

Drinking Water in the DC Area: Past, Present, and Future

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Interstate Commission on the Potomac River Basin
Fairfax Environmental Quality Advisory Council
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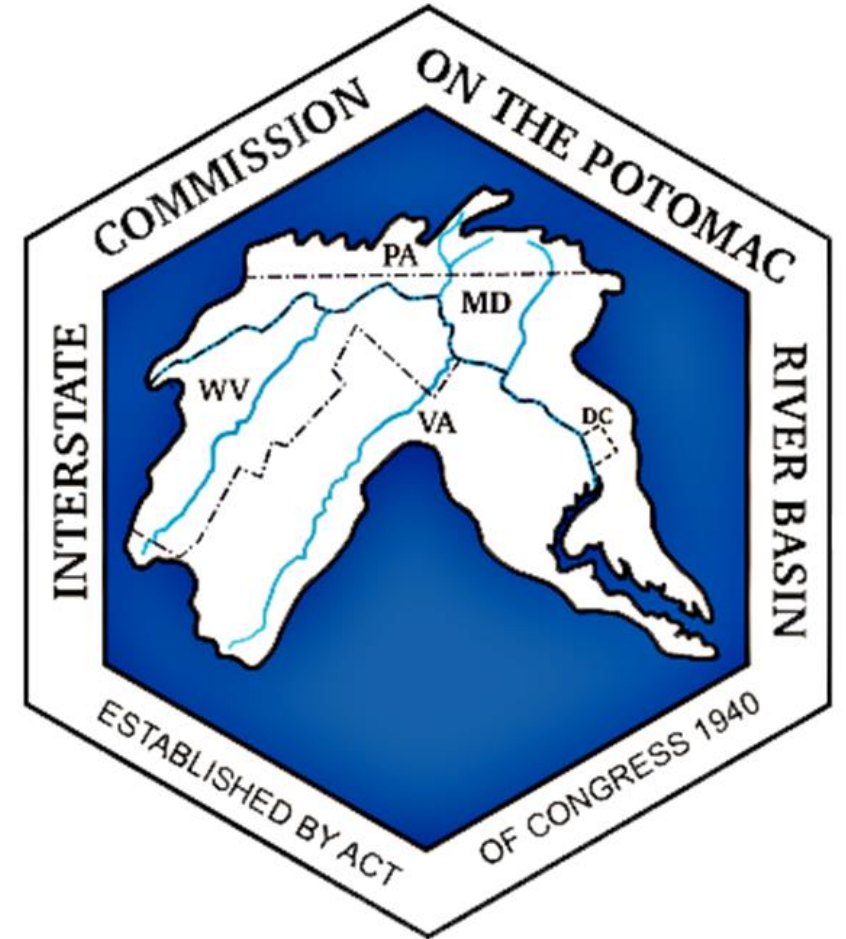
ICPRB: Who We Are

- Approved by Congress in 1940 as an Interstate Compact for “the purpose of regulating, controlling, preventing, or otherwise rendering unobjectionable and harmless the pollution of the waters of said Potomac drainage area by sewage and industrial and other wastes.”
- Signatory Jurisdictions: Maryland, Virginia, West Virginia, Pennsylvania, and the District of Columbia but not the United States



ICPRB: Who We Are

- The five jurisdictions and the federal government appoint three Commissioners each.
- The Compact establishes the Commission as an agency of each signatory jurisdiction.
- **No regulatory authority**



Regional Water Supply Coordination

- Drinking Water in the News: Western Droughts
- Importance of the Potomac River Here
- Climate, acute threats
- What happened, challenges, and next steps
- Resiliency investment
- Water Supply Resiliency
- Agreements and governance

Drivers for the Current Water Supply System

1851 Library of Congress Fire

USACE Builds Washington Aqueduct

Severe historical droughts

- 1930 Dust Bowl era
- 1966 Lowest recorded river flow
- 2002 Minor Drought

1960s -1970s

- Rising regional water demand
- Federal interest in Washington Aqueduct supply
- “Last straws” in the river
- Critical federal facilities



