

Mountain Run, Muddy Run, Lower Hazel Implementation Plan

2nd Residential Workgroup Meeting

May 11, 2021

Attendees:

1. Dave Evans, DEQ
2. Roland Owens, DEQ
3. Cathy Nicely, DEQ
4. Heningham Calloway, Culpeper SWCD
5. Richard Jacobs, Culpeper SWCD
6. Greg Wichelns, Culpeper SWCD
7. Bryan Hofmann, FOR
8. October Greenfield, FOR
9. Andrew Hardy, Culpeper County: Parks and Recreation Director
10. Paul Howard, Culpeper County: Environmental Services Director
11. Melanie Bayne, Town of Culpeper: Public Works/Environmental Services
12. Ben Holt, Town of Culpeper: Planning/Community Development
13. Andrew Hopewell, Town of Culpeper: Planning/Community Development Director
14. Matthew Decatur, RRRC
15. Michelle Edwards, RRRC
16. John Foster, Mt Run Lake property owner
17. Emily Melton, Mt Run resident

Welcome and Introductions

Dave Evans of DEQ opened the meeting with an overview of meeting logistics and shared formal opening remarks explaining the rationale for holding an entirely virtual workgroup meeting. Following that he went over the meeting agenda and objectives.

Residential Septic and Pet Waste BMP Recommendations

Preliminary recommendations for residential septic, pet waste and kennel BMP recommendations were presented by DEQ. A brief discussion of these followed:

- Greg Wichelns observed that the presentation slide on residential septic BMPs did not include any sewer line connections (RB-2 practice). Dave Evans clarified there will be recommendations for sewer connections in RA-19 (Mt Run – Hiders Branch) and RA-20 (Jonas Run), the two IP watersheds where the Culpeper wastewater treatment facility sewer use area is located. The RB-2 recommendations were not included in the table shown in the presentation because they were not calculated with the comparative analysis approach used for the other Septic BMPs.
- Ben Holt shared information on the Town's plans for purchasing and installing another 11 pet waste stations along Mountain Run and its tributaries this summer. These will complement the 3-4 stations already in place in the Town, and were supported with 50% cost-share funding from Friends of the Rappahannock (FOR).
- Bryan Hofmann of FOR asked that information on the specific pet waste station model being purchased be communicated locally, as additional stations would ideally be compatible. Ben shared information that these stations, which include bag dispensers, wastebaskets and signage, cost \$230 from <https://dogwastedepot.com/dog-waste-station/>
- Richard Jacobs noted that there is a station at Culpeper Sports in the Jonas Run watershed, and that there are a few additional stations in area HOA properties. He asked if the pet waste

stations BMP recommendations took existing stations into account, and Dave Evans noted they do not, and that the recommendations can be refined if workgroup members think changes in the total or distribution across IP watersheds is warranted.

- Greg Wichelns asked, relative to the Confined Canine Facility (CCF) recommendations, whether any participants were aware of existing waste treatment at area kennels. No one had information to share on that, and Dave Evans noted that when DEQ conducted a literature search to support the new CCF BMP, there was little information available on existing local requirements for kennel waste management.

Mountain Run Benthic Impairment Analysis

Roland Owens of DEQ presented an update of the ongoing benthic impairment analysis he is conducting. He communicated the approach DEQ takes in conducting benthic life WQ assessments, how he has applied the methodology in Mountain Run, and presented the initial summary results of his ongoing analysis of benthic impairments in the Mountain Run, Jonas Run, and Flat Run watersheds.

- Richard Jacobs asked whether the DEQ benthic assessment protocol was different based on the stream substrate, and in a written (chat) comment Melanie Bayne asked to get a copy of DEQ's benthic assessment protocol. Bryan Hofmann noted in a written comment that he understood that DEQ's method differed for rocky vs. muddy stream bottoms. Roland said he would look into this and provide additional information in follow up communications from DEQ (the 1999 DEQ document "*Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers*" was shared with workgroup members, along with these meeting notes.)
- Richard Jacobs observed, relative to the data results for the Jonas Run benthic assessment unit, that there had been a gravel road near the tributary to Jonas Run up until several years ago, there is significant sediment accumulation in the tributary, and the former gravel road may have had a significant effect on benthic community health.
- Greg Wichelns noted that some of the segments (Jonas and Flat Run) have very limited data points, and that DEQ should be cautious in making conclusions on seasonal patterns. Roland Owens noted that the complexity and staff time requirements for benthic data analysis limit the amount of observations that are feasible.
- Greg also asked if his assumption that Total Nitrogen includes organic nitrogen was correct, and Roland confirmed it was. Greg also asked about DEQ data on Total Suspended Solids (TSS). Roland noted that DEQ doesn't routinely collect that data, because there is not a criterion/stressor threshold for TSS. Bed stability and habitat data observations are the best proxy for the impact of sediments on benthic health. The State Water Control Board has directed DEQ to develop a turbidity standard and that work is ongoing.
- Bryan Hofmann noted that FOR has turbidity tubes and trained volunteers who could perform TSS data collection if that would be helpful, and asked DEQ to share its protocols for TSS collection. Roland will follow up with Bryan on this.

