

PFAS:

From Basinwide Research to Statewide Planning to Community Impact

Presented By:

14th Annual Delaware River Watershed Forum

Shaping the Future of Our Watershed



Thank you
Sponsors:



**William Penn
Foundation**

Meet Your Presenters



Beth Brown
Director, External Affairs &
Communications
DRBC
Elizabeth.Brown@drbc.gov



Dr. Jeremy Conkle
Senior Chemist/Toxicologist
DRBC
Jeremy.Conkle@drbc.gov



Todd Keyser, PG
Hydrologist VI
DE DNREC
Waste and Hazardous
Substances
Todd.Keyser@delaware.gov



Coalition for the
Delaware River
Watershed



Amanda Lacklen
Senior Environmental Scientist 4
Office of Environmental Hazards
& Toxicology
DE DHSS, Div. of Public Health
amanda.lacklen@delaware.gov



Dr. Matthew Amato
Senior Water Resource Scientist
DRBC
matthew.amato@drbc.gov



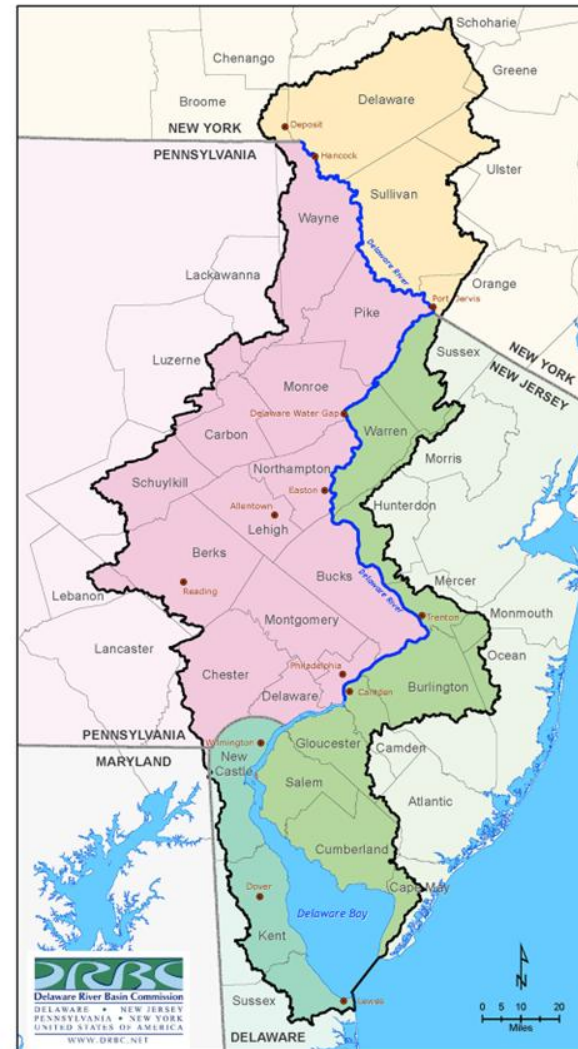
Brianne Callahan, JD
Senior Research Manager
The Water Center at Penn
bdonohue@sas.upenn.edu

Agenda

- Intro & goals for this session (3 min)
- Delaware River Basin Commission (DRBC) PFAS program & sampling results (10 min)
- Delaware statewide approach (10 min)
- Delaware statewide approach - public health perspective (10 min)
- Visualizing Data - Delaware River Basin PFAS Data App (10 min)
- The need for a holistic strategy and policies that match (10 min)
- Panel Discussion
- Audience Questions

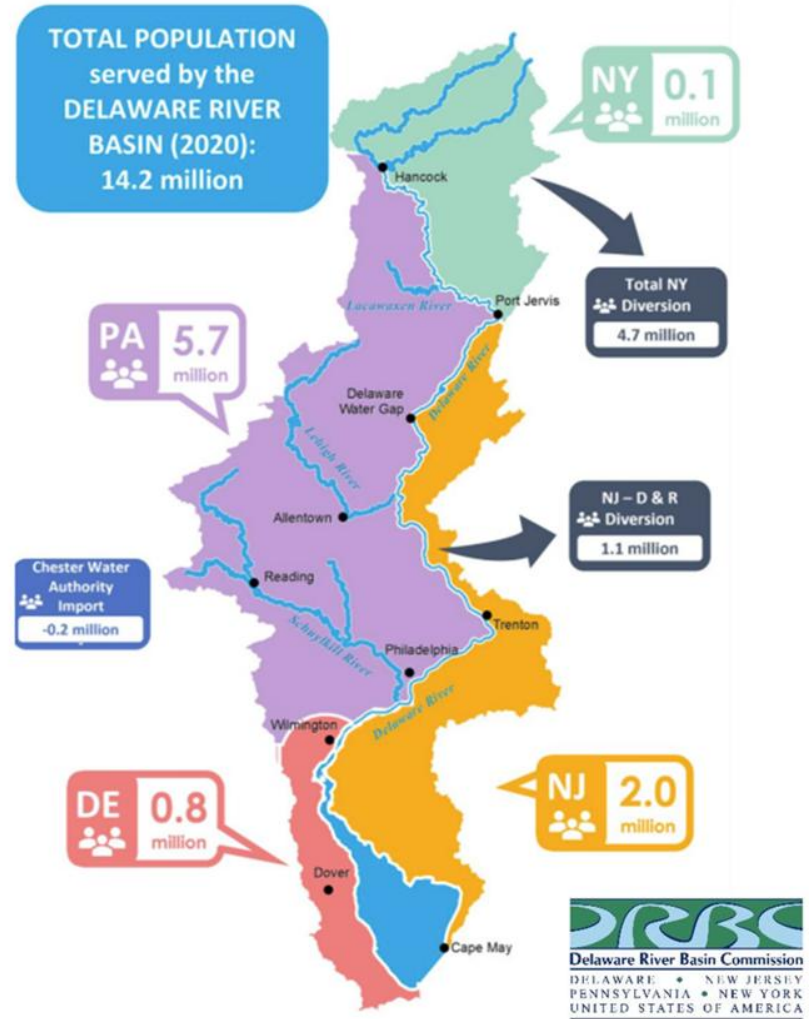


The
Delaware
River Basin
Serves over
14 million
people in
four states



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

- 14+ million people
- \$21+ billion in economic value
- Significant electric generation
- Largest freshwater port in U.S.
- Critical habitats and fisheries
- Water supply and recreation



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.

Our Foundation

The Delaware River Basin Compact is both an agreement, federal law and state law.

PFAS is a *CENTURIAL* Problem





Delaware River Basin Commission

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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.

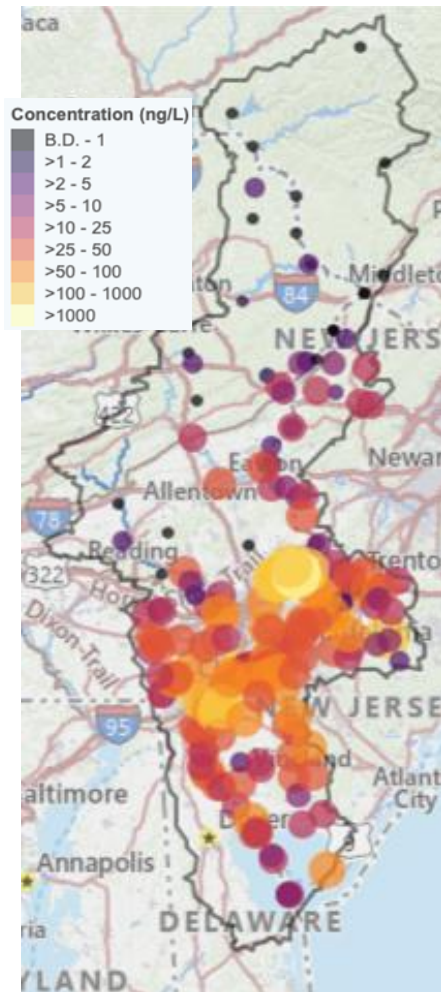
Existing PFAS Data in the Delaware River Basin



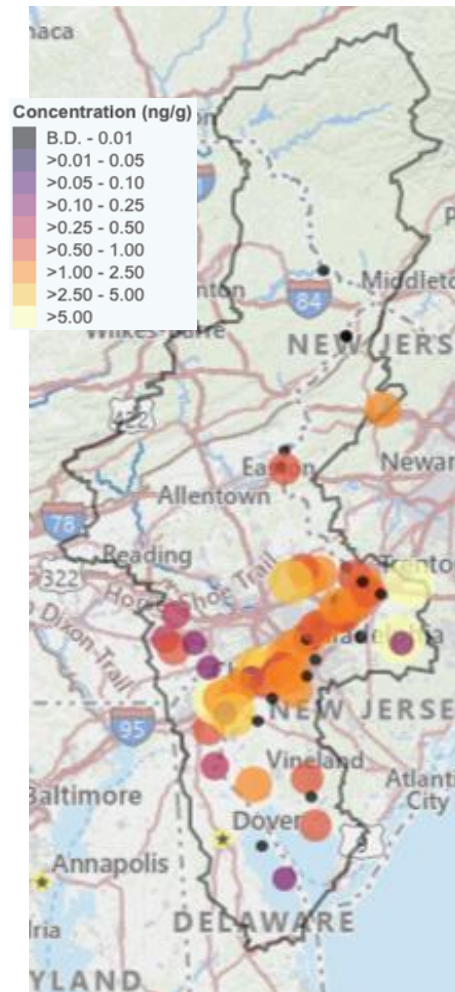
	Samples (%)				Below Detection (%)	
	All	Estuary	>2019		All	Estuary
Surface Water	1,393	931 (67)	1,353 (97)		95 (7)	19 (1)
Groundwater	296	186 (63)	233 (79)		108 (36)	68 (29)
Sediment	131	101 (77)	115 (88)		38 (29)	26 (23)
Tissues	221	194 (88)	150 (68)		20 (9)	8 (5)
Total	2,041	1,412 (69)	1,851 (91)		261 (13)	121 (7)