Occoquan Reservoir, 1966

Regional Cooperative Water Supply System

Suppliers

- Fairfax Water
- WSSC Water
- Washington Aqueduct*

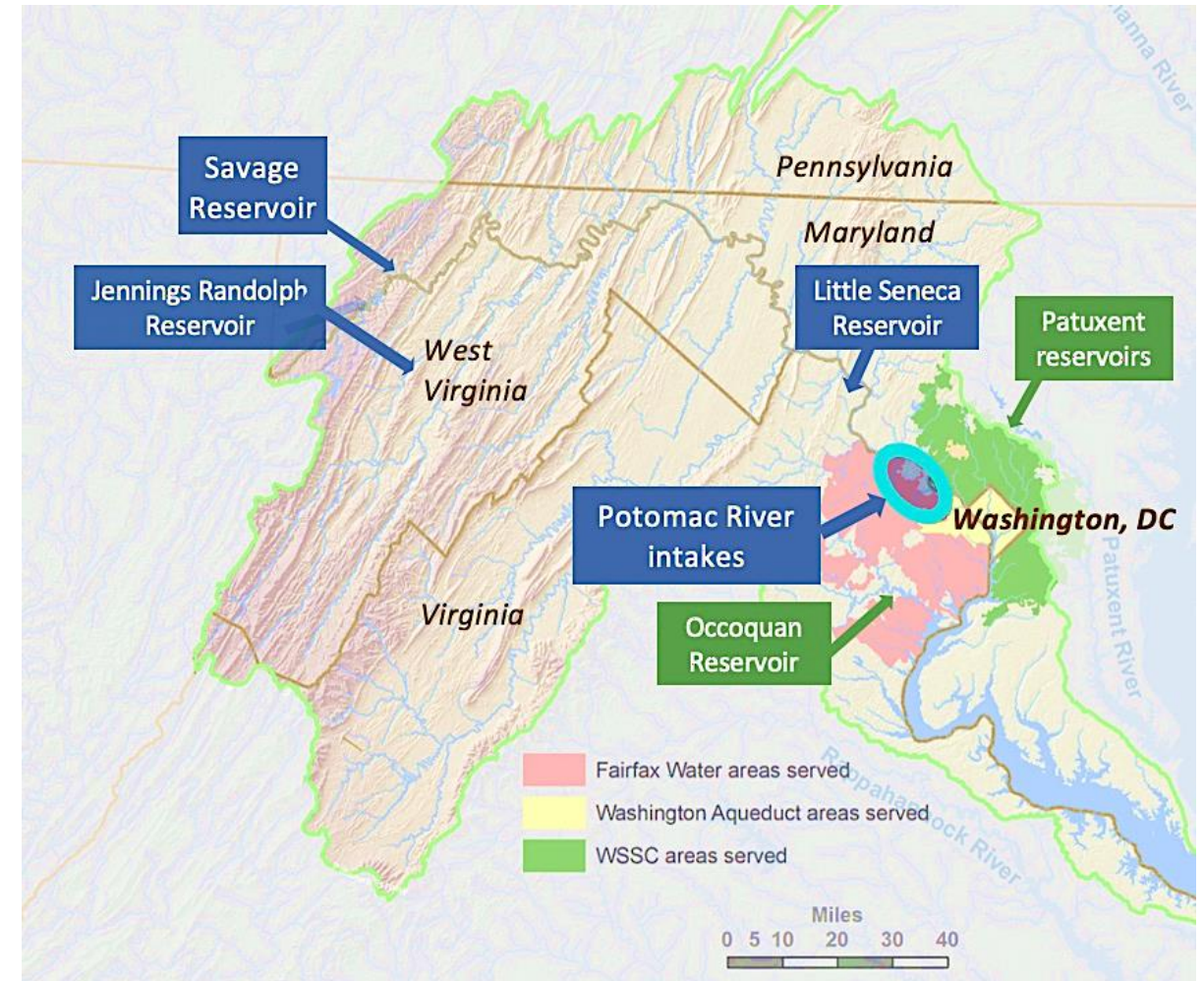
Off-Potomac Sources

- Fairfax Water: Occoquan
- WSSC Water: Patuxent

Shared Reservoirs

- Jennings Randolph
- Little Seneca
- Savage

*A Division of the US Army Corps of Engineers



Regional Water System Operations

The Potomac River is the primary supply

- Provides 78% of water to the region
- Provides 100% of water to the District of Columbia and Arlington County via the Washington Aqueduct)

