# Broad Run Watershed Benthic Total Maximum Daily Load (TMDL) Study

## Third Technical Advisory Group (TAG) Meeting

February 4, 2026

Meeting Summary

**Location:** Brambleton Library, Meeting Room A
22850 Brambleton Plaza, Brambleton, VA 20148

**Start:** 1:00 P.M.
**End:** 3:00 P.M.

**Meeting Attendance:**

Project Team:
Amanda Thompson, Virginia Department of Environmental Quality (DEQ)
Sarah Sivers, DEQ
Gwendolin Mccrea, DEQ
Justin Loyd, DEQ
Tim Jones, DEQ
Heidi Moltz, Interstate Commission of the Potomac River Basin (ICPRB)
Carlington Wallace, ICPRB
Stephanie Nummer, ICPRB
Garett Pignotti, ICPRB

TAG Members:
Melanie Mason, Loudoun County
Bradley Schmitz, Loudoun Water
Pam Kenel, Loudoun Water
Robert Wilbur, Loudoun County Soil & Water Conservation District
Rick Entsminger, Loudoun Wildlife Conservancy
Martin Hurd, Fairfax County
Gregory J. Prelewicz, Fairfax Water
Gem Bingol, Piedmont Environmental Council
Traci McAllister, VDOT
Eddie Hoy IV, Loudoun Quarries
Jonathan Matheny, MWAA

Members of Public:
Michael Donnelly, Loudoun County

**Meeting Materials:**

The meeting was conducted with the assistance of a MS PowerPoint presentation. Detailed information in the presentation is not repeated in these summary notes; instead, highlights from each general topic section of the meeting are summarized along with the questions and discussion held during the meeting.

**Meeting Summary:**

1:02 p.m.: Meeting Begins

Amanda Thompson, DEQ introduced DEQ staff and contractors in attendance, then provided an outline of the meeting agenda:

1. Meeting Objectives
2. Overview of Benthic Stressor Analysis (BSA) Report Structure
3. Group Discussion – BSA
4. Implementation Questions and Discussion
5. TMDL Phase Overview and Timeline
6. Wrap-up and Next Steps

**1. Meeting Objectives**

Ms. Thompson gave further details on meeting objectives, explaining that the second Public Meeting was cancelled in favor of holding the third TAG meeting; and, that this third TAG meeting will initiate a 30-day comment period for the final draft of the BSA and the TMDLs to be developed.

- Question 1, Fairfax County: In terms of policy and procedure – in the second TAG meeting minutes, DEQ's answer to Question 36 noted addressing nonpoint sources requires voluntary action, and as the Salt Management Strategy (SaMS) addresses winter salts and covers covers this area, DEQ would not then develop an Implementation Plan (IP) to address winter salts for this watershed. Isn't an IP required by VA state law to achieve Water Quality Standards (WQS)?
    - Answer, DEQ: TMDLs are pollutant specific, and implementation of a TMDL is through permits and the IP, the latter which solely addresses nonpoint sources. State and federal law requires the development of TMDLs to address impaired waters, but there is no requirement to develop an IP to address the load allocation of a TMDL that are attributed to nonpoint sources. For this watershed, given SaMS provides a voluntary toolkit to address winter salts in Northern Virginia, further expenditure of resources to develop an IP to address the same pollutant source is not recommended. Specific interpretations of VA law and what is required can be discussed further one on one.

- Question 2, Fairfax County: But there is a difference between a MS4 permittee's TMDL Action Plan to address nonpoint source and an IP. An IP is meant to include timelines, stakeholder partners, and costs over several years to achieve WQS. Is DEQ developing these types of IPs?
    - Answer, DEQ: Yes, DEQ is developing IPs and these are specific to addressing the load allocation of a TMDL that is attributed to nonpoint (unpermitted) sources of the pollutant. The IP is developed to meet the nine elements of a an EPA Watershed Plan, which requires the inclusion of milestones, stakeholder involvement and estimated costs of best management practices. The TMDL Action Plan required to be developed and implemented by a MS4 permittee is specific to their assigned wasteload allocation (WLA) from a TMDL. These plans are not addressing the load allocation of a TMDL but the WLA of a TMDL that is assigned to the permittee and therefore, is their responsibility to reduce the specific pollutant in their permitted discharge to meet the WLA.

