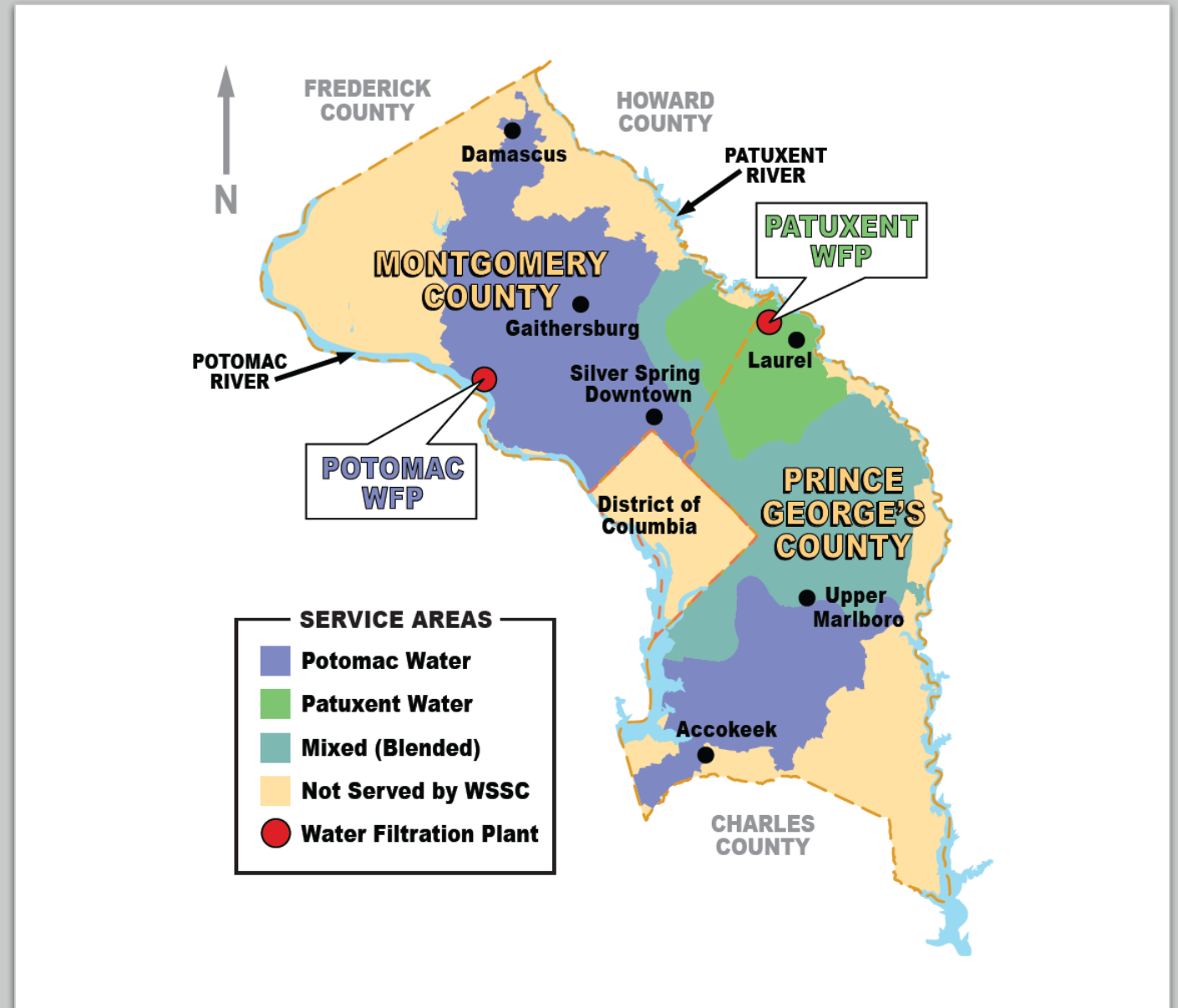




2023 WSSC Water Salt Summit

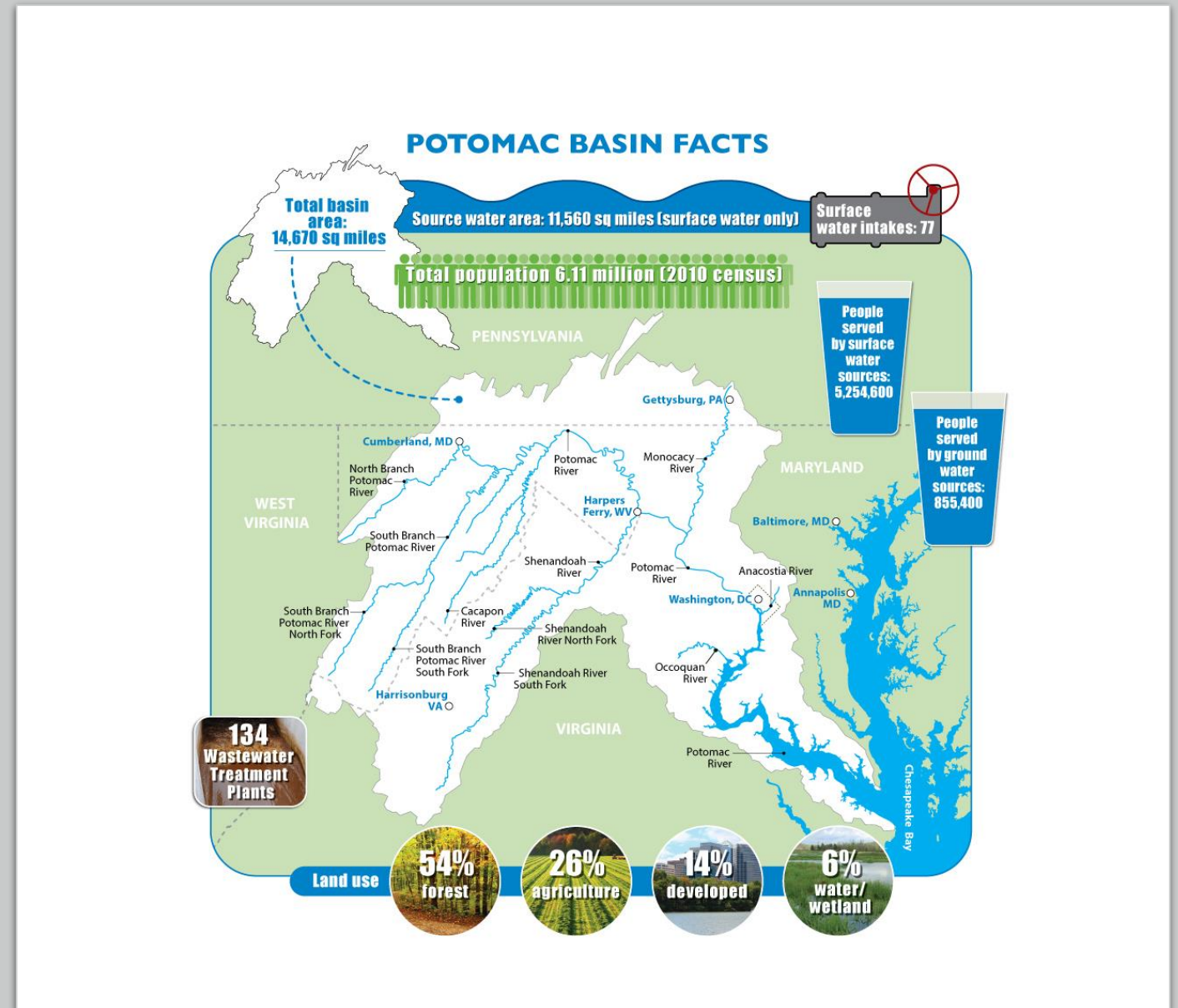
WSSC Drinking Water Sources

- Serving 1.9 million customers in Montgomery and Prince George's Counties
- Operates 2 water filtration plants and 6,000 miles of water mains
- Potomac serves ~ 70% of the demand
- Patuxent serves ~30% of the demand