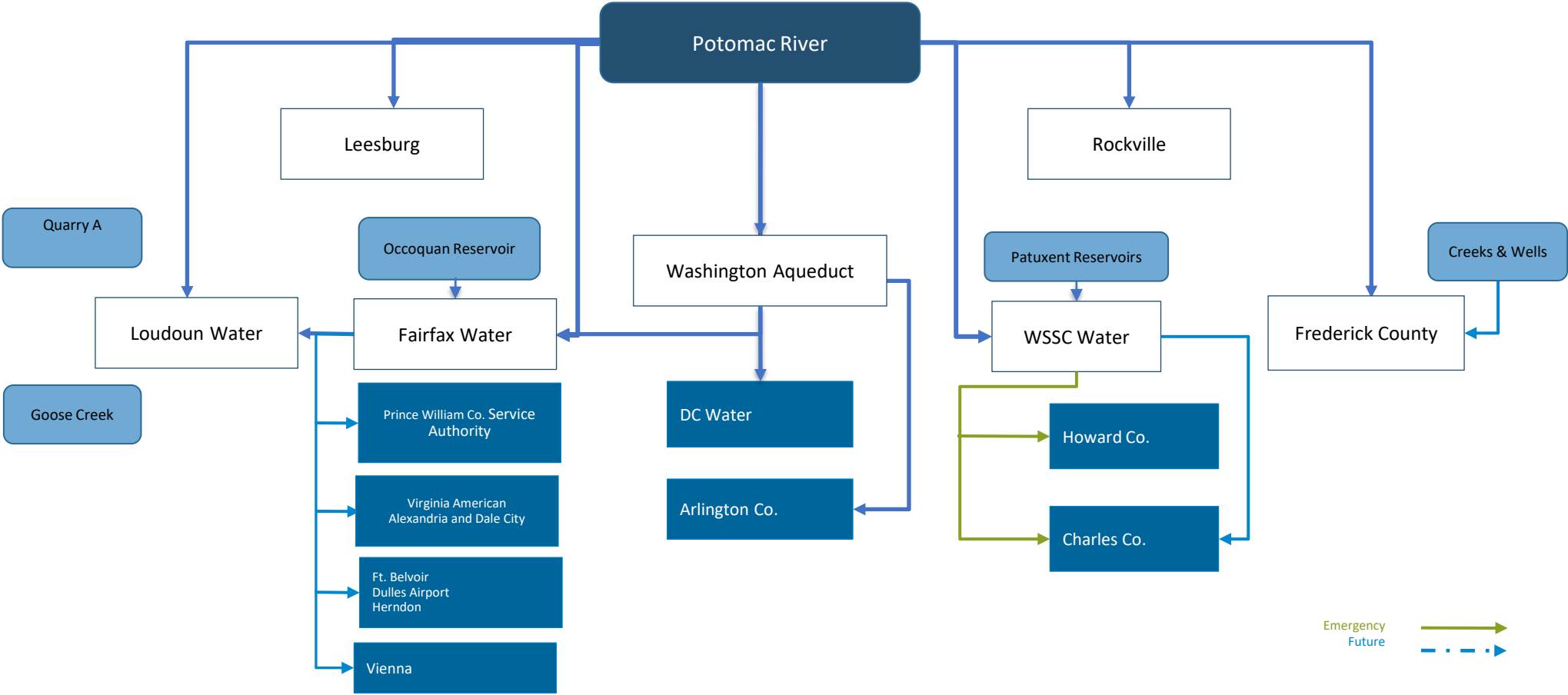
Water suppliers share costs of upstream reservoirs

- Upstream reservoir releases during droughts increase Potomac River flow and benefit all
- The District of Columbia and Arlington County do not have any off-Potomac reservoir storage

The three largest suppliers participate in the cooperative system

- Drought planning & drought operations are cooperative
- Costs of upstream reservoirs are shared by the three suppliers
- New shared multi-purpose infrastructure may require complex new agreements

Potomac River Drinking Water Supplies the Region



History of Regional Cooperation

- 1970 - Water supply added to ICPRB compact
- 1978 - Low Flow Allocation Agreement (LFAA)
- 1982 - Water Supply Coordination Agreement (WSCA)
- 1982 - Reservoir cost-share agreements
- 1994/04/09 - Water Supply Emergency Plan
- 2000 - Water Supply & Drought Response Plan
- 2004 - Potomac Drinking Water Source Protection Partnership
- 2007 - MWCOG Regional Redundancy Study
- 2008 - NCR Water/Wastewater Agency Response Network
- 2016 - MWCOG regional water system redundancy study
- 2017 - ICPRB Washington metro area water supply alternatives study