The Estuary is a Hot Spot

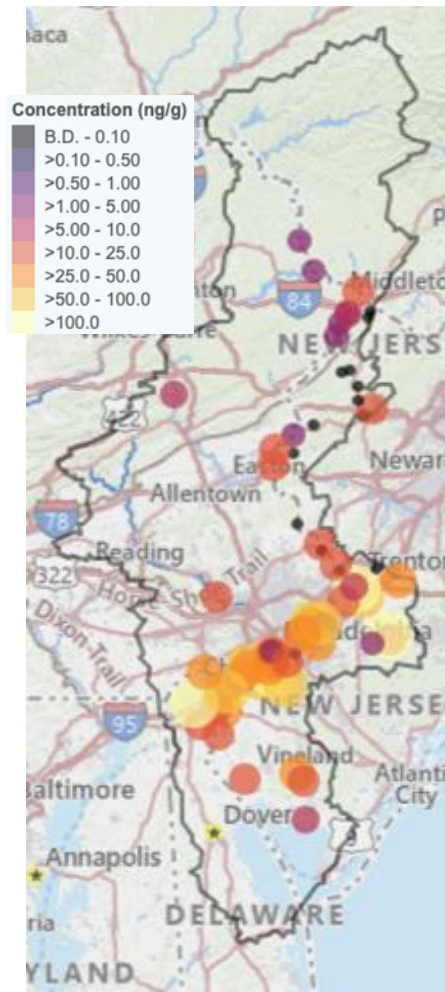
Surface Water



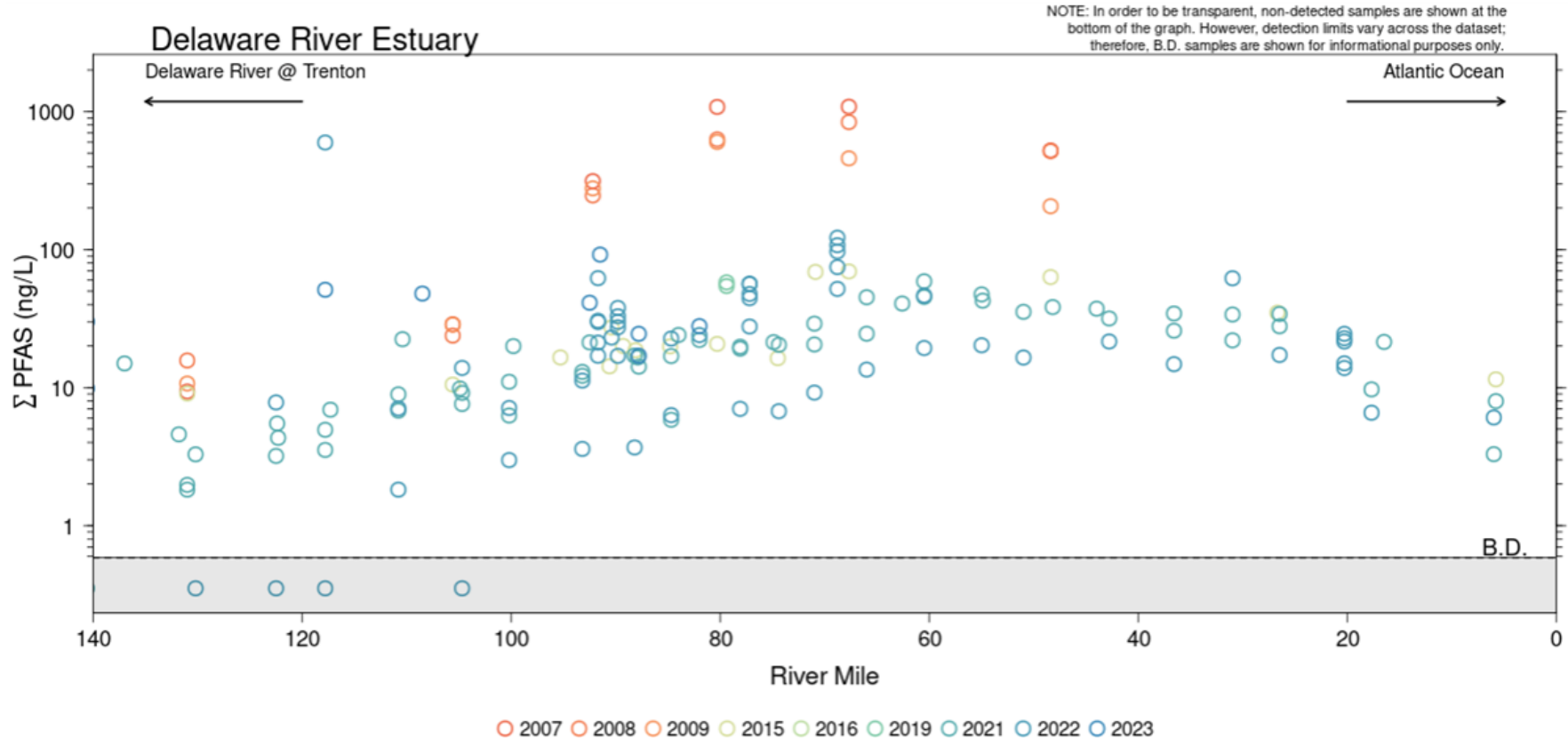
Sediment



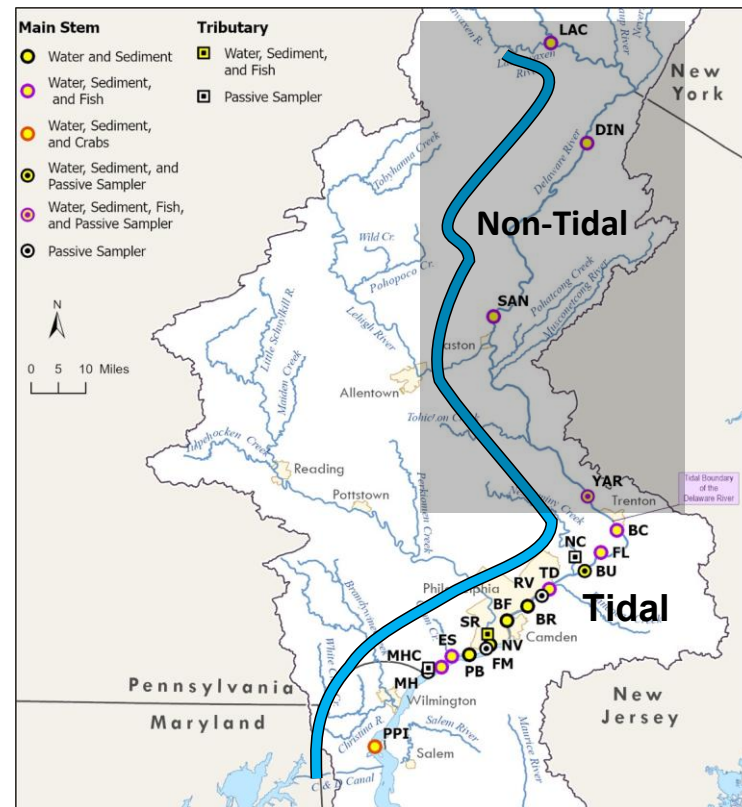
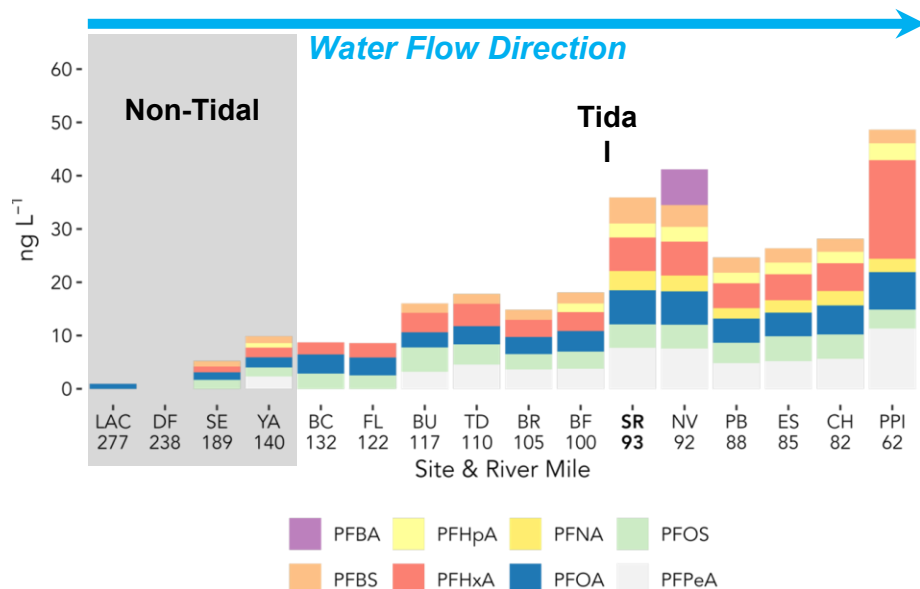
Tissue



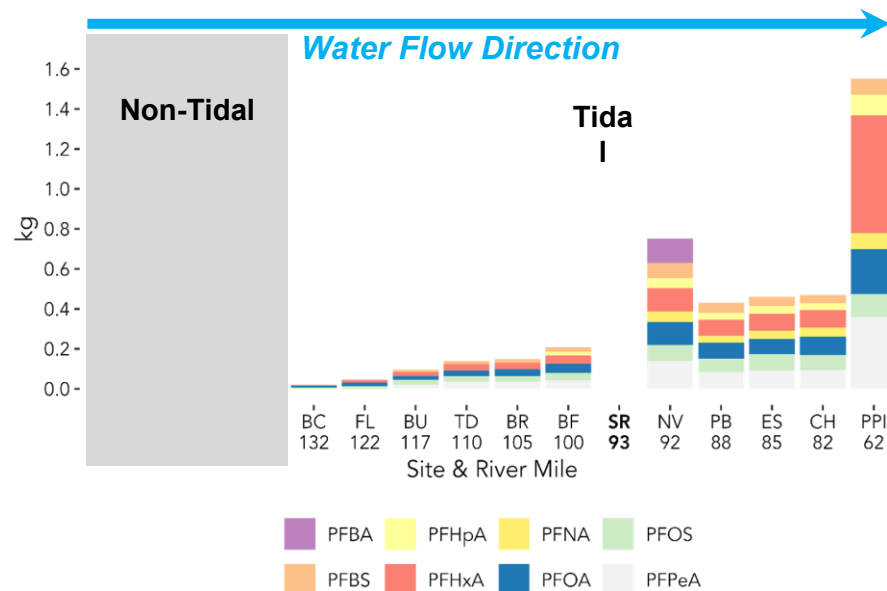
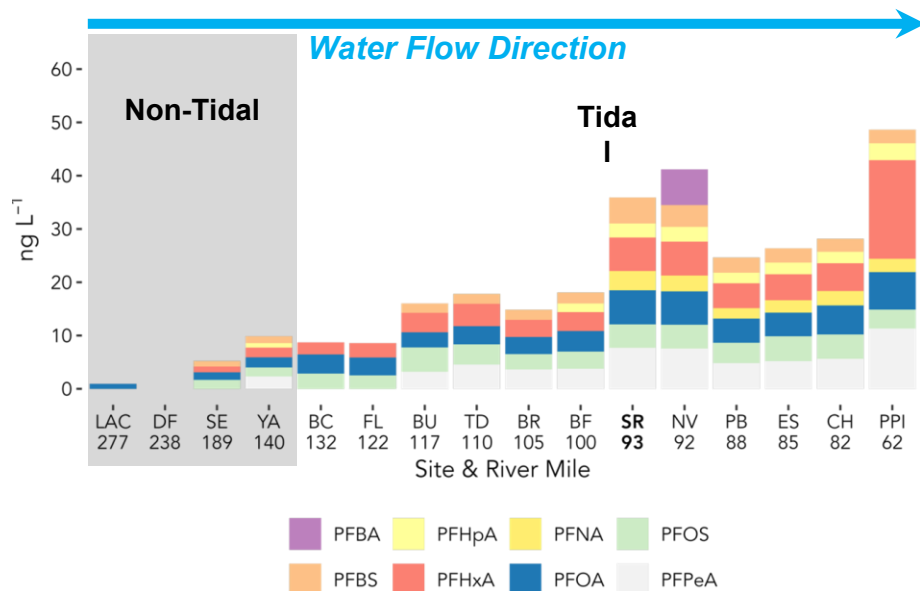
Surface Water Σ_{PFAS} Peaks near River Mile 65



