

James River and Tributaries Benthic TMDL 1st TAC Meeting Minutes

Wed, April 14, 2021 1:00pm – 2:30pm

Webinar was recorded

Attendance:

Alan Lederman (Chesterfield Co.)	Laura Nicklin (Ashland Specialty Ingredients G.P.)
Ashley Hall (Stantec)	Oula Shehab-Dandan (Dominion Energy)
Chip Kramer (JTCC)	Ram Gupta (DEQ)
David Sirois (Chesterfield Co.)	Rebecca Stewart (Chesterfield Co.)
Emily Guillaume (Troutman Pepper)	Robert Brent (JMU)
James Beckley (Chesterfield Co.)	Ryan Shore (Aleris)
Jen Rogers (DEQ)	Ryan Smith (LaBella Associates)
Jennifer Palmore (DEQ)	Scott Bookwalter (Chesterfield Co.)
Julian H Lipscomb (Branscome Incorporated)	Warren Smigo (DEQ)
Katie Shoemaker (WSSI)	Weedon Cloe (Chesterfield Co.)
Kelley West (DEQ)	
Laura Barry (Chesterfield Co.)	

Roles and expectations of Technical Advisory Committee (TAC) members were discussed.

Introductions of staff and contractors and project roles.

Project review

Review of the project watershed map with all of the impairments, also the DEQ waterwheel or process of water monitoring, assessment and TMDL development. Discussed aquatic life use indicators, benthic macroinvertebrate, monitoring protocols, and VSCI scoring

All of the impairments were shown on individual maps and the boundaries were discussed. On the Swift Creek impairment DEQ plans to deploy meters to collect continuous monitoring data in multiple locations within the impairment areas this year to help determine how to categorize the dissolved oxygen impairment. DEQ does not plan to develop a TMDL equation in this report for this segment, but the continuous monitoring will help determine how to categorize this impairment.

Stressors

Discussed stressor analysis process and the model used to produce these reports and outputs. All of the impairments have sediment as the probable stressor, and phosphorus in a few of the segments so phosphorus and sediment will be targeted in the TMDL.

Questions:

Ram Gupta asked if the DEQ stressor analysis tool was used for this project. Robert Brent answered saying the CADDIS tool was used but used all of the same inputs that the DEQ tool uses plus a few extra inputs.

It was asked if we could discuss more why swift creek will not have a TMDL. Jen R. answered saying the dissolved oxygen (DO) impairment may be moved to a Category 4C if the low DO is being caused by the dam. Robert Brent said there will be a phosphorus TMDL for the swift creek that will cover some of the DO impairment but he thinks there will still be an impairment for DO especially after phosphorus reductions.

Each watershed will have a separate TMDL developed, all of these segments are in the same area as the Chesapeake Bay TMDL so yes there will be some overlap between the two.

Model Approach and inputs (presented by Katie Shoemaker, WSSI)

The model that will be used for this project is GWLF which is a lumped parameter model that looks at point and nonpoint sources. This model incorporates a sediment delivery ratio and has landscape and streambank erosion ratios inputted. The model is broken down into sub watersheds and all the model inputs were discussed in detail. Land Cover or Land Use percentages were discussed for each watershed. Questions: none

Sources

Nonpoint sources and Residential Septic System details and how they were derived were shown. *Is the 3.3% septic system failure rate accurate? Are there any known straight pipes in the watersheds that can be addressed or unreported sewer system overflows that anyone would like to bring to their attention?*

Permits

Point sources were listed and it was mentioned how they were included within the model and what their permitted annual loadings currently are. Industrial stormwater general permits were shown in tables with the receiving streams and the permitted general permit loadings per year. Concrete products general permits with permitted annual flows and receiving streams were listed. Domestic sewage general permits were shown with receiving streams and the annual discharges.

Municipal separate storm sewer permit (MS4) permits were displayed in a map. *How would TAC members prefer the MS4 permits get handled, as aggregated or disaggregated?* VDOT would prefer an aggregate load since the areas are always changing. Ram asked if the model output can have a loading for the MS4 and the non MS4 area. Yes the areas can be separated out in the model, it's usually presented together in the report. Ram thinks it would be helpful during the IP process to have both areas MS4 and non MS4 areas documented within the TMDL.

Construction General Permits were listed with potential disturbed area in each watershed. *Do the acreage estimates for construction related disturbance seem reasonable? What level of ESC controls do you see implemented on construction sites within the watershed – does the 85% sediment reduction for ESC BMPs make sense for the allocated scenarios and should that reduction be different for existing conditions?*

Weedon Cloe mentioned Upper Swift Creek has increased sedimentation and Control measures that are within their ordinances since they are upstream of Swift Creek. All the area draining to the reservoir have strict controls in place. They can help out and include the engineering team into this if needed. The permitted controls are subject to failure with significant rainfall but typically the construction staff is diligent on maintaining this.

Ram asked if the model will be calibrated. When the calibrations is done they are limited on where the hydrology data is available. They will do calibration validation on a USGS gauge, and where they do have data they will compare the model to that. Sedimentation is difficult to do this but calibration will make it better so they perform where possible.

Existing Best management practices (BMPs) that are known to DEQ were listed in each receiving stream *Do you know of any permitted sources or BMPs or pollutant sources that were missed? If so please reach out to DEQ to discuss.*

TMDL Development

TMDL Equation, future growth, TMDL reductions and targets were reviewed. The reference watershed method has been used in the past to develop the pollutant targets where there is no regulatory limit (neither sediment nor phosphorus have a regulatory limit). It can be hard to find a healthy reference watershed, especially in a more developed area, so instead the All Forested Load Multiplier (AllForX) method is what is suggested to be used for these watersheds. All of the AllForX watersheds were shown in a map and the process was discussed how they use the AllForX methodology to come up with the pollution targets.

Next Steps

Implementation Plan will be the next step after the TMDL is complete. The goal is to start the plan directly after the TMDL is completed. Once the Implementation plan is completed then it will be a good guide for watershed clean up to begin. The implementation plan strategies are to have measurable goals and milestones, have stakeholder roles, and integrate with other available plans and to identify potential funding sources.

The next TAC meeting will be in later Spring/early Summer.