Mountain Run, Muddy Run, Lower Hazel River Implementation Plan: First Workgroup Meeting

October 29, 2020: 10am – Noon via Webinar/Conference Call

Participants: A total of 32 people participated in the Workgroup Meeting webinar, including 6 DEQ staff. Non-DEQ participants were from the Culpeper Soil and Water Conservation District, the Rappahannock-Rapidan Regional Commission, several Virginia state agencies, the Town of Culpeper and Culpeper County, Friends of the Rappahannock, Piedmont Environmental Council, a reporter from the Culpeper Star Exponent, and a few area residents. Participants are identified below, in alphabetical order of their last name.

1. Bayne, Melanie: Town of Culpeper
2. Blomstrom, Maggi: Piedmont Environmental Council
3. Calloway, Heningham: Culpeper Soil and Water Conservation District (SWCD)
4. Champion, Allison Brophy: Culpeper Star Exponent
5. Cook, Steve: Virginia Department of Health
6. Cross, Deborah: Virginia Department of Conservation and Recreation
7. Dellinger, Kendall: Culpeper SWCD
8. Edwards, Michelle: Rappahannock-Rapidan Regional Commission (RRRC)
9. Evans, David: Virginia Department of Environmental Quality (DEQ)
10. Foster, John: Culpeper resident (Mountain Run Lake)
11. Furlow, Edward: Virginia Department of Forestry (DOF)
12. Greenfield, October: Friends Of The Rappahannock (FOR)
13. Hardy, Andrew: Culpeper County
14. Hermoso, Dina:
15. Hofmann, Bryan: FOR
16. Holt, Ben: Town of Culpeper
17. Andrew Hopewell, Town Of Culpeper
18. Howard, Paul: Culpeper County
19. Jacobs, Richard: Culpeper SWCD
20. Massie, David: Culpeper SWCD
21. McCullen, Amanda: Culpeper SWCD
22. Owens, Roland: DEQ
23. Cathy Nicely, DEQ
24. Rossetti, Joe: DOF
25. Sivers, Sarah: DEQ
26. Stafford, Carl: Virginia Cooperative Extension
27. Stuart, Ed: DEQ, and Culpeper County resident
28. Thomas, Bryant: DEQ
29. Wichelns, Greg: Culpeper SWCD
30. Unknown Phone Participant #1: (540) 825-8591
31. Unknown Phone Participant #2: (540) 727-3412
32. Unknown Phone Participant #3: (540) 219-3460

Welcome and Introduction

DEQ provided an overview of GoToMeeting platform and explained the means by which attendees could participate and contribute to the discussion. DEQ informed attendees that the meeting would be recorded.

The formal opening remarks were read, and they included an introduction of the DEQ staff helping with the webinar. Attendees were invited to introduce themselves by posting their name and organization in the chat box.

DEQ then summarized the purpose and the objectives of the meeting, which were to seek and receive member input on the information shared during the meeting, and proceeded to discuss the MS PowerPoint presentation posted to DEQ's website and shared by email with participants.

Project Overview

- The DEQ presentation began with a summary of the water quality impairments within Implementation Plan (IP) project area, which include bacteria impairments in all watersheds, and benthic impairments in Mountain Run.
    - DEQ noted that Mountain Run also includes some PCB impairments that will be addressed in a new TMDL study to begin early 2021.
- A quick review of the WQ planning process was provided, with a more detailed focus on the TMDL implementation plan portion and public involvement.

Part I – Agricultural Workgroup Discussion

- Agricultural sources of bacteria from livestock and agricultural lands were highlighted, from the TMDL reports, the draft 2020 Integrated Report by the Virginia DCR, and recent land cover analysis. DEQ noted that Carl Stafford of Virginia Cooperative Extension previously shared his sense that dairy cattle in local watersheds are lower than the draft 2020 report shows.
- DEQ summarized land use changes from 2001-2020 and why the analysis looked at both National Land Cover Dataset (NLCD) as well as Virginia Land Cover Dataset (VLCD). The latter is considered the most accurate data due to more detailed resolution of the land imagery. NLCD data is available in time-series and was used to portray land use changes over time, while VLCD data was used to present the most accurate sense of current land use in the IP project area.
- DEQ presented and discussed summary information on the $4.1 million in Agricultural and Residential Septic BMPS installed from 2000-2020. This was followed by a discussion of bacteria level trends (2002-2020), which show a higher level in bacteria criteria exceedances in recent years.
- DEQ explained the challenge of evaluating bacteria trends due to the inability to control for the timing of sampling events relative to rainfall/runoff, and noted that 2018 had record levels of rain, and 2019 and 2020 have had above average rainfall; this impacted bacteria sampling results.