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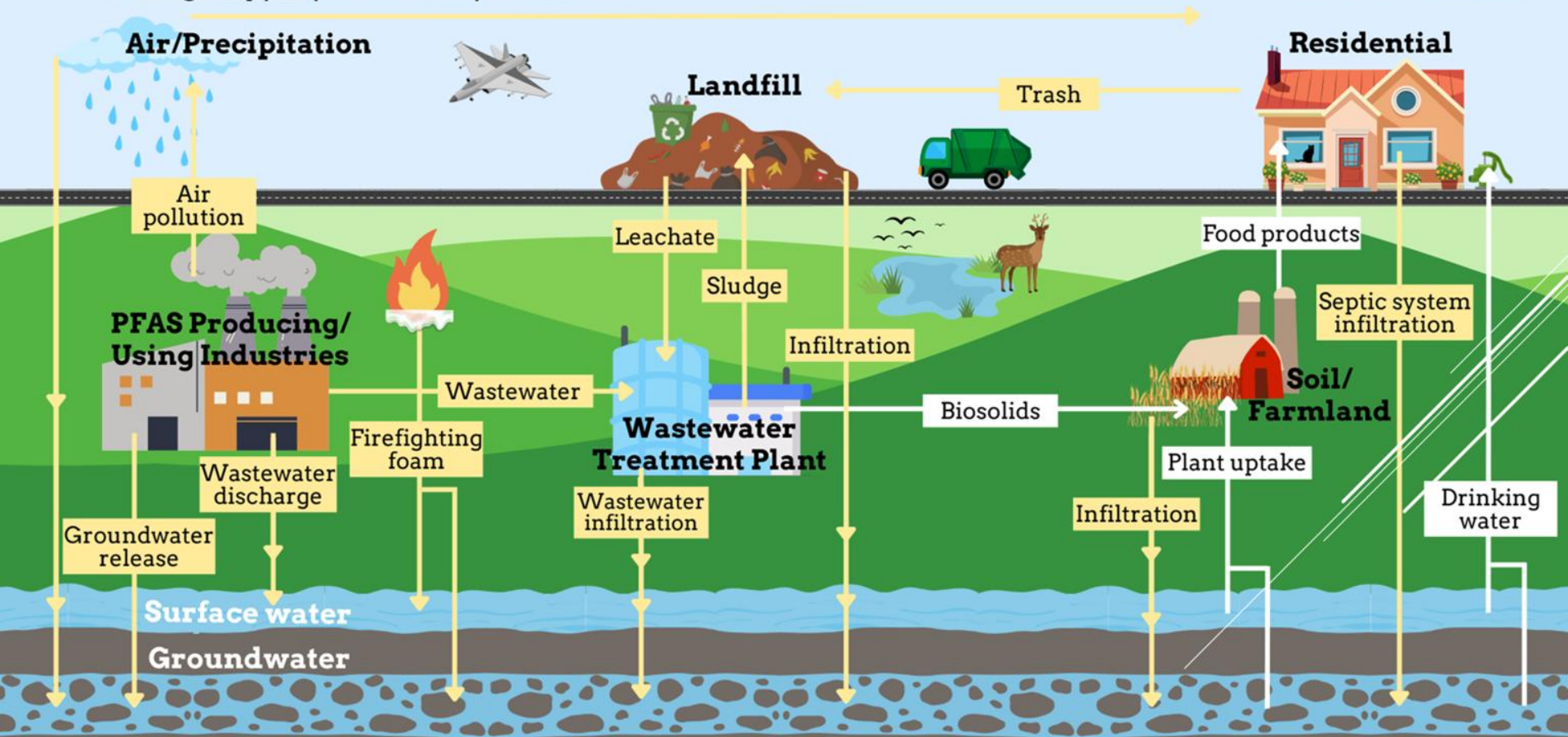
PFAS PATHWAYS

Visit de.gov/pfas for more information.

Color Guide

PFAS released into environment

PFAS priority exposure pathways



<u>Family Group</u>	<u>Intrepretation</u>	<u>R-G-B Color Code</u>
Perfluoroalkyl carboxylic Acids	AKA: "Terminal PFAS" typically found in older, well-developed PFAS plumes. Are also terminal products of replacement PFAS. These compounds are typically the predominant PFAS detected under ambient conditions.	R/G/B=146/208/80
Perfluoroalkyl sulfonic Acids		R/G/B=0/112/192
Fluorotelomer sulfonic acids	Fluorotelomers: Landfill signature (can also be fluorotelomer process signature at manufacturing sites, including AFFF) in-situ flux of both polymer and non-polymer PFAS transformation.	R/G/B=192/0/0
Fluorotelomer carboxylic acids		R/G/B=255/0/0
Per- and Polyfluoroether carboxylic acids	AKA: "Replacement PFAS" newly (last 25 years) manufactured PFAS. Predominately found in the Piedmont. Occasionally found in the Coastal Plain.	R/G/B=0/176/240
Perfluorether sulfonic acids		R/G/B=237/125/49
Perfluorooctane Sulfonamides	Ex-situ transformation products of polymer and non-polymer PFAS. Transform from both Fluorotelomers and replacement PFAS. Eventually turn into terminal PFAS downgradient of a source area or within a PFAS plume.	R/G/B=255/192/0
Perfluorooctane sulfonamidoacetic acids		R/G/B=255/255/0
Perfluorooctane sulfonamide ethanols		R/G/B=112/48/160
Ultra-short chain PFAS	3 or less carbons. Emerging understanding of these PFAS, including less toxicological effects both in human health and the environment. This group is removed from signature evaluations but not total PFAS analysis. PFMOAA is also "ultra-short," however it is an important analyte in the Piedmont and will not be grouped here.	None

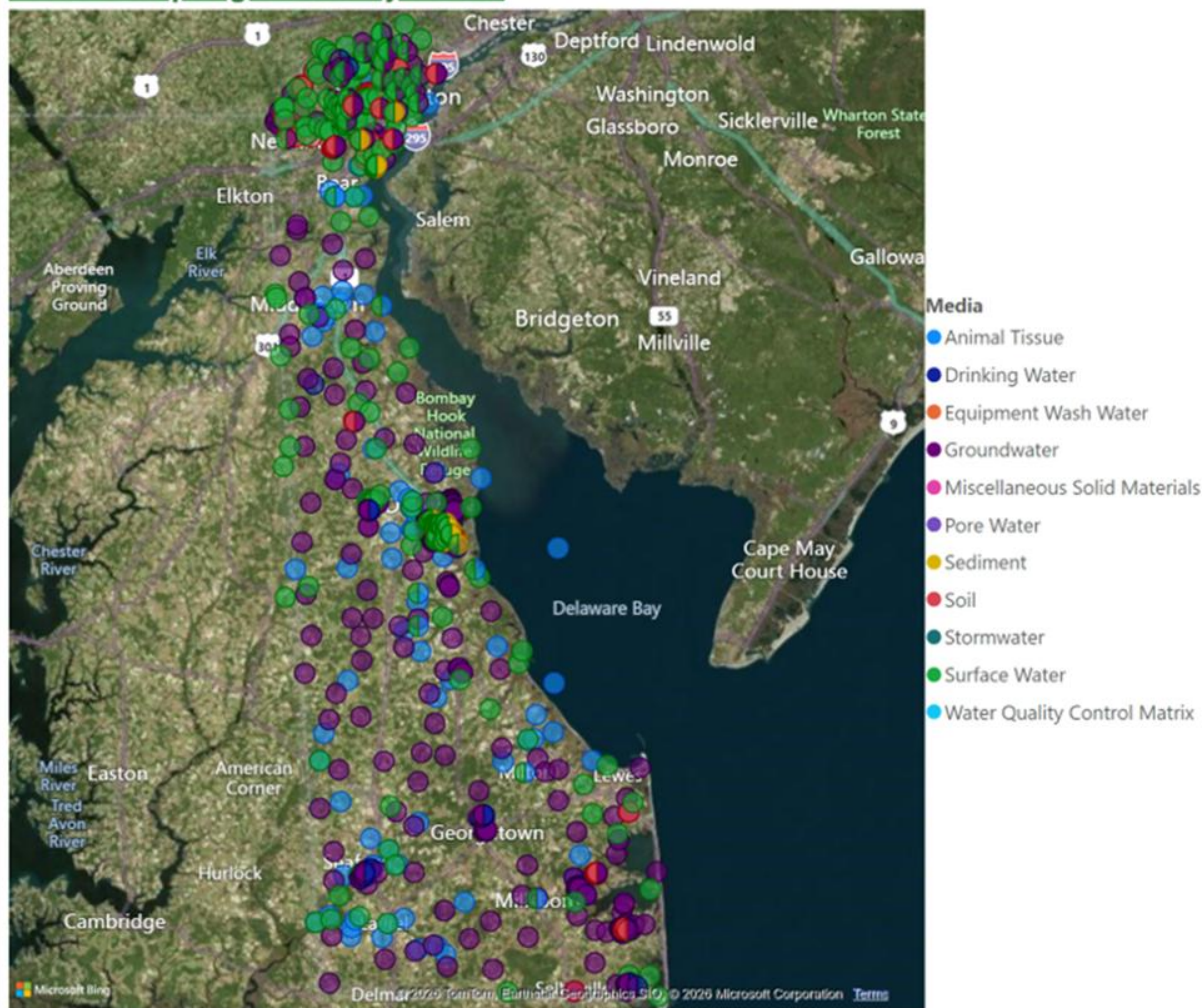
Information Citations:

ITRC (2024), Per- and Polyfluoroalkyl Substances Technical and Regulatory Guidance. Interstate Technology and Regulatory Guidance. Interstate Technology and Regulatory Council, Washington, D.C. <https://pfas-1.itrcweb.org/>
 McWayne, E. (2022). PFAS Transport, Fate, and Remediation: Understanding and Managing Per-and Polyfluoroalkyl Substances. [Power Point slides]. National Environmental Management Academy, University of California, Davis.



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PFAS Sampling Points by Media





2026 Strategic Framework for Contaminants of Emerging Concern



Tracking, Reducing and Communicating Exposure to Contaminants of Emerging Concern in Delaware



PHOTO: Delaware DNREC

March 25, 2026

State of Delaware

- Collaborative group across multiple regulatory protection and resource programs
- Pre-regulatory assessment through existing authorities
- Identify and mitigate at **points of opportunity**
- Holistically collect and analyze multi-media data then act based upon proven science
- Provide knowledge from PFAS effort to state entities
 - provide proof via collected data
 - develop regulation and policy
 - especially to benefit environmental justice communities

Delaware_CEC_Strategic_Framework@delaware.gov



PHOTO: Delaware DNREC

2026 PFAS Implementation Plan

A Decade of Progress and Next Steps to
Track, Reduce and Communicate PFAS
Exposure in Delaware