Potomac Watershed

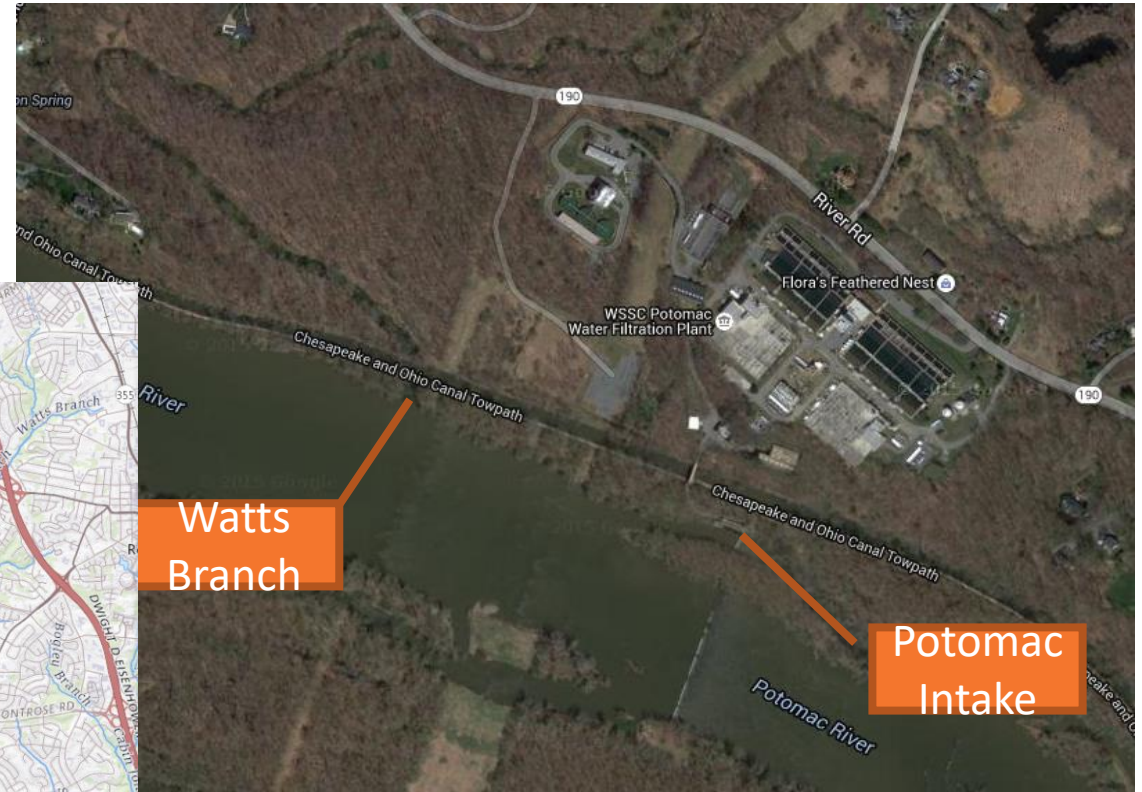
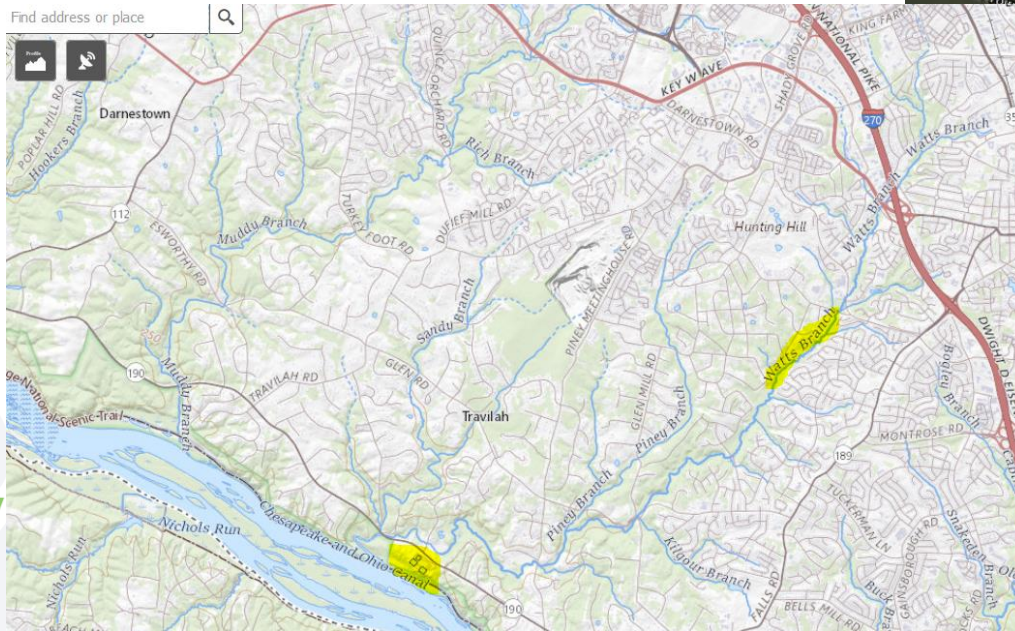
- 14,670 square miles drainage area in 4 states
- 486 MGD withdrawn for water supply serving ~6.1M people
- 14% of watershed developed
- Many challenges – increasing demand, emerging contaminants, spill threat



