

## James River and Tributaries Benthic TMDL 1<sup>st</sup> TAC Meeting Minutes

Wed, Feb 3, 2021 1:00pm – 2:30pm

Webinar was recorded

21 members of the public in attendance plus 9 DEQ employees and contractors

Introductions of staff and roles and expectations of Technical Advisory Committee (TAC) members were discussed.

Kickoff meeting review: Provided the map of the project area and went through each impaired area, briefly reviewed the Clean Water Act, and designates uses, the DEQ water wheel (water monitoring, biological monitoring). Why do we monitor aquatic life/bugs and what can they tell us and examples of them. The Water Quality stations map was shown and then the DEQ water wheel Assessment process and impaired waters list was discussed. Benthic VSCI scores and details about each stations scores were shown for Baileys Creek, Nuttree Branch, Oldtown Creek, Proctors Creek, Rohoic Creek, Swift Creek Upper and lower. DEQ water wheel discussion on what is a TMDL (total maximum daily load) means a sum of a waste load allocation, plus the sum of the load allocation plus margin of safety, details of how we develop the TMDL. The next step discussed on the water wheel is implementation planning, which uses the TMDL allocations to help guide us where to focus implementation. The timeline was discussed, what we have accomplished so far, second TAC meeting expected to take place spring 2021 and final public meeting to be held summer 2021.

Question Break: no questions were posed.

Stressor Analysis: Talked about the stressor analysis process, modeling approach that was used (CADDIS). What data is available and what data or metrics are computed for or from the model. Reference stations, seasonality, composition of benthic community, feeding group figures. Data review and habitat scores. Data thresholds and probabilities of impacting benthic macroinvertebrates. Diurnal data measurements were collected. Non agency data and reports that have been generated were looked at and citizen monitoring data that was used as model inputs. Caddis approach and examples of the 14 lines of evidence that were evaluated and the strengths of the scores. Probable stressors table from the modeling results were shown for each impaired area. Next were details about each identified stressor and evidence that was supported them. Sediment TMDLs for all 6 streams and phosphorus TMDLs for 3 of the streams are recommended.

Questions: What stat test was used to determine values? P values of .05 and stat test alpha

Swift Creek Lake at the dam has Broad crested weir, 25 ft down is the intake structure for release. It's a stratified lake that mixes in the spring and fall and all the Low Dos are associated with the thermocline that establishes in early march April, the thermocline usually starts at about 20 ft. Most of the water comes from the top of the weir, in late summer water does not

come from the top if there is a significant drought. They have a significant hydrilla problem due to nutrient uptake. During the summer months it's normally seepage from the dam that is released downstream, there are requirements for downstream flows but contact public works for those details.

TAC member asked a question about the shifting sand bottoms, the benthic are not establishing on those and the communities are sticking to the banks, do you think that can be attributed to the geology of the area? Response: The model tries to include the geology and when the slopes and flow are low you get a lot of buildup he will try to attribute to that in the write up.

TAC member from Chesterfield County says the thermocline in the summer is usually set up around 13-14 ft based on her calculations.