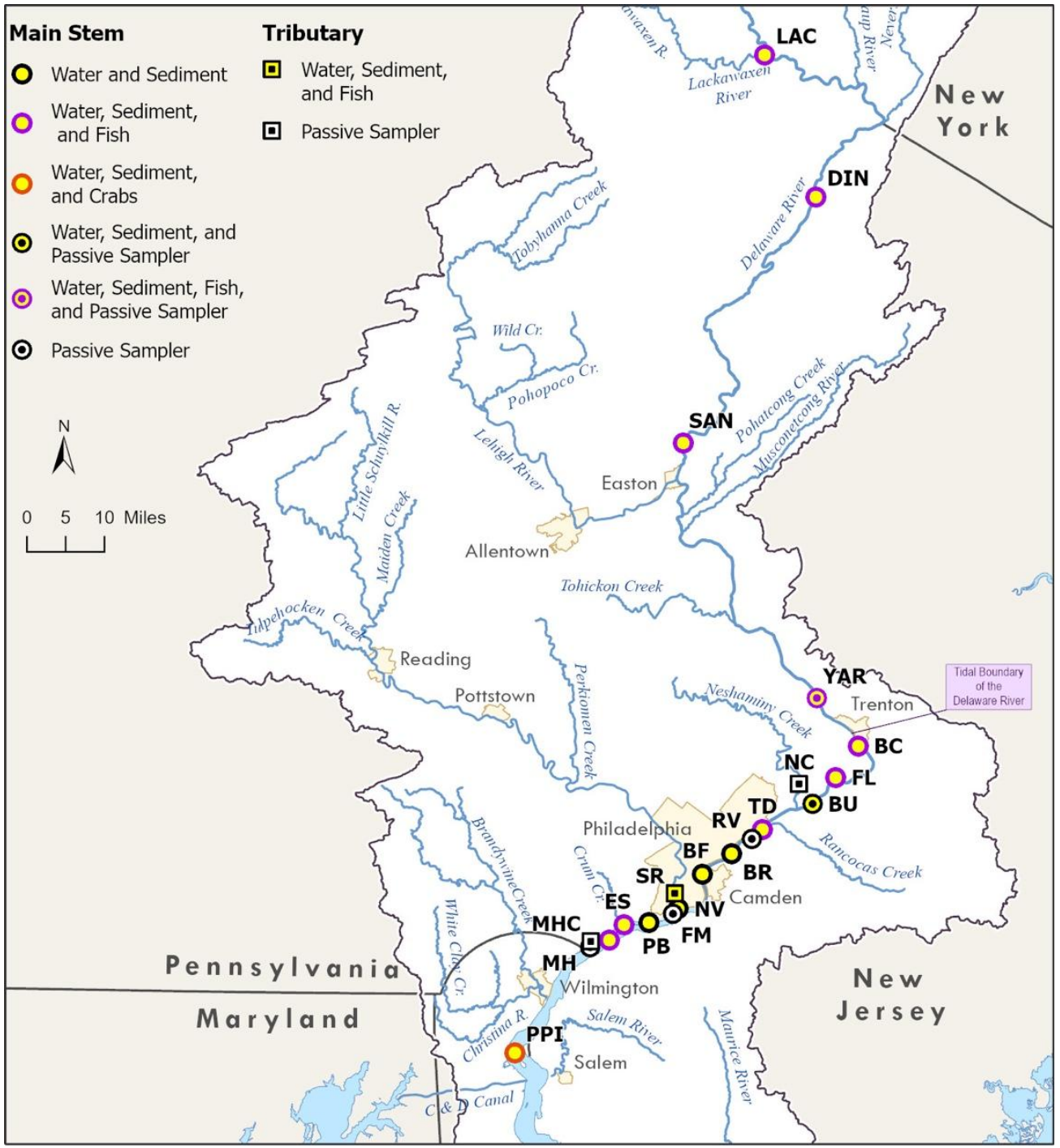
Multi-Matrix Sampling from Lackawaxen to Pea Patch Island



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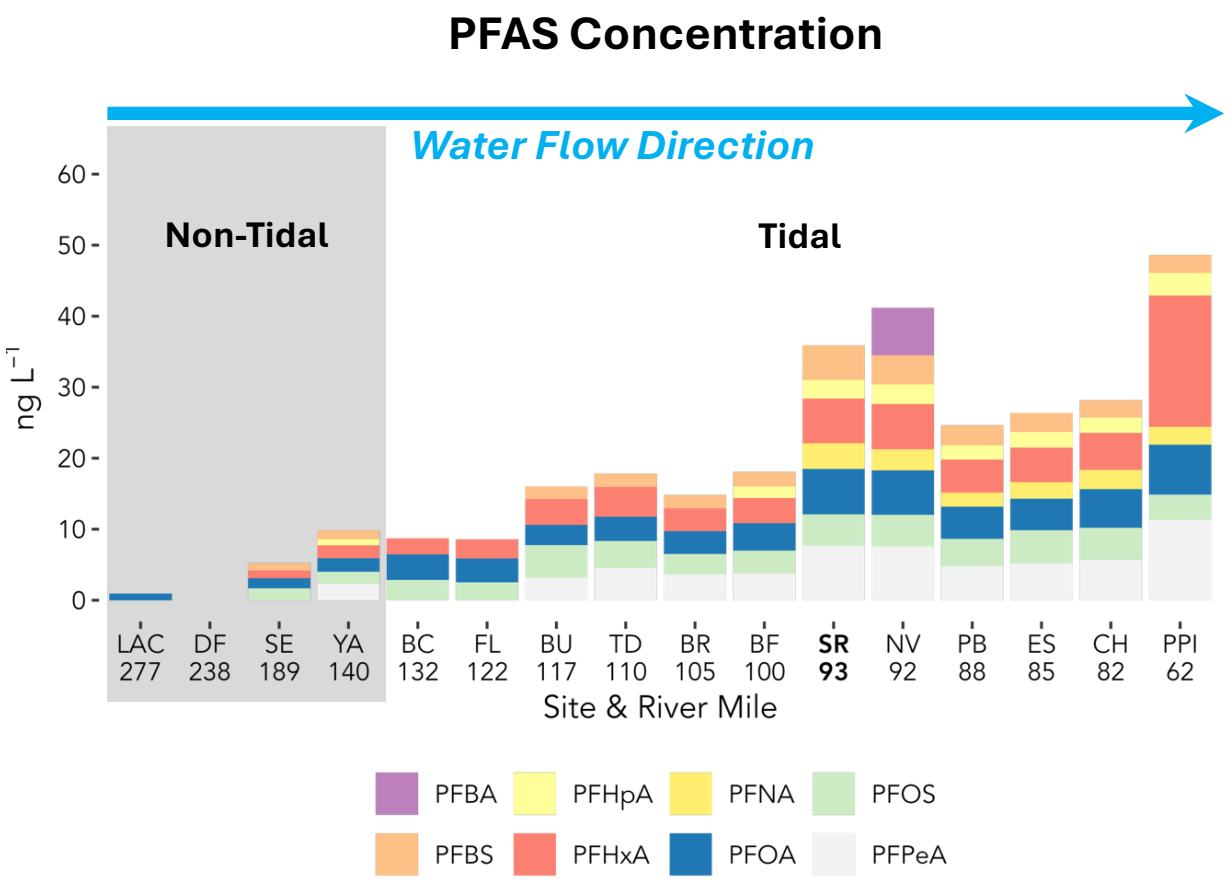
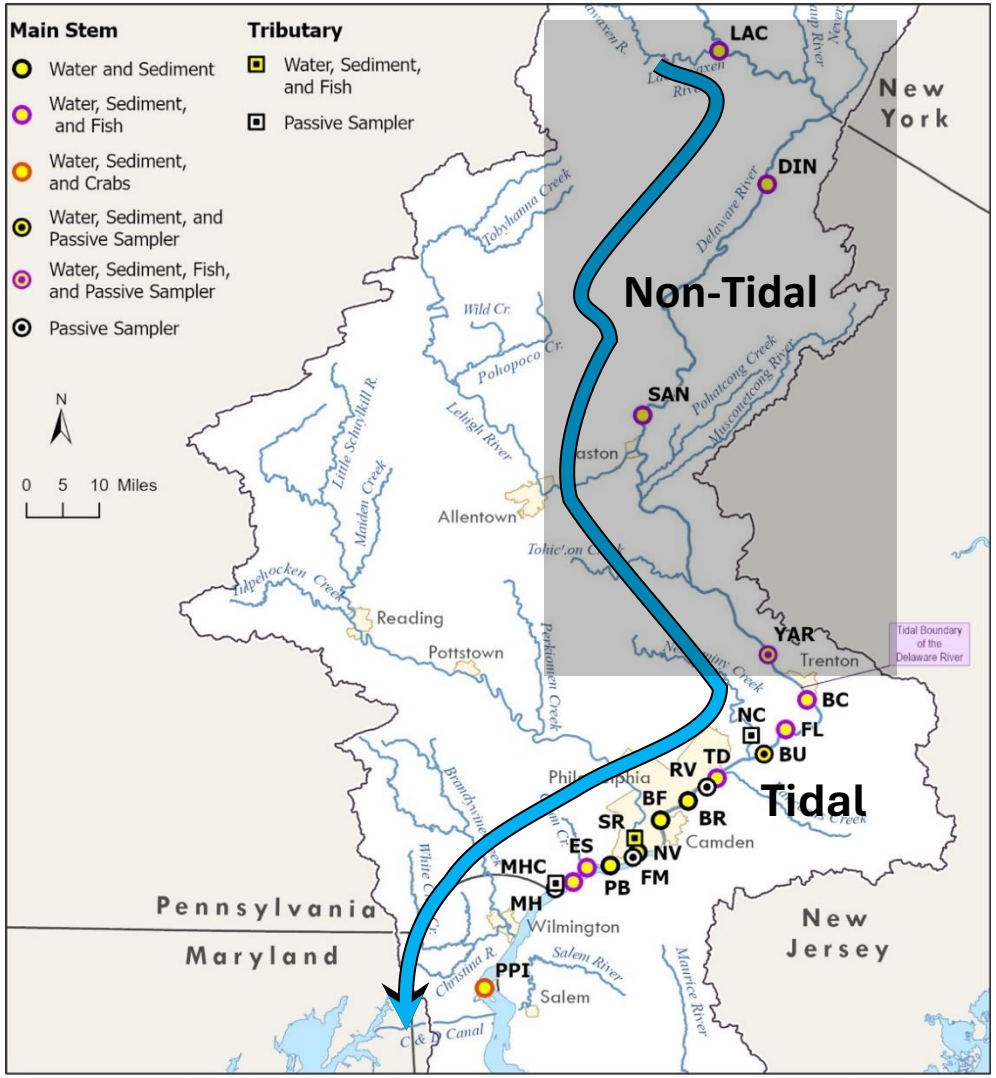
PFAS Increase Downstream





