



Managing Salt: A Utility's Perspective

Water Resources Protection Division,
Department of Operational Reliability and Resilience

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Agenda

- WSSC Water and Its Water Sources
- Why Salt is a Concern for Utilities
- Current Concentrations in Source Water
- What WSSC Water is Doing to Address Salt Pollution



WSSC Water and its Water Sources

WSSC WATER AT A GLANCE

 106 years of no drinking water quality violations, ever.



8th

Largest water utility
in the United States



1.9M

Residents
served



162 MGD

Water provided
each day



1000 Sq. Miles

Size of WSSC Water's
Service Area



1,700+

Members of Team H₂O
deliver on our mission



\$114.9B

WSSC Water supports the economic
output of Prince George's and
Montgomery counties



\$1.8B

FY2025 Operating &
Capital Budget



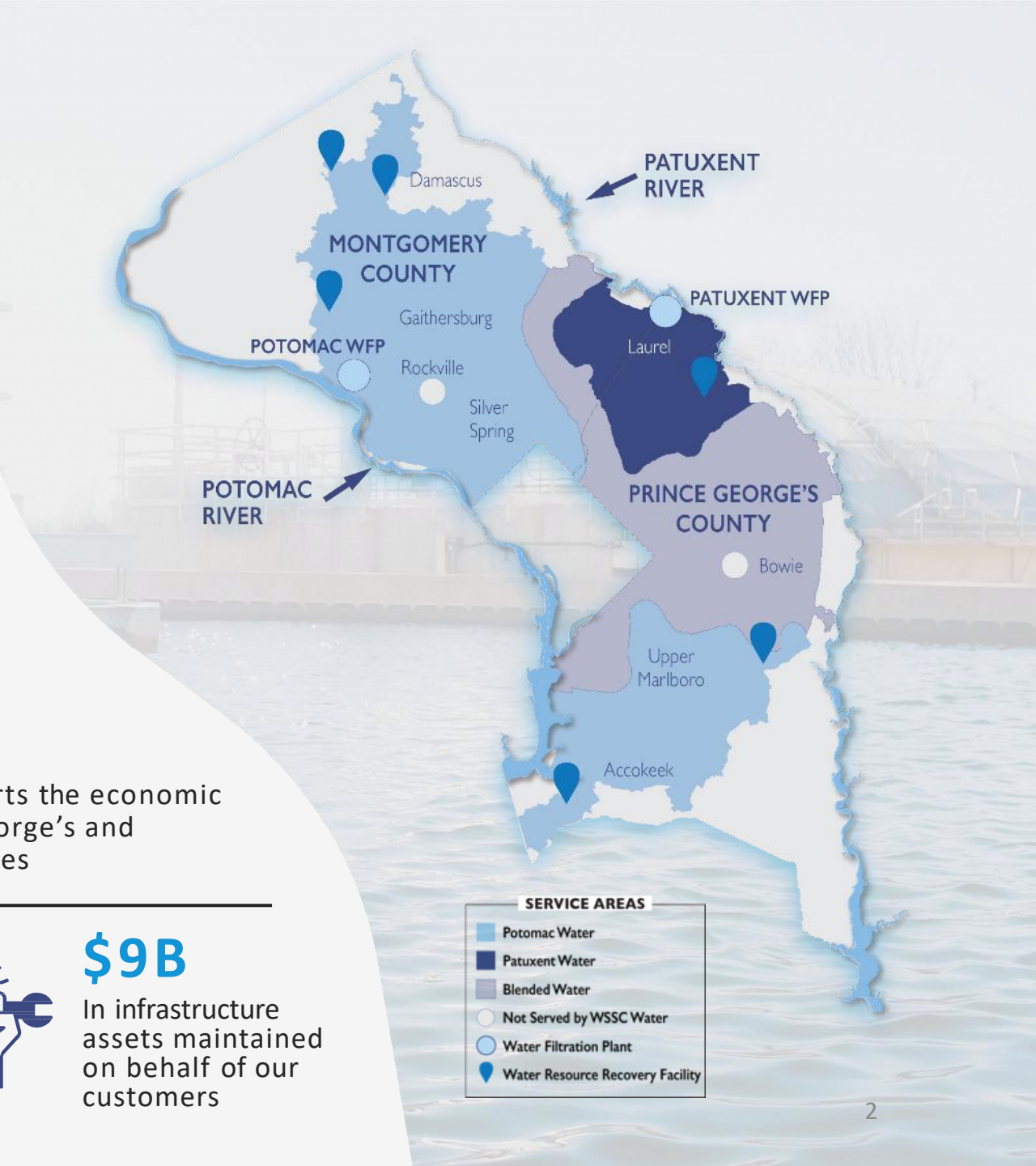
\$5.9B

6-Year Capital
Improvements
Program



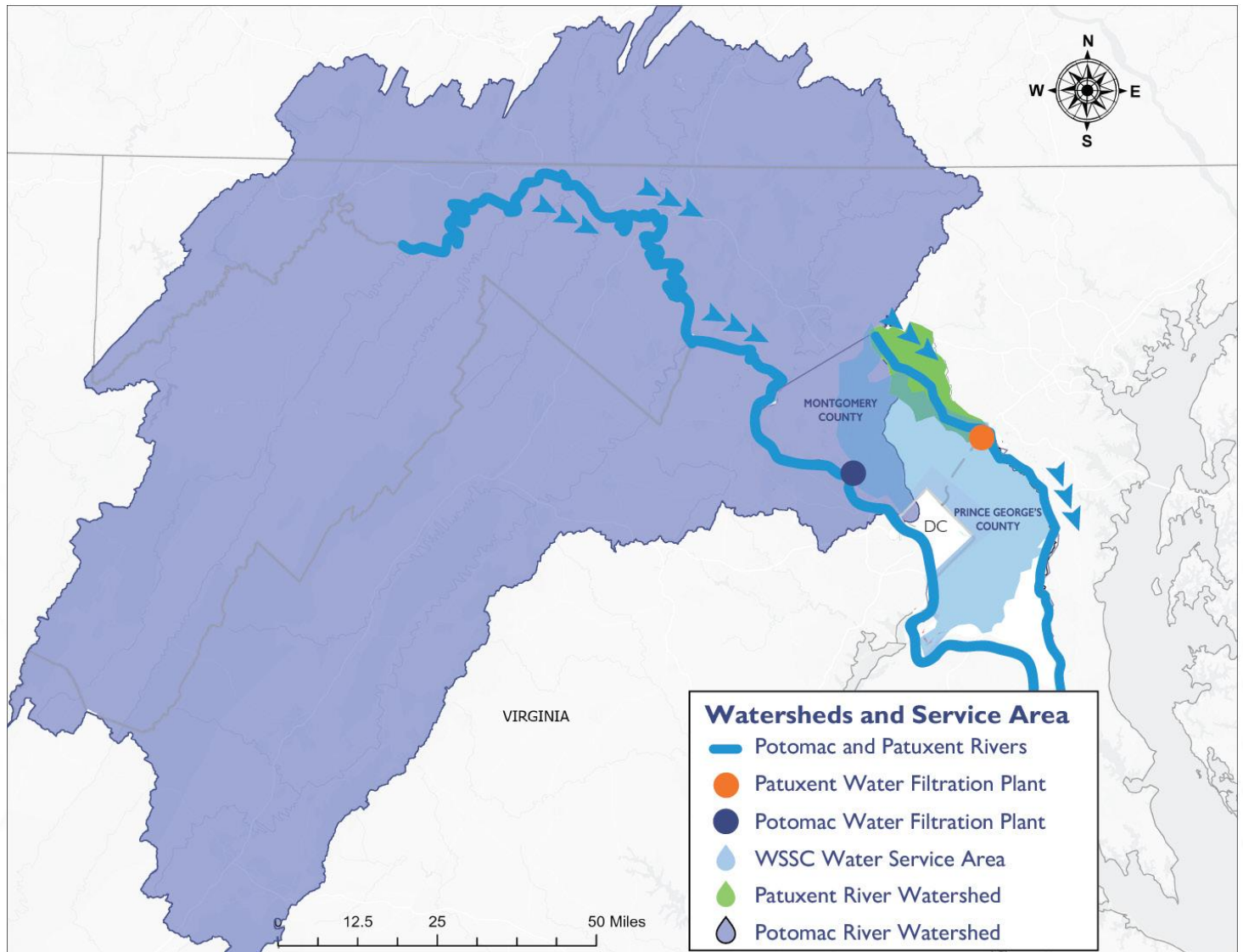
\$9B

In infrastructure
assets maintained
on behalf of our
customers



Water Sources

- Potomac River and Patuxent River Reservoirs
- WSSC Water's combined watersheds are over **10x** the size of our service area
- The Potomac River, our major source, provides drinking water to **5 MILLION** people in the region
- Contaminant Movement in Rivers vs. Reservoirs





Why Salt is a Concern for Utilities

Salt Impacts to a Water Utility

Infrastructure

- Corrodes pipes
- Increases leaks and breaks

Drinking Water

- Conventional treatment doesn't remove salt
- Higher sodium levels can impact people on salt-restrictive diets
- Taste issues during spikes
- Discolored water

