



# Chesapeake Bay & Water Resources Policy Committee

Annual Water Quality Forum Briefing

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September 15, 2023

# Agenda

- WSSC Water At A Glance
- PFAS in Drinking Water
  - Regulatory Status
  - WSSC Water Monitoring
  - Mitigation and Future Compliance
  - Risks to Drinking Water
- PFAS in Wastewater and Biosolids
  - Wastewater and Biosolids Management: PFAS Considerations
  - Research and Collaboration Efforts
  - Residuals and Biosolids Master Plan
  - Risks
- Achieving & Evaluating Bay Progress

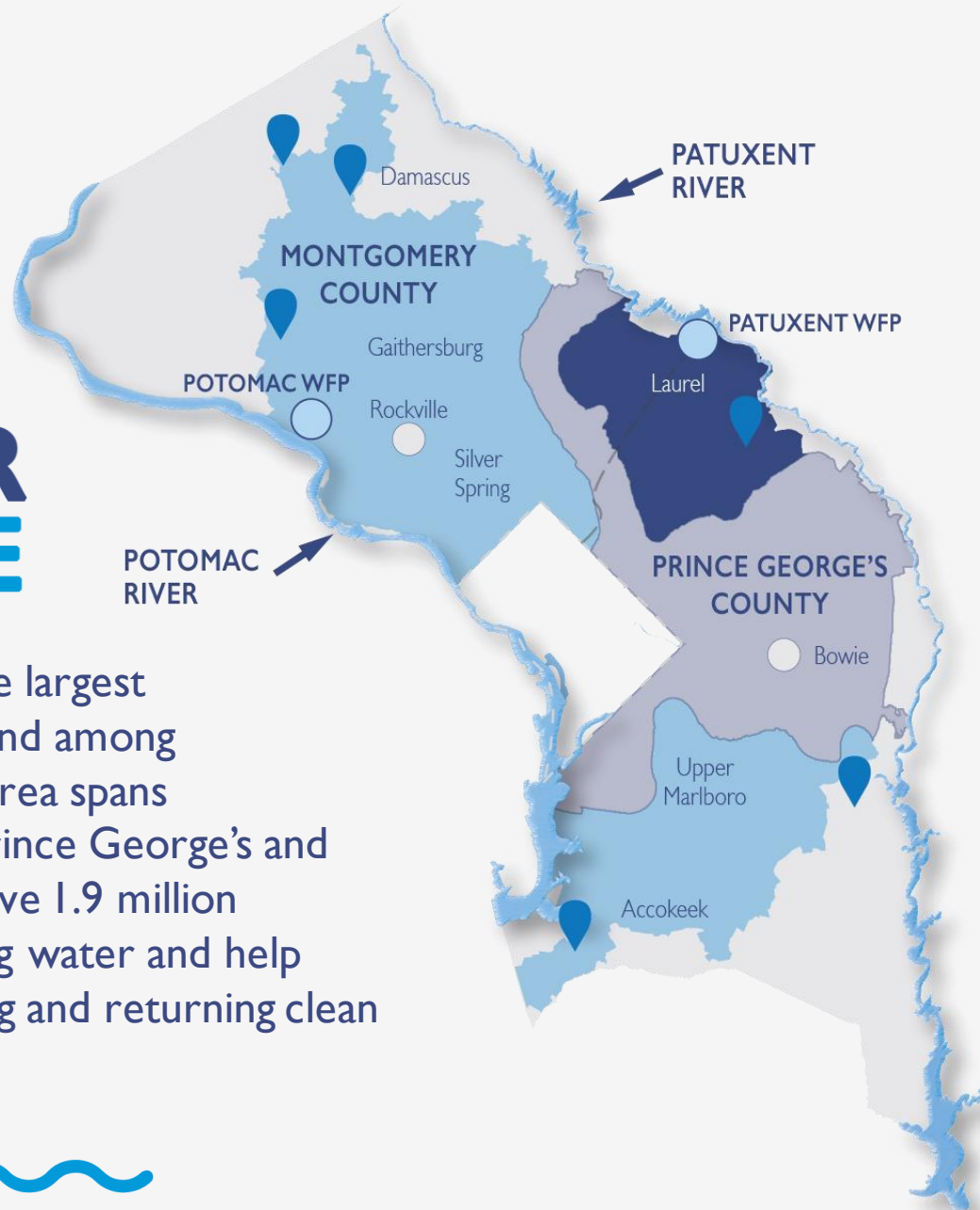


**105** years & counting  
No drinking water quality violations...ever!



# WSSC WATER AT A GLANCE

Established in 1918, WSSC Water is the largest water/wastewater utility in Maryland and among the largest in the nation. Our service area spans approximately 1,000 square miles in Prince George's