Proximity to Watts Branch

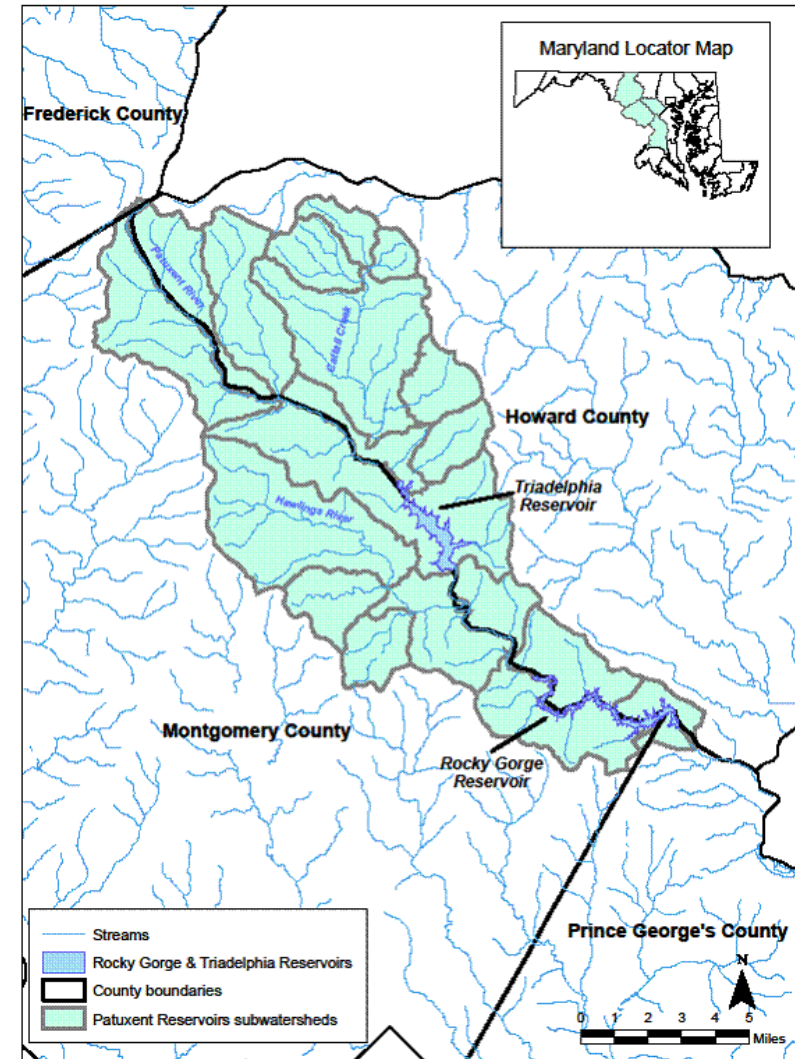
“In the Watts Branch watershed, 33 of the 62 subwatersheds are greater than 10% impervious”.

