

Chickahominy River and Tributaries - Bacteria TMDL Implementation Plan Development  
Residential Work Group – Final Meeting Minutes  
June 18, 2012  
6:00 pm – 8:00 pm

In Attendance:

Megan Sommers (DCR – meeting scribe), Margaret Smigo (DEQ – meeting facilitator), James Beckley (citizen), Lynn Wilson (Henricopolis SWCD/citizen), Christine Beish (citizen), Robin Wilder (citizen)

Meeting convened at 6:04 pm. Margaret began the meeting with a brief overview of the meeting agenda and goals followed by member introductions.

Margaret noted that the results from the homework assigned at the first Public Meeting would be assembled into a list that will be given to the Steering Committee. She reviewed comments submitted by members in response to the homework assignment.

Attendees identified the following additional constraints:

- Limited opportunity for residential scale BMPs because of building codes and/or Homeowner Association Standards. Geese management and grass cutting standards is an example.
- Some localities have nothing in their building codes to require low-impact development practices (ex. rain gardens, cisterns, etc.). This could potentially be a roadway/right of way issue. These practices should be incentivized.
- The County owns and operates drainage areas but they are not being maintained.

Margaret asked for solutions to the aforementioned constraints. For example, MS4 localities could include LID as part of their permit. There was discussion over why these practices are not being implemented currently.

Potential solutions:

- Opportunity for homeowner audits to summarize individual impacts and potential improvements. Examples of existing programs include the District of Columbia and the Alliance for the Chesapeake Bay's work in the Reedy Creek watershed. Brochures could be included with the annual water quality report. It was noted that neighbor to neighbor promotion of BMPs is essential and information should be uniform across the watershed.

Margaret mentioned the programs initiated by Hampton Roads Planning District Commission to address BMP implementation (ex. HR Green, etc). The Richmond area does not have as much support for regional approaches to issues.

It was noted that localities need to be shown the benefit of incentivizing BMPs. Soil and Water Conservation Districts could be a good means for educating and highlighting positive actions by homeowners, similar to the James River Association's River Hero Homes program. Media partners could be beneficial to highlight stories about local waterways. A "Yard of the Month" competition was suggested. "Neighborhood of the Month" was also suggested. Friendly competition between neighbors and communities could encourage public participation.

The following media outlets were suggested for outreach efforts: WRIR, WRVA, the Henrico Citizen, and North of the James. Homeowner Associations (HOA) are another potential means for communicating homeowner BMP implementation. Localities should have information on HOA contacts. If this information does not exist the District could utilize an intern to compile the list.

Alternative Funding Sources were discussed. Randolph Macon College's environmental science program is active in the community and has an annual project for student volunteers. Master Naturalists, Master Gardeners and outdoor outfitters were also mentioned. Corporate sponsorship from businesses in Innsbrook could be a means of funding. The proffer discussion from the Government work group meeting was mentioned. Money could be set aside to maintain BMPs and localities could be given authority by the General Assembly for enforcement.

Margaret gave an overview of the BMP estimates in the pamphlet. She noted that the developed category includes humans and pets. 100% of human sources are listed first because there should not be any human waste contributing to the problem. She also mentioned the difference between the violation standard used by the state to list impairments (10.5% - Single Sample Maximum Standard) and the 0% standard used by the model (geometric mean). Modeled violations are different because simulated values fill in the monthly or bimonthly "single sample" with hourly values, therefore a geometric mean can be calculated. The model generated conservative estimates. It is unlikely that all BMPs included in the plan will need to be implemented to meet water quality standards. A phased approach will be used to implement BMPs. Generally, the timeline for Implementation includes the more desirable/cost effective BMPs initiated first, and those more difficult or costly to implement later on. More recent cost estimates on some residential practices would be appreciated by those who could provide them.

Buffers were suggested to promote/facilitate homeowner actions. The group discussed ways in which buffers might be incentivized. Rain barrels can be implemented in residential areas because if downspouts put rain into the yard and there if dog feces are on the ground surface, it can be carried in the runoff to the waterbody.