Stormwater BMP Discussion

Dave Evans presented a listing of Stormwater BMPs that were most frequently included in six Sediment IPs that he reviewed, along with a table of the Stormwater BMPs allocated to the IP watersheds in the local WIP III BMP "input deck". Workgroup members then shared their thoughts on the type of

Stormwater BMPs they believe should be included in the Mountain Run, Muddy Run and Lower Hazel River IP.

- Greg Wichelns suggested that DEQ identify the likely sources of bacteria in the developed areas in and around the Town of Culpeper, so that stormwater management BMPs would be located in areas that will provide the most bacteria reduction benefit. October Greenfield commented that FOR's bacteria sampling plan for Mountain Run is under development, as well as a plan to sample in the Rush and Lower Hazel Rivers. Both citizen science volunteers and FOR staff will participate in the sampling efforts, which is being done in collaboration with the Alliance for Chesapeake Bay. The FOR-led sampling in Mountain Run should help to identify areas with high bacteria levels in stormwater runoff.
- Michelle Edwards, who was unable to participate by audio, noted in written comments that the Upper Rappahannock Watershed Plan being developed by RRRRC will include a data application, under development by the Chesapeake Conservancy that will identify the type and location of BMPs that will achieve the greatest benefits. Bryan Hofmann noted that this tool will be based on high resolution imagery and Lidar and should provide much help in guiding BMP planning.
- Emily Melton shared comments that she sees great value in the inclusion of low cost practices like wetlands (constructed and fringe) and tree planting/live stakes to establish root mass that stabilizes streambanks prone to erosion. It will be very important for the IP to have a strong education and outreach component to encourage landowners to embrace these practices; many people currently believe wetlands will foster mosquito growth, and may believe maintenance costs are high for environmentally beneficial practices. Educational materials can help communicate the water quality, habitat, and aesthetic value of stream bank vegetation and wetlands.
- Richard Jacobs shared a comment that many HOAs/residents have objected to having "no mow" zones and other environmentally beneficial practices, for concern with mosquitos and wildlife; he seconded the call for education and outreach. He then noted that there are opportunities to add new stormwater management practices in developed areas with untreated storm drains, and to improve the performance of existing stormwater BMPs. Adding filtering and infiltration features to dry detention ponds would be valuable, and converting dry detention to wet ponds would provide even greater water quality benefits. Also, some of the few wet ponds that currently exist, upstream of the Town of Culpeper, are mowed right up to the pond edge. Schools and other public buildings in and around the Town may present the best opportunities to add/improve stormwater management.
- Richard also observed that increasing the frequency of street and storm drain cleaning could reduce bacteria and other pollutants from entering local waters. Michelle Edwards noted in written comments that the local WIP III "input deck" had included these measures, but DEQ removed them in the final WIP III because those practices don't address nitrogen (the focus of WIP III planning efforts).
- Bryan Hofmann mentioned that FOR and Culpeper County have jointly prepared an application for a NFWF grant to conduct a stormwater management opportunity assessment. Bryan also summarized the extensive tree planting efforts by FOR, and welcomed input from meeting participants on any suggestions for additional tree planting. Bryan offered FOR's assistance if

any of the participating organizations were interested to apply for a Department of Forestry “Trees for Clean Water” grant.

- Greg Wichelns noted that the biggest concern for water quality comes with the “first flush” of runoff during a storm event. Dave Evans concurred, noting that in a Stormwater Management class DEQ sponsored the point was emphasized that infiltrating runoff during the beginning of a storm generally has the greatest water quality benefits.
- October Greenfield recapped a number of local area initiatives FOR has completed recently, including (1) youth environmental education programs in the parks, (2) a bird watching program at the Cedar Mountain battlefield, (3) several river cleanup projects, (4) Spring tree planting at many sites in the County, and (5) plans for a Summer 2021 rain barrel education program, with approximately 20 rain barrels given away to participants.
- Bryan Hofmann welcomed additional input from meeting participants on suggestions for water quality monitoring locations in Mountain Run, and encouraged anyone interested to participate in the May 20 (10am) Land Use and Environment Committee meeting that Michelle Edwards leads. The meeting will include details on the Chesapeake Conservancy BMP location tool that was noted during the workgroup discussions.

DEQ closed the meeting with a summary of the remaining steps in IP development, including a meeting this Summer (TBD) to share and discuss the benthic stressor analysis in more detail. DEQ requested volunteers to participate in the Steering Committee, which is tentatively planned for late this Summer. DEQ shared its appreciation for workgroup member’s participation and contributions, and committed to send a draft summary of the meeting discussions, along with the webinar recording, to workgroup members for their review and comment within the next couple days, and asked for comments back quickly to enable a public posting of the meeting summary within 10 days, per Agency policy.