Water Supply

- Steady increase over 30 yrs
- Increased mobilization of other contaminants



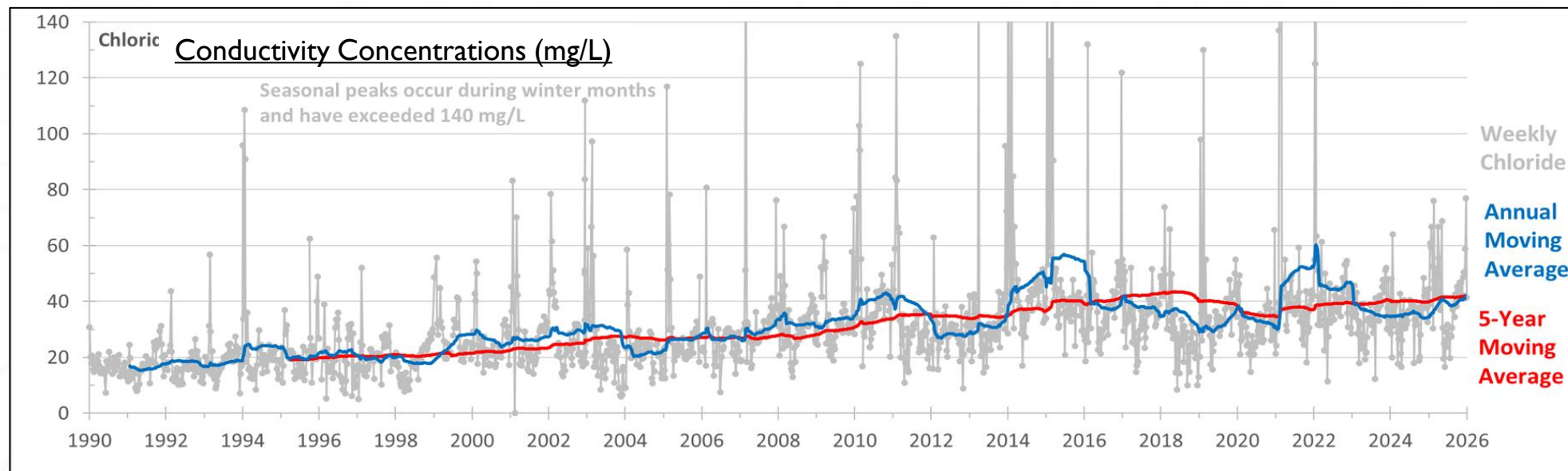
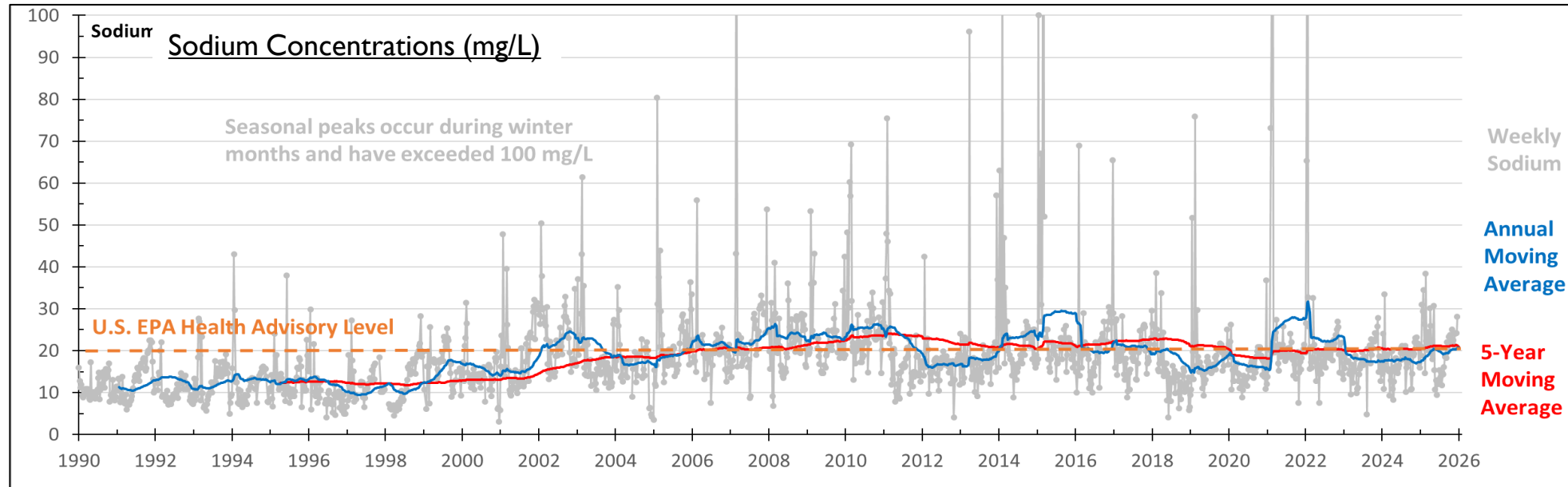
Photos courtesy of iStock by Getty Images