The group discussed wildlife sources. The IP can promote wildlife management through education ("do not feed wildlife" signage, handout materials, etc.) however it isn't possible to include BMPs to "reduce wildlife" nor could it include "wildlife management" plans itself as those fall under the purview of DGIF. DGIF can be consulted, especially in instances of nuisance

wildlife populations, and it is they who may make recommendations. It was noted that some BMPs suggested may have the side benefit of deterring resident geese (vegetative buffers can be used to avoid attracting resident geese because it makes it more difficult for them to come ashore).

A member asked what the difference was between a bioretention basin and a raingarden. Margaret said her inclination was that a bioretention basin was a much larger, engineered raingarden. Later, in a follow-up email, Margaret provided this expert from the James River – City of Richmond IP developed in 2011, which explains that bioretention basins are:

*“Bioretention Facilities Level 2 Design, are excavated areas backfilled with a sand/soil mixture, planted with native vegetation, and used to detain, filter, and infiltrate water. They can be located in median strips, parking lot islands, unused odd areas, and easements usually less than 2 acres in area. Implementation of bioretention basins could reduce runoff volume flowing into combined-sewers by detaining, evapotranspiring, and infiltrating water. A bioretention facility with an underdrain system is commonly referred to as a Bioretention Filter. A bioretention facility without an underdrain system or with a storage sump in the bottom is commonly referred to as a Bioretention Basin. Small-scale or Micro-Bioretention used on an individual residential lot is commonly referred to as a Rain Garden.”*

An error was noted in the number of units necessary for the “vegetative buffer”, for both the residential and agriculture tables in the worksheet. This was later clarified and the worksheets have been updated. The corrected worksheet will be posted on the DEQ website. In the residential veg. buffer estimate, the modeler assumed that of the 8000’ feet of stream available, a ¼ of that would receive veg. buffers, equal to 1.4 acres total. With respect to what areas would be most benefitted by vegetative buffers, the modeler said that he would look at areas to target, based on sources in subwatersheds with regard to landuses and reductions required to them, and get back to us. He said that when developing IPs, he likes to leave it up to the stakeholders to determine whether or not vegetative buffers would be a successful BMP in any given watershed, so he tends to start on the low end of estimates for these. We can most certainly increase the amount of vegetative buffer. In the preliminary BMP estimates the vegetative buffers are assumed to be 30’ wide.

The vegetated buffer on cropland (Table 9, which is one of the ag-tables, which says 0.11 acres) should be corrected as well. We actually used 5000 ft in the model, or 3.4 acre. These changes have already been made in the government and agriculture handouts which are to be posted on the DEQ website.

Margaret mentioned that rain barrels, cisterns, permeable pavers were not included in the initial recommended BMPs although these are practices that could be included and targeted at residential areas within the watershed. Portfolio of homeowner practices could be created.

Margaret reviewed information on sanitary sewer overflows (SSOs) and how localities track problems in their systems. James noted that citizen monitoring near sewer lines crossing rivers could help identify problem areas. Megan will check to see how citizen monitoring has been included in other IPs.

Among additional topics of discussion:

Schools should be involved to provide a meaningful watershed experience within the watershed. BMPs at schools could be used as “teaching tools”.

Localities could recruit local citizens for water quality monitoring at community events.

Margaret explained the schedule for upcoming meetings (general timeframe). James asked about having a collective meeting of all working groups prior to the 1<sup>st</sup> steering committee meeting. Margaret said that she would discuss it with the contractor but she could not guarantee that it will be feasible (contracts, deadlines, etc.). The Steering Committee meetings are where the working group representatives discuss all of the ideas developed and proposed during the 1<sup>st</sup> and 2<sup>nd</sup> working group meetings. In order to have an additional meeting as suggested, there should be a necessity. At the present, it is not apparent that it would/wouldn't be. Anyone that would like to attend all three WG meetings is welcome to, and anyone who'd like to join the Steering Committee may do so as well.

Finally, Margaret briefly reviewed the stream fencing maps and noted that the agriculture work group will review this information in more detail. If the WG members would like to comment on any of the Ag-BMP preliminary estimates they were welcome to do so.

The meeting concluded around 8pm.