March 25, 2026

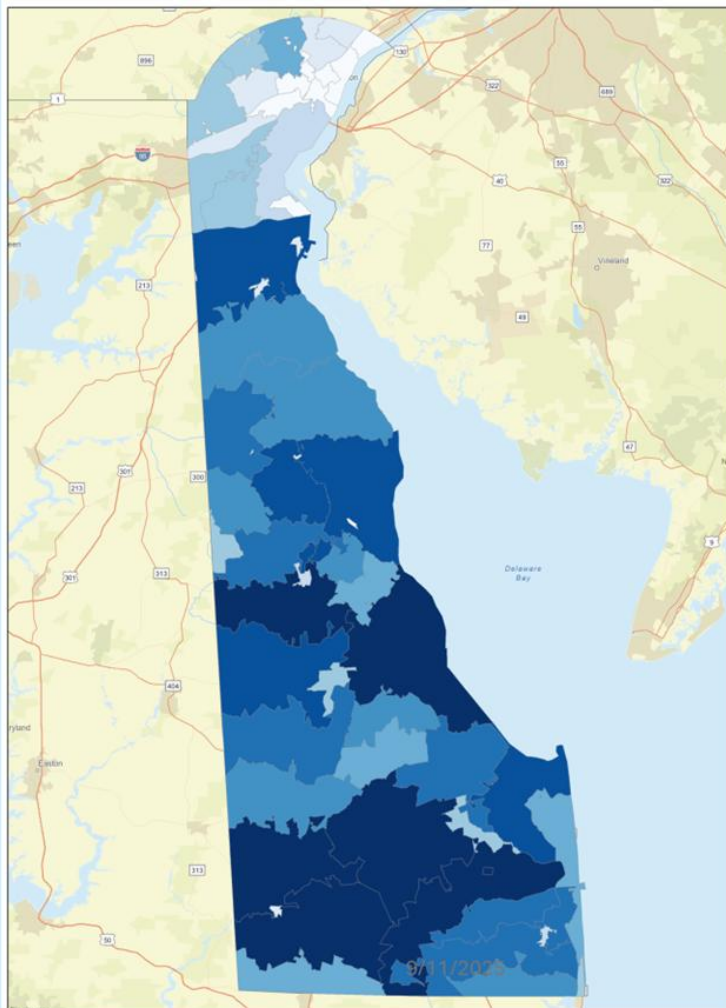


Delaware_PFAS_Implementation_Plan@delaware.gov

- Mitigate Consumption (exposure) – drinking water, home and product exposure
- Identify Sources (several tiers) – extensive sampling in water, air, sediment, tissue
- Eliminate Sources (effectiveness)-
 - How do we define a source? – product, use when creating a product?
 - Who has regulatory authority?
- Accessible Communication – meet people where they are and share wh



Private Wells in Delaware



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ActivePerZip	
0 – 10	> 159 – 434
> 10 – 74	> 434 – 872
> 74 – 159	> 872 – 1,291
	> 1,291 – 1,643
	> 1,643 – 2,162
	> 2,162 – 3,154



PFAS in Delaware



Waste and Hazardous Substances

Home

Contact Us

Managing Waste ▶

Recycling ▶

Site Remediation ▶

Emergencies ▶

Storage Tanks ▶

DNREC and the DHSS Division of Public Health are working with federal agencies to protect the environment and public health in Delaware from the effects of a group of synthetic chemicals known as PFAS.

The state of Delaware is offering no cost [sampling of private drinking water wells](#) to test for a list of possible contaminants, including PFAS.

Per- and polyfluoroalkyl substances (PFAS) include thousands of synthetic chemicals including PFOA, PFOS, and GenX. They have been used throughout the world in manufacturing, firefighting, and consumer products since the 1940s.

Delaware state agencies are working together and with partners to study [PFAS in drinking water](#), [PFAS in surface waters of the state](#) and [PFAS in wastewater systems](#) in Delaware.

The state maintains [a list of sites being investigated by DNREC](#) for per- and polyfluoroalkyl substances (PFAS) in drinking water, groundwater or surface water in Delaware.

PFAS Menu ▾





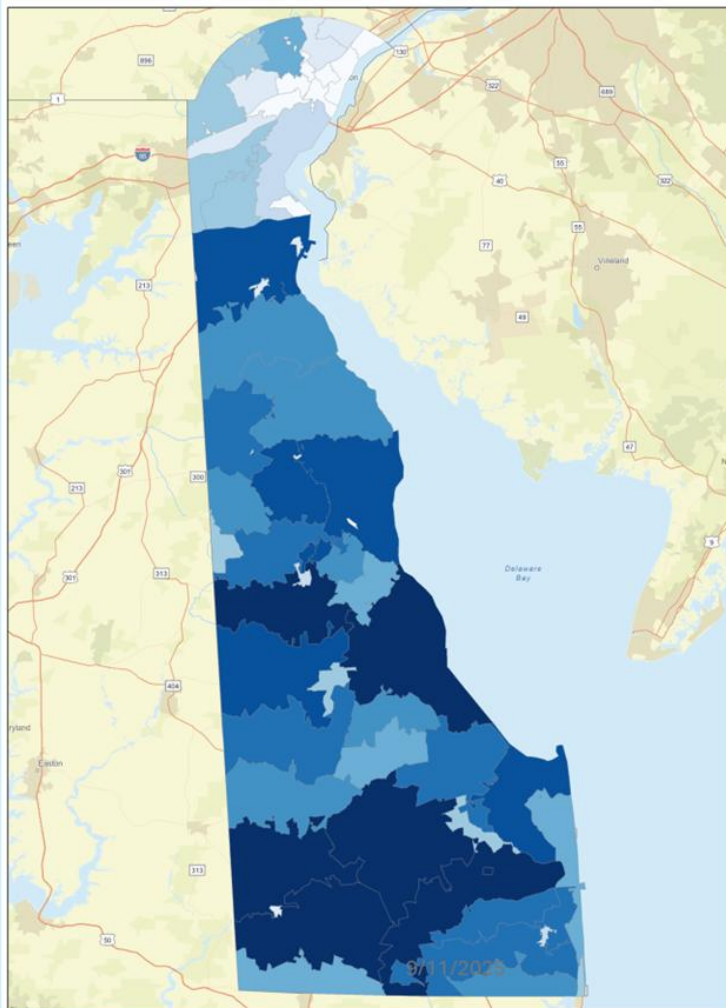
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Private Wells in Delaware



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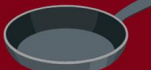
AVOIDING PFAS: A SHOPPING GUIDE

Per- and polyfluoroalkyl substances (PFAS) are a class of chemicals known to persist in the environment and accumulate in living organisms, posing a significant public health concern.

Since the 1940s, PFAS have been widely used in consumer products. The absence of regulations and mandatory labeling can confuse and mislead consumers in identifying PFAS-containing products.

This brief guide from the Delaware Division of Public Health (DPH) aims to educate consumers on common PFAS products and how to find safer alternatives.

PRODUCTS COMMONLY KNOWN TO HAVE HIGHER LEVELS OF PFAS:



**NON-STICK
COOKWARE**



**FOOD
PACKAGING**



**CLEANING
SOLUTIONS**



**COSMETICS AND
PERSONAL CARE**



**CARPETS AND
UPHOLSTERY**



**WATER-
RESISTANT
CLOTHING**

WAYS PFAS CAN BE FOUND IN PRODUCTS

1 INTENTIONALLY: ADDED INGREDIENTS

Companies will intentionally add PFAS to products for their properties (i.e. heat resistant, non-stick, waterproof, grease/stain repelling, wrinkle-free).



2 UNINTENTIONALLY: CONTAMINATION

Products can be contaminated by PFAS in the production processes (i.e. machine equipment lubricant touching the final product) or leaching packaging containing PFAS.



When shopping for “PFAS-free” products, you should focus on avoiding products with intentionally added PFAS because these have higher concentrations, compared to PFAS-contaminated products; still, be conscious of production processes that may include PFAS. Unfortunately, not all companies disclose PFAS compounds in their labels.

PFAS-CONSCIOUS CONSUMPTION



**IDENTIFY PFAS
LANGUAGE**

“Fluoro,” “perfluoro,” “PFTE,” “polyfluoroalkyl,” “PFBS,” “PFOS,” “PFOA,” and “GenX” often indicate PFAS.” Even buzzwords like “natural” or “sustainable” don’t always mean PFAS-free.



**RESEARCH PFAS
ALTERNATIVES**

Glass and wooden products are generally safer. Do your research on specific products you are interested in before buying. Though DPH cannot endorse specific companies or products, the following links may be helpful:

- [PFAS Free Product List](#)
- [Article: An overview of the uses of PFAS](#)
- [Shopper's Guide to Avoiding PFAS](#)

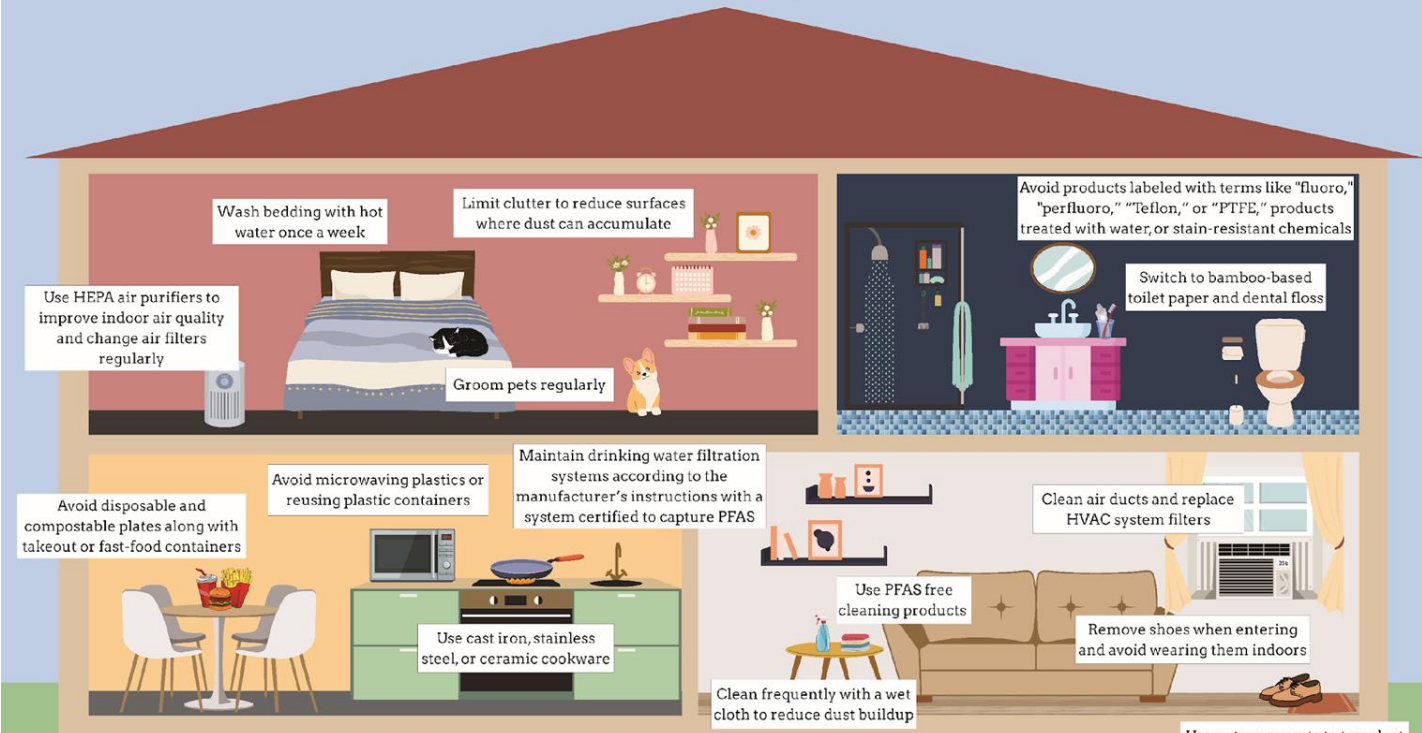


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Ways to Reduce PFAS in Your Home

Per- and polyfluoroalkyl substances (PFAS) have been widely used since the 1940s in manufacturing, firefighting, and consumer products. These substances are known to persist in the environment and accumulate in living organisms, posing a significant public health concern.