PFAS Mass Downstream

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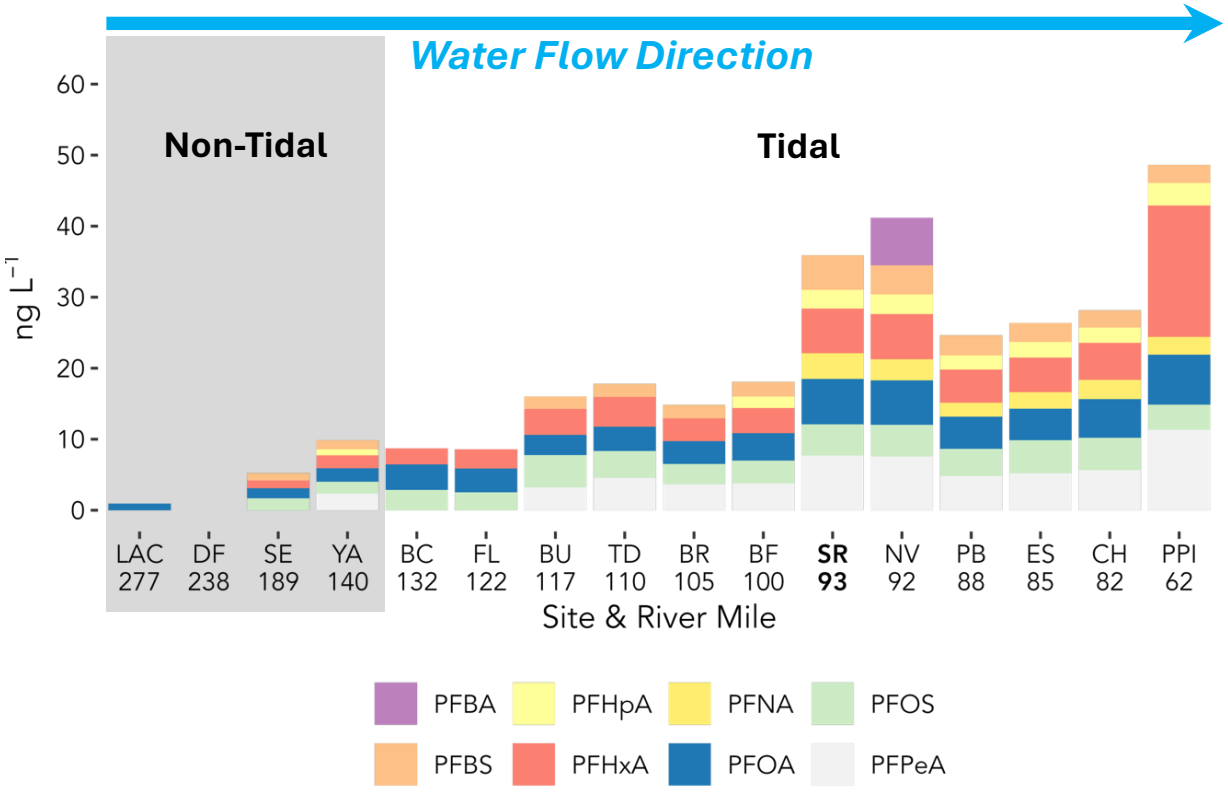
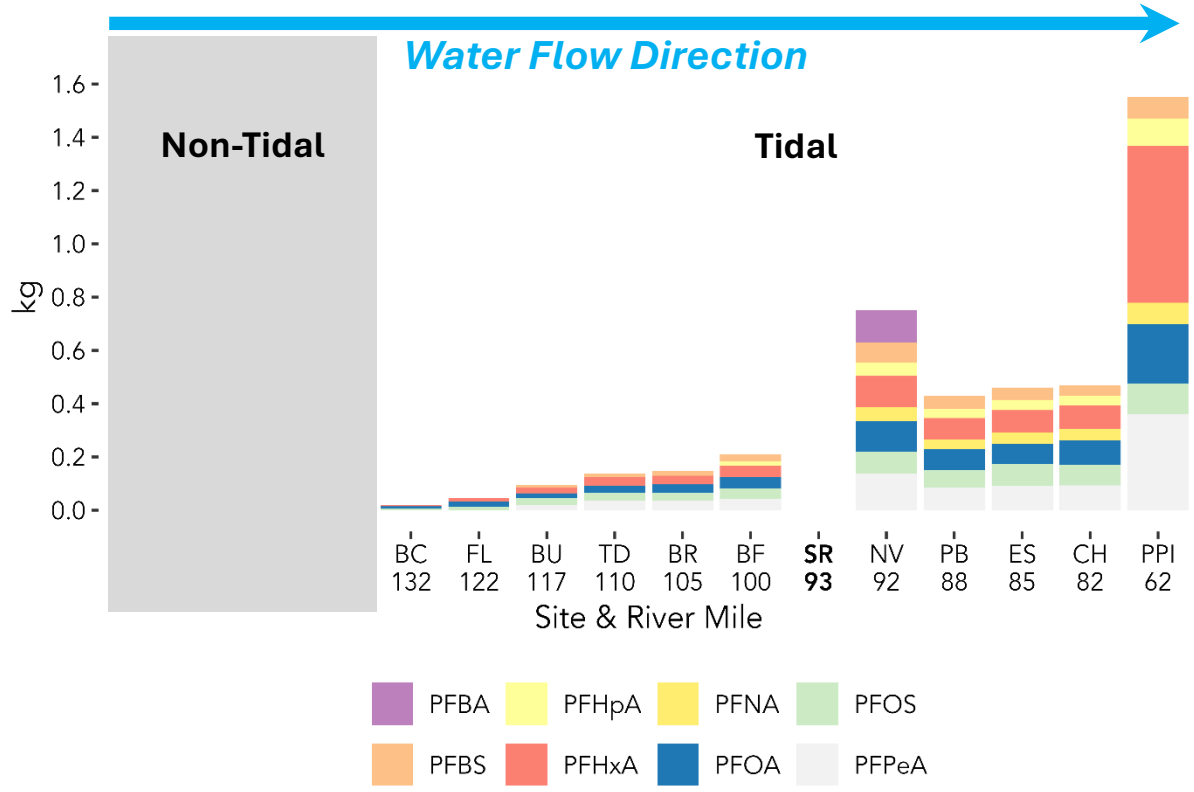
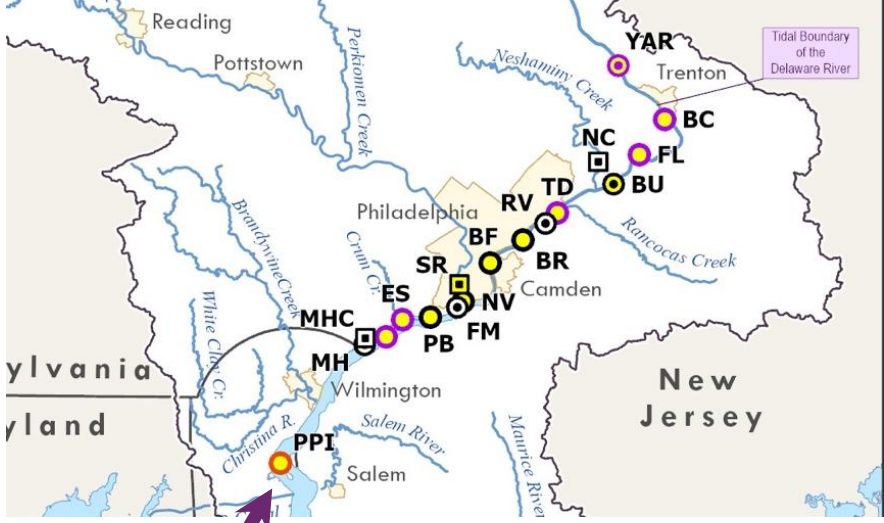
PFAS Concentration

