

**Upper Rapidan Watershed**  
**Total Maximum Daily Load (TMDL) Implementation Plan**  
**Government Working Group Meeting**  
**Madison County Cooperative Extension Office**  
**Tuesday, March 31, 2015, 2-4 p.m.**

**Attendees:**

Jenny Biche', Rappahannock-Rapidan Regional Commission  
Brian Daniel, Madison County  
Dwayne Dixon, Madison County Health Department  
Michelle Edwards, Rappahannock-Rapidan Regional Commission  
Edward Furlow, Virginia Department of Forestry  
Alan Mazurowski, Greene County Health Department  
Emily Nelson, Thomas Jefferson Soil and Water Conservation District  
Byron Petrauskas, Blue Ridge Environmental Solutions  
Dan Ratzlaff, Greene County  
Rebecca Shoemaker, Virginia Department of Environmental Quality  
May Sligh, Virginia Department of Environmental Quality  
Greg Wichelns, Culpeper Soil and Water Conservation District  
Whitney Wright, Virginia Department of Health  
Spencer Yager, Culpeper Soil and Water Conservation District

**Welcome & Introductions**

May Sligh welcomed attendees and distributed hand outs.

Review of Government Working Group Functions: fact sheet

Attendees reviewed the Government Working Group Fact Sheet.

**Overview of programs/tools in the counties (Madison, Greene, Orange, Albemarle) that address Agriculture, On-site sewage disposal systems/Sewer connections, Pets, Education/Outreach**

**RESIDENTIAL SEPTIC review/comments:**

Byron Petrauskas provided an overview of practices/programs hand out and requested feedback from attendees on the various topics addressed, beginning with residential practices and programs. Upon asking whether the costs seemed reasonable, attendees responded with the following comments and questions:

- Whitney Wright stated that the \$15,000 listed as average cost for an alternative on-site waste treatment system (RB-5) is on the low end of actual cost to install.
- In Greene County, public sewer hook up is \$10,000, while Madison County has no tap fee (although service is only for the town of Madison at this time, which is not in the watershed)
- An inquiry was made as to whether the average unit costs figures in the hand out are actual costs, or what 319 grant funding allows. Attendees discussed, and May Sligh suggested both cost figures be shared and compared. *It is noted that the average unit costs should be based on the cost of the practice installation as opposed to a specific amount allowed from a grant program (e.g. 319, VACS, EQIP, etc.).*
- May asked attendees if they knew of any areas that have public sewer hook-up options. Orange and Stanardsville have some. Does RSA run out to Ruckersville? No, it stops at Ruckersville. DEQ staff will inquire about sewer overlays for Orange and Stanardsville (Greene).
- The \$300 cost for pump-outs is the average cost state-wide. Madison charges \$300 (VDH).
- It was suggested that Byron look at what other TMDLs cost share and use the average. The Health Department does not see any of the invoices so they do not see project total costs, they just provide the permits.
- RB-2—no taps, less than \$10,000. Madison costs \$10,000 (out of project area). \$4,500 payment cost share? Just from house to line/infrastructure plus tap fee.
- RB1 costs \$300. Grinder pump station costs \$6,000. Tap cap costs \$10,000. Additional money for the pipe. For RB-2, the \$16,000 cost listed is on the low end of the actual cost; the true cost is \$20,000.
- May mentioned that there has been discussion during previous TMDLs about providing cost-share assistance where there have been septic failures beyond simply paying for the sewer hook-up. Whitney replied that SERCAP and other programs provide such assistance. SERCAP has low interest/no interest loans available.
- During Robinson WQIF project Dwayne suggested that there was some price gouging by contractors. He recommended homeowners get three estimates when requesting cost share. Greg added that there were (and are) times that the SWCD does not pay on all invoiced items; we review invoices, and there are some contractors that seem to charge more. Dwayne stated Fauquier SWCD experienced some price gouging as well. *This concern would be addressed through TMDL implementation program bid requirements. There will be some modified bid procedures coming out in the 2016 DEQ TMDL BMP Implementation Guidelines. For non-Ag projects less than \$5,000 bids are not required, although greater than this amount will require bids.*
- For the repair average cost of \$3,500, those are component replacements not full replacement (ie. Partial drain field, D-box). Greg replied that RB-3 repair cost is okay.