Toxicological studies suggest that exposure to PFAS can lead to serious health issues. Fortunately, there are several steps everyone can take to minimize PFAS exposure at home.



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The Office of Environmental Hazards and Toxicology
(302) 744-4727



Scan to view our
Healthy Homes website



	Result
NASEM Recommended Summation Unit of Measure: ng/mL	3.21
MeFOSAA Desired Range: <0.1 ng/mL	NOT DETECTED
PFHxS Desired Range: <0.1 ng/mL	0.59
Linear PFOA (n PFOA) Desired Range: <0.1 ng/mL	1.19
Branched PFOA (Sb PFOA) Desired Range: <0.1 ng/mL	NOT DETECTED
PFDA Desired Range: <0.1 ng/mL	NOT DETECTED
PFUnDA Desired Range: <0.1 ng/mL	NOT DETECTED
Linear PFOS (n PFOS) Desired Range: <0.1 ng/mL	0.62
Branched PFOS (Sm PFOS) Desired Range: <0.1 ng/mL	0.26
PFNA Desired Range: <0.1 ng/mL	0.27

PFAS 9-Panel Comments:
Polyfluorinated alkyl substances (PFAS) are man-made forever chemicals used in industry and consumer products. They have been used in nonstick cookware, water-repellent clothing, stain resistant fabrics and carpets, and some cosmetics and firefighting foams. PFAS do not break down.

For additional information, please refer to <https://www.questdiagnostics.com/faq295>
(This link is being provided for informational/ educational purposes only.)

The National Academies of Science, Engineering, and Medicine (NASEM) Guidance on PFAS Exposure Testing and



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9 Panel Blood Test Results & NASEM Recommendations. ng/mL = ppb

0 - 2 ng/mL	No action needs to be taken
2 ng/mL - 20 ng/mL	Screen for various health conditions
Over 20 ng/mL	Screen for various health conditions as soon as possible

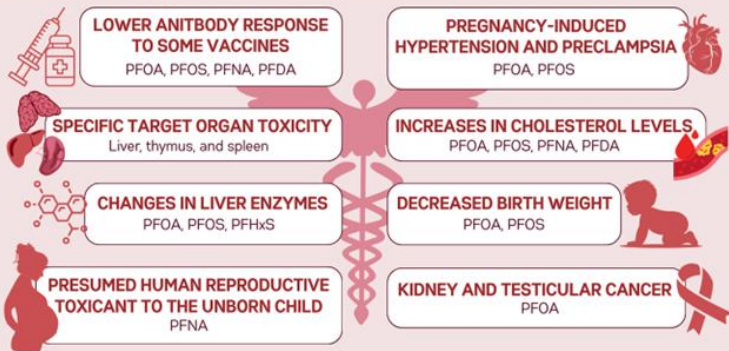
Water Sample	PFOA (ppt)	PFOS (ppt)	PFHxS (ppt)	PFNA (ppt)	HFPO-DA GenX (ppt)	MeFOSSA (ppt)
9/5/2024	17.5	3.81	4.63	.75	3.61	4.51

HEALTH EFFECTS

from PFAS

Per- and polyfluoroalkyl substances (PFAS) accumulate in animals and humans once entered the system through contaminated water and food sources, skin contact, or airborne particles.

Epidemiological evidence suggests associations between increases in exposure to (specific) PFAS and certain health effects, such as:



The risk of health effects associated with PFAS depends on:





CLINICIAN'S GUIDE TO PFAS: EXPOSURE, EFFECTS, AND ACTION AGAINST THE PERSISTENT TOXINS

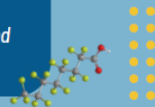


Join the Academy/DPHA and the Delaware Division of Public Health for the first **virtual** Clinician's Guide to PFAS conference
Thursday, September 11, 2025, from 12:00 p.m. to 4:00 p.m.



Topics Covered

- **PFAS in the Blood**, Linda Birnbaum, PhD, DABT, ATS
- **Clinical Guidelines for Physicians and ATSDR Paper**, Captain Arthur Wendall, MD, MPH, FAARP; Amy Lavery, PhD, MSPH; Gonza Namulanda, DrPH, MS
- **Current Efforts in Delaware: PFAS Sampling and Remediation**, Amanda Lacklen; Todd Keyser, PG
- **Moving Forward with PFAS Policy**, Sarah Bucic, MSN, RN, PMHCNS-BC and Ruth McDermott-Levy, PhD, MPH, RN, FAAN



Receive Continuing Medical Education Credits

See registration page for more information on accreditation requirements and policies.



Register today!

<https://delamed.org/education/educational-series/conferences/2025-pfas-conference/>

PFAS EXPOSURE AND PATIENT HEALTH



Wednesday, Sept. 23, 2026 from 11:00 a.m. to 4:00 p.m.

- Join the Academy/DPHA and the Delaware Division of Public Health for the **second annual** free virtual Clinician's Guide to per- and polyfluoroalkyl substances (PFAS) summit.

Speakers and Topics

- Dr. Laurel Schaidt and Dr. Phil Brown
 - What are PFAS and the Pathways of Exposure**
- Dr. Emily Pennoyer
 - How Maine is Taking Action**
- PFAS Panel
 - Dr. Carla Ng: **Variation in Bioaccumulation and Persistence from Community Exposures**
 - Dr. Jamie DeWitt: **Recent Scientific Findings and Placental Health**
 - Dr. Sue Fenton: **Lasting Impacts of PFAS from Childhood Exposure**
- Melissa Walter, MPH, RDN, LDN
 - A Bridge from Science to Action**



Receive Continuing Education Units
See registration page for more information on
accreditation requirements and policies.

Registration is FREE!

[Scan or click HERE to register today and watch last year's conference recordings!](#)



Completed Research Studies in Delaware

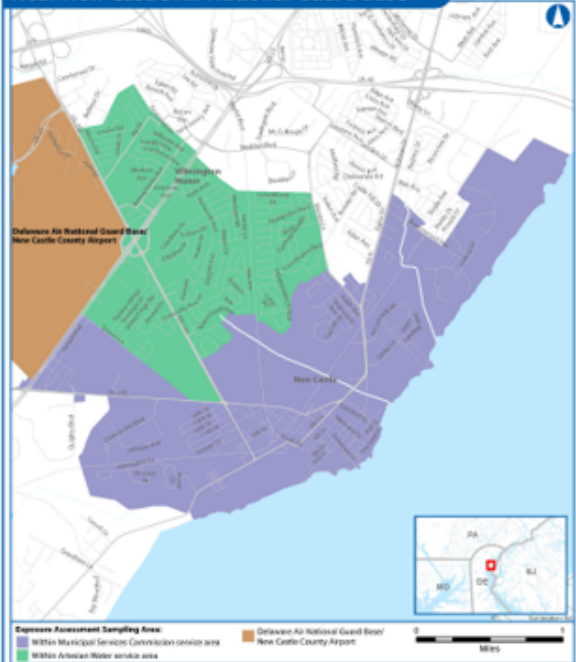


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Sampling Frame for New Castle County, DE
Near New Castle Air National Guard Base



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Division of Public Health
Agency for Toxic Substances and Disease Registry
Office of Community Health and Hazard Assessment
ATSDR
FINAL - FOR PUBLIC RELEASE

PFAS Exposure Assessment: New Castle County, Delaware | PFAS and Your Health | ATSDR (Agency for Toxic Substance and Disease Registry)

- In October 2019, ATSDR collected samples and other information from participants. ATSDR collected and analyzed data from the following:
 - 214 people
 - 203 adults
 - 11 children
 - 134 households
 - Questionnaires completed by all participants.
 - Blood and urine samples provided by most participants.
 - The serum portion of the blood from blood samples.
 - Samples of tap water and dust from some homes.
 - ATSDR sent individual results to each participant in November 2020.

Free fact sheets, resources, and give aways available from DNREC & DHSS!

PFAS IN DELAWARE THE FACTS YOU NEED

Per- and polyfluoroalkyl substances (PFAS) include thousands of human-made chemicals including PFOA, PFOS, and GenX. PFAS has been used globally in commercial and consumer products since the 1940s.



Gen X (a.k.a. HFPO-DA):
hexafluoropropylene oxide dimer acid

PFOS: perfluorooctanesulfonic acid

PFOA: perfluorooctanoic acid



POTENTIAL HEALTH EFFECTS

Studies suggest PFAS exposure may be linked to:

- Hormone disruption
- Thyroid effects
- High cholesterol
- Liver damage
- Reproductive effects
- Increased risk of certain cancers

Research on PFAS is ongoing.

WHERE CAN YOU BE EXPOSED?

PFAS can be found in everyday products and the environment, including:

- Drinking water
- Food and food packaging
- Stain-resistant clothing, carpets and upholstery
- Cosmetics and cleaning products

Industrial contamination and stormwater runoff



STAY INFORMED. STAY PROTECTED.

Scan the QR code to learn more about PFAS in Delaware and how you can protect your health and community.



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For more information:
dnrec.delaware.gov/pfas

The little changes we make can create a lasting impact!

Introducing the Delaware River Basin PFAS Data Application

Coalition for the Delaware River Watershed
Annual Delaware River Watershed Forum
September 30th, 2026

Matthew T. Amato, Ph.D.
Senior Water Resource Scientist
Delaware River Basin Commission



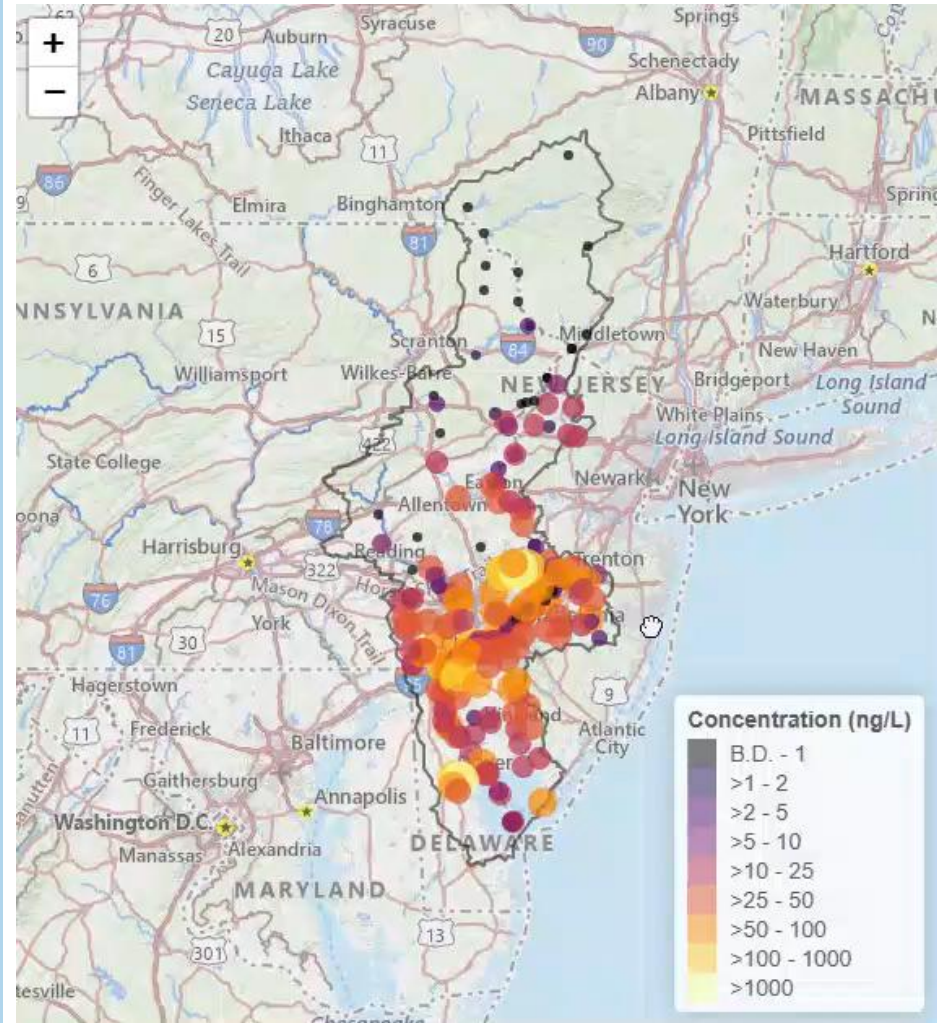
Delaware River Basin Commission

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Introducing the Delaware River Basin PFAS Data App