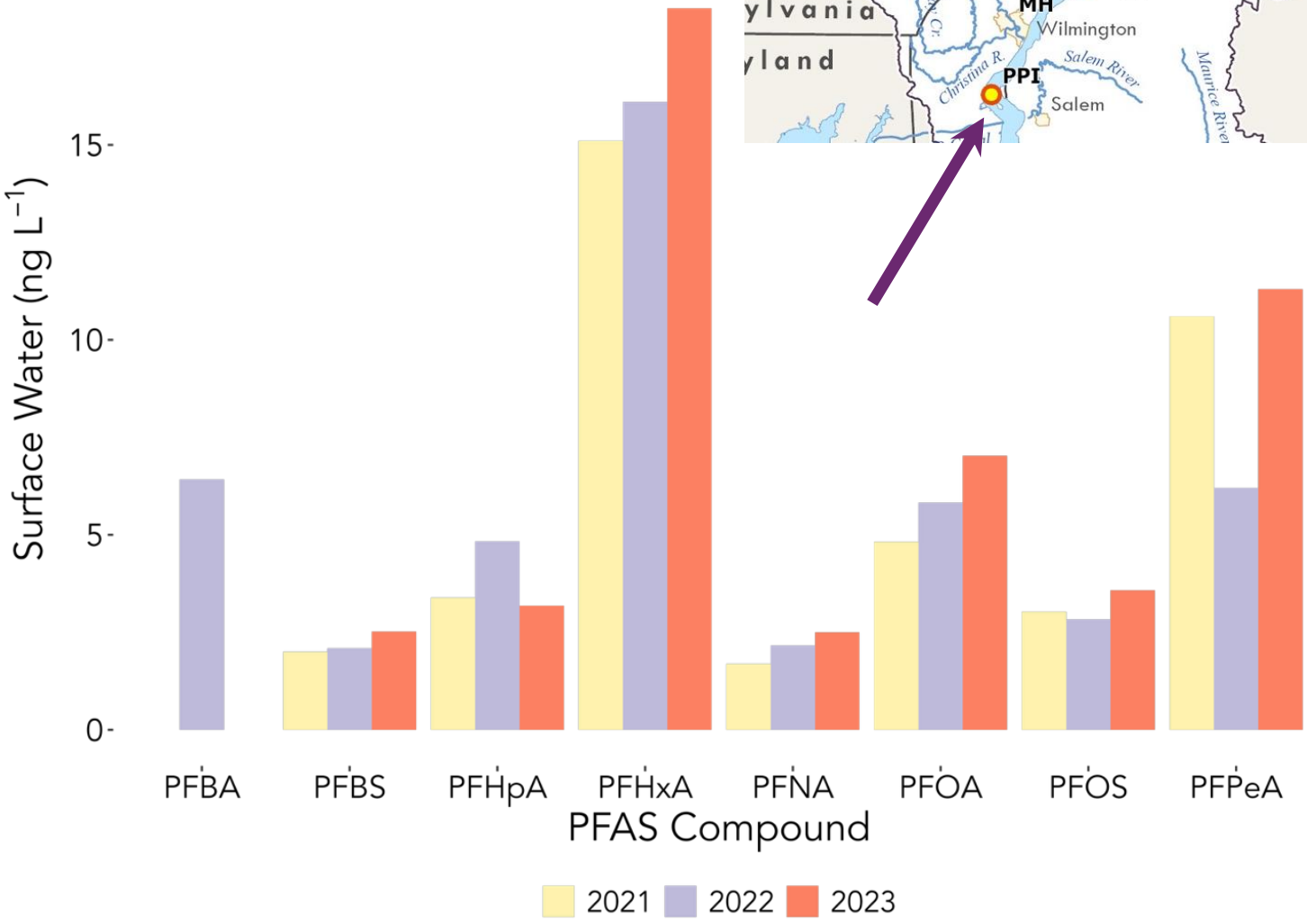


PFAS Mass



Surface Water PFAS Concentrations Were Consistent at Pea Patch Island





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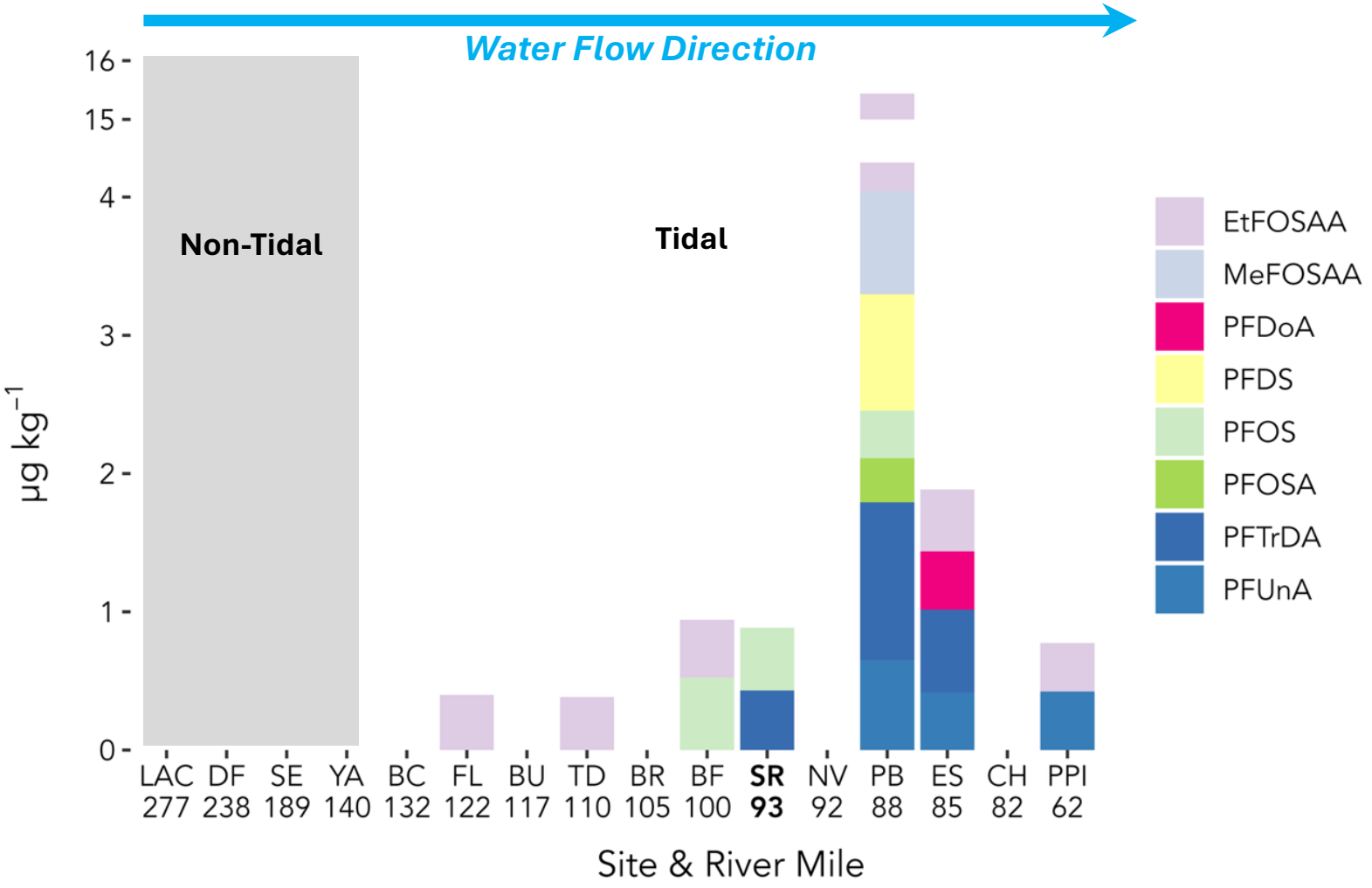
Sediment Concentrations Were Highly Variable and Inconsistent