- Greg Wichelns, District Manager of Culpeper SWCD (C-SWCD), was invited to summarize their agricultural program activities. He asked David Massie, who manages the District's Agri. BMP cost share program, to provide summary remarks:
    - C-SWCD has 5 staff, covering five counties, who in the past 10 years have worked to carry out grant projects in 4 other IP areas. There has been a high level of interest from agricultural producers, and C-SWCD has been able to complete much work on the ground.
    - Section 319 grant funds, which provide targeted funding within IP project areas, enable the statewide VACS funds to go further. Historically Section 319 grants have supported higher cost-share rates that are attractive to producers, and allow for more flexibility than VACS, such as variable setback distances for fencing. While VACS now includes some of those flexibilities and higher cost-share rates for fencing, the Section 319 funds continue to enable increased overall cost-share funding in the IP watersheds.
    - Additional comments by David Massie included the following:
        - Completion of an IP allows funds to be used to educate the public on what they can do, in terms of both agricultural and residential septic measures.
        - While most believe agriculture is the greatest bacteria pollutant source, significant bacteria levels also come from the Town, wildlife and septic systems.
        - Maintaining good relationships (with a neutrality and partnership approach) with area producers enables the District to achieve more conservation on the ground.
        - The Department of Forestry provides technical assistance to assist with plans for buffer planting, and Virginia Cooperative Extension shares questions or needs from citizens with C-SWCD for detailed follow up.
        - The U.S. Dept. of Agriculture's NRCS is co-located with C-SWCD; this presents opportunities to collaboratively address producers' interests and issues.
    - Andrew Hopewell, the new Town of Culpeper Director of Planning and Community Development, was recognized due to his need to leave the call early. He had no specific remarks and expressed appreciation for the ability to participate.
    - DEQ then provided an overview of the comparative analysis methodology being used to develop preliminary (aka "strawman") recommendations for a set of "core" BMPs, which include livestock exclusion fencing, buffers and pasture management as well as septic repairs/installation. The focus on these BMPs is because all bacteria IPs give primary focus on those measures. The methodology was discussed using the Jonas Run watershed as an example.
        - Question by Greg Wichelns: are the BMPs that are already implemented excluded from the recommendations? DEQ responded that completed BMPs were not subtracted from the comparative analysis strawman. Greg observed that about 60% of the exclusion fencing strawman value has

already been accomplished (the 80 miles completed from 2001-2020 could be subtracted the estimated 123 miles needed). DEQ noted that while a simple subtraction may not be warranted, adjustments to account for completed BMPs are warranted, and will be the subject of further discussions within the Agriculture workgroup.

- Question by Greg Wichelns: Is the 741 acres of buffer the result of livestock exclusion fencing? Greg also asked DEQ to clarify if CREP or federal funding (NRCS) was included in completed BMPs. DEQ responded that the buffer totals included those accomplished both in Livestock Exclusion Fencing systems and separate buffer BMPs. CREP-funded projects are included, but those funded solely by the federal government, such as EQIP, are not included.

- DEQ asked participants to respond to the questions posed on the Agricultural Discussion slide, and the following observations were shared:
    - David Massie noted that since 2019, VACS program changes enabled up to 100% cost share for fencing projects, with additional payments for riparian buffer areas. This has significantly increased interest from producers. Several recent projects have been installed in the Mountain Run watershed. Soon there will also be an option for cost-share funding for temporary fencing, which may be of interest for flood-prone areas in the eastern portion of the Mountain Run watershed.
    - Greg Wichelns noted that the District has potential funding to purchase movable shade areas. Use of movable shade is valuable for producers who use rotational grazing, and could reduce the undesired practice of allowing cattle to access forested riparian areas during the summer months to escape the heat of sunny pastures.
    - David Massie noted that pasture management practices that maintain grass heights and control weeds improve nutrient absorption to the soil, and reduce bacteria runoff. Cropland management is challenging, but moving to variable fertilizer application rates is recommended, and shallow tillage practices (except when incorporating bio-solids into the soil). These all are becoming popular practices in the area.
    - Carl Stafford asked whether tree planting has the potential to become similar to wetlands banking, to help offset the land clearing associated with large-scale solar power projects. DEQ observed that the Virginia General Assembly has passed legislation to establish a program to support forest preservation and afforestation through participation in carbon markets. Joe Rosetti of DOF noted that this program is in its very early stage of development, but could provide forestry incentives in the future.
    - Joe Rosetti asked if there would be a mechanism to add limited tree planting to provide shade within pastures. Greg Wichelns responded that this could be a producer's choice, but that in context of rotational

grazing, movable shade provides greater flexibility and doesn't require 10 yrs or so for the planted trees to mature. Bryan Hofmann noted that Friends of the Rappahannock can support tree planting and is interested to discuss this further.