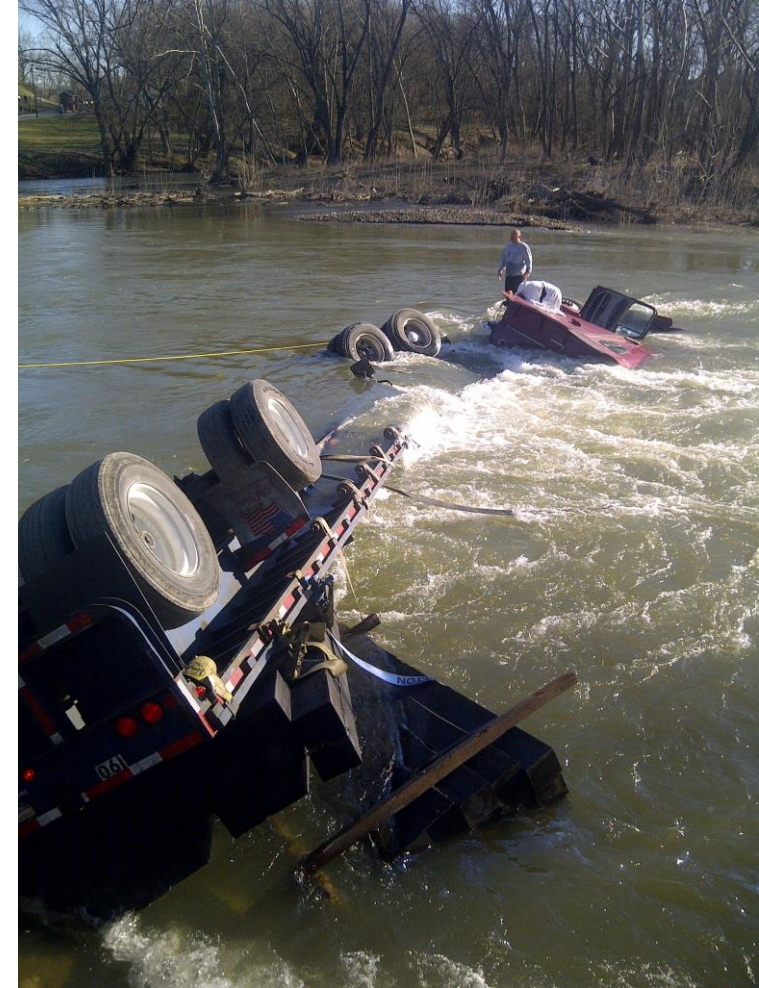


WSCA Signing

21st Century Resiliency Planning

Two primary considerations

- Spill releases into river
- Unprecedented drought due to climate change