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PFOS Dominates Freshwater Fish Fillet Samples

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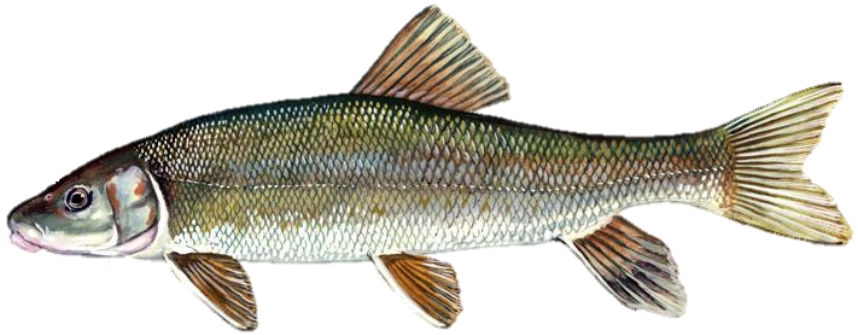
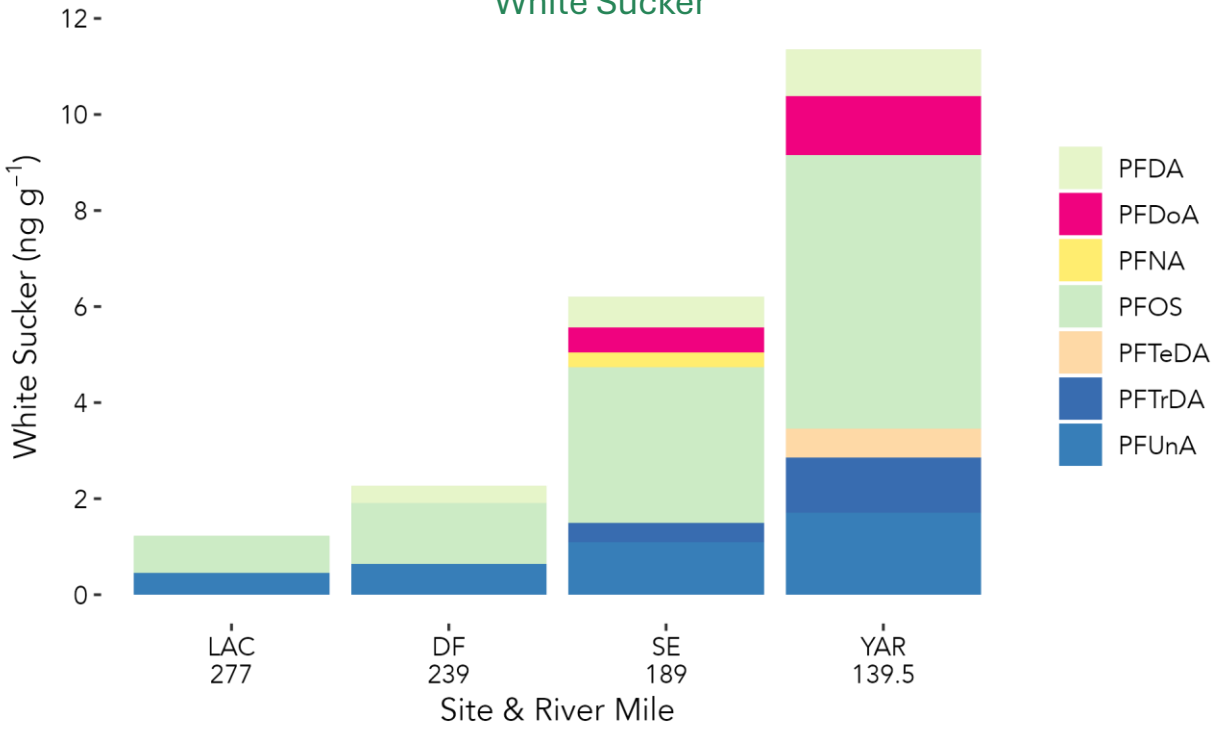
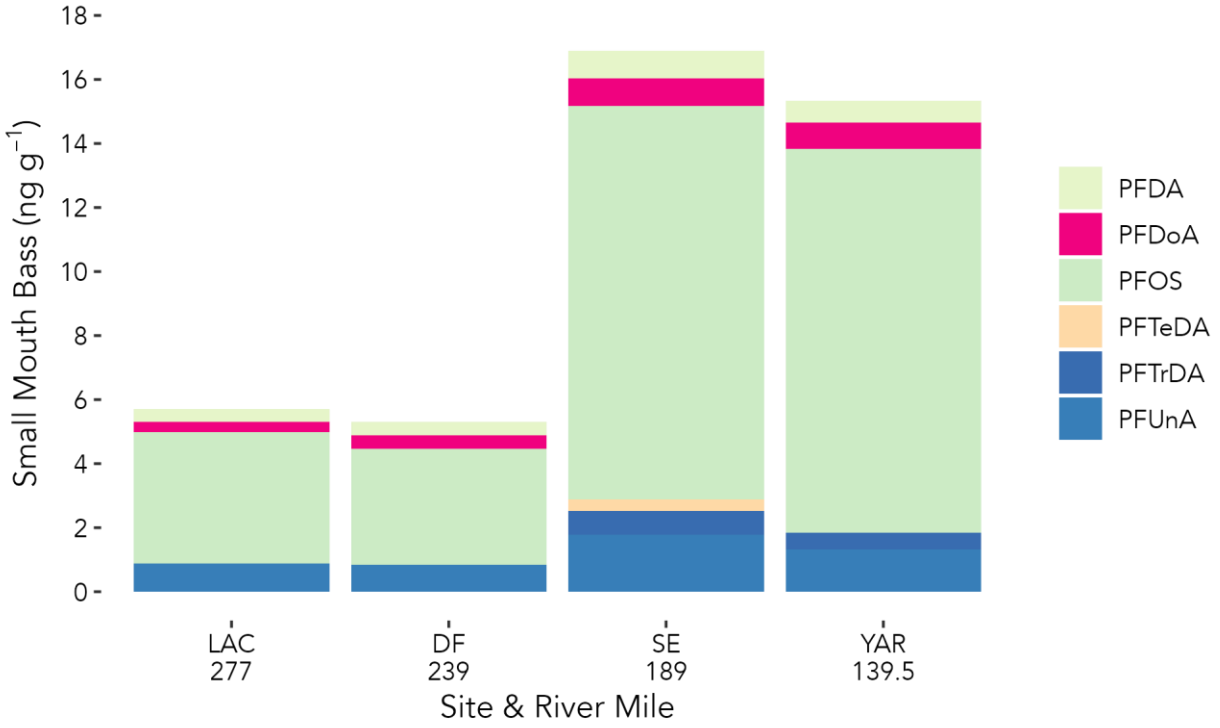


