Fryingpan Creek, Pigg River, Poplar Branch and Beaverdam Creek TMDL and IP Public Meeting

27 September, 2022 at 6:00 pm

The Franklin Center- Rocky Mount, VA

Attendees: Kristina Sage (Tri-County Lakes), Jason Hill (VDEQ), Katie Shoemaker (WSSI), Tom Shahady (University of Lynchburg), Leslie Mace (VDOF), Ed Wells (RAVRC), Tracy Culbertson (Peaks of Otter SWCD), Bill Sweeney (VDOF), Lucy Smith (VDEQ)

Lucy Smith (VDEQ) presented an outline of the meeting and explained that this meeting will serve as a final public meeting for the Total Maximum Daily Load (TMDL) portion and a kickoff meeting of the Implementation Planning (IP) process. Lucy explained DEQ's water quality improvement process that begins with monitoring rivers, streams and lakes in Virginia. The next step is to compare the data to Virginia's water quality standards and evaluate the streams that are healthy and those that are considered unhealthy or impaired. The aquatic life use standard is evaluated using the Virginia Stream Condition Index (VSCI), which is a multi-metric score for aquatic insect communities. The Total Maximum Daily Load process is initiated for rivers and streams that are impaired and involves stakeholder participation and stressor identification for benthic impairments. The TMDL process results in a report that address the pollution reductions necessary within the watershed in order for the waterbody to meet the water quality standards. This is the stage we are completing tonight and a draft report is available on our website for a 30-day public comment period (expires on 10/28/2022). Following the comment period and EPA and SWCB approval, we will be moving into the Implementation Planning stage where we will be recommending best management practices (BMPs) that will address the pollution reduction goals in the TMDL. The watersheds of interest will be eligible for 319 funding after we have an EPA-approved IP.

Fryingpan Creek, Pigg River, Poplar Branch, and Beaverdam Creek are considered impaired for the aquatic life use water quality standard for consistently having VSCI scores below 60. A stressor identification process was conducted to identify the most likely stressor to the community. Sediment was identified as the most likely stressor for all streams based on the total habitat scores and individual habitat parameters. The AllForX approach was used to identify an endpoint for sediment in order to develop the TMDL equation for the watersheds. Reductions in sediment were estimated for each watershed based on the endpoint determination. The TMDL equation has 3 parts: a Wasteload allocation (WLA) which quantifies the permitted load, load allocation (LA) which is the nonpoint sources, and a Margin of Safety (MOS) for model uncertainty. Pasture/hay and cropland were identified as the largest sources of sediment based on the land use in each watershed. Sediment reductions were recommended evenly across the different land uses so that BMP options are available for each land use category.

DEQ has a new requirement to evaluate the cost/benefit for new WLA's. Since this project only has a few permits (1 IP, 2 GPs) that have been permitted to discharge TSS, there will be no costs to these permits as a result of this TMDL. Benefits of this project include ecological health and aesthetics and downstream recreation and ecosystems.

We will be moving directly into the implementation planning phase for this study. Moving forward immediately after the TMDL approval will save time and effort often spent on updating land

cover information when previous projects had a long delay between TMDL and IP work. This process will result in a document that details actions and strategies that must be undertaken to meet the goals of the TMDL. After EPA approves and Implementation Plan then the watersheds are eligible for 319 funding. There will be a series of working group meetings to discuss the BMPs that make the most sense for each watershed, funding opportunities, outreach necessary and constraints to funding /participation. We hope to have the first set of working group meetings in February 2023. Please email Lucy if you are interested in participating in one of the working groups (agriculture, government, or resident).

** The draft TMDL report is located here:
https://www.deq.virginia.gov/home/showpublisheddocument/16065/637975239343770000

** A 30- day comment period will expire on October 28, 2022. Please send any comments on the draft TMDL report or the Implementation Plan to:

Lucy Smith- lucy.smith@deq.Virginia.gov
or 901 Russell Drive Salem, VA 24153

Questions/Comments:

Q: The term water bug means something different to the scientific community. I would suggest using aquatic insect instead.

A: Yes, we have recently heard this criticism and will clarify the language used in future project materials.

Q: In evaluating the model, the observation was made that the sensitivity analysis shows that curve numbers are the primary driver in the model. These numbers are old and not generally calibrated locally. Would it be worthwhile to pursue funding to get better data to improve the model?

A: Katie (WSSI) explained that yes, the curve numbers are driving the model but things like slope and soil type etc. are also factored in. There has been no evidence in the literature to show that the curve numbers are inaccurate or need improving upon. Pursuing funding to improve the model could be an option but we must keep in mind that funding spent there would potentially mean less funding for on the ground best management practices. Models are useful tools to help us set goals but they are limited.

Q: Based on the pie charts in slides 46-49, the streambank sediment loading is surprisingly low given the characteristics of these streams.

A: This piece of the equation was not in the original version of the GWLF and was added years ago by a modeler to attempt to capture this load. We do not have data to adjust this number in a quantifiable way (e.g. data on in-stream sediment movement and bank erosion to calibrate the model against) but we can incorporate this comment and the observations we have heard at previous meetings in the implementation plan. Given stakeholder support, the implementation plan can highlight riparian buffer practices which benefit both the land use they are on, the land

draining to them, and the streambanks themselves and are useful in addressing not just sediment but also other stressors like nutrients and temperature.

Q: The observation was also made that these watersheds could definitely benefit from riparian buffer practices but that education and outreach needs to be prioritized as well to inform land owners on the benefits and upkeep. Finding the BMPs that will resonate with local landowners will be a priority.

Q: The suggestion was made to have a working group to identify sources of funding in the watershed and discuss the pros and cons of each. Having a plan for grant application processes was highlighted as a concern to be addressed.

Q: The presence of beavers in the Poplar Branch watershed was noted.