Risk of Spill Events

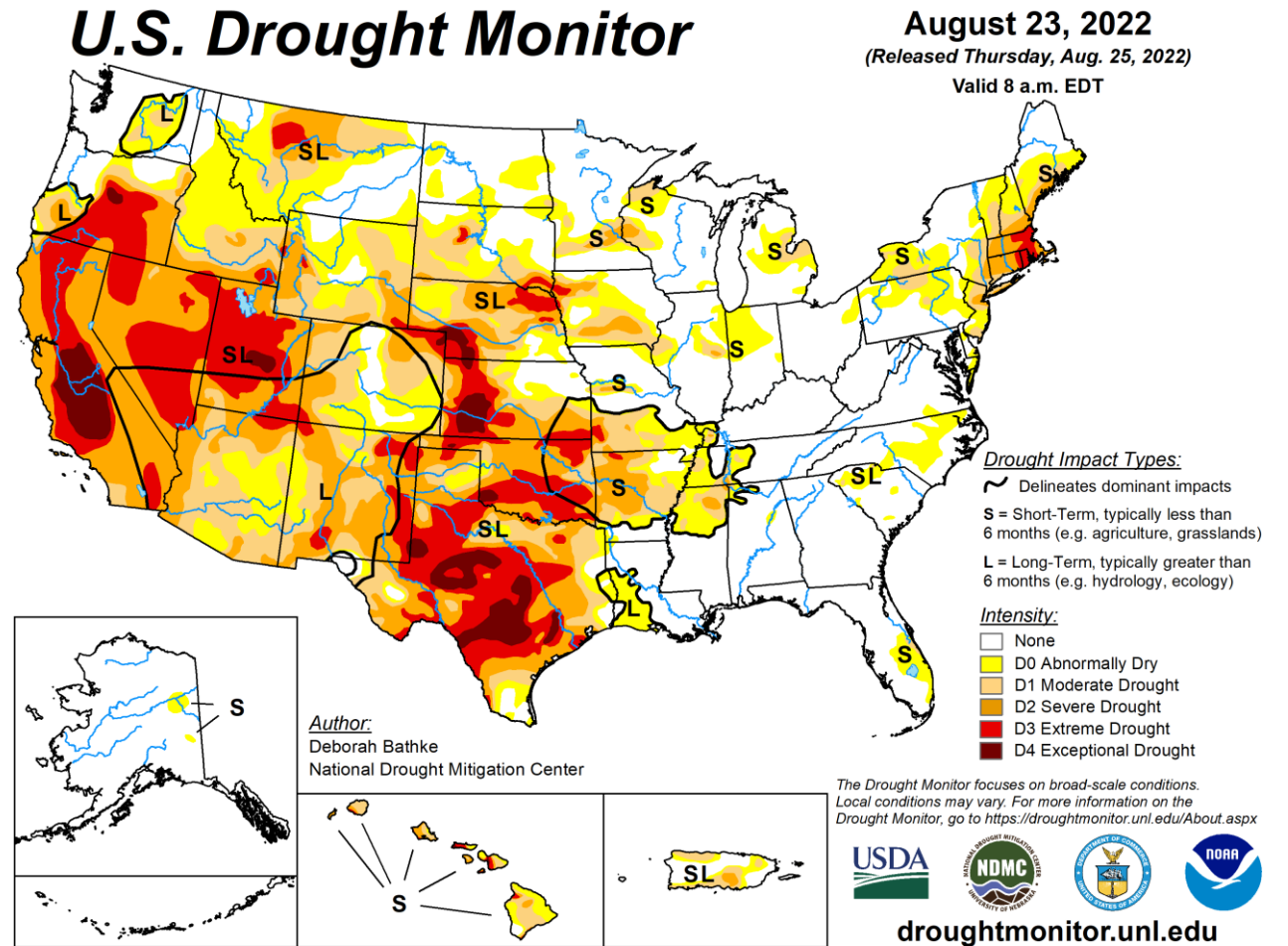
- 1993 Colonial pipeline
- 2015 Latex release
- 2016 Oil sheen
- 2018 Discharge from research facility
- 2021 Three spills