White Sucker

Small Mouth Bass





Channel Catfish have a Unique PFAS Profile

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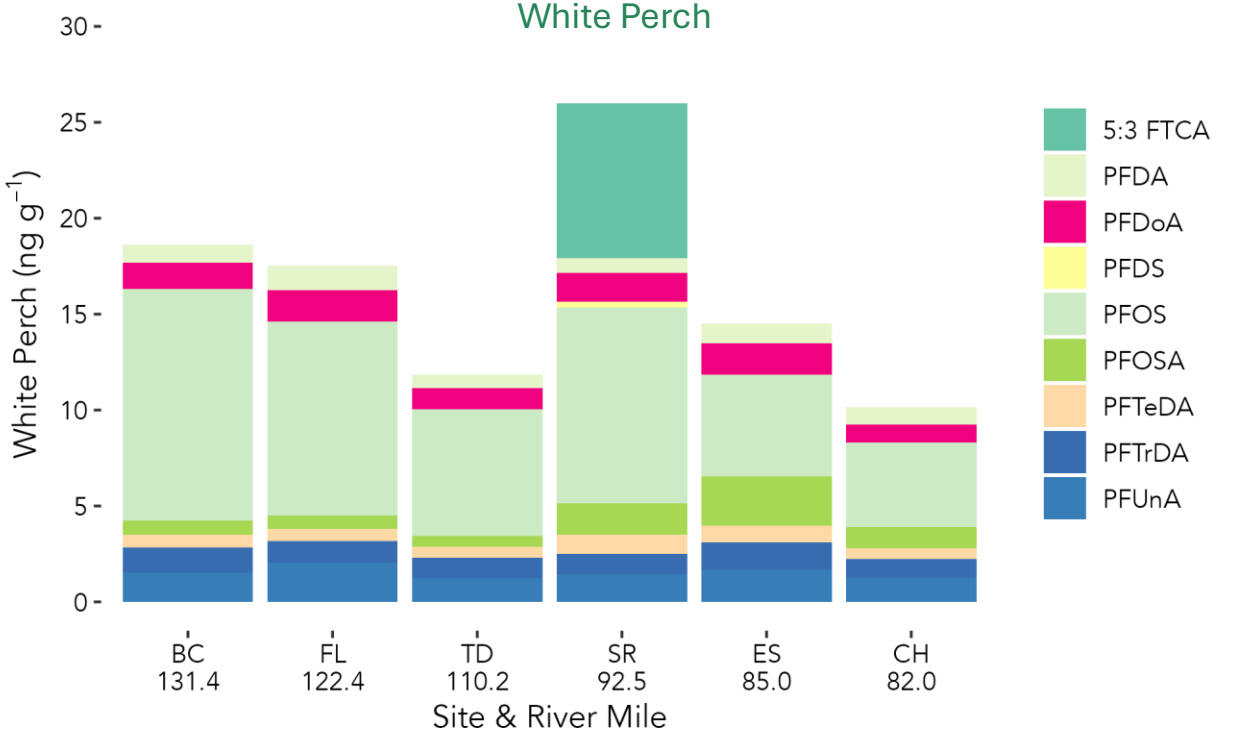
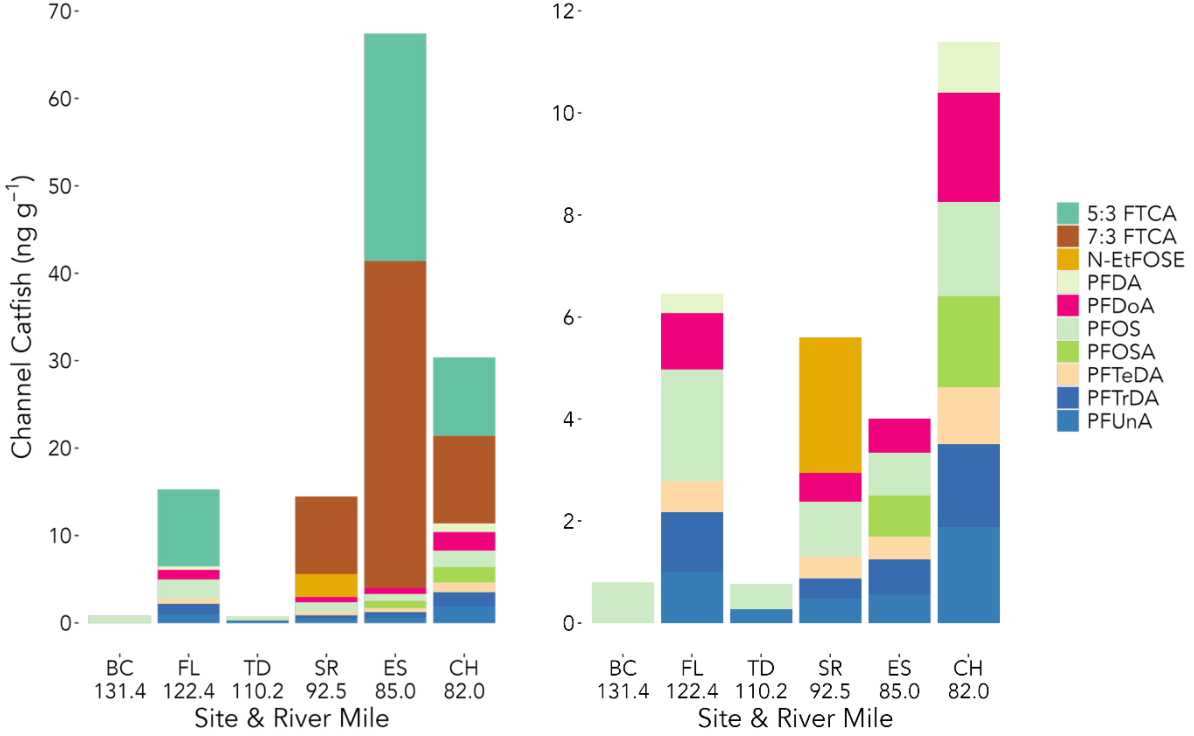
White Perch

