



# PFAS Update

**Priscilla To, PhD, PE - Senior Scientist - Interim PFAS Program Manager**

**September 12, 2024**

# Agenda

- What are PFAS?
- Prepared for Drinking Water Compliance
- Priorities for Future Compliance

# What are PFAS?

## Per- and Polyfluoroalkyl Substances

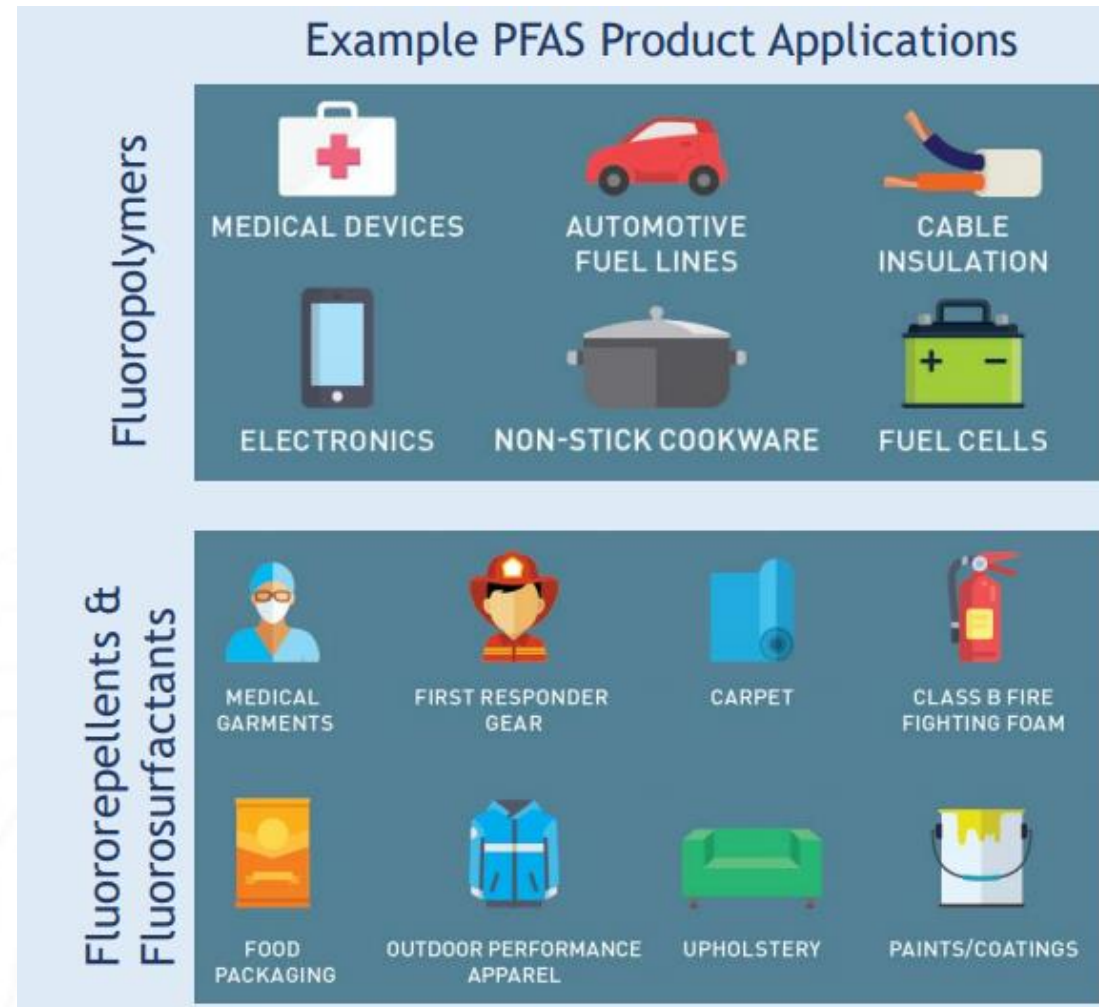
- Human-made
- Includes thousands of chemicals
- Used since the 1940s
- Oil, water, stain, flame resistant
- Resistant to degradation