- Full system replacement—health department doesn't see invoices or prices. The full system replacement costs (RB-4 and RB-4P) seem reasonable.
- Alternative system installation total cost (RB-5) should be a minimum of \$20,000, based on of treatment units, and new nitrogen standards. State pays \$10,000 at 50%. True cost \$20K-\$25K. Whitney asked if the cost listed includes construction costs, as well as design costs and health department permit fees? May Sligh found the practice in the BMP manual during the meeting and found that engineering design and proper septic tank closure are included (not permitting). Greg Wichelns stated costs have been as high as \$29K for an alternative system to be installed, including the design fees, but costs for this practice vary a lot and can be much higher than \$29K.
- With alternative systems there are price differences on fees—less than 1,000 gallons per day has one fee and over 1,000 gallons per day has a higher fee. VDH permit application fee is \$1,250. The fees are on the health department website. Whitney & Dwayne will send May a breakdown of the fees. (these costs would be the responsibility of the homeowner)
- In the past 5 years, Madison has not had that many new alternative systems, whereas in Greene County there have been about 15-20 alternative systems in that time period, mostly new construction.
- May asked attendees if they were aware of any areas that are prone to problem septic? Poor soils? In Madison County/Rapidan Watershed, the soils are decent. In the Robinson Watershed—Rt. 15 corridor, there are problem soils, especially where the Rapidan & Robinson merge—likely suspect areas, homeowners could use assistance.
- Any areas of old homes on flat land? Garth Run area—older vacation style homes that are now full time residences—could be why Garth Run area is impaired. Septic systems may be unsuitable for year round usage.
- Failing septic were identified by using census data and the age of homes—not by looking at soils. “Failing” just means in need of repair or replacement, not necessarily failed. Straight pipes were identified by taking the 150 foot corridor with buildings and census data and the “other” category from the census.
- Whitney recommended doing a table similar to Table 1 for houses on public sewer. May replied that she would try to get the sewer layers for Orange and Stanardsville.
- May asked attendees if the numbers in Table 3 seem reasonable. Dwayne replied that it should be accurate if the numbers are adjusted to reflect true costs as previously discussed. Greg commented that based on Dwayne's information Garth Run will probably need more RB-4Ps than RB-4s with a 70:30 split. Another suggested a 50:50 split.
- Discussed the ratio of a conventional gravity flow vs. pump. For a lot of houses a pump system is needed in this watershed—Madison County—in particular Garth Run (steep and rocky).

- Table 1—estimates from Census? Derived from census years 1990, 2000, 2005—1990 was the last time they used the “other” category.
- Table 1 numbers for failing septic look really high. Really that many failures? Greg responded that failing can mean the system needs repair/maintenance and is based on the age of the home—not necessarily that it failed. Byron stated that high numbers are based on the modeling. May agreed that the title may need to be changed (i.e. Septic Systems in Need of Repair).

### **AGRICULTURE review/comments:**

Byron moved on to the agricultural practices and programs section of the handout, stating that the major task on the agriculture side is to identify where livestock have access to the stream using aerial photography and stream overlays. Once we come up with the estimate the soil and water conservation district provides comments and then DEQ cost-share data is added to determine existing fencing. Upon asking whether the costs seemed reasonable, attendees responded with the following comments and questions:

- Greg asked how current the stream fencing data is, and Byron replied that he received the data from DEQ in February 2015. Greg recommended the figures be updated in July 2015 once all the people signed up for the 100% cost share are identified. *The amount of signed up fencing based on the 100% can be referenced in the IP, but only installed fencing can actually be credited towards the IP implementation goals for each of the impaired watersheds.*
- Emily asked if the GIS data on the fencing can be shared with TJSWCD? Byron replied yes.
- May asked if the fencing numbers seem reasonable for Albemarle, and Emily replied that they seem high but she will confirm. They have worked with the 3 major landowners in the Albemarle portion of Blue Run watershed (one is Barboursville Vineyards).
- Greg asked if the SL-6 numbers in Tables 5 and 6 figures assume 100% cost-share, to which Byron replied yes. Since the 100% cost-share ends this year and there will instead be a big push for CREP, Greg recommended adjusting the numbers. Byron stated that for past TMDLs he had usually assumed 60-70% to SL-6 and the rest to CREP. Greg agreed that would be best. Also, LE-2T and WP-2T need to be in the mix.
- Length of fencing went dramatically up in feet when 100% cost share became available
- Total # of systems—adjust for SL-6 and CREP
- Stream protection? LE-2 10 ft buffer with 50% cost share vs. 35 ft. set back
- Greg questioned why CCI is in table 6 but not 5? According to Charlie Lunsford, whatever is existing—apply to everything—all fencing that is out there now or what we need