Watts Branch Watershed Restoration Study, Montgomery County DEP, 2003

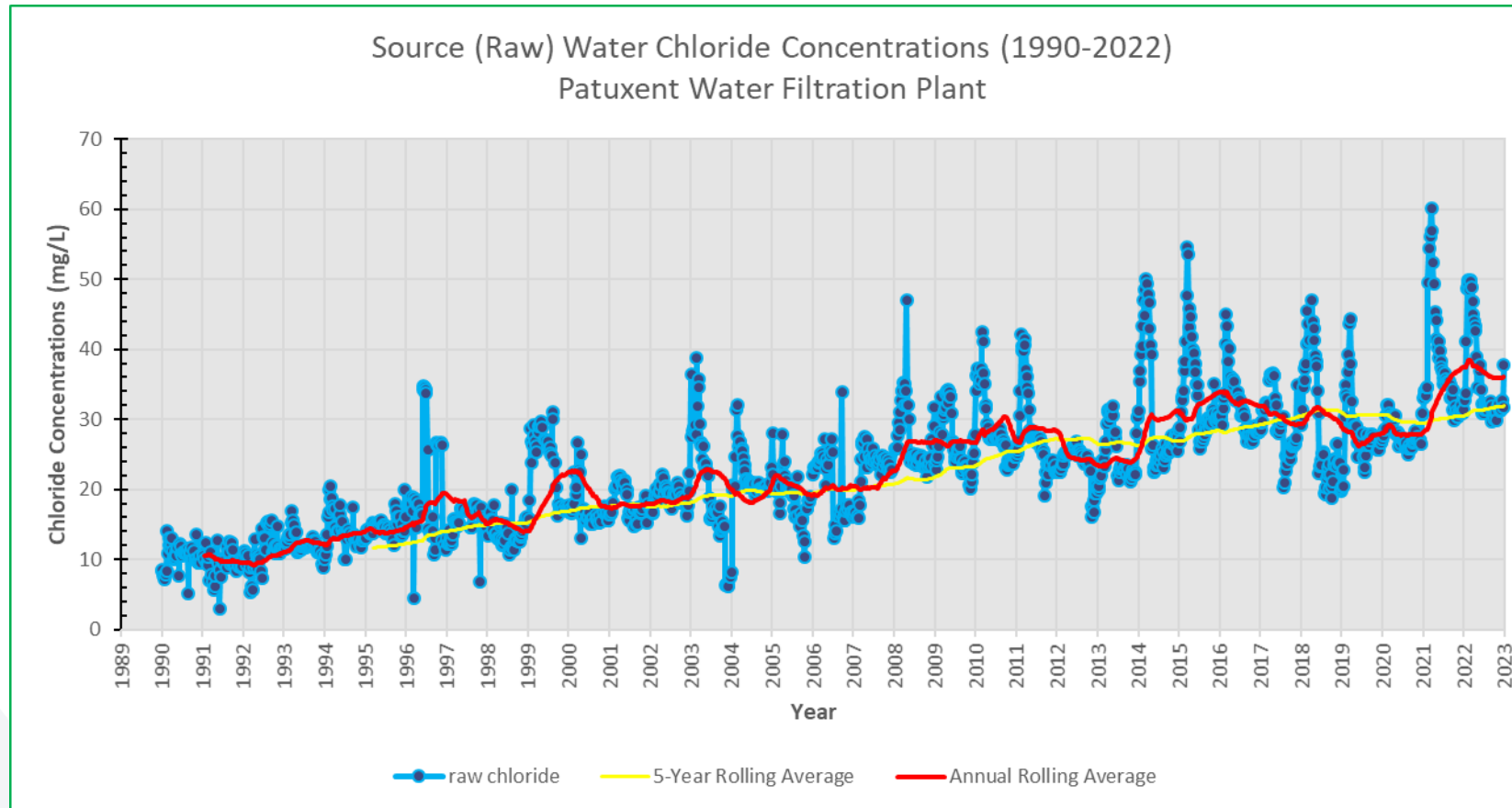


Patuxent Watershed

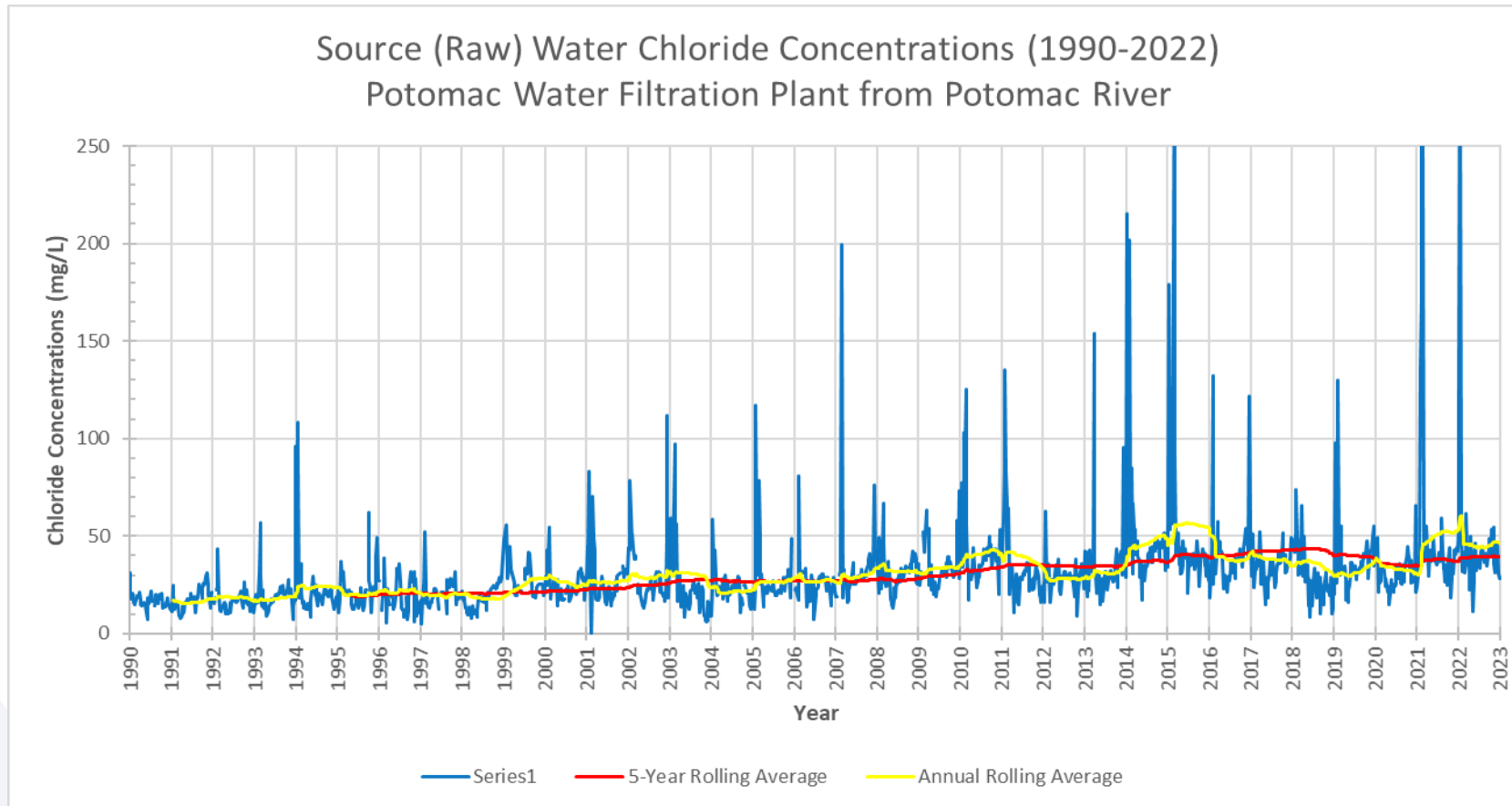
- 132 sq. miles watershed in MD Piedmont to T Howard Duckett
- About 77 sq. mile (59%) drains to Triadelphia Res.
- 99% watershed in Howard & Montgomery Counties
- Typical limnological traits of a standing water
 - Seasonal turnover
 - Seasonal algal activity
 - Refractory organic matter



Chloride Trend – Patuxent Raw



Chloride Trend – Potomac Raw



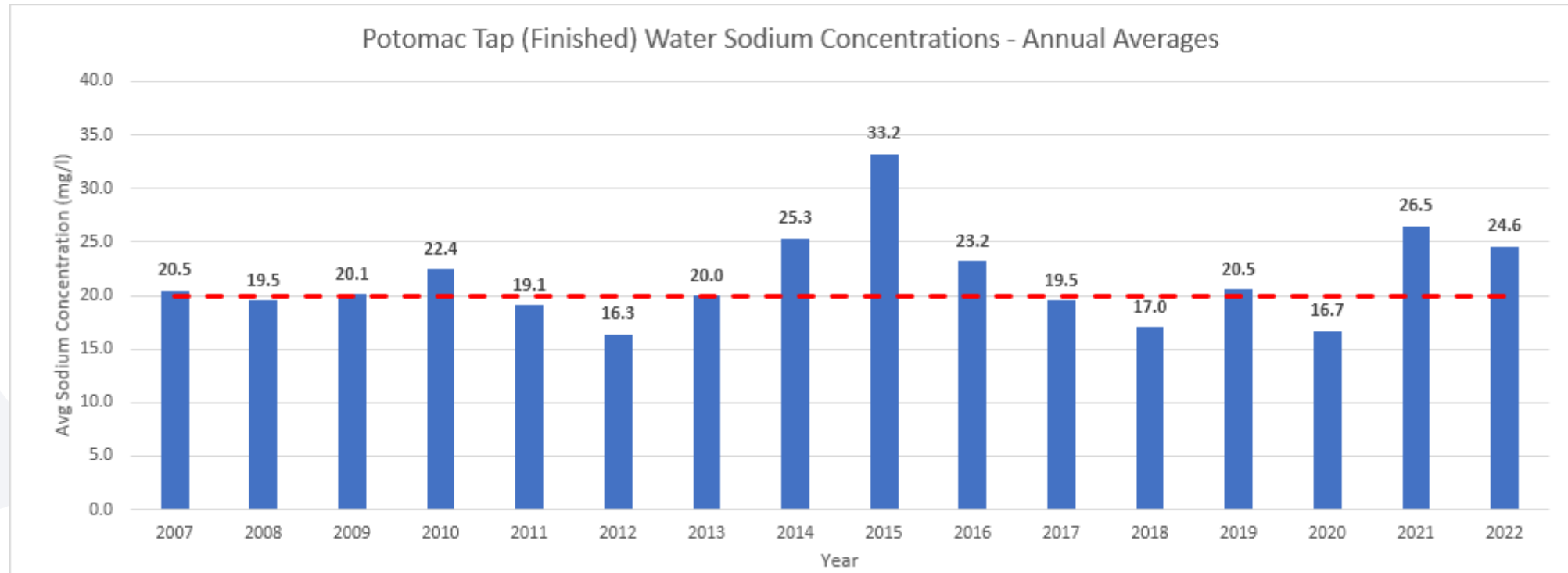
Water Quality Challenges

- Salt cannot be removed by conventional water treatment
- Promotes erosion of other contaminants from soil, enter water system via snowmelt
 - Discolored water due to manganese
 - High chlorine demand and elevated disinfection byproducts due to organics
- Corrosion of water supply infrastructure
 - Iron rust from pipes, causes water discoloration
 - Potential lead corrosion (e.g., Flint)

Health Impacts

- Chloride adds salty taste to the water
 - EPA Secondary MCL at 250 mg/L for aesthetic recommendation
- EPA Health Advisory for sodium at 20 mg/L for individuals with severe salt restricted diet
- Manganese
 - EPA Secondary MCL at 0.05 mg/L
 - EPA lifetime health advisory at 0.3 mg/L; 10-day HA at 1 mg/L
- Lead
 - Elevated chloride level in treated water can potentially aggravate lead corrosion. E.g., Flint lead crisis

Sodium Trend – Potomac Tap



Whatever whenever wherever has happened
is written on the water of Babel.

“Water” by Wislawa Szymborska

Questions?