Channel Catfish





Consult Your State's Consumption Advisory Website

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Pennsylvania

New Jersey

Delaware

New York

OR Search: [STATE NAME] + Fish Advisories

PFAS concentrations and masses increase as water flows downstream

Sediment concentrations are highly variable, but likely reflective of nearby sources

PFAS is found in all tissues sampled, with PFOS generally being the dominant compound

Review your states consumption advisories

PFAS is pervasive in the Delaware River Basin – more monitoring and source Identification are needed

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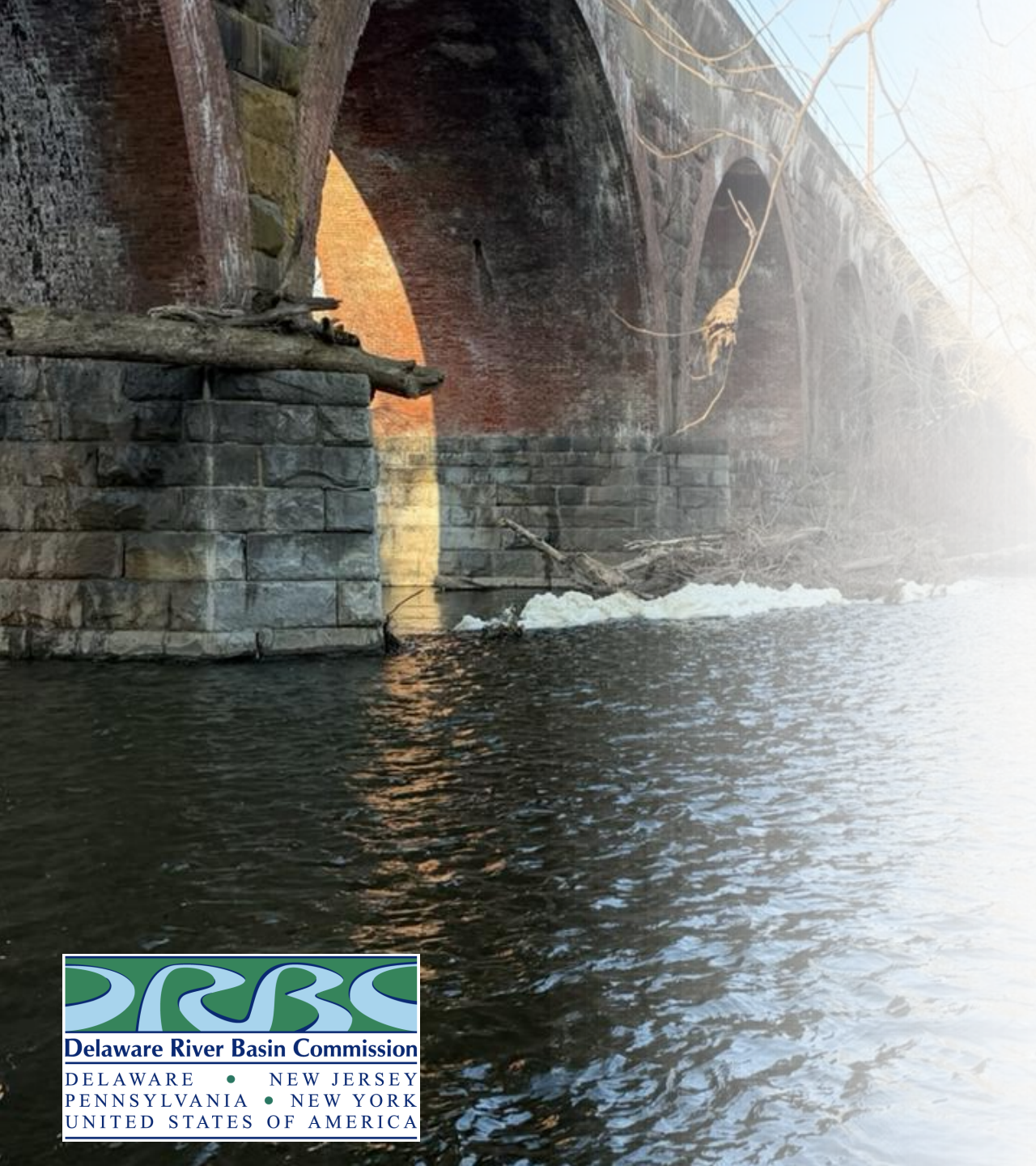

A HUGE thank you to the National Fish and Wildlife Foundation Delaware Watershed Conservation Fund for 3 consecutive years of funding to study PFAS in the Delaware River Basin

NFWF Yr 3 Final Report

DRBC PFAS Website

OR search for: “DRBC PFAS”

Thank you for the support:

DRBC Staff: Ron MacGillivray, Elaine Panuccio, Jake Bransky, Bailey Adams, Kyle McAllister

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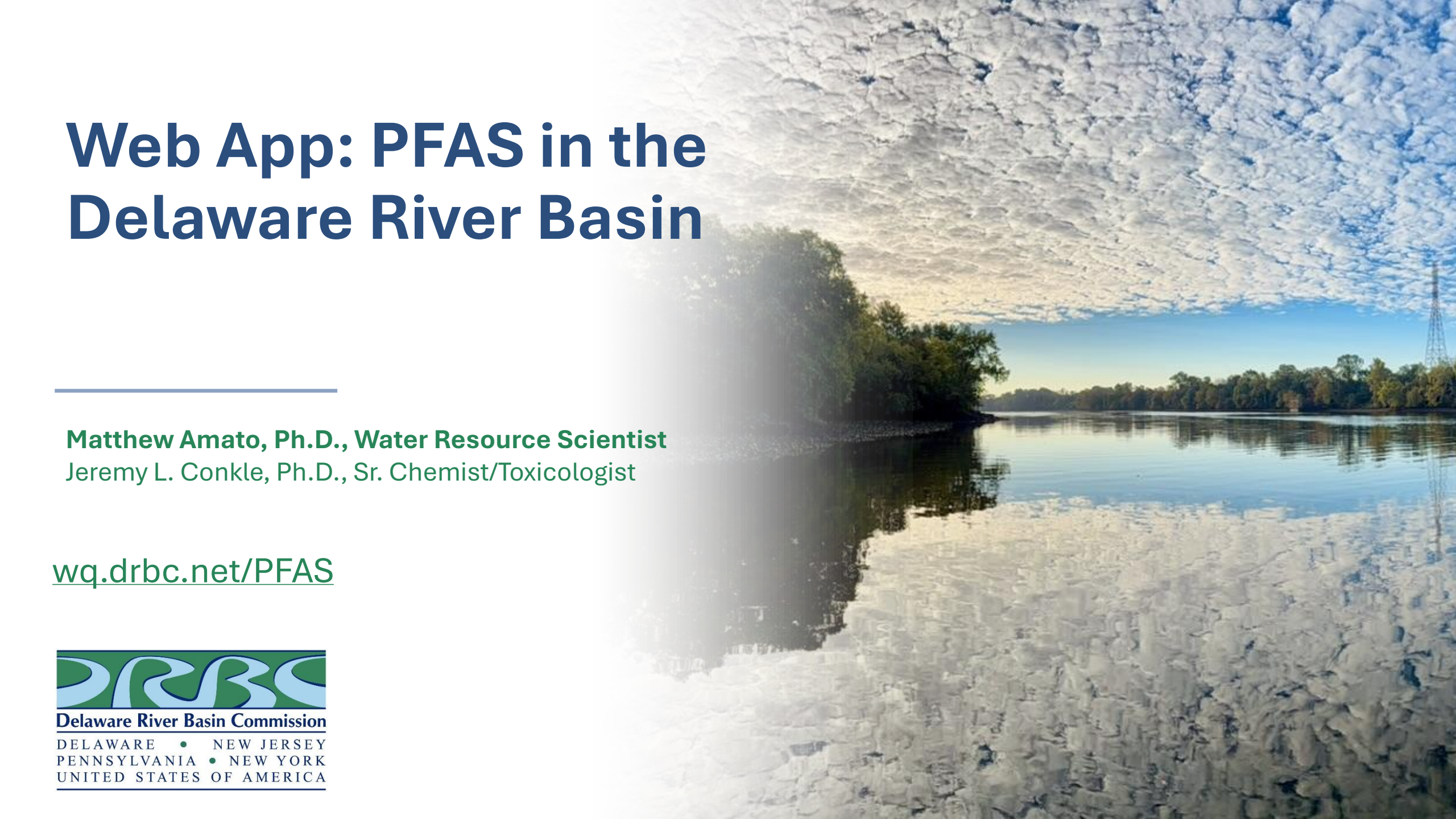
Web App: PFAS in the Delaware River Basin