and Montgomery counties. We proudly serve 1.9 million residents with safe and reliable drinking water and help protect the Chesapeake Bay by treating and returning clean water back to Maryland waterways.



## SERVICE AREAS

- Potomac Water
- Patuxent Water
- Blended Water
- Not Served by WSSC Water
- Water Filtration Plant
- Water Resource Recovery Facility



# PFAS In Drinking Water

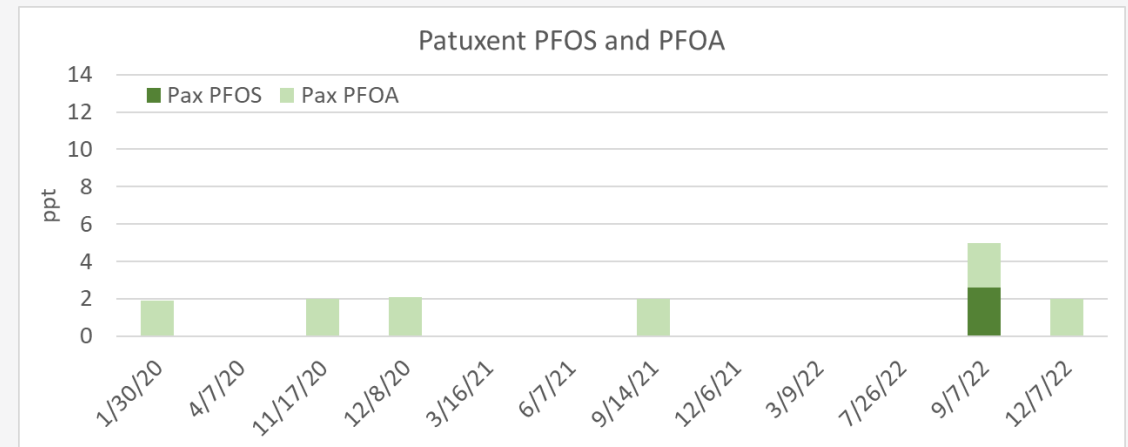
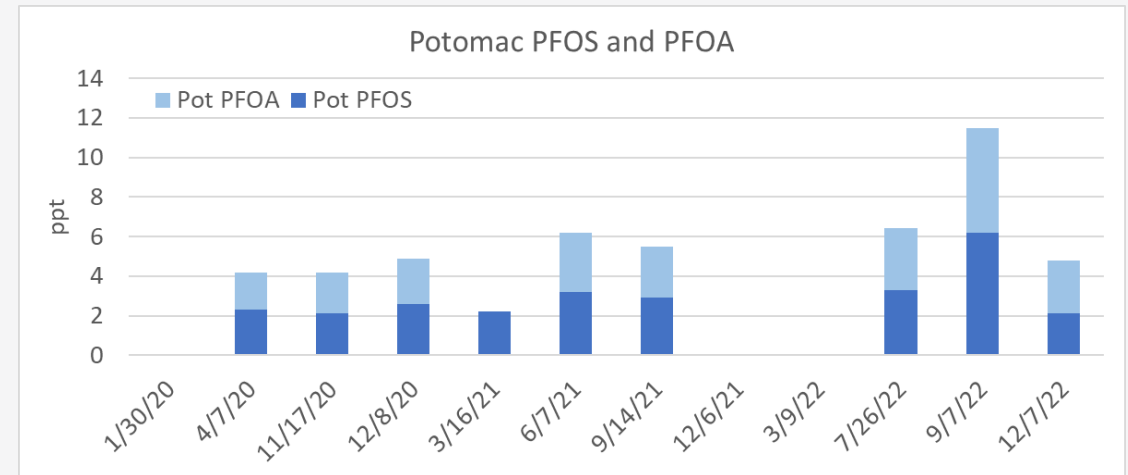
- EPA Proposed Rule released March 2023
- Adoption of Limits for PFOA and PFOS
  - PFOA: 4 parts per trillion (ppt)
  - PFOS: 4 ppt
  - MCLG: 0 ppt
  - Additional chemicals (four) addressed through hazard index
- Public Water System requirements would include:
  - Monitoring
  - Public notification of PFAS levels
  - Compliance within three years of final rule (by 2027); potential extension at discretion of Primacy Agency