**2. Overview of Benthic Stressor Analysis (BSA) Report Structure**

Ms. Thompson presented an overview of the structure of the final BSA draft, explaining the information discussed in each section.

- Question 3, Member of Public: This is my first meeting attendance, what are the sources of the Sodium and Chloride?
    - Answer, DEQ: With this assemblage of Sodium, Chloride, and Total Dissolved Solids together, and the urban area of the watershed, it is indicative of a Winter Salts/Road Salts issue.

**3. Group Discussion - BSA**

Ms. Thompson opened the floor to the TAG to discuss any feedback or ask questions on the most recent draft of the BSA report.

TAG members stated the report was well written and organized, noting how box plot color coding changing with the scales and spatial maps furthered understanding.

- Question 4, Loudoun County: For Phosphorus, the CADDIS categorized it as a Probable stressor, but there are high seasonal variations and it can be limited with algal growth.
    - Answer, ICPRB: Phosphorus can be a tricky parameter and can be very seasonal. One mechanism to check if Phosphorus is persisting in the environment is with the taxonomy of benthic species, specifically Phosphorus-sensitive species. The Phosphorus-sensitive species were still present in the Fall of the same year, indicating the summer spikes did not primarily drive the stress to the benthics. Therefore, it was placed as a Probable stressor.

- Question 5, Loudoun Wildlife Conservancy: An email was sent with revisions regarding the citizen-science data that Loudoun Wildlife collected. Was that revision received?
    - Answer, DEQ: Yes, that email was forwarded to ICPRB for consideration of incorporation into the report.
- Question 6, Loudoun Wildlife Conservancy: In Section 8 discussing seasonal Chloride patterns, natural geology is noted as a reason for Chloride, when it is clear the main driver is anthropogenic road deicing and not geology. Can this be made clearer in the report?
    - Answer, DEQ and ICPRB: The report is structured with the intent that Section 8 focuses solely on outlining the data itself, and conclusions about that data and its primary causes are made in the CADDIS section. The report will be reviewed to ensure this intent is clear. It was suggested that Section 8 can be amended to highlight Chloride seasonality and levels.
- Question 7, Piedmont Environmental Council: On p. 131 in the Conclusion, the last sentence in the second to last paragraph is difficult to understand.
    - Answer, DEQ: That sentence will be edited to clarify understanding.
- Question 8, Loudoun Wildlife Conservancy: Will the previous comments sent be included in the public comment?
    - Answer, DEQ: No, any comments sent before the comment period starts (February 4$^{th}$ – March 7$^{th}$) cannot be included. Please forward them via email to Ms. Thompson for inclusion in the official public comments.
- Question 9, Piedmont Environmental Council: Should we forward the report and notify others that DEQ is soliciting public comment?
    - Answer, DEQ: Yes, all members are encouraged to notify organizations and partners regarding the public comment period.
- Question 10, VDOT: In looking at Ammonia and its possible correlation with septic tank locations – is there a correlation between the age of the septic systems or just locations? It was surprising to see numerous septic systems in a developed watershed.
    - Answer, DEQ: Solely locations were utilized, as datasets between counties vary widely and some data does not include the age of the systems. However, greater details will be explored during the Source Assessment phase.

## 4. Implementation Questions and Discussion

Ms. Thompson reminded members of the proposed approach discussed in the last TAG meeting: the TMDLs for development and utilizing the Salt Management Strategy (SaMS) to address Sodium, Chloride, and Total Dissolved Solids (TDS). Ms. Thompson explained DEQ's proposal to create a memorandum document to memorialize this overall watershed approach, that will provides the linkage between the BSA and the approach to address the probable stressors through either TMDL or SaMS.

