

FINAL

Friday, February 29, 2008

To: The Rivanna River Basin Commission

From: The RRBC Technical Advisory Committee

Subject: TAC February 29 meeting summary

The emphasis of the February Technical Advisory Committee meeting was to determine next steps on the literature review/synthesis report the TAC has been considering undertaking. The group also briefly discussed grant funding, future guest speakers, and appointing new TAC members.

Developing Report on Management Practices

Report from Dave Hirschman on work by the Center for Watershed Protection

Dave distributed a draft report summarizing research on runoff reduction for stormwater management practices that the Center for Watershed Protection is working on. They are working under contract with DCR to develop standards for stormwater BMPs, and have developed a model that includes runoff reduction and pollutant removal of various BMPs. To build this model, the Center conducted a literature review to gather data on effectiveness of practices. The effectiveness numbers in the model are for storm events of about 1". Dave said that 90% of annual runoff is these "water quality" storms, and added that the 1" 24-hour storm has been used for years as the event that plays the biggest role in changing stream channels. The more catastrophic storms may move more sediment but they occur less frequently. The Center found a range in values of runoff reduction coefficients, with low volumes of runoff reduced in standard BMP designs and higher volumes reduced in enhanced designs. Dave thinks they have assembled through this research the state of the practice at this time. The draft Dave shared with the TAC will be finalized and integrated into a technical report that should be done in March.

The Center's next step is to go back to the literature and find out what the specs are that make the enhanced designs better. They will then incorporate these specs into the standards they give to DCR. There are also some localities who are interested in implementing the new standards soon and don't want to wait for the new DCR regulations. These early adopter communities will be implementing practices based on the standards the Center develops and will serve as a test bed. After they turn in the report to DCR, the Center is going to do a feasibility exercise by holding charettes with stakeholders to figure out what it would cost to meet the standards. Ultimately DCR will write regulations that may or may not require this model. DCR will also be redoing the stormwater manual.

Dave mentioned that recently there was a charette where they talked about stormwater BMPs. Ridge added that he heard from Tom Schueler (of the Chesapeake Stormwater Network) after the charette and he is very interested in developing specs for rainwater harvesting as a stormwater

management tool, since there isn't much information on the effectiveness of rainwater harvesting. Ridge scheduled a meeting to work on developing specs for rainwater harvesting, which will be held March 10 from 1-4 at Ivy Creek Natural Area. Participants will include Tom Schueler, Glenn Brooks (County Engineer), Scott Collins (a site designer, working on Biscuit Run), a hydrologic modeler, a cistern salesman, and an irrigation specialist. Ridge said that any of the TAC members that want to come are welcome.

Ridge reminded the group that the TAC started talking about doing a literature review to see what was known about management practices, and talked about putting some practices on the ground here to see how well they work in this setting. He said that the first step is to see what we know about practices, then if necessary test practices to see how well