Includes 2,000+ PFAS samples:

- 1,600+ surface water and groundwater samples
- 250+ fish tissue samples
- 130+ sediment samples



wq.drbc.net/pfas

PFAS in the Delaware River Basin



Media:

Surface Water

PFAS Data Type:

☒ ΣPFAS

☐ Compounds

☐ Groups

Agency:

All

Years:



Value displayed at sampling locations with multiple sampling years:

Most Recent Sample

☐ HUC12 Averages (based on values displayed at each sampling location)

☐ River Miles

☐ Hide Map Legend

☐ Samples with known Quality Assurance Project Plans

ΣPFAS = Sum of detected PFAS compounds in a sample; not all samples were analyzed for the same compounds.

B.D. = Below analytical detection limits; varies by sample.

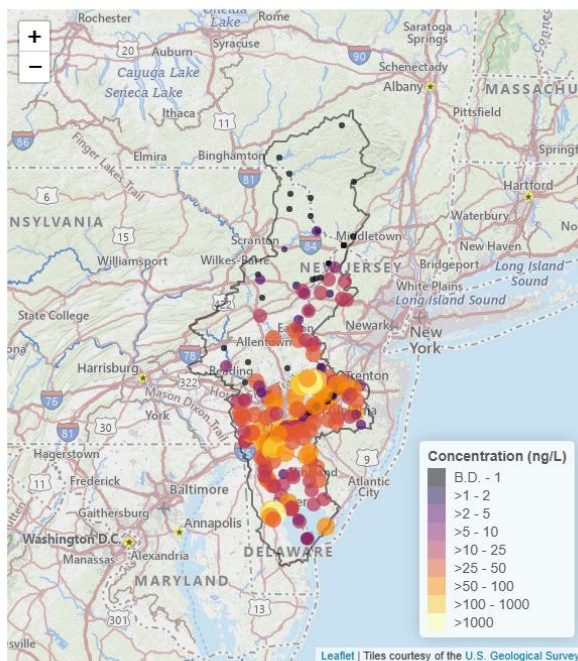
Map

Estuary Analyzer

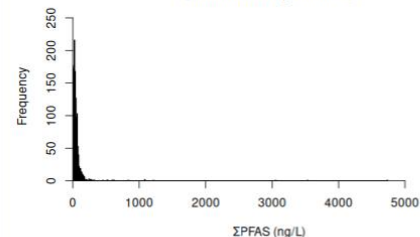
Criteria

History

About

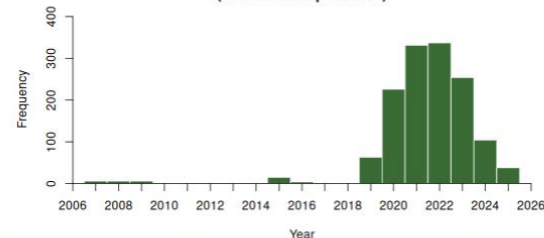


Concentration Distribution (in current map window)



Summary Statistics
n = 1393
B.D. = 95 (6.8%)
Mean = 59.34
Median = 34.3
Min = 0.25
Max = 4731.47

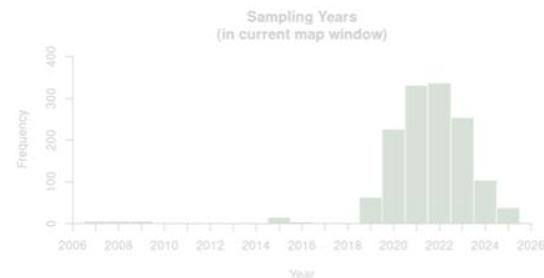
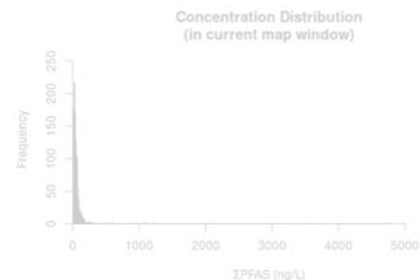
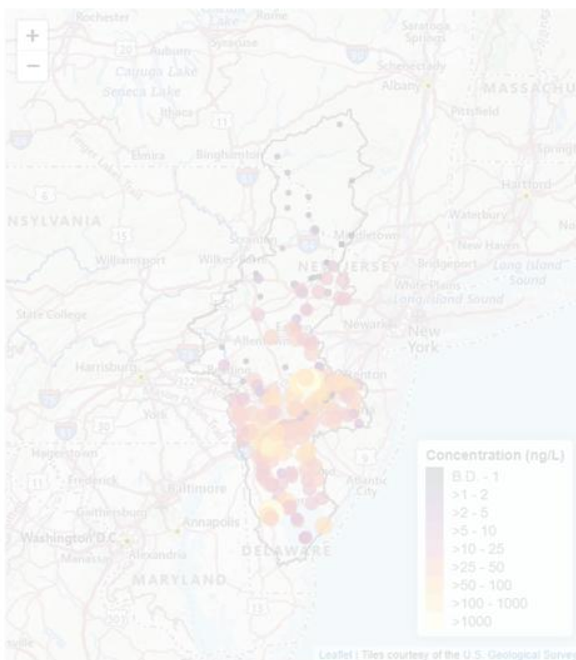
Sampling Years (in current map window)



PFAS in the Delaware River Basin



Map Estuary Analyzer Criteria History About



Media:

Surface Water

PFAS Data Type:

☒ ΣPFAS

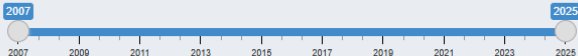
☐ Compounds

☐ Groups

Agency:

All

Years:



Value displayed at sampling locations with multiple sampling years:

Most Recent Sample

☐ HUC12 Averages (based on values displayed at each sampling location)

☐ River Miles

☐ Hide Map Legend

☐ Samples with Known Quality Assurance Project Plans

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PFAS in the Delaware River Basin



Media:

Surface Water

PFAS Data Type:

☒ IPFAS

☐ Compounds

☐ Groups

Agency:

All

Years:



Value displayed at sampling locations with multiple sampling years:

Most Recent Sample

☐ HUC12 Averages (based on values displayed at each sampling location)

☐ River Miles

☐ Hide Map Legend

☐ Samples with known Quality Assurance Project Plans

IPFAS = Sum of detected PFAS compounds in a sample; not all samples were analyzed for the same compounds.

B.D. = Below analytical detection limits; varies by sample.

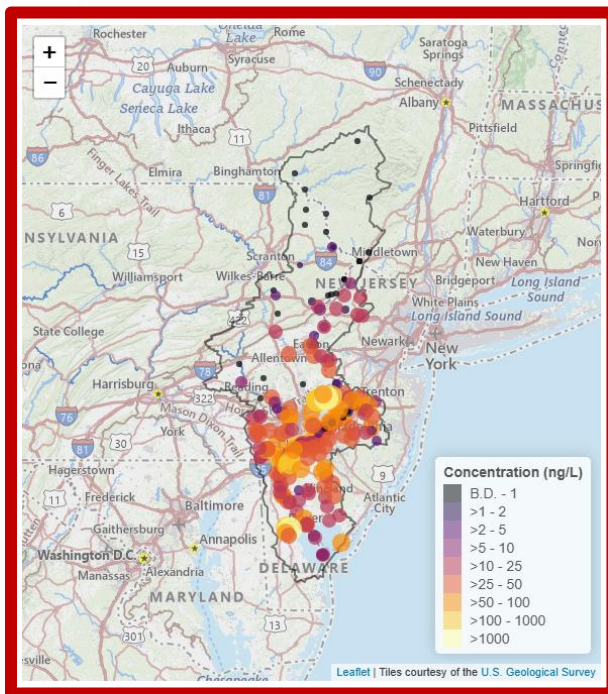
Map

Estuary Analyzer

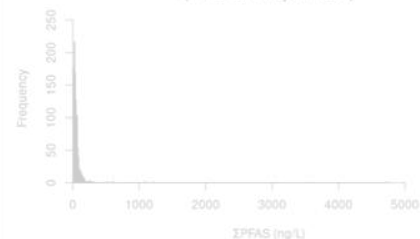
Criteria

History

About

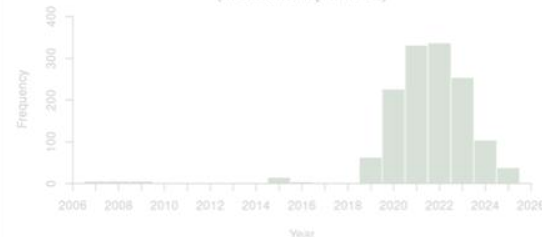


Concentration Distribution
(in current map window)



Summary Statistics:
n = 1393
B.D. = 95 (6.8%)
Mean = 59.34
Median = 34.3
Min = 0.25
Max = 4731.47

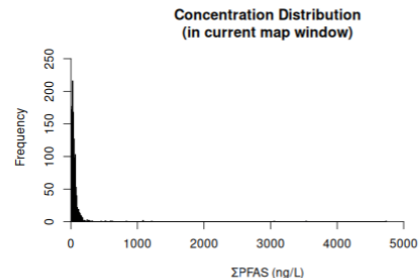
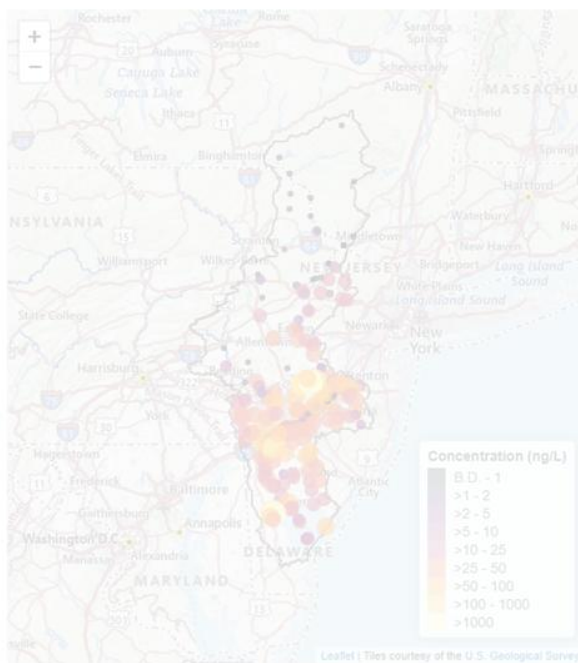
Sampling Years
(in current map window)