- Question 11, VDOT: For the approach to address winter salts using SaMS, there is no regulatory requirement to carry it out. Would the memorandum be regulatory?
    - Answer, DEQ: No, the memorandum will not be regulatory in nature. Rather, it is meant to provide the linkage between the BSA and the approach to address the probable stressors through either TMDL or SaMS. It was noted that the primary source of winter salts, other than MS4s, is nonpoint source. Additionally, the focus of implementation for addressing winter salts is on enhanced best management practices. Therefore, expenditure of resources to develop a TMDL to address winter salts for this watershed is best allocated towards implementation, which is already provided by SaMS.
- Question 12, VDOT: Is there an expectation SaMS will be used instead of a TMDL?
    - Answer, DEQ: Salt management is an urban issue that is seen across northern Virginia and the reason why SaMS was developed to address this region. Given winter salts is primarily a nonpoint source issue, developing TMDLs to address specific watersheds is not as effective as focusing limited resources on implementation in the region. It was noted that this watershed is the first since SaMS was developed to rely on implementation of SaMS without preceding implementation with a TMDL that addresses winter salts.

Loudoun Wildlife Conservancy requested the memo be robust in structure to ensure winter salts are fully addressed.

- Answer, DEQ: DEQ coordinated with Northern Virginia Regional Commission (NVRC) on the potential to focus SaMS implementation efforts in the Broad Run watershed given the results of the BSA. NVRC is favorable to the idea but further discussions are needed on what these focused efforts could be – such as targeted communications at Homeowners Associations and landscapers, etc. As to the memo itself, it was noted that this is a new approach for DEQ and therefore, the exact format is still in development.
- Question 13, Piedmont Environmental Council: In the last TAG meeting, a post-meeting discussion occurred on approaches in addition to SaMS, such as certification for salt applicators. Could certification be included in the memo?
    - Answer, DEQ: Certification is a current recommendation in the SaMS Toolkit and information is provided in the Toolkit on existing winter salt certification programs. Steps to make such certification mandatory for any winter salt applicator would require legislative support and it is not DEQ's place to pursue that. The TAG voiced their understanding of that and if pursued, it could be done by either Counties or non-governmental organizations.
- Question 14, Piedmont Environmental Council: Could Counties or nonprofits request the certification mandate through the General Assembly?

    - Answer, Fairfax County: The counties cannot require that due to the Dillon Rule. But it was noted they could likely pursue the initiative for it to be considered at a state level.
    - Answer, DEQ: Yes, nonprofits would be able to pursue that initiative. It was noted that during the development of SaMS, DEQ communicated with New Hampshire on their Green SnowPro Certification and it was described as a very long and difficult political process to pass legislation that requires that certification.
- Question 15, Fairfax County: Fairfax County has developed an Action Plan to address their WLA for the Accotink Creek Chloride TMDL , which was released for public comment through March. It outlines aspects of SaMS that Fairfax County adopted including outreach to privately maintained lots. Would this approach for Broad Run watershed cause their TMDL Action Plan change?
    - Answer, DEQ: No, the Action Plan developed to address their WLA assigned for the Accotink Creek chloride TMDL would not change as that plan is required to address that specific TMDL. However, it was noted that the best management practices the County take as it pertains to their winter salt management are likely not restricted to Accotink Creek watershed but applied countywide. Additionally, it was noted that their MS4 permit has always included a requirement for proper salt storage and more recently, has included requirements that pertain to salt application and management.
- Question 16, VDOT: Does DEQ anticipate the chloride TMDL for Accotink Creek to become irrelevant or change as the area moves to SaMS?
    - Answer, DEQ: The challenge with the Accotink TMDL is it includes a WLA that is assigned to permittees. Until the WLA is met, permittees are required to continue to meet the WLA. It was noted that implementation of the TMDL through SaMS is focused on improving and implementing enhanced best management practices due to the challenges in addressing this pollutant, winter salt.
- Question 17, Loudoun County: How will the TSS and Nitrogen TMDLs correlate with the Chesapeake Bay TMDL?
    - Answer, DEQ: This project's proposed TMDLs include two of the three pollutants the Chesapeake Bay TMDL focuses on. In addressing those pollutants with the Broad Run TMDLs, it would also contribute to the Chesapeake Bay's TMDLs. The local efforts support the larger Chesapeake Bay effort.
    - Answer, Fairfax County: Reductions of pollutant achieved through a project, such as stream restoration, counts towards both the local TMDL and the Chesapeake Bay TMDL; one ledger exists for local efforts and one ledger exists for the Chesapeake Bay. It was noted the reductions achieved under each TMDL may be slightly different.