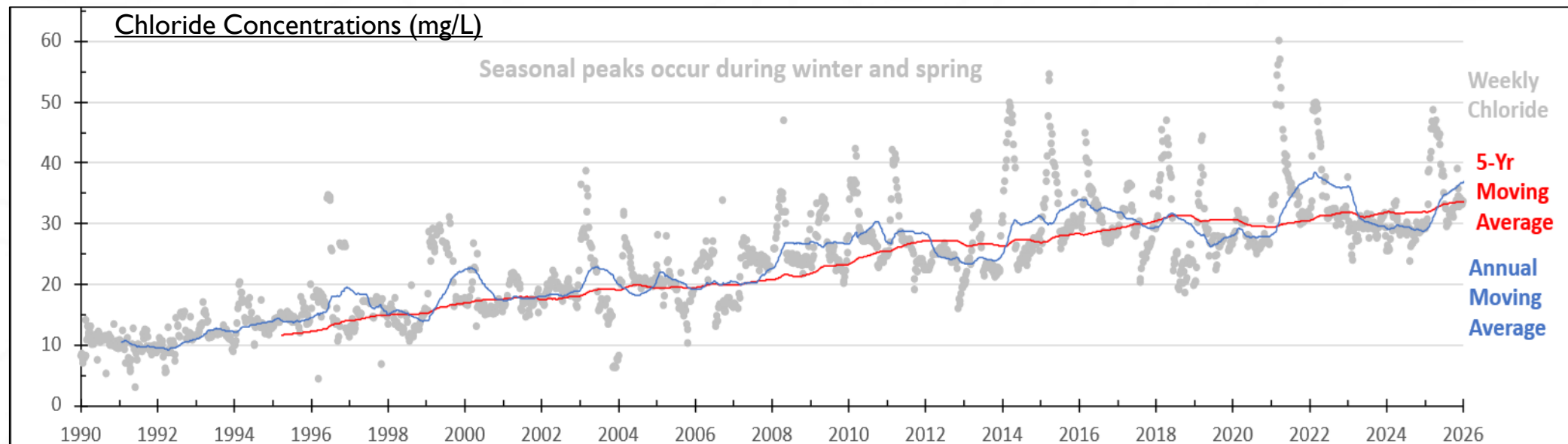
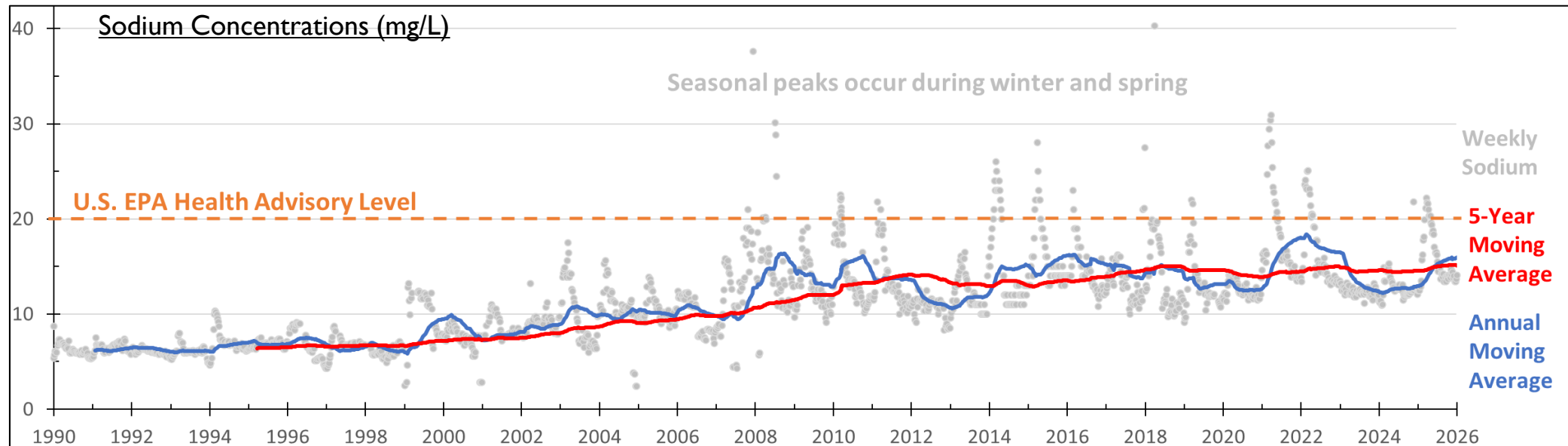