Matthew Amato, Ph.D., Water Resource Scientist
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wq.drbc.net/PFAS

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Surface Water Σ_{PFAS} Peaks near River Mile 65

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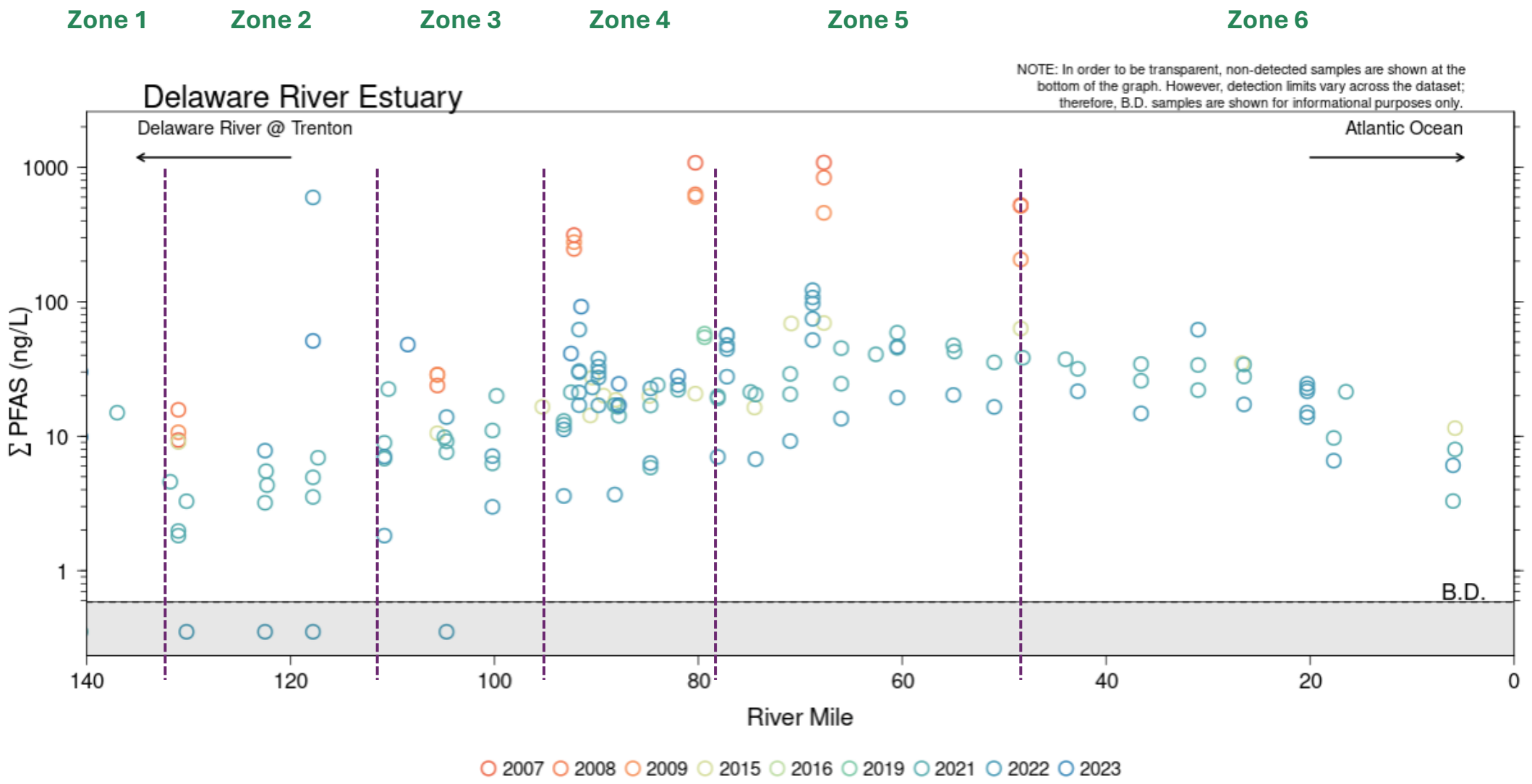

PFOS in Mainstem Surface Water

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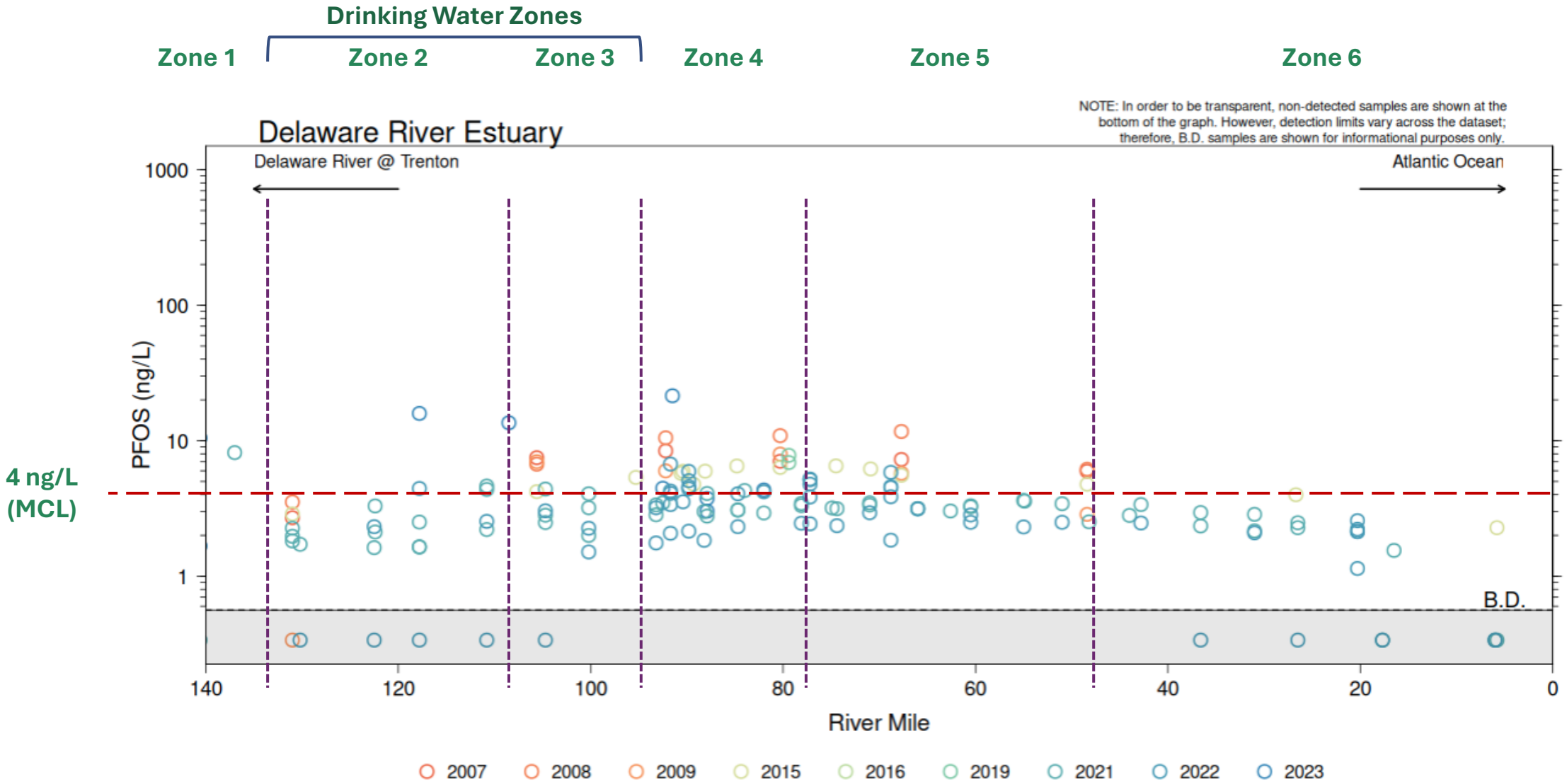