# WSSC Water Monitoring

- Proactively began monitoring in January 2020 for 18 compounds
- In September 2022, proactively expanded monitoring to 29 compounds using latest US EPA testing methods
- Proactive testing goes above and beyond federal and state requirements
- All test results have been posted on our website
- Test results indicate very low levels of PFAS in our drinking water
  - No known PFAS contaminated sites upstream of drinking water intakes

	Potomac Average (ppt)	Patuxent Average (ppt)
PFOS	2.24	0.22
PFOA	1.92	1.03



# PFAS Action Plan - Drinking Water

## Regulatory Process (2023)

- Discussions with EPA
- May 2023 public comment
- Advocacy for funding and comprehensive approach to addressing PFAS
- Preparations in advance of Final Rule
  - MCL
  - Implementation timeline and framework

## Source Water Protection (2023 - 2025)

- Monitoring to understand watershed distribution\*
- Update Source Water Assessment and develop source mitigation strategies\* (monitoring, regulatory, advocacy...)

\* Pursuing through DWSP and MWCOC regional collaboration and funding

## Treatment Decision (2023 - 2024)

- Monitoring
  - Continue quarterly monitoring of tap (ongoing)
  - Increase frequency to monthly tap monitoring increase data set
  - Increase monitoring to include raw-tap pairs to evaluate fate in WTP (FY24)
- Capital Planning
  - Update order-of-magnitude cost estimate for Potomac WFP treatment\* (FY23)
  - Update Risk Assessment (FY24-26)
  - Develop more detailed treatment design alternatives and feasibility\*\* (FY24-26)
  - Depending on final rule and timeline, pursue bench/pilot testing

\*\* Under ongoing Phase II Water Quality and Treatment Master Planning



# Risks – Drinking Water

- **Compliance**

- Treatment process changes require time for alternatives development and capital investment
- Lack of comprehensive approach for compliance

- **Financial**

- Potential treatment changes are estimated to cost from \$400 million to more than \$1 billion just for WSSC Water alone (does not include annual operating costs)
- Costs to remove PFAS may be passed on to WSSC Water and our customers

- **Operational**

- Only known methods to remove PFAS from drinking water are activated carbon, ion exchange, and reverse osmosis; all have pros and cons
- Additional costs for operations and maintenance not appropriately contemplated
- Laboratory capacity and capability

The Washington Post

*Democracy Dies in Darkness*

## Md.'s largest water utility sues DuPont, 3M over 'forever chemicals'



WSSC Water  
@WSSCWaterNews

Are you noticing an earthy taste in your tap water? The change is due to algal activity in the Potomac River. Despite the taste & odor issues, water remains safe. More info at [ow.ly/o8sy500N56W](https://ow.ly/o8sy500N56W) – have a question or complaint, fill & submit this form [ow.ly/SY4J500N56V](https://ow.ly/SY4J500N56V)

**TASTE & ODOR CHANGES TO TAP WATER**

Impacting customers served by the Potomac Water Filtration Plant (Potomac River).

Visit [wsscwater.com](https://wsscwater.com) to learn more.

# Risks - Wastewater and Biosolids

- **Compliance**

- NPDES permit renewals for all WRRFs will include PFAS monitoring of effluent
- PFAS in air emissions not well understood nor currently regulated
- PFAS may not be fully destroyed but transformed