Risk of Severe Drought

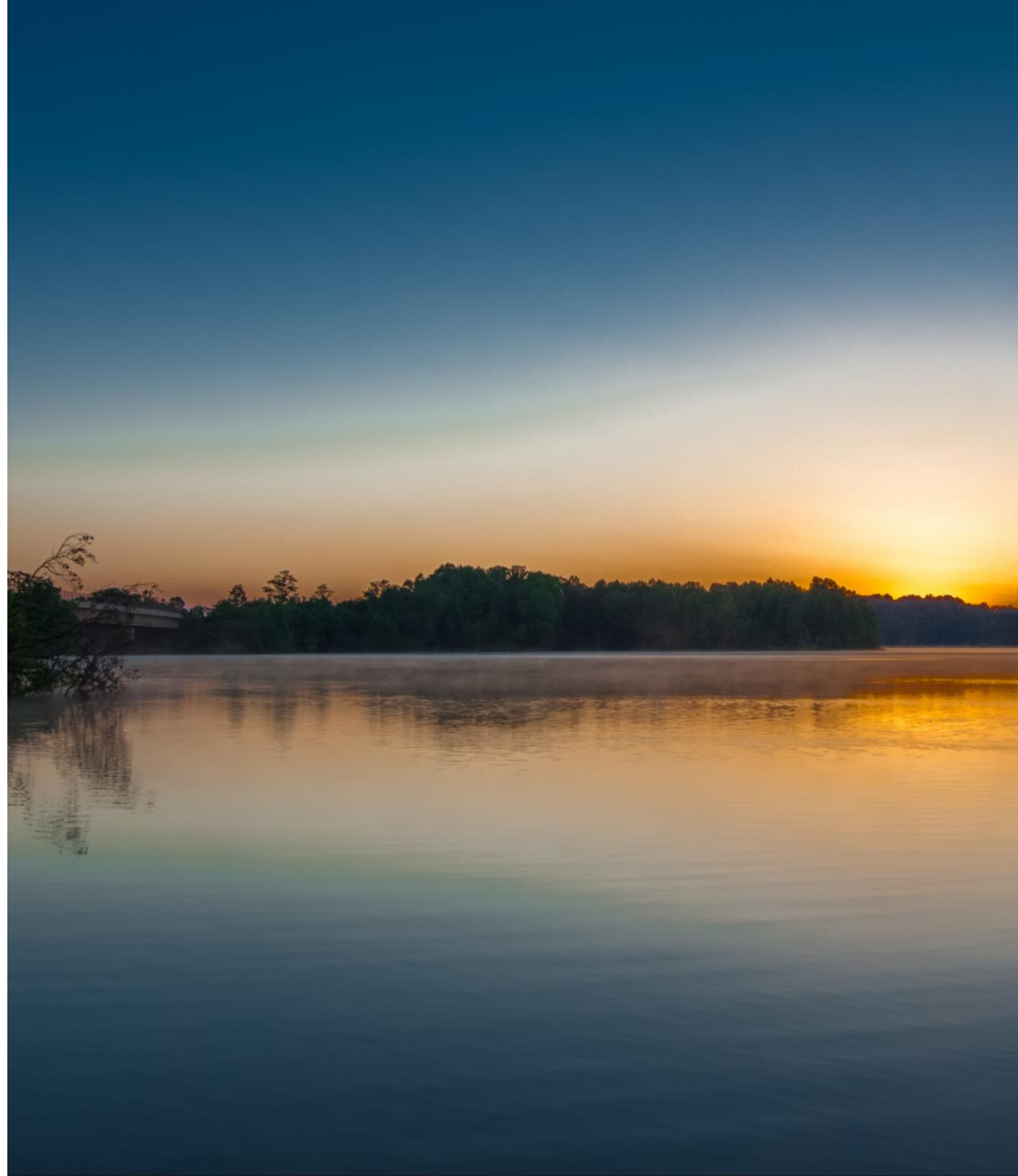
Potomac Basin

- Increased variability in weather patterns
- Climate change projections point to wetter wet years but deeper droughts
- Long-range river flow forecasts



Regional Water Supply Emergency Planning

- Regional Water Supply Emergency Plan Update
- Flushing Protocols
- Contaminant Monitoring Systems
- Source Water Assessment
- Laboratory Capabilities
- Coordinated Messaging
- Public Health Collaboration



Beginning the Effort

- ICPRB lead the education and outreach to Congress on the risks to regional water supply, need for water storage and federal funding.
- Neal Augenstein of WTOP News has reported on this vulnerability for several years.
- Fairfax Supervisor Penny Gross has spoken and written about this issue.
- On September 14, 2022, MWCOG passed a Resolution urging the Congress to authorize and appropriate funds for a feasibility study to develop solutions to this problem.