Current Concentrations in Source Water

Potomac WF Plant - Sodium & Chloride



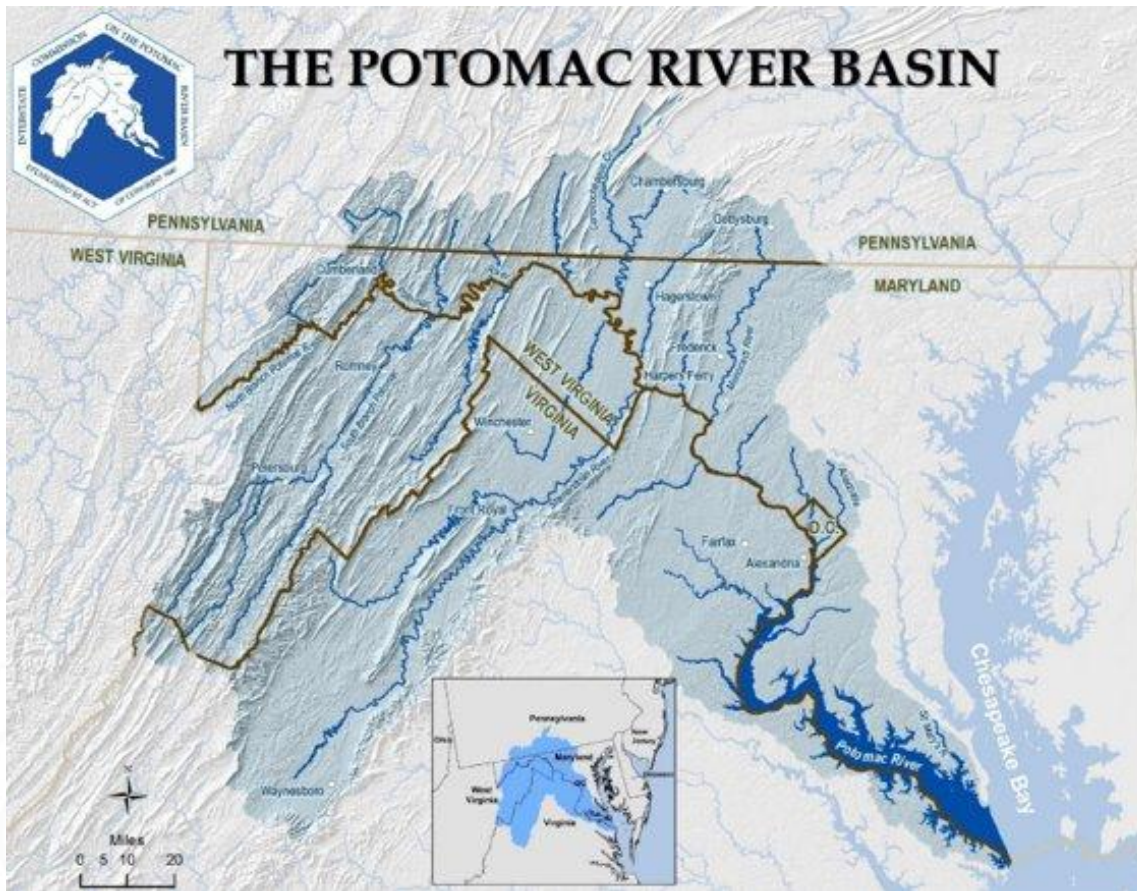
Patuxent WF Plant - Sodium & Chloride





The Importance of Partnerships

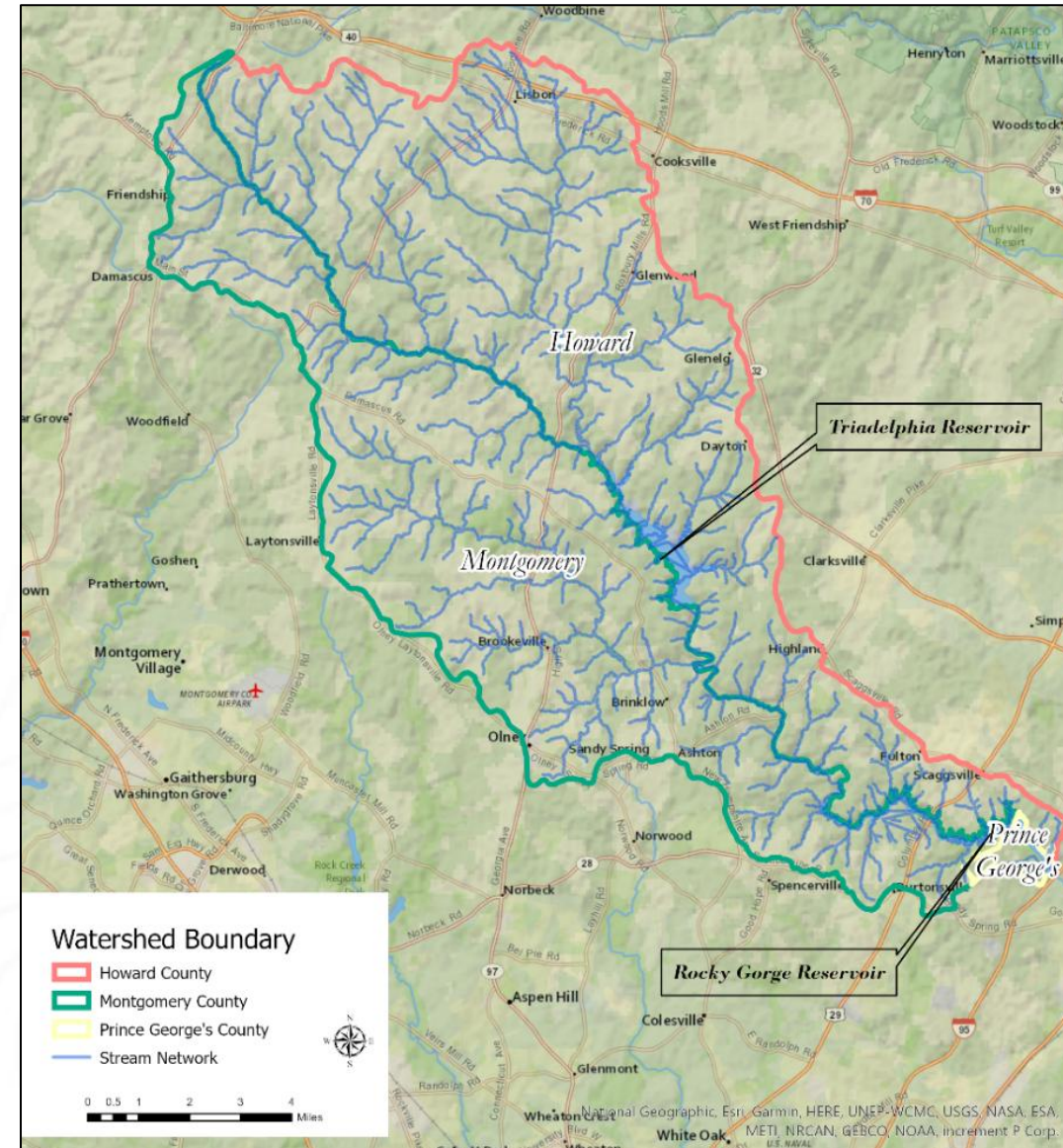
Potomac River Basin Drinking Water Source Protection Partnership



- Coordinated by the Interstate Commission on the Potomac River Basin (ICPRB)
- 15 Potomac River Utility Partners (MD, WV, DC, VA)
- 10 Government Partners
 - State Environmental and Health Departments (5)
 - Federal Agencies (US EPA Region 3, USGS)
- Other Participants - Metropolitan Washington Council of Governments (MWCOC)
- Benefits to the Region:
 - Regional & Utility Knowledge Exchange
 - Regional Salt Management Collaboration
 - Collaborative projects such as:
 - Regional Research Workshop
 - WRF Study 5308: Assessing the Changing Salinity in Water Sources with the Potomac River Basin Drinking Water Source Protection Partnership (DWSPP)

Patuxent Reservoirs Watershed Protection Group

- Consists of Policy Board and Technical Advisory Committee (TAC)
- Member Agencies
 - Howard, Montgomery, and Prince George's County
 - Soil Conservation Districts
 - Maryland-National Capital Park and Planning Commission
 - WSSC Water (as coordinators)
- Other State Participants (MDE, MDA)
- Key Accomplishments:
 - Established relationships with area stakeholders
 - Collaborative projects such as
 - Special Salt Management Area designations in Howard, Montgomery and Prince George's counties
 - Monitoring conductivity in watershed tributaries with Montgomery County and University of Maryland



