**Fryingpan Creek, Pigg River, Poplar Branch and Beaverdam Creek Public Meeting**

**Essig Recreation Center, Rocky Mount VA**

**6:00 pm on 18 November, 2021**

DEQ presented an overview of the water quality improvement process used in Virginia. The steps in this process include monitoring rivers, streams, and lakes, evaluating the data to see if waterbodies are meeting Virginia’s water quality standards (WQSs), developing a plan for waterbodies that are impaired or not meeting the WQSs, and developing a cleanup plan that outlines the best management practices (BMPs) that will improve the water quality. After a cleanup plan or Implementation Plan is developed then the watersheds are eligible for grant funding from the US Environmental Protection Agency (EPA). This meeting begins the start of the development of a plan to address the impairments on Fryingpan Creek, Pigg River, Poplar Branch, and Beaverdam Creek also known as a Total Maximum Daily Load study (TMDL).

**Q:** How do you pick sample sites?

 *We typically locate sample sites at public access points (i.e. road crossings, parks, or boat ramps). DEQ conducts a random monitoring program that often requires access to private land for sampling 2 times per year. If follow up monitoring is required for at these stations, then monitoring is often moved to the nearest public access point.*

**Q:** How do you determine the length of the impairment?

 *We will look at given distances upstream and downstream and may have to guess somewhat since we cannot sample every mile of stream. But if there are tributaries entering or large point source inputs then the impaired section will stop because the assumption is that the water quality is different and we would need to collect additional data there to render an assessment.*

DEQ went on to describe the impaired streams of focus for this TMDL study. They are located in Franklin County, Pittsylvania County, and Bedford County. Biological, physical and chemical data have been collected for several years at each stream to assist in the identification of the stressor or pollutant that is causing the unhealthy biological communities. For all of the streams in this study, we identified that excessive sediment was the most probable stressor to the biological community and will move forward with developing a TMDL equation for sediment. However, upstream impoundments were identified as a large contributing factor for the Fryingpan Creek and Poplar Branch watershed. Beaverdam Creek and Poplar Branch also showed excessive Total Phosphorus (TP) levels but further investigation showed that there were no biological effects of the excess TP at this time. This information is described in the Draft Stressor Analysis Document is available for review on DEQ’s website: <https://www.deq.virginia.gov/water/water-quality/tmdl-development/tmdls-under-development>

**Q:** Do you use samples from floods or droughts?

 *No, our biologists are trained to avoid floods or droughts and to allow several weeks after a high flow event to allow for the community to establish again.*

**Q:** What can be done? We have seen changes in the streams (Pigg River and Turners Creek) due to high flow conditions.

 *These are natural systems that will move and change over the years and will have some level of acceptable sedimentation. However, our observations show that the sediment load is unnatural and is causing stress to the biological community but the VSCI scores are not too terrible. Therefore, targeting some of the land use practices with grants may be enough to improve the stream so that it is delistable.*

**Q:** How far back do you go with a model?

 *We will model the whole watershed so all of the tributaries and land that drains the tributaries. These tributaries will also be eligible for grant funding after the project is complete.*

**Q:** How do you set the benchmark for the conditions a long time ago when we don’t have data?

 *The VSCI score was calibrated and validated using reference conditions or the best streams that Virginia has today.*

**Q:** How do you sample TN/TP?

 *We generally take a grab sample monthly or bimonthly for 2 years. If we see levels that are elevated we will follow up with additional monitoring, like deploying a water quality probe to evaluate daily changes in Dissolved Oxygen.*

**Q:** Does flooding impact sediment? Many very wet years lately with lots of trees falling in the river.

 *Yes, we will have to account for that in the TMDL model. For example we will use precipitation data from past years to account for weather conditions and hydrology.*

**Q:** How do we know that the VSCI score goal isn’t overshooting, or that the historical conditions in the Pigg River was not at 60 to begin with?

 *The assessment value of 60 was determined as the benchmark for impairment based on the reference conditions in Virginia. When developing the model, we found that watersheds determined to be reference based on their landuse (i.e. least disturbed) generally were well above 60. In fact only about 5-10% of the reference streams were at or below 60. So the score of 60 is a very conservative estimate of unimpaired.*

DEQ described the TMDL equation that will be developed by accounting for the loads of sediment coming from point and nonpoint sources. We also discussed next steps for this project which include a 30-day public comment period following the meeting (expires January 3, 2022) and a smaller Technical Advisory Committee meeting that will be held in January and one in the spring. This project will move straight into the cleanup plan development phase.

\*Please send all comments to Lucy.Smith@deq.virginia.gov or 901 Russell Drive Salem, VA 24153

\*\* For more information or to access the Draft Stressor Analysis Report please visit the DEQ website: <https://www.deq.virginia.gov/water/water-quality/tmdl-development/tmdls-under-development>