- Question 18, Fairfax County: For the Chesapeake Bay TMDL, there was developed a large-scale model for loading rates. Would this local TMDL modeling be more specific?
    - Answer, ICPRB: Yes, the model will only be built for this watershed. It is very difficult to find a pristine reference watershed in a similar land use area. Instead, the planned approach is for the model to focus on percentage change. For example, one approach that could be employed is the AllForX method that establishes a baseline, then compares the baseline to a theoretical all forested condition in the watershed. From that, target a percent reduction.
- Question 19, Fairfax County: Do you envision developing multiple TMDL equations for each pollutant associated with each subwatershed, or one TMDL equation for the entire watershed?
    - Answer, ICPRB: The model will include all three subwatersheds, which allows for the TMDL equation to be developed for each subwatershed. This could be done depending on the source(s) identified in each subwatershed. After presenting the options, DEQ will make the final decisions on the best approach to take for this watershed and each of the pollutants for which a TMDL is being developed.
- Question 20, Fairfax County: In the BSA, the heat maps display certain pollutants as stressors in some subwatersheds and not others. Would the TMDL equations for those pollutants be developed for the entire watershed, or only for specific subwatersheds in which those are identified as a probable stressor?
    - Answer, ICPRB: That will require further conversations during the TMDL phase – would time be spent developing one equation for the watershed or would focus be placed on specific subwatersheds. The spatial distributions of the stressors will also assist in this conversation. If equations are developed at the subbasin level, certain basins may have greater or lesser reductions than other basins.
    - Answer, DEQ: It will require further discussion, but if a pollutant is truly specific to a certain subwatershed, then a TMDL equation for that subwatershed may be more appropriate.

ICPRB noted future questions will need to be addressed with Ammonia during the TMDL phase. For example, if septic systems outside the Broad Run watershed are contributing to the pollutant and how that would be addressed.

- Question 21, Piedmont Environmental Council: Septic systems in areas outside of this watershed may be affecting this watershed?
    - Answer, ICPRB: It may be affecting it, yes. A high number of septic systems exist outside of the Broad Run watershed near the subwatershed border of Lenah Run.

- Answer, DEQ: Given some of the septic data received from the local health departments was not limited to the Broad Run watershed boundary, these septic systems close to the border of Lenah Run were found.

**5. TMDL Phase Overview and Timeline**

Ms. Thompson outlined the TMDL phase of the Broad Run Cleanup Study, explaining each major step within the phase and providing a timeline.

- Question 22, Loudoun Water: For the pollutant source assessment phase, how does the TAG factor in?
    - Answer, DEQ: That phase examines land uses, permittees, and other possible sources to identify what contributes to the pollutant presence. TAG members personalized experience and knowledge of the watershed would be beneficial to capture anything this initial source assessment may miss. Additionally, the public participation component strives for transparency with stakeholders at every stage of the process.
    - Answer, ICPRB: Additionally, for the overall modeling process assumptions must always be made. This iterative process of explaining the assumptions made and gaining input from the TAG on those decisions ensures the process moves smoothly and all members have clarity.
- Question 23, Loudoun County: For nonpermitted sources, making assumptions without additional data may be challenging. How would that be handled?
    - Answer, DEQ: Nonpoint source primarily looks at land use. For example, amounts of sediment runoff for forest versus barren land and how that contributes. Also, additional data can be incorporated if available.
- Question 24, Loudoun County: As watersheds cross political boundaries - could imagery be utilized to capture changes in imperviousness and then identify how much of this is publicly controlled versus privately controlled? That level of implementation may be difficult on jurisdictions, and outreach could be targeted by NVRC with that information.
    - Answer, DEQ: Yes, NVRC may be a good resource to focus on that type of outreach.

**6. Wrap-Up and Next Steps**

Ms. Thompson concluded the presentation with next steps, encouraging members to send any comments on the final draft of the BSA and TMDLs to be developed via email. The public comment period will run from February 4th to March 6th.

Ms. Thompson adjourned the meeting by requesting that any questions or comments be directed to her and thanking attendees for their discussion and participation.

2:48 p.m.: Meeting Adjourned