More Partnerships

Coordinating the **Message**

- The SaltWise Campaign with Various Regional Partners –
www.wsscwater.com/saltwise

Promoting **Communication & Research**

- WSSC Water Salt Summits (2018-2025) bringing together national salt experts & local salt applicators



2018 Salt Summit Summary

- WSSC Water presented the source and tap water monitoring data and impacts on drinking water quality and water supply infrastructure
- SHA presented their Salt Management Plan and progress made to date
- MDE shared current and draft permit language
- Discussion
 - Importance of outreach and public education
 - Training needs for contractors and counties
 - Operator certification or license requirements
 - Formation of task force for Potomac and Patuxent

WSSC Water's Internal Strategies

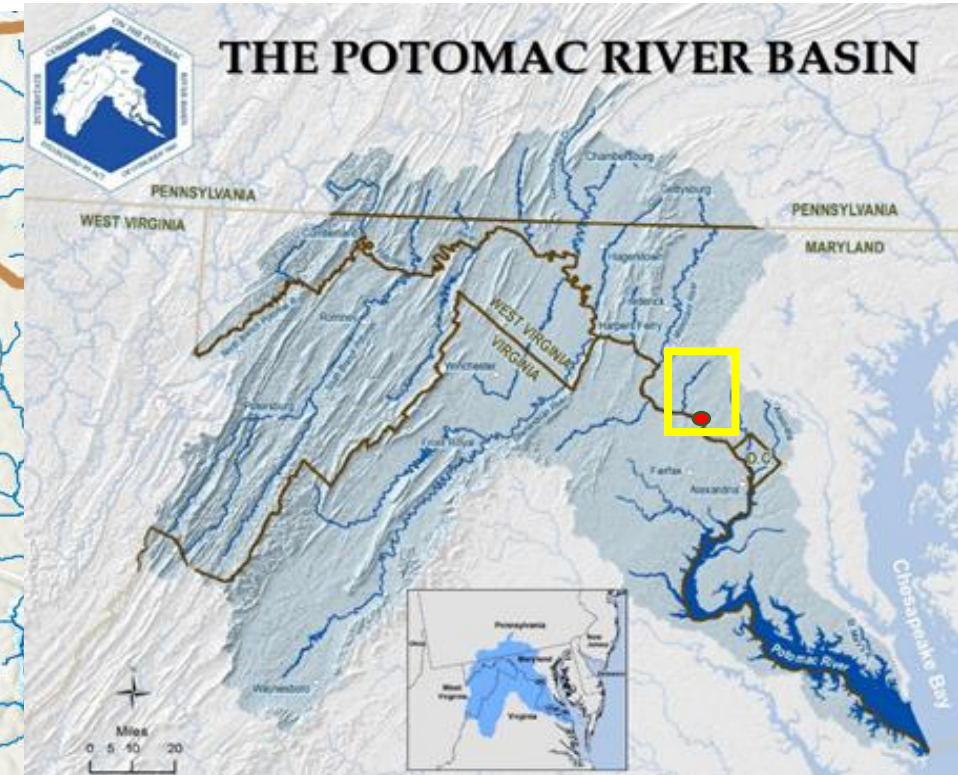
Salt Management

- Internal Coordination on BMPs
- Completed MDE Smart Salt applicator training
- Invested in brine equipment; implementing use whenever possible



Maryland
Department of
the Environment

Internal Strategy - Monitoring



- PFAS Source Tracking + Conductivity
- Watts Branch, Muddy Branch, Seneca Creek
- 6-week sampling event
- 10 fixed locations per tributary watershed – 3 wks
- Hotspots + fixed – 3 wks



Questions?