

Sand Branch Benthic Total Maximum Daily Load (TMDL) Study

First Public and First Technical Advisory Committee (TAC) Meetings – Summary Notes

October 29, 2020

The public meeting and the first Technical Advisory Committee (TAC) meeting were held concurrently to kick-off the Sand Branch TMDL Total Maximum Daily Load (TMDL) study on October 29, 2020. The study is to address an Aquatic Life Use impairment that is based upon an impaired benthic macroinvertebrate community in Sand Branch, which is located within Fairfax and Loudoun Counties. The agenda and a full summary of meeting attendance, automatically generated by the GoToWebinar platform, is provided below.



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genda_20201029.pdf



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The meeting was conducted with the assistance of a MS PowerPoint presentation, which is provided in the embedded file below. The detailed information in the presentation is not repeated in these summary notes, instead the questions and discussion that stemmed from the information provided is summarized.



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I. Welcome and Introductions

- a. Introductions of DEQ staff, overview of meeting logistics
- b. Discussed requirements for holding a solely virtual meeting. Read written opening remarks.



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- c. An overview of the meeting agenda was provided and a brief overview of the organizations represented by those participants who had joined the meeting.
- d. Summarized meeting objectives, which consist of:
 - i. Providing an overview of the water quality planning process to provide a basic understanding of how this study fits into that process.
 - ii. Summarize the water quality impairments that will be addressed by this study.
 - iii. Identify the data DEQ has collected to date to help with the study.

Paused for questions; no questions asked.

II. Overview of Water Quality Planning

- a. Water quality standards
 - i. Designated uses, criteria, antidegradation
- b. Continuous water quality planning process
 - i. Water quality monitoring, assessment, TMDL development, TMDL implementation
- c. Benthic macroinvertebrate community
 - i. Overview of benthic metrics and VSCI scores
- d. Benthic stressor analysis

- e. TMDL
 - i. WLA, LA, MOS, TMDL endpoints
- f. Public participation in benthic TMDL study

Paused for questions; no question asked.

III. Water Quality Impairment in Sand Branch

- a. Project location
- b. Water quality assessment of Sand Branch
- c. Water quality monitoring locations
- d. Basis of benthic impairment, summarized VSCI scores at both DEQ monitoring stations.

Paused for questions:

- Question 1: Are TMDL studies a joint effort of all localities in the Chesapeake Bay watershed, or a Northern Regional Office effort?
 - Answer: TMDL studies are led by DEQ-NRO, but with input from stakeholders.
- Question 2: Is there an evident change in the benthic impairment on Cub Run upstream or downstream of the Sand Branch confluence?
 - Answer: DEQ has not dived deep into in the data to know, but all of Cub Run and its tributaries are impaired.
- Question 3: What is the difference between the drainage area at 1ASAN000.34 and 1ASAN001.45?
 - Answer: We're not sure, we look at the drainage area for the stream as a whole. The impairment is based on the most downstream station. Also, important to note that the watershed boundary is not yet finalized.

IV. Overview of the TMDL Study for Sand Branch

- a. Project timeline
- b. Watershed boundary
 - i. Changes from the original boundary to draft boundary
 - 1. Watershed tour to help finalize
- c. Ecoregions
 - i. Soil mapping is unavailable for the Dulles Airport portion for the watershed, the watershed is highly developed so the soils are disturbed and good information is not available
 - ii. Triassic basin may play role in water chemistry
- d. Existing land cover
- e. Future land cover
- f. Authorized VPDES dischargers
- g. Location of permitted dischargers

Paused for questions:

- Question 4: Many facilities that are location along Rt. 50 are being replaced with data centers. What changes do you anticipate because of this?
 - Answer: Different types of facilities will require different permits, most data centers discharge to the sanitary sewer so there may be an elimination of a discharge. Data centers will cause more impervious land use. Any planned changes would be good information to know as we move forwards.

- Follow-up comment: Parking lot runoff from impervious surface would discharge to the stream.
 - Response: DEQ staff clarified stormwater discharges to the stream from process wastewater discharges.
- h. DEQ monitoring data
 - i. Overview of the data collected to date (chemical, benthic, toxicity, effluent monitoring)
- i. Other data
 - i. Overview of data collected from outside of DEQ (Loudoun County, Fairfax County, VT Occoquan Watershed Monitoring Lab)
- j. Data Analysis In-Progress: Identifying Probably Stressors
 - i. Monitoring data evaluation
 - 1. Comparing to WQS, stressor thresholds, seasonal/daily variations, CADDIS
 - ii. Considering other relevant data
 - 1. Hydrology, influence of Triassic basin, surround land use

DEQ asked for any other data or information that is available and which is willing to be shared to help improve the accurateness of the information used in the study.

Paused for questions:

- Question 5: Initial thoughts on stressors?
 - Answer: Based upon an initial review of the water quality data, there are excursions above some of the thresholds and criteria for conductivity, nutrients, and ions. But further study is needed to consider rest of the available information to identify the most probable stressor(s) to the benthic community.
- Question 6: Have you selected a model?
 - Answer: No, model selection will occur during TMDL development and will depend on what pollutant(s) are determined to be the most probable. Will also be selected with the help of DEQ's contractors.
- Question 7: For current permit holders, will you be asking for additional monitoring?
 - Answer: Currently it's too soon to tell, and will depend on the pollutants of concern identified as being the most probable stressors to the benthic community. DEQ can also discuss individual situations with specific permit holders.
- Question 8: How are you addressing Loudoun County's MS4 WLA, will be aggregated or non-aggregated?
 - Answer: Too early to tell as that will occur during TMDL development and will likely depend on the specific pollutant(s) of concern.
- Comment: VT faculty are conducting a stream survey of specific conductance along Cub Run. Can share more information if there's interest.
 - Answer: DEQ is interested.

V. Next Steps

- a. Public comment period, Oct. 30th-Nov. 30th
 - i. Seeking input on being on the TAC
 - ii. Any additional information that is available or feedback on the information shared.
- b. 2nd TAC meeting agenda
 - i. Sharing results of the stressor analysis and obtain feedback

VI. Meeting Feedback

- a. Questions or comments on the Sand Branch TMDL study, direct those to Sarah Sivers, DEQ.
- b. Comments on the virtual meeting format, comment form provided and to be submitted to FOIA Council.



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Final opportunity, before closing the meeting, was provided for questions or comments.

- Comment: The upper benthic sites has a small drainage area and is entirely within the trap rock/conglomerate uplands. Lower portion of the watershed is within the Triassic lowlands. These two can be very different. Strong seasonality between the benthic data collected in the Spring versus the Fall, which has been seen across Fairfax County.
 - Response: DEQ will be looking more into this as we moved forwards.
- Comment: S. Minavio said he would now like to be on the TAC, initially he had declined.
 - Response: He will be added to the TAC.

Final closing remarks provided by DEQ were:

- A recording of the meeting will be sent out to all meeting attendees the following day.
- Once final meeting notes are compiled, those will be emailed out to all meeting attendees.
- Reminder that the comment period ends Nov. 30th and seeking any additional information that may be helpful to this study and also interest in being on the TAC.
- After Nov. 30th, an email will be sent to all those who expressed interest in being on the TAC.