- Joe Rosetti commented that the percent of forest in the IP watershed (referring to the data on Jonas Run) was extremely low and any buffer/afforestation occurring in the watershed would be beneficial, with riparian tree planting most valuable. October Greenfield noted that afforestation should be a priority, and that FOR has gotten a lot of interest and that afforestation projects are opportunities for partnerships with C-SWCD, FOR, DOF, PEC and local volunteers. Bryan Hofman and Carl Stafford expressed support for such partnerships and bundling support/assistance.
- Maggi Blomstrom agreed with these comments, and asked if the IP project area watersheds could benefit from added incentives such as those provided in Rappahannock County by the Krebser Fund (which provided for 100% cost-share for fencing when the State rate was lower). Greg Wichelns observed that the "Krebser model" of providing additional incentives as beneficial and would be helpful for this project area. Bryan Hofmann then noted that the Rappahannock River Roundtable also has funding to offer additional incentives for this region, and Maggi Blomstrom observed that the "Culpeper Fund" can also support additional incentives.

Part II – Residential Workgroup Discussion

- DEQ presented a series of slides that summarized information on human population estimates (which can be used to project pet populations), septic system analysis and opportunities for sewer connections, land use change from 2001-2020 with focus on developed lands, and completed residential septic BMPs in the watershed.
- DEQ then discussed the comparative analysis methodology used to create strawman septic BMP recommendations, and noted the strawman values did not take into account septic BMP work done already.

Comments/Perspective from CSWCD, Local Government and NGO

- Michelle Edwards spoke for RRRC, with a focus on their work in support of the Chesapeake Bay WIP III
  - In 2018, RRRC led development of a set of recommended BMPs and implementation strategies for the urban/septic sector to meet its Bay TMDL nutrient reduction allocations. These included wet ponds, urban tree planting, constructed wetlands, infiltration practices and other BMPs that have both bacteria and nutrient removal benefits.
  - RRRC's Upper Rappahannock Watershed planning effort is advancing WIP III implementation in the area, by spatially prioritizing BMP recommendations. A primary focus of Phase I is to compile and digitize data from different partners to

support plan implementation. Data will be available to partners through a MOU due to data sensitivity (to maintain privacy information).
    - Phase II, which is supported by a NFWF grant, will be a partnership with the Chesapeake Conservancy to develop a customized web-based platform to support planning on a variety of spatial levels, using enhanced hydrography and land cover data. RRRC is contracting with FOR to ground-truth this planning tool, support the effort with WQ monitoring and site-specific assessments, and conduct education and outreach.
    - Green infrastructure planning conducted in the past identified areas for WQ protection, and provide another resource for project area planning. RRRC recently completed and posted to their website a Homeowners Guide to water quality management, and has experience with pet waste management programs conducted under past Section 319 grants to C-SWCD.
- Greg Wichelns, C-SWCD then discussed the District's experience implementing Residential Septic cost-share and VCAP programs.
    - The District's Residential Septic cost-share program is well known in the five counties the District encompasses. In addition to the four IP project areas eligible for Section 319 funding, the District recently completed a 4 year WQIF septic project that filled in areas not covered by 319 funding. Broad area education and outreach has been very effective, and strong partnership with VDH and County Health Departments are in place.
    - Private contractors have become familiar with the cost-share program, and are instrumental in moving the project forward. Greg would like to see more funds available (319 or WQIF) to support the program, and noted that this IP area is the least funded part of the C-SWCD's jurisdiction. The septic cost-share program has enabled the District to interact with a wider range of citizens than previously (focused most attention on the Agricultural sector).
    - VCAP program: Richard Jacobs was instrumental in creating many of the specifications for the Virginia Conservation Assistance Program (VCAP). In recent years Richard and Henny Calloway have completed many projects throughout the five counties, these have been primarily residential, retrofit-type projects.
    - The District's residential lawn soil testing program brings science to decisions on fertilizing lawns; it has a high participation rate, working with the Virginia Tech Soil testing lab.
- October Greenfield, the FOR River Steward for the Culpeper area, shared an overview of their ongoing and planned activities, which include:
    - Partnerships built in Town and County of Culpeper through urban buffer plantings (several in Mountain Run and one along Muddy Run). FOC has teamed with RRRC and Culpeper County Parks and Recreation to give away one gallon trees to county residents and businesses. Efforts are focused on outreach, programs to garner interest and participation on getting tree planting on the ground. FOR's Mountain Run initiative is aimed at addressing urban stormwater.