- Dan asked whether there was a regulatory buffer requirement for livestock? There is no regulatory requirement in general, but in order to receive cost-share funds you have to have meet set-back requirements. However, it is a voluntary program.
- Dan asked about the probability that farmers will install the fencing. CSWCD had \$5 million in cost-share spent on BMPs. 35ft set back is 100% cost share, 10 ft setback has 50% cost share and no set back allows for a 25% tax credit. (*Fencing installed at top of stream bank can be done under an SL - 6B and as such has no cost share but is eligible for a 25% BMP tax credit up to \$17, 500 per applicant per year.*)
- All voluntary but requires a 10 year maintenance agreement

### **POTENTIAL FUNDNG SOURCES:**

Looking at potential funding sources, Byron explained that there has been some consolidation of programs due to Farm Bill. RCPP is a new grant this year, which brings together non-government partners with district/state agencies. The focus for this working group may be the regional and private sources. Attendees responded with the following comments and questions:

- May Sligh asked Ed Furlow of VDOF to give an overview of their Stewardship Program. Ed stated it was a planning program and was not aware of any available cost share associated with the program. Ed stated that Barbara White does have some money that she can use for tree planting that may be available next year, but it is dependent on DCR and Chesapeake Bay funds. Greg added the program is called the Virginia Trees for Clean Water, but is only for urban tree planting to reduce turf.
- Greg related a funding source developed through a past TMDL in Rappahannock County through Piedmont Environmental Council and the Krebsler Fund, which donated \$50K to use as an extra \$0.50 per foot incentive—farmers got \$0.60 per foot if first time cost share recipient. Are there any private sources like this in the area? (no one knew of any at this time)
- May asked whether Center for Natural Capital could offer any incentive funds (possibly just as matching funds) or any Foundations or private funders. Greg suggested adding Rapidan Better Housing and USDA Rural Development to the list of potential funding sources.
- Byron pointed out that the Agricultural Cost-share and Landowner Cost Share tables are intended to give examples of what it would cost the farmer/homeowner.
- Greg suggested referencing the Virginia Conservation Assistance Program (VCAP). May stated that she has information that can be added and will provide it to Byron.
- Are there any financial incentives to farmer and to homeowners to do bmps? Yes. (see link at the bottom of notes for full details of TMDL cost share program)

- Dan asked whether there is any stormwater component to the IP or any incentives for developers? Greg and Brian responded that there are publically-funded assistance programs (SLAF – SW Local Assistance Fund) for new construction. New construction is covered by regulatory requirements.
- There are some tools-nutrient credit trading—haven't seen a lot in Greene county and don't expect to see any unless it becomes more densely populated
- Dan asked what was expected from localities regarding stormwater for this TMDL-IP? May responded that education/outreach will be needed (e.g. encouraging rain barrels). In Greene County, Cooperative Extension currently does that, but Dan stated the County could partner with them. Greg suggested the County could inform the SWCD of any agriculture land that has a change in land use and goes into development, or septic issues noticed during construction site inspections.
- Pet Waste—in rural areas pet waste digesters hard to get buy in from community, but pet waste stations are popular.
- Outreach—let people know of failing septic systems, identify places for pet waste stations, stormwater retrofits—kennel and hunt club locations, concentration of dog walkers, etc. List counties as assisting with education/outreach (with their permission)—stormwater/erosion & sediment control staff could help with that.
- Michelle suggested adding RRRRC/Friends of the Rappahannock Rainscape Retrofit program and CSWCD residential stormwater cost share programs (VCAP). May added that these programs are geared towards nutrient and sediment reductions but they will provided the added benefit of bacteria reductions in some situations.