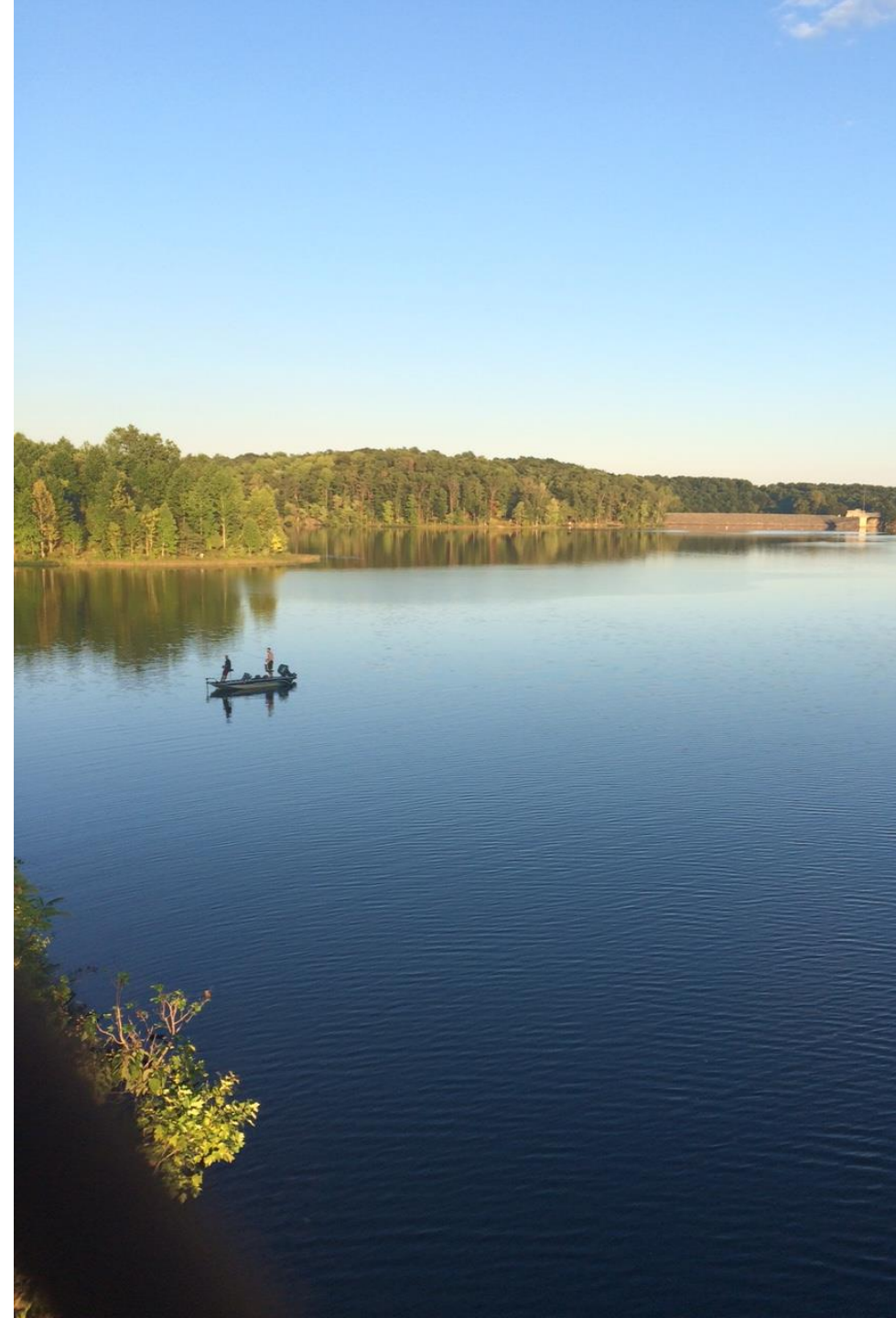
Current Actions

ICPRB, COG, and our water utilities are collaborating on a Congressional initiative to:

- Authorize the regional feasibility study in WRDA
- Appropriate the funds for the Study
- Brief public and elected officials across the region
- Have support from regional Congressional delegation and committee staff
- Develop messages to communicate urgency, role for federal funding

Status

In December 2022, Congress passed the Water Resources Development Act authorizing a regional water supply study, including the identifying a secondary water source and additional water storage capability in the National Capital Region. The Senate Appropriations Committee (but not the House) approved \$500,000 for the Study. This feasibility Study estimated to take 3 years and cost \$3 million.





Now is the time to address this serious local, regional, and national vulnerability.

Fairfax Water Overview

- Fairfax Water serves 2 million people with a daily average of 167 million gallons of treated water from the Potomac River and the Occoquan Reservoir.
- Water from the Washington Aqueduct supplies Fairfax County east of the Beltway and north of Arlington Boulevard.
- The rest of the County receives treated water from two water treatment plants: Corbalis & Griffith (shown).
- The U.S. Supreme Court ruled that Fairfax Water may build a structure to divert water from the Potomac River for use in Virginia without being subject to regulation by Maryland, even though the river lies entirely within Maryland. Virginia v. Maryland, 124 S. Ct. 598 (2003).



Other Challenges

In addition to drought and contamination events, providing clean, safe and abundant drinking water still faces many new challenges, such as:

- Salt in our waterways caused by excessive use of salt on roadways and sidewalks;
- PFAS (“Forever Chemicals”) from years of use in a variety of household products (Teflon) and firefighting foam; and
- Harmful Algal Blooms caused by excessive nutrients from runoff.



PROTECTING AND PRESERVING THE POTOMAC THROUGH SCIENCE AND COOPERATION



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Thank you to coalition members:
Arlington County, DC Water, Fairfax Water, WSSC Water,
and Metropolitan Washington Council of Governments



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