

## Moore's and Mill Creek Stream Clean-Up Study (TMDL)

Preliminary Technical Advisory Committee Meeting

Jordan's Point Park, Lexington: September 7, 2021

### Meeting Participants

Jonathan Griffin, Rockbridge County

Teagan O'Brian, VA Department of Forestry

Sandra Stuart, Natural Bridge SWCD

Barbara Walsh, Rockbridge Area Conservation Council

Lee Cummings, Natural Bridge SWCD

John Pancake, Rockbridge Area Conservation Council

Sara Bottenfield, VA Department of Environmental Quality

Tara Wyrick, VA Department of Environmental Quality

Nesha McRae, VA Department of Environmental Quality

### Meeting Summary

Nesha McRae with the VA Department of Environmental Quality (DEQ) welcomed participants and asked everyone to introduce themselves. The group reviewed the objectives of the meeting, and Nesha provided a brief overview of the benthic impairments on Moore's and Mill Creeks and the Total Maximum Daily Load (TMDL) process that will be used to address the impairments in these streams. Nesha noted that it appears sediment is negatively impacting aquatic life in the streams and that it may end up being the target pollutant in the clean-up study. She asked participants if they had observed any evidence of erosion or excess sedimentation in Moore's or Mill Creeks. One participant asked how Willow Lake (Moore's Creek watershed) is managed. They noted that it would be good to know if it is accumulating sediment and whether it is regularly dredged. A participant noted that the lake is privately owned, most likely by Homeowners Association (HOA) (this needs to be confirmed). Another participant responded the Department of Conservation and Recreation (DCR) must approve design, operation and maintenance plans for the dam because it is over 25 feet. Recent discussions with DCR staff indicated that this approval has not yet occurred. Nesha offered to follow up with DCR on the status of the review and approval process. A participant asked how the level of the lake is controlled. The lake has a spillway with an overflow pipe. Nesha will follow up with DCR on this. Another participant noted that Willow Lake is very popular for birding, and suggested that local birders may have observations that they can share about changes in the lake over time.

Nesha discussed the role of the Technical Advisory Committee with the group. She explained that the group would meet 3-4 times over a 9-12 month period to review technical content and provide input on aspects of the study including monitoring data, watershed land use, pollutant sources and potential pollutant reduction scenarios. She asked participants to reach out to her if they were not interested in serving in this capacity.

The group moved on to discuss characteristics of the watersheds including current and historical development patterns. A participant noted that the southern portion of the Mill Creek watershed is one of the fastest developing areas in Rockbridge County. There are several new restaurants in the area, a new health clinic, and lots of new construction. The truck stop at the northern end of the Moores Creek watershed is the second biggest employer in Rockbridge County. There has been considerable development around this area as well. It would be helpful to look at how far away silt fences were installed during development projects due to the proximity of projects to the stream. It would be very easy for a large amount of sediment to make its way off a construction site, into Moores Creek, and downstream to Willow Lake. It would be interesting to look at how much sediment is coming out of the lake. A lot of the work was done between mid-2014 and 2016. We probably would not see the changes in the lake for many more years.

Participants discussed a VDOT has a roadway expansion along I-81 that is starting today where they will be adding another lane to I-81. Susan Hammond is the local VDOT administrator and would be a good person to engage in the clean-up study. Nesha noted that VDOT is an MS4 permittee and that they have consultants who typically engage in TMDL development on their behalf. Nesha offered to reach out to Susan Hammond as well.

RACC expressed concerns about airborne emissions from the truck stop. Most of the trucks run their engines all evening in order to operate electronics. Bobby Burkstrater is the owner of White's Truck Stop. He was one of the first people to install plug in charging stations at his truck stops. Truckers do have to pay to use these, so that is a disincentive. It would be a good idea to reach out to Bobby to see if he would be willing to participate in development of the study. He owns quite a bit of land in the Moores Creek watershed.