- **Financial**

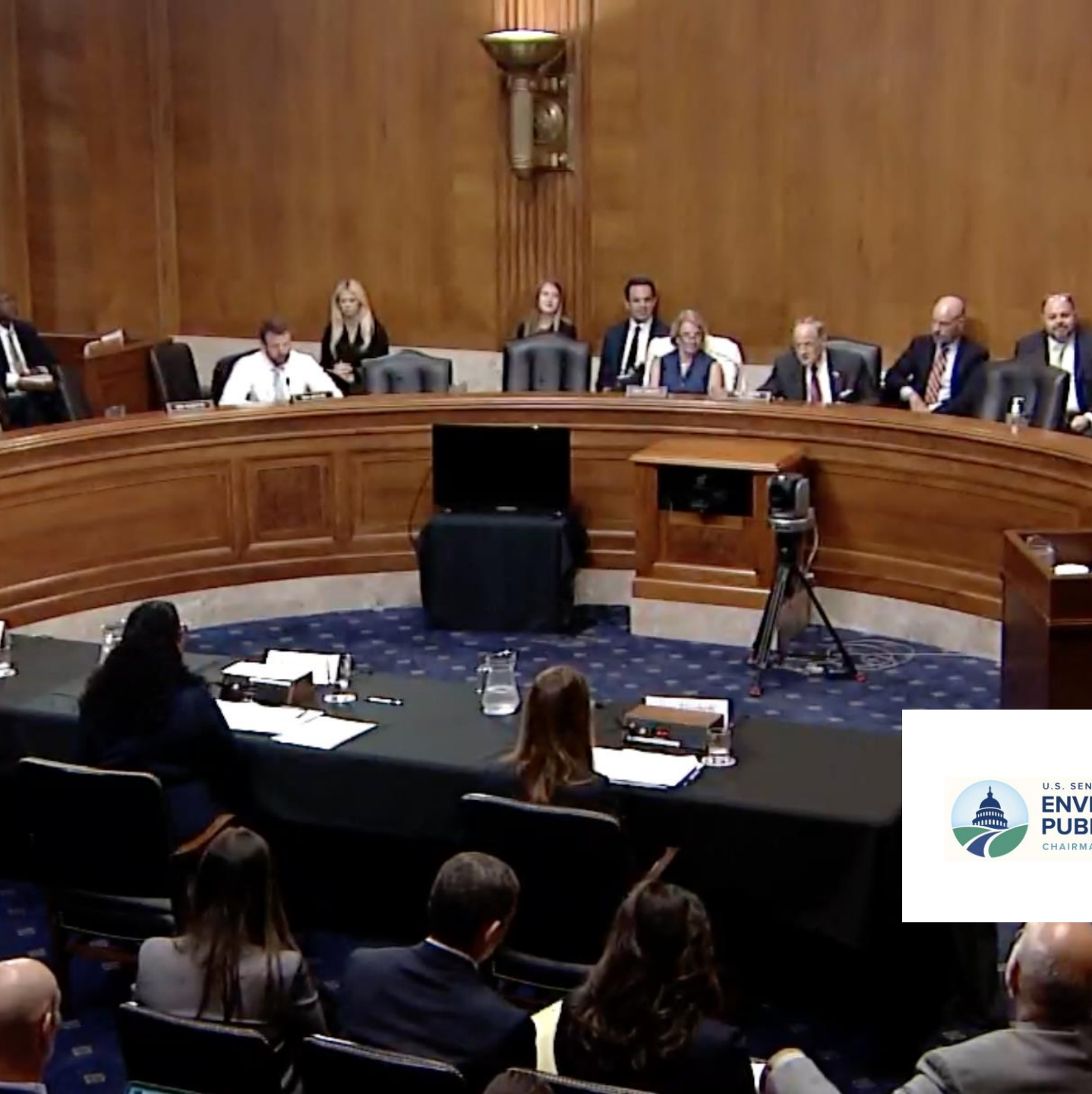
- Pyrolysis for biosolids processing is an emerging technology
- Preliminary estimate to construct a pyrolysis (biosolids PFAS destruction) facility adjacent to the Bioenergy Facility is **\$175 million**

- **Operational**

- Minimal PFAS removal through existing WRRFs
  - Limited options for full-scale treatment / removal in current wastewater treatment processes
  - Membranes / Ion exchange are cost prohibitive and energy intensive
- As of February 28, MDE withholding final authorization of new Class B permit applications to land-apply sewage sludge







# Biggest Risks

CERCLA Liability

Lack of Funding

Further behind on maintaining existing infrastructure, investing in workforce

Historic levels of funding are not enough

Treatment requirements energy intensive; further away from achieving climate goals

Impacts to Chesapeake Bay and Bay Watershed