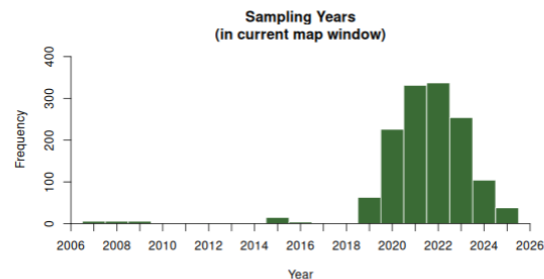
PFAS in the Delaware River Basin



Map Estuary Analyzer Criteria History About



Summary Statistics
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Max = 4731.47



PFAS in the Delaware River Basin



Media:

Surface Water

PFAS Data Type:

☒ ΣPFAS

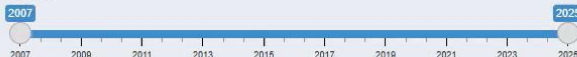
☐ Compounds

☐ Groups

Agency:

All

Years:



Value displayed at sampling locations with multiple sampling years:

Most Recent Sample

☐ HUC12 Averages (based on values displayed at each sampling location)

☐ River Miles

☐ Hide Map Legend

☐ Samples with Known Quality Assurance Project Plans

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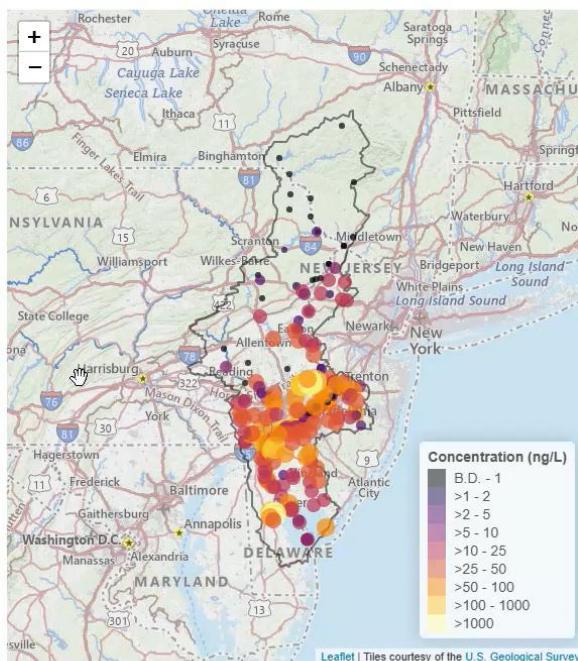
Map

Estuary Analyzer

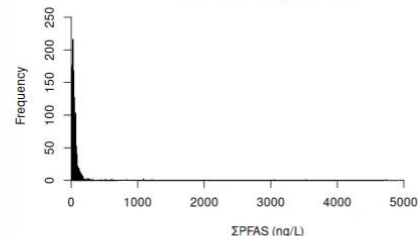
Criteria

History

About

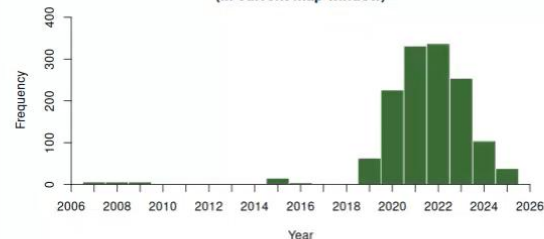


Concentration Distribution
(in current map window)



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Min = 0.25
Max = 4731.47

Sampling Years
(in current map window)



PFAS in the Delaware River Basin



Map

Estuary Analyzer

Criteria

History

About

Media:

Surface Water

PFAS Data Type:

☒ IPFAS

☐ Compounds

☐ Groups

Agency:

All

Years:



Value displayed at sampling locations with multiple sampling years:

Most Recent Sample

☐ HUC12 Averages (based on values displayed at each sampling location)

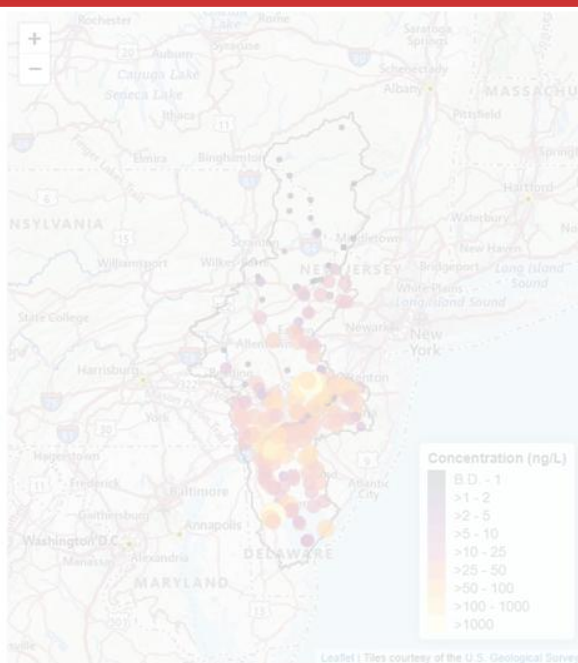
☐ River Miles

☐ Hide Map Legend

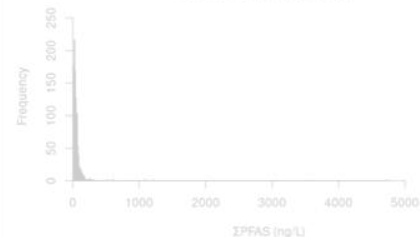
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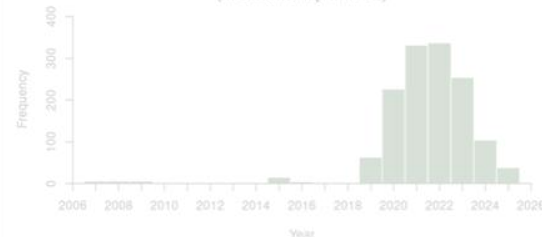


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Sampling Years
(in current map window)



PFAS in the Delaware River Basin



Media:

Surface Water

PFAS Data Type:

☒ Σ PFAS

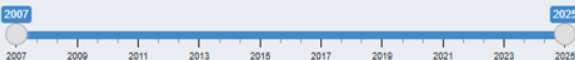
☐ Compounds

☐ Groups

Agency:

All

Years:



Value displayed at sampling locations with multiple sampling years:

Most Recent Sample

☐ HUC12 Averages (based on values displayed at each sampling location)

☐ River Miles

☐ Hide Map Legend

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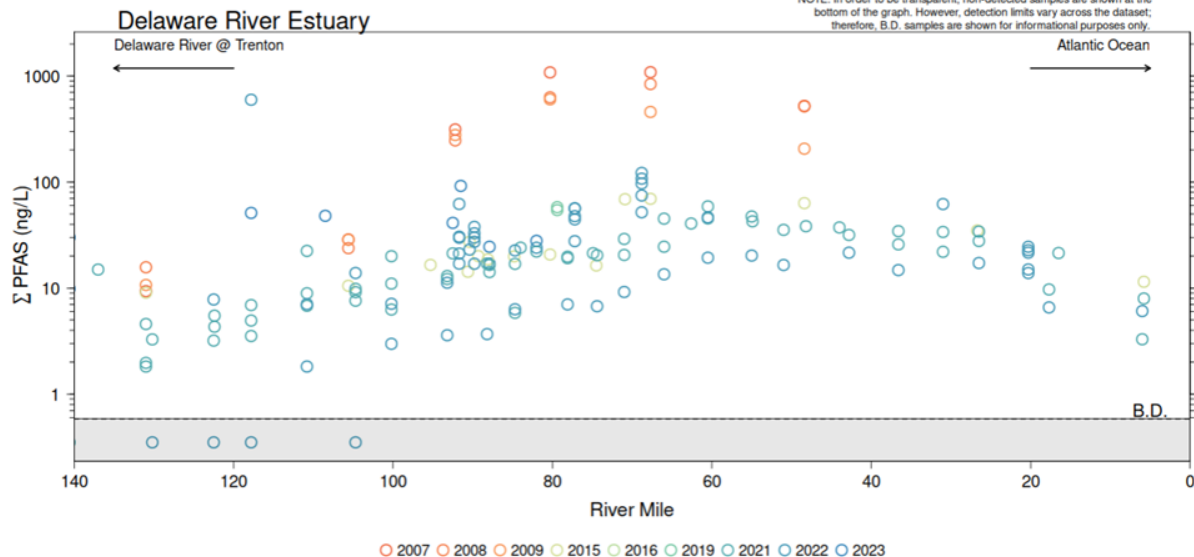
Map

Estuary Analyzer

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PFAS in the Delaware River Basin



Media:

Surface Water

PFAS Data Type:

- ☐ ΣPFAS
☒ Compounds
☐ Groups

Compound Name:

PFNA

Agency:

All

Years:



Value displayed at sampling locations with multiple sampling years:

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Map

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EPA Drinking Water Maximum Contaminant Level (MCL) for PFAS

Compound	MCL Goal (ng/L)	Final MCL (ng/L)
PFOA	0	4.0
PFOS	0	4.0
PFHxS	10	10
PFNA	10	10
HFPO-DA (GenX)	10	10
Mixture of PFHxS, PFNA, HFPO-DA, PFBS	1 (Hazard Index)	1 (Hazard Index)

EPA Draft Human Health Water Quality Criteria (HHC) for PFAS*

Compound	Water + Organism HHC (ng/L)	Organism Only HHC (ng/L)
PFOA	0.0009	0.0036
PFOS	0.06	0.07
PFBS	400	500

*These HHC values are draft EPA criteria. Unless and until these values are adopted, they have no legal effect. Notably, the states, individually or jointly through the DRBC, may also establish HHC for PFAS, which need not necessarily match those adopted by EPA.

The following resources provide more information about these criteria and what the numbers mean:

- [National Primary Drinking Water Regulations | US EPA](#)
- [Technical Fact Sheet: Draft National Recommended Human Health Ambient Water Quality Criteria for PFOA, PFOS, and PFBS](#)
- [Human Health Water Quality Criteria for PFAS | US EPA](#)

PFAS in the Delaware River Basin



Media:

Surface Water

PFAS Data Type:

- ☐ ΣPFAS
☒ Compounds
☐ Groups

Compound Name:

PFNA

Agency:

All

Years:



Value displayed at sampling locations with multiple sampling years:

Most Recent Sample

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Map

Estuary Analyzer

Criteria

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About

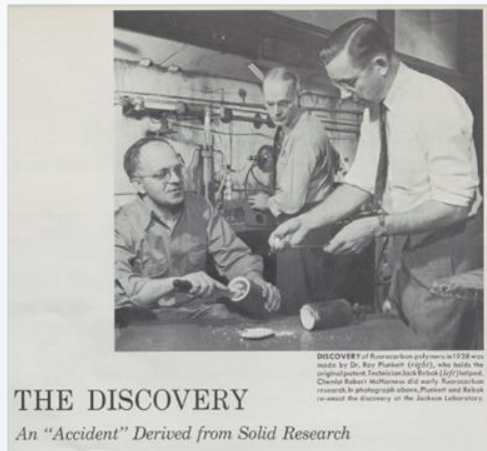
History of PFAS in the Basin

Per- and polyfluoroalkyl substances (PFAS) are a group of more than 13,000 synthetic organic compounds characterized by exceptionally strong carbon-fluorine bonds. These bonds make PFAS highly resistant to heat, water, and oil, and protect them from natural biological and chemical degradation. As a result, PFAS persist for long periods in the environment and are often referred to as 'forever chemicals.' This persistence, together with the wide range of physical and chemical properties across PFAS compounds, allows some to accumulate in sediments and organisms while others are readily transported by air or water, ensuring they can be found almost everywhere in the environment.

