

## **Montgomery County Water Quality Advisory Group Draft Meeting Summary**

**Date and Time:** March 10, 2025 (7:00 PM – 8:30 PM)

**Location:** Microsoft Team meeting

**Staff Liaison:** Ho-Ching Fong, DEP

**Notetaker:** Travis Gorleski

**Members present:** Travis Gorleski, Ho-Ching Fong, Amy Stevens, Bob Buglass, Phillip Mariscal, Keith Brooks, Mark Symborski, Linda Silversmith

**Members absent:** Amanda Rockler; Miranda Reid, Allison Wright, Tim Stemann

**Others present:** Kenny Mack, Montgomery County DEP

### **Meeting Summary**

#### **I. Introductions and welcome**

Travis started the meeting at 7:05.

#### **II. Review of the February 10, 2025, meeting summary**

The summary of the February meeting was approved.

#### **III. New Business**

##### **a. Monitoring the Impacts of Road Salt in Our Streams – Ken Mack, Montgomery County DEP**

- Map of streams impaired from chloride. Typically in Rock Salt Size or brine. The county's DOT supplies the majority of road salt. What is the threshold for impairment? Designated by MDE. Consistently measured for a chronic or acute concentration. Biological indicators and subsequent measurements are used to determine when there is an impairment.
- Monocacy, Patuxent, and Rock Creek are the only streams in the County without chloride impairments.
- Monitoring is not driven by impairments. Special Protection Areas (SPAs), environmentally sensitive areas, and protection

of drinking water sources largely determine prioritization. WSSC is a primary partner in the monitoring effort.

- Special Protection Areas (SPAs) are environmentally sensitive and have good water quality that is threatened by development. Ten Mile Creek and Paint Branch are examples of SPAs in the County. Conductivity monitoring is implemented in these areas.
- Ten Mile Creek has three large parcels shifting from agriculture to commercial/residential.
- Geomorphic, temperature, stream flow, and biology monitoring are conducted in the SPAs. Spring biological sampling is taken prior to spring hatching. This provides a better representation of biodiversity, as the samples capture the macroinvertebrates that typically survive year-round.
- Watersheds with high impervious areas see consistently high conductivity where as the results are more volatile for watersheds that are low impervious and high forest cover. There is a strong correlation to impervious areas, though agriculture can have an impact at different times of the year, pointing to agricultural activities.
- 30 – 170 microsiemens per centimeter ( $\mu\text{S}/\text{cm}$ ) is the minimum across most sites.
- Low water periods sometimes cause spikes in conductivity but the cause is not entirely understood. But Ten Mile Creek showed an extraordinary ability to attenuate the conductivity spike before it reached the lower. Any readily dissolved ionic compound is going to increase conductivity. Some can increase it significantly. Chloride monitoring confirms when it is chloride.
- Clarksburg premium outlets are highly impervious, with greater than 50% imperviousness. A heavy concentration of ESDs are installed in pervious areas.
- There are also chloride levels in groundwater. After the outlet was constructed, groundwater had such high chloride levels that it reached a health concern level for people with heart issues. BMPs failed to attenuate chloride entering groundwater. Some BMPs may actually create a pathway to send chloride into groundwater. There has been a massive increase over five years.

- It seems that chloride concentration does gradually decrease, so in 10 years if road salt stops being applied, it may return to normal levels.
- Many reservoirs have sodium concentrations in excess, which becomes unhealthy for those with heart conditions. WSSC does a good job of controlling it. Over the short term, the average is dropping versus the long term being more level.
- The Hawlings River sends a lot more sodium chloride into the Rocky Gorge Reservoir than Patuxent.
- August shows a slight uptick, reducing baseflow, and then groundwater begins to export chloride into the waterways.
- It is still a relatively new program, so there is ongoing research into figuring out what creates the spikes.
- Steve Nelson at WSSC provided a lot of data, including how many million pounds of salt are applied.
- For perspective, one reservoir in Massachusetts had about 18 million pounds in one year. We are generally closer to 2 million pounds, with low snow years having closer to 1 million pounds.
- Research with WSSC and the University of Maryland will continue. Sujay Kaushal will examine Watts Branch, a primary source of drinking water to the Potomac River.
- The mainstem of Watts Branch receives flow from Clarksburg, I-270, and other developed areas and has higher spikes than tributaries. Parkland downstream in Watts Branch is attenuating quite a bit of chloride. Riparian buffers are responsible for reducing a lot of the chloride from entering the waterway.
- What we are seeing: conclusions
  1. Smaller streams have higher conductivity and are more volatile than larger ones.
  2. Low salt application could have an immediate impact on watersheds.
  3. Road salt isn't the only source of conductivity—spikes were detected in the spring and summer.
  4. Stormwater BMPs are unable to reduce chloride, and many may be increasing groundwater chloride concentrations (e.g., infiltration-type practices).
- What are we doing?

1. DEP is working with DOT to update the County's Salt Management Plan annually.
  2. DEP will be working with other County agencies on salt application training for staff and contractors.
  3. DOT cleaned up more than 100,000 Lbs of salt during a single storm this year using street sweeping (January 5<sup>th</sup> event).
  4. Provide public education on salt application to property managers and salt applicators and set new public expectations on winter salt application.
  5. Identify other sources of conductivity and salt.
- Across the Potomac watershed in Virginia, larger roadways and highways drove chloride concentration. In Montgomery County, 60% was from private landowners, HOAs, and commercial.
  - Brine application provides a 77% savings over putting down rock salt.
  - DOT has done a really good job of brining.

**b. 2025 Meeting**

- Travis discussed the speakers list and the priority list and ranking. He unfortunately did not have the opportunity to review it. We might also have the operating budget reviewed in April. Amy can give a brief presentation on the operating budget.
- Linda Silversmith will be contacted to confirm note-taking. She came in late and was reminded of the priority speaker list.
- BCC advertising for positions? Keith suggested that somebody reach out to the committee.
- The state Water Quality Advisory Group was disbanded shortly after Hogan came into office. It was a good group. May be worth reaching out to the Governor. It was well staffed and was a good exchange for information, gave a chance to see problems all around the state.

**IV. Reports of Officers, Boards, Standing Committees**

None at this time.

**V. Reports of Special Committees**

None at this time.

**VI. Special Orders**

None at this time.

**VII. Unfinished Business and General Orders**

None at this time.

**VIII. Adjournment**

Next meeting will occur on April 14, 2025, from 7:00 pm – 8:30 pm ET.

The meeting adjourned at 8:35 pm ET.