### **PROGRAMS AND TOOLS**

- Greg recommended adding WP-4 and SL-9 to go on Ag list
- Whitney Wright asked if the resident practices lists all of the ones for septic? Are there any incentives for voluntary septic system upgrades? VDH permit was not possible to grant to someone who did not have a failing septic system but who wanted to make improvements to their septic system (add nitrogen reduction, etc.) so VDH changed their code so they could issue voluntary upgrade. Whitney will ask Charlie Lunsford, and May agreed to check if failure is necessary for the cost-share practices. *In the descriptions for RB-4, RB-4P and RB-5, it has to be a failed system, or a system not VDH approved that can potentially impact water quality (bacteria). See the link below for additional details for each practice.*
- Madison County developed a sewer database during the Robison River TMDL-IP that covered the entire county and is accessible by record look up. Brian stated that records are listed by tax map number.
- Greene & Albemarle Counties have their septic data scanned and accessible. Orange County has no database, but all counties can map structures by age.

- No counties have ordinances requiring mandatory pump-outs.
- Orange has a pet waste ordinance and requires a license for dog kennels. None of the other counties do that the group is aware of. Could cross number of dog licenses per address for Madison County. Could do a target mailing to older homes and/or dog owners if there is a budget for that. CSWCD goes door to door instead of using a mailing for their outreach programs. Some other areas include a mailing in the water or electric bill by partnering with utilities.
- Greg recommended offering 100% cost share for straight-pipe conversion as a pilot program to see whether it would yield an improvement in sign-up, since straight pipes are difficult to find. He will talk to Charlie Lunsford. Attendees responded that the Garth Run community would respond well to 100% cost share.
- May asked whether any areas of Garth Run would warrant a community system. Lost Valley Subdivision is the only one but there are not any problems there, so a community system would not be appropriate.
- May pointed out that there was interest at the public meetings for additional monitoring in the IP to identify hot spots and determine where to get started on IP/BMP out reach. *A monitoring component is a required element of an IP. The monitoring plan always addresses DEQ on-going and/or planned future monitoring in the impaired watersheds. This is also how citizen monitoring is also discussed in the monitoring plan.* Citizen monitoring has not always been included in past TMDL IP 319 projects, but it is good to have as a place holder in the IP case funding becomes available. Greg recommended instead of conducting hot spot monitoring, which is presumptive, conducting sub-watershed monitoring to provide better background data for targeting and avoiding any finger-pointing which can be counter-productive(*hotspot monitoring is intended to be an internal term used to help describe more targeted bacteria source monitoring*).
- May reported on previous supplemental monitoring conducted by CSWCD and others in the Upper York and asked whether there were citizen groups or students in the watershed who might do citizen monitoring. The Center for Natural Capital student interns from Woodbury Forest and Madison County has a 4H wildlife club could be possible groups interested in more monitoring in certain areas of the watershed. The CSWCD could also continue with some supplemental monitoring. *Master Naturalists may also be interested in assisting.*
- The question was raised as to why Garth Run is the only impaired stream segment in that whole area; there is quite a distance downstream before further impairment. Rebecca stated it may be due to a lack of monitoring data, or Garth Run data may be just over the impairment threshold. Rebecca will research it and let May know the result. Dwayne Dixon recommended DEQ be prepared to answer that question at the public meeting. There is a bridge at Garth Run that could be used for an additional monitoring station. May stated that citizens can nominate additional stream segments to be considered for DEQ monitoring. *(Rebecca explained that the monitoring station further up in the watershed is for benthic macro-invertebrate monitoring and not bacteria*

*(Station 3-GAR003.56). The impairment is not borderline as originally mentioned; the impairment at Station 3-GAR000.95 (not on the project map but just downstream from where the upper reach of the impairment in “red” is shown) was 6 of 11 samples (54.5%). The recreation use was not assessed prior to 2014. The northern portion of Garth Run (VAN-E11R\_GAR02A06) had not been assessed for the recreation use as of the 2014 assessment. There is a new station farther up in the watershed where monitoring just began in 2015, and so far it has shown 2 bacteria violations during the month of January 2015. The monitoring at this station will only be done for 2015. May will have the raw data available in case there are questions at the final public meeting).*

### **STEERING COMMITTEE**

May provided an overview of the Steering Committee, which will meet before the final public meeting and review the first draft of the IP. Whitney Wright volunteered for the committee.

For additional information on cost share amounts for various practices see the TMDL Implementation Cost share Guidance:

<http://www.deq.state.va.us/Portals/0/DEQ/Water/NonpointSource/DEQTMDLGuidelines-Specifications.pdf>