PFOA in Mainstem Surface Water

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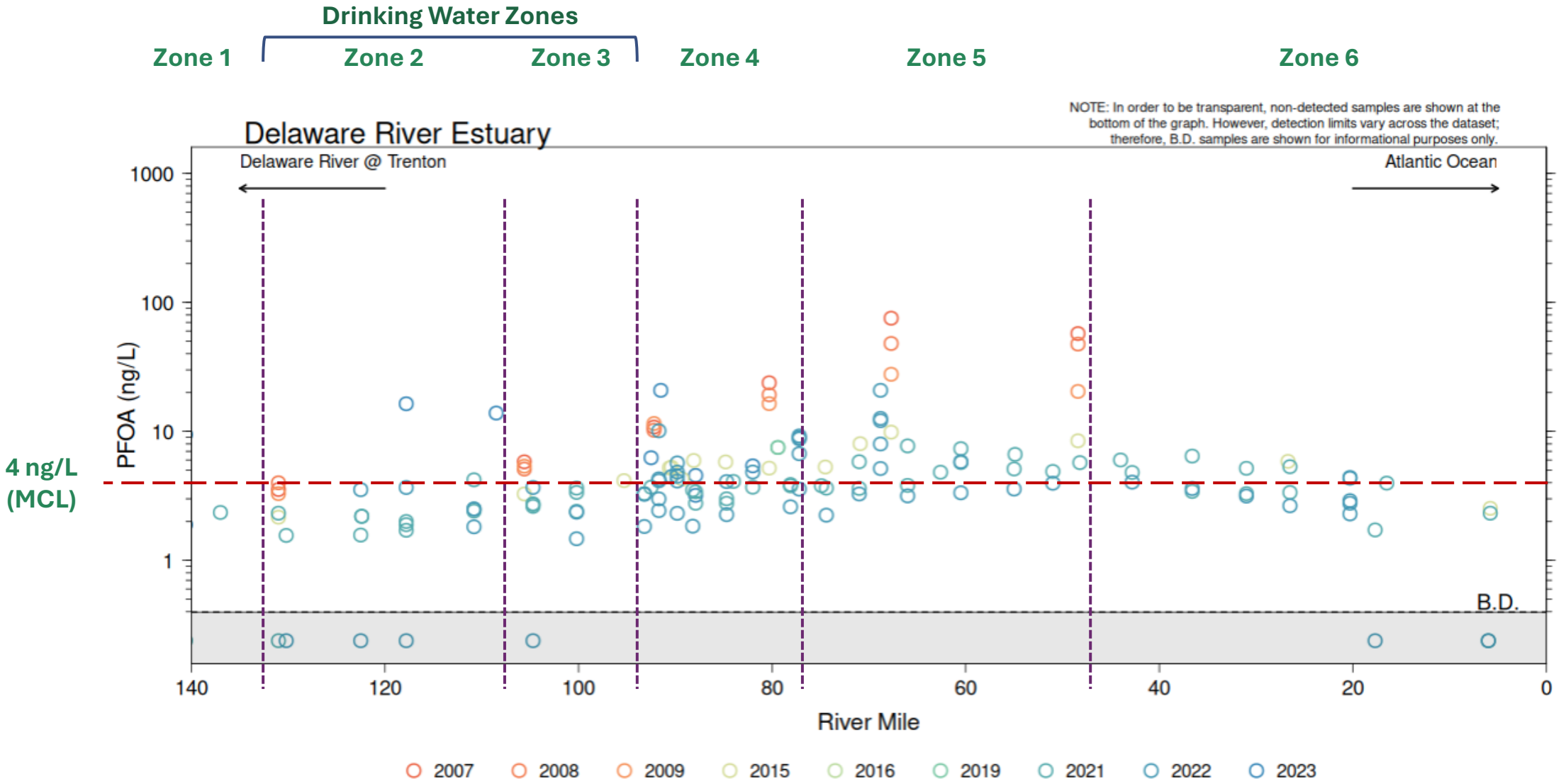

DRBC's Next Steps for PFAS

Jeremy L. Conkle, Ph.D., Sr. Chemist/Toxicologist

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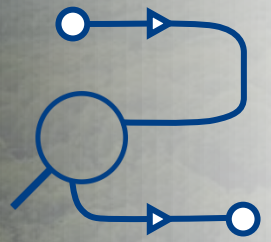
DRBC's Plans for PFAS

Continue collecting and assessing publicly available PFAS data for the Delaware River Basin



Begin tracking sources of PFAS

When sources are identified, work with state and federal partners to find ways to reduce loading

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DRBC's Plans for PFAS

Continue collecting and assessing publicly available PFAS data for the Delaware River Basin

PFAS Web App for assessment

Samples of opportunity

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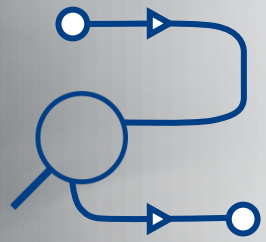
DRBC's Plans for PFAS



Begin tracking sources of PFAS

Start with smaller-scale efforts in tributaries

Pursue funding

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DRBC's Plans for PFAS

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DRBC knows that PFAS is a significant problem in the Delaware River Basin. While still assessing data, we are starting to look for ways to identify sources and reduce this pollution in our basin.

Jeremy L. Conkle, Ph.D.
jeremy.conkle@drbc.gov

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Stay Engaged with DRBC's PFAS work

- **Explore DRBC's PFAS resources**
  - PFAS report and resources: https://www.nj.gov/drbc/programs/quality/pfas.html
  - Web app: https://wq.drbc.net/pfas/
- **Attend a DRBC meeting**
  - Next advisory committee meeting: https://www.nj.gov/drbc/meetings/advisory/index.html
  - Next public input opportunity: https://www.nj.gov/drbc/meetings/upcoming/
- **Apply to serve on a DRBC advisory committee**
  - Committee openings https://www.nj.gov/drbc/about/advisory/committee-openings.html
- **Sign up for news from DRBC**
  - https://www.nj.gov/drbc/contact/interest/
- **Share DRBC's PFAS social media toolkit**
  - Toolkit will be sent via email to webinar attendees

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Question & Answer session

The Delaware River Basin Commission ensures water security for over 14 million people in 4 states.

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