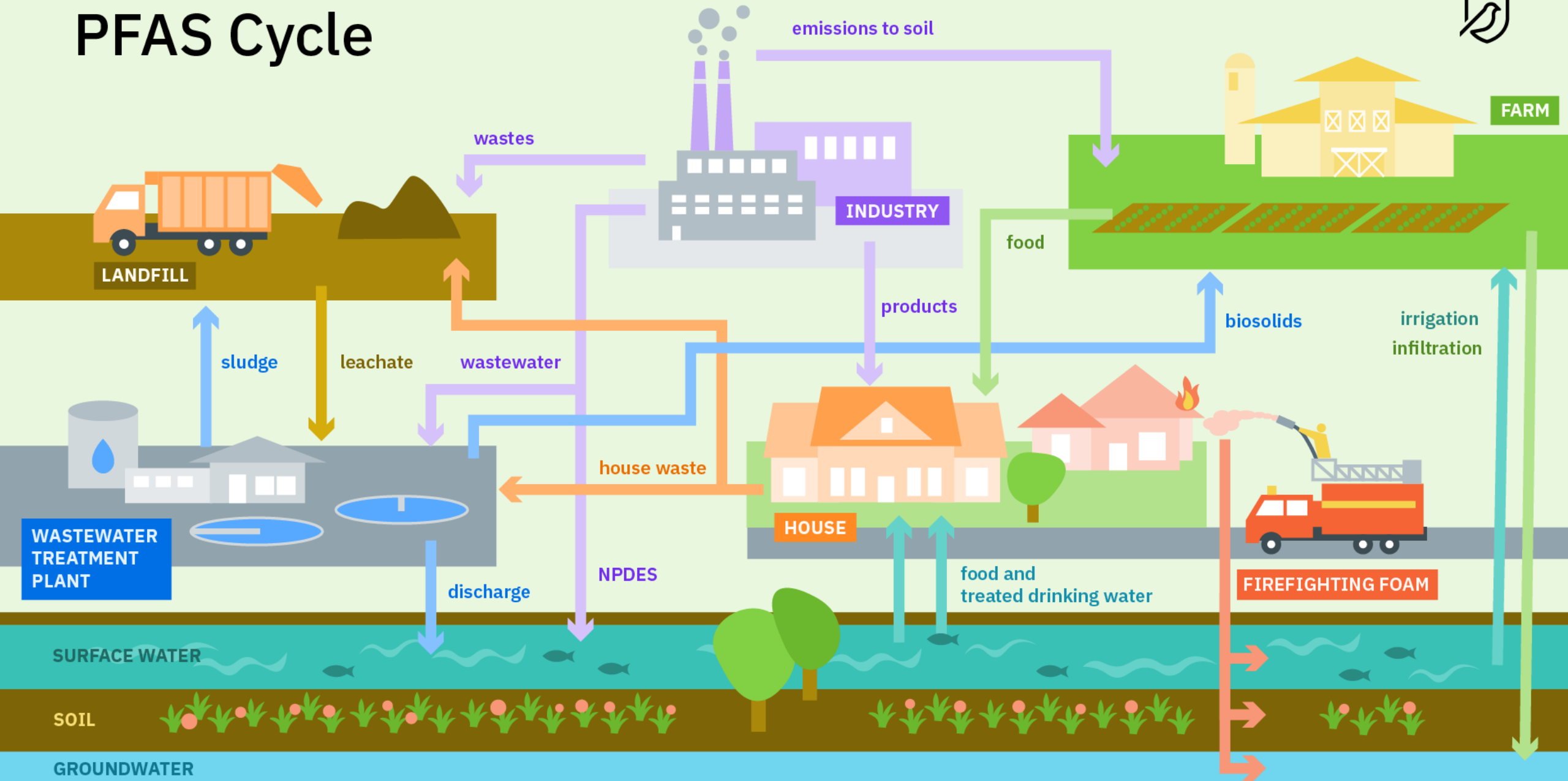
# What are PFAS?

## Per- and Polyfluoroalkyl Substances

- Human-made
- Includes thousands of chemicals
- Used since the 1940s
- Oil, water, stain, flame resistant
- Resistant to degradation

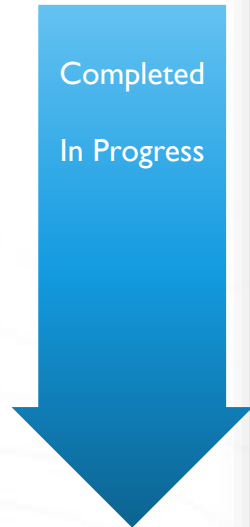


# PFAS Cycle



# Maryland PFAS Action Plan – Dec 2023

<https://mde.maryland.gov/PublicHealth/SiteAssets/Pages/PFAS-Landing-Page/Maryland%20PFAS%20Action%20Plan%20December%202023.pdf>



<b>List of Tables</b>	<b>1</b>
<b>List of Abbreviations</b>	<b>1</b>
<b>1.0 Introduction</b>	<b>1</b>
<b>2.0 Purpose</b>	<b>1</b>
<b>3.0 PFAS Actions Summary</b>	<b>1</b>
<b>4.0 Minimizing Environmental Exposure to PFAS Chemicals</b>	<b>11</b>
4.1 Drinking Water	11
4.2 Fish Consumption	15
4.3 Product Bans for AFFF, food packaging, Rugs/Carpet, and Cosmetics	21
4.4 Air Emissions	22
<b>5.0 Minimizing Future Releases of PFAS Chemicals</b>	<b>25</b>
5.1 Municipal Wastewater Treatment Plants	25
5.2 Biosolids	29
5.3 Industrial and Municipal Wastewater Spray Irrigation Facilities	32
5.4 Landfills	34
5.5 Septic Systems	36
5.6 Industrial Facilities (Wastewater and Stormwater)	36
5.7 Pesticides	40
<b>6.0 Identifying, Assessing, and Cleaning up Historical Releases of PFAS Chemicals</b>	<b>44</b>
6.1 Source Identification	44
6.2 Federal Facilities & National Priority List (NPL) Sites	48
<b>7.0 Assessing Environmental Justice and Health Equity Concerns</b>	<b>55</b>
7.1 Summary of EJ-Related Actions	55
<b>8.0 Education and Communication on PFAS Risks</b>	<b>56</b>
8.1 Summary of Public Education/Communication Related Actions	56
<b>9.0 Analytical and Field Services</b>	<b>57</b>
9.1 MDH Laboratories Administration	57
9.2 MDE Field Services	59

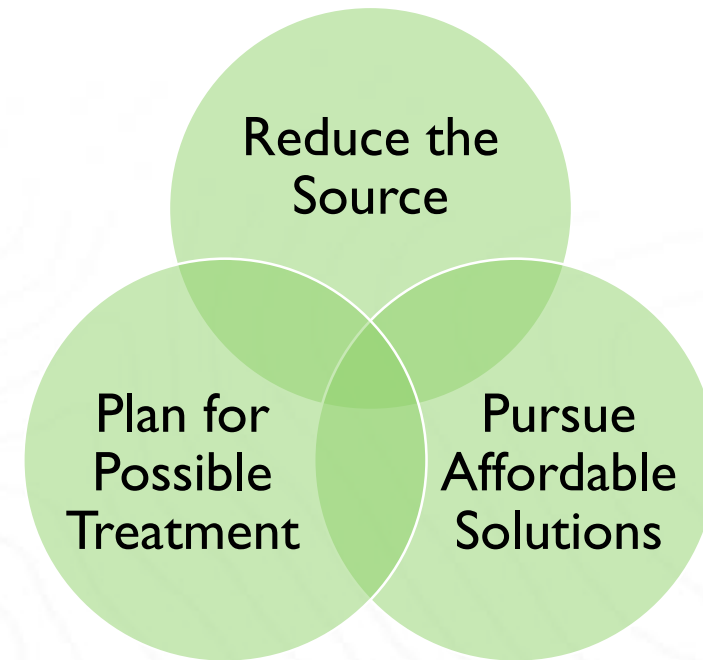


# Priorities for Future Compliance in drinking water, wastewater and biosolids

## Increasing WSSC Water Capabilities



## Smart One Water Management of PFAS





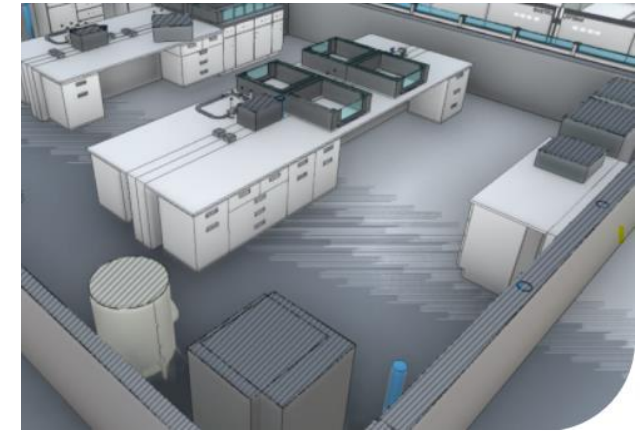
# Priorities for Future Compliance: Increasing WSSC Water Capabilities



## Enhance our analytical capabilities

## Enhance our research

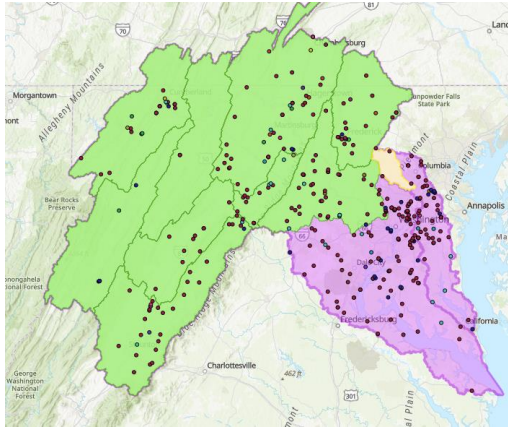
- Sampling our raw water, tap water, wastewater and biosolids
- Conducting PFAS treatment tests
- Participating in 8 projects of nearly \$7M of research work funded by NRCS, EPA, NSF, WRF



## Enhance our expertise



# Priorities for Future Compliance: Smart One Water Management of PFAS



## Reduce the Source

- Increasing data sets
- Identifying potential sources



## Plan for Possible Treatment

- Water – Seeking technologies that deliver multiple water quality and resilience benefits
- Wastewater – Seeking technologies that retain community and environmental benefits of biosolids
- Planning for multiple scenarios



## Pursue Affordable Solutions

- Conducting performance tests to define funding needed
- Developing solutions that can reduce treatment needs
- Promoting data-driven policies



**Questions?**