The Delaware River Basin holds a unique place in the history of PFAS. It was at DuPont's Chambers Works facility in Deepwater, New Jersey, that the first commercially produced PFAS compound—polytetrafluoroethylene (PTFE)—was accidentally discovered in 1938. Later marketed as Teflon™, this discovery helped establish the region as a global center for fluoropolymer research and production. For decades, the basin served as both a laboratory and manufacturing hub for the expansion of PFAS into thousands of consumer and industrial applications.

This long history of industrial and commercial activity across the Delaware River Basin has left a legacy of PFAS pollution that is heavily concentrated in the Lehigh Valley and extends south through the estuary. According to the EPA's ECHO database, nearly 3,000 industrial sites in the basin have been identified as potentially involved in the production, manufacture, or use of PFAS, with more than 1,500 facilities still active today. Together, these historical and ongoing sources present a significant challenge to protecting water resources across the basin, which is shared by more than 13 million people across four states.

Historical reference: Polytetrafluoroethylene (Teflon), 1938 – Hagley Museum and Library Digital Archive



Source: Hagley Museum and Library Digital Archive

Together, these historical and ongoing sources present a significant challenge to protecting water resources across the basin, which is shared by more than 13 million people across four states.

PFAS in the Delaware River Basin



Media:

Surface Water

PFAS Data Type:

- ☐ ΣPFAS
☒ Compounds
☐ Groups

Compound Name:

PFNA

Agency:

All

Years:



Value displayed at sampling locations with multiple sampling years:

Most Recent Sample

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Map

Estuary Analyzer

Criteria

History

About

About the Delaware River Basin PFAS Data App

This interactive application provides free access to publicly available monitoring data for **per- and polyfluoroalkyl substances (PFAS)** in surface water, groundwater, sediment, and biological tissue across the Delaware River Basin. The app is designed to translate large datasets from difficult-to-access formats into a visual tool that can be readily accessed and understood by a broad audience, including those without a scientific background.

The app was originally developed by scientists at the **Delaware River Basin Commission (DRBC)** as an internal tool for better understanding the scope, distribution, and variability of PFAS pollution throughout the Basin. Recognizing the importance of transparency and shared science, DRBC has made this tool available to support state agencies, researchers, utilities, and community members from all backgrounds.

Data Sources and Scope

All data displayed in this application are **publicly available** and were retrieved from the U.S. Environmental Protection Agency's *Water Quality Portal* or the U.S. Geological Survey's *Water Data API*. The dataset currently includes **over 2000 PFAS samples**, most of which are surface and ground water samples (>1700), and almost 300 of which are tissue samples from 17 aquatic species.

All data were downloaded from their original sources and processed to support the app's functionality and performance. While reasonable efforts were made to ensure accuracy, the app and data are provided **as they are** with no guarantee of suitability for any specific use. Users are solely responsible for assessing whether the data are appropriate for their purposes.

To assess data feasibility and limitations for your intended use, you can access the uncurated (raw) dataset at the following links:

EPA's WQP ([all data](#))

USGS' Water Data API ([water](#), [sediment](#))

Important note on agency attribution: The *Agency* filter in this app can be used to identify the organization that handled the sampling and/or uploaded the data to WQP. In many cases this will appear as DRBC or USGS, even when sampling programs may have been coordinated with or funded by other federal, state, or local agencies. The listed agency does not necessarily represent sole program ownership.

Supporting DRBC's Long-Term PFAS Roadmap

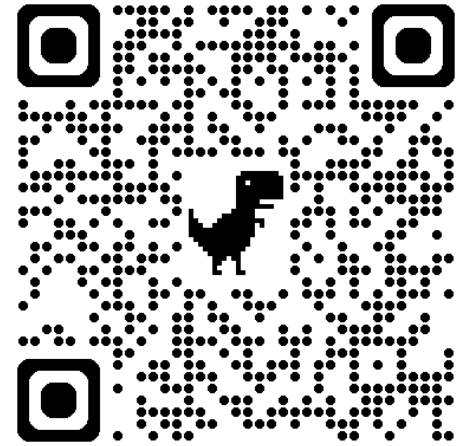
Consolidate inter-agency PFAS monitoring data
Centralize monitoring data into one public platform
Explore spatial & temporal patterns
Improve transparency & data accessibility
Support future monitoring, analysis & decision-making

matthew.amato@drbc.gov

www.drbc.gov



Scan QR Code to Visit the App



<https://wq.drbc.net/pfas/>



The Water Center
UNIVERSITY of PENNSYLVANIA

Strategic Planning & Emerging Contaminants: Building a Holistic, Adaptable & Sustainable Approach

CDRW, September 30, 2026



Coalition for the
Delaware River
Watershed



THE HUMAN BODY



—

What are our biggest problems involving water?







What are emerging contaminants?

Emerging contaminants are a broad class of unregulated or newly regulated chemicals increasingly detected in drinking water and aquatic systems.

Strategic Planning Process

Information Gathering & Analysis

- Steering Meetings
- Individual Interviews
- Data Gathering
- Literature Review

Plan Development

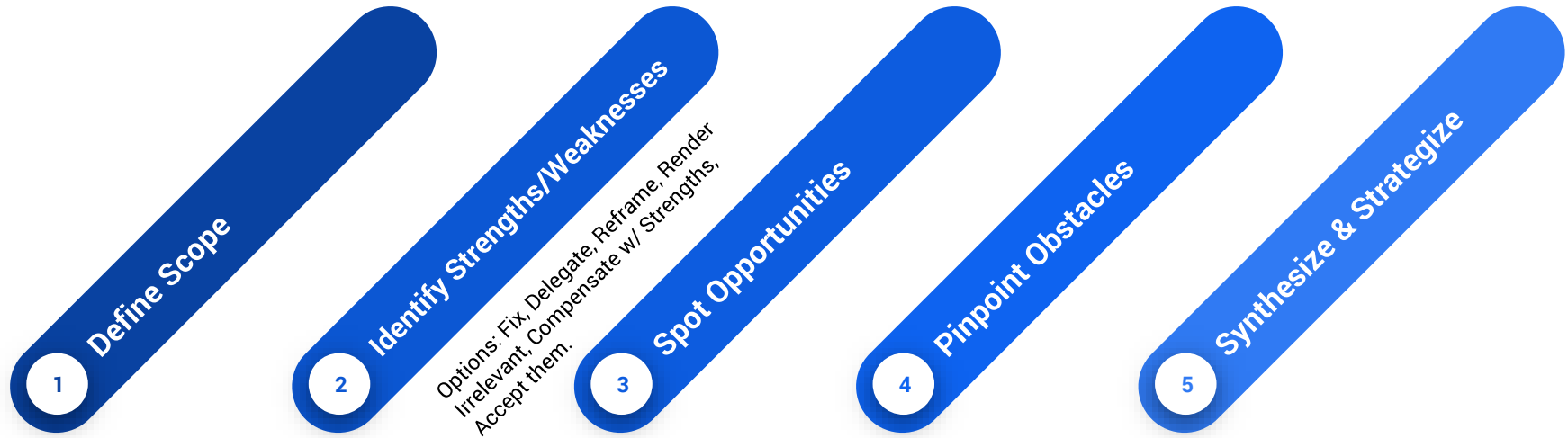
- Goals
- Strategies
- Implementation Pathways

Plan Activation

- Refinement
- Deploy implementation Pathways
- Continued iteration



Information Gathering & Analysis



Communicate & Implement

SWOT Analysis

The good

The not-so-good

What we've got

Strengths

What resources can we deploy?
What are our advantages?
What's working well?



Weaknesses

What abilities are we lacking?
Where are we starting to struggle?
How can we overcome these?



What's out there

Opportunities

Who might most value our strengths?
What trends work in our favour?
What prizes are within reach?



Threats

What headwinds do we face?
Who might challenge us?
What could go wrong?



BiteSize Learning



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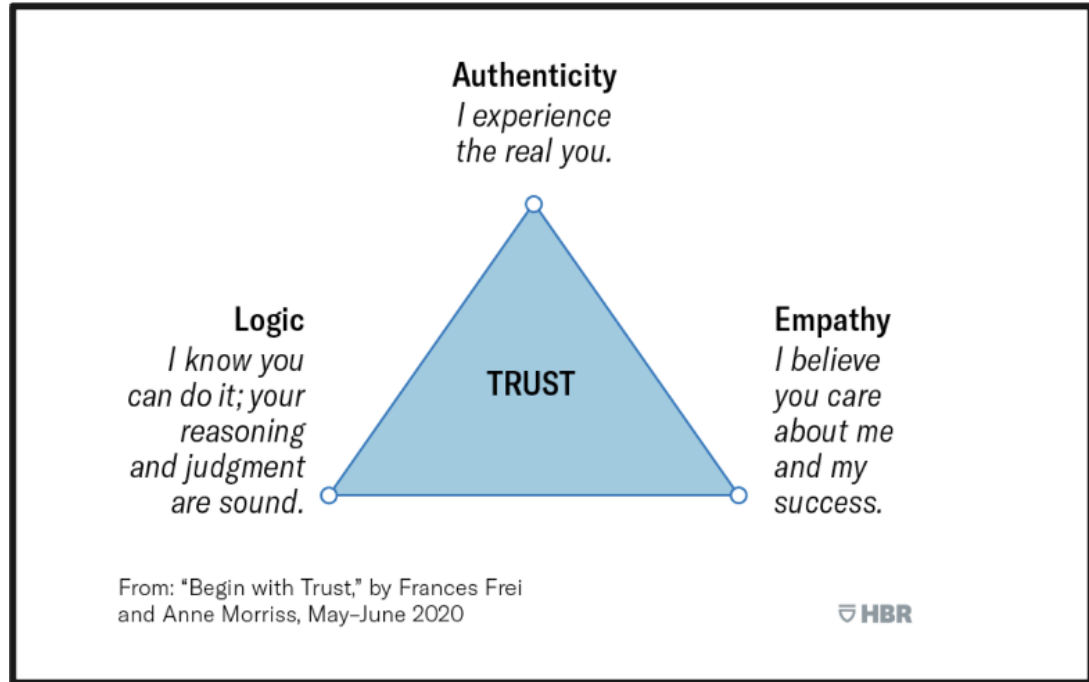
Strategy

- What authority do we have?
 - Is there any legislation in place that hasn't been fully utilized?
- What authority do we think we need?
 - Is this something that will only have continued support if legislation is in place - perhaps with dedicated funding?
- What does the political will suggest?
 - State leadership support
 - Legislative support
 - Public education/support
 - Env/Public Health/Industry
 - Anyone else?
- What hand-holding would be advantageous?
 - Legislators
 - Particular environmental/public health/economic development non-profits?
 - Industry
 - Etc.



Top Takeaways

- Build Trust
- Express Empathy
- Strategize
- Innovate & Iterate



Join the conversation on social media! Tag @DelRivCoalition with #DRWForum2026

14th Annual Delaware River Watershed Forum



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William Penn
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