    - Bryan Hofmann then commented Rappahannock River Roundtable also supports projects that get practices on the ground and provide outreach. Examples include urban forests and urban nutrient management. FOR looks forward to hearing ideas on how they could find regional funds to help support additional on the ground projects.
- Maggi Blomstrom shared comments about the work Piedmont Environmental Council is doing in the area:
    - PEC joins in partnerships (with DOF, FOR, SWCDs) to get more tree planting on the ground.
    - PEC has developed a proposal for the "Rapidan-Rappahannock River Partnership". This is a project application for funding from NRCS to support practices such as tree planting, riparian buffers and strategic conservation areas.

Residential Workgroup Discussion

- Greg Wichelns asked about the comparative analysis tables – is the data built using a core assumption from the older IPs that a higher septic failure rates are from older homes? DEQ said that is reflected in general, but because different contractors prepared the IPs used for comparative analysis, the original methodologies are not likely to be fully consistent. The strawman recommendations provide a very basic starting point and can be refined as we continue discussions.
- Carl Stafford observed that increased human activity is the largest change in the watershed. He noted that the ratio of pets to people is important to assess, and observed that when land is developed, many people believe it pushes water fowl and wildlife out. Carl shared his observations that development creates new opportunities and habitat for wildlife like small mammals. It is important to recognize these are all sources of bacteria.
- Michelle Edwards noted that RRRC has had success with installing pet waste stations in follow up to previous IPs, but did not have success with pet composters. She recommended not including pet waste composters in the IP recommendations.
- Bryan Hofmann noted that FOR has funding available to provide pet waste stations to high priority areas within Mountain Run. Many areas within the parks already have them installed, but there are opportunities in the residential areas and along trail areas for additional pet waste stations, and there is a need for targeted outreach and to assess the specifications for pet waste station BMPs. Michelle Edwards shared her agreement with Bryan's comments.
- Ben Holt of the Town of Culpeper said there is a need to place more pet waste stations at Yowell Meadow Park and along the adjacent greenway trail.
- Greg Wichelns asked if there was a strategy to identify the effectiveness of urban practices such as rain gardens to reduce the bacteria pollutant load. DEQ replied that this is a good question that will warrant continued discussion. DEQ observed that in the most recent completed IP (Mattaponi River) approved by EPA did not include specific assessment of the bacteria reductions from those BMPs, and that the stormwater BMPs were accepted for inclusion based on generic bacteria reduction efficiencies.

- Ben Holt share a comment that uncontrolled stormwater runoff can create infiltration for old sewer pipes, exacerbating the issue and causing those sewer pipes to leak. He asked if this was a concern within and around the Town's wastewater treatment facility. DEQ suggested follow up with the Town on the question and noted there is a fine line between what can be addressed in this IP versus what is subject to permit requirements.
- Bryan Hoffman recommended targeting BMPs with more direct impacts on nutrients and sediment (vs. bacteria) to the streams and in surrounding areas where there are benthic impairments.

Part III – Synergy with Other Local Planning Efforts

- DEQ briefly noted other local planning efforts in the region in reference to the slide that listed several such plans/initiatives.
- Maggie Blomstrom noted that the Krebser Fund for Rappahannock County provides funding to headwater stream initiatives and additional incentives for landowners to install conservation practices. In Culpeper Co., the "Culpeper Fund" can do similar activities, and has historically supported conservation easements. The foundation resources are very flexible in terms of their allowable uses.

Meeting Closure

- DEQ highlighted the preliminary project timeline, and noted that moving at the desired pace would create the possibility of a Section 319 grant application for the project area in the 2022 RFA, that will be posted in the Summer of 2021.
- DEQ is seeking input from participants on their desire to participate in the workgroups and in which focus area, agriculture or residential/septic/urban, their interests lie.
- DEQ noted that the public comment period for input on DEQ's plans for this IP runs through November 30, 2020, and provided information for participants to share feedback on the virtual meeting format (send to FOIA Council).
- DEQ quickly noted the additional MS PowerPoint slides at the end of the presentation, that were included to provide more detailed bacteria data, and additional reference information for participants to look at on their own.
- DEQ thanked all participants for their interest in the project, and committed to share draft meeting summary notes within a week for review and comment.