Nesha asked participants about historic interest in agricultural best management practices in the watersheds. The Natural Bridge SWCD has done some stream exclusion BMPs in the area. There is not a lot of row crops in the watersheds. Most of the farmers in the area that do have row crops have nutrient management plans in place and participate in cover crop programs. Richard Clemmer has a poultry operation in Mill Creek but there are not any streams on his property. He has a litter storage facility and manages his operation well. All of his cattle are fenced out except on an area of land that he leases (the Kugler Farm, they are not interested in implementing BMPs; they used to own property around Willow Lake but have sold it). A participant asked if Cherry Grove Farms falls within the Mill Creek watershed. Nesha offered to check on that (Follow up: It is just outside of the watershed boundary). The rotation of crops is changing in the area a bit recently as guidance has changed from NRCS and farmers have observed increased yields with different rotations. As a result, the SWCD has seen an increase in establishment of grass on existing crop fields. Participants noted that cropland in the area is almost all in no till, with lots of broadcast seeding. A participant asked whether biosolids were applied on any farms in the watersheds. There have been some biosolids applied in the Moores Creek watershed, but there is a very strict application process to be followed. RACC is worried about PFASs in biosolids and a buildup in the soils. RACC has asked DEQ to conduct additional monitoring on emerging contaminants. There is a study of emerging contaminants in biosolids underway, but it is largely focused on urbanized areas. A participant expressed concerns that

rural areas like Rockbridge County are not being included in the study. She asked whether emerging contaminants had been considered in the study of Moores and Mill Creeks. Nesha explained that it is highly unlikely that emerging contaminants or toxics are responsible for the impairments we are seeing in these streams, so these classes of pollutants are not being investigated as part of the clean-up study.

The group discussed stormwater management in the watersheds. One participant noted that Devils Backbone recently completed their stormwater drainage work and repairs. Efforts to address stormwater issues were extensive and costly. They were also draining their stormwater basin into the sanitary sewer, and were charged for this. These repairs should help to improve water quality in Mill Creek. Walmart has a large stormwater basin on the backside of the building, but this is outside of the watershed. Participants were unsure about stormwater drainage from Lowes.

Nesha asked participants if they had noticed any karst features in the watersheds. Participants responded that they were everywhere. All of the pastures in the area are full of rocky outcroppings, and it is very common for sinkholes to open up along I-81 on a weekly basis. Ed Spencer developed a map showing karst features in Rockbridge County. David Harbor would also be a good person to check with regarding karst features in the area. Margaret Ann Hinkle (Washington & Lee University) is doing some work with springs, may want to reach out to her

Nesha shared information on high conductivity and dissolved ion concentrations in the streams, and participants discussed potential sources. Nesha explained that the karst topography present in the watersheds is a likely source and asked whether there had been any observations of other potential sources in the area. Participants had not observed any over application of de-icing agents in the watersheds. VDOT applies a brine to their roadways, but this is not typically over-applied. Participants noted that VDOT has a large salt barn off Route 39 near the Maury River. Salts stored at this facility are in a building, under cover and generally well managed. There have been issues with over application of salts by Washington and Lee University, but this would just impact Woods Creek.

The group moved on to discuss existing water monitoring and restoration efforts in the watersheds. RACC has one monitoring station located along Equestrian Lane in the Mill Creek watershed; this was last sampled in spring 2021. The monitor sampling that site will be moving, so they are not sure if they will continue there. Catherine Seigel has done e coli monitoring up by the Showalter Farm. RACC made a request for additional DEQ monitoring on Moores Creek above Willow Lake in 2017. DEQ began regular monthly ambient monitoring below Willow Lake in 2019 to support the clean-up study. While the DEQ station is downstream of Willow Lake, it is considered representative of the watershed. The group discussed existing BMP implementation efforts in the watershed. A livestock exclusion project was just approved for funding by the Natural Bridge SWCD in the Mill Creek watershed just above DEQ monitoring station 2-MIS006.88. Leslie Arrows (Rockbridge BOS) is looking at opportunities for stormwater BMPs throughout the county. She would be a good person to engage in the clean-up study as well. Melissa Alexander (Maury River PSA) would be a good person to contact if you are interest in learning where public sewer lines have been extended in the watersheds.

The group moved on to discuss next steps and plans for a public meeting. Nesha mentioned that Glen Maury Park might be a good location for a public meeting. Participants agreed that this would be a quiet outdoor location, though it is a little further away from the project area. Nesha noted that she would like to hold the meeting at an outdoor location, so it would need to occur this fall before temperatures drop too far. She asked whether local residents would be likely to attend an in person meeting. Participants thought that the response would be mixed. Some local residents are avoiding in person meetings while others are more comfortable with them.

Nesha thanked everyone for attending and said that she would be in touch soon with a summary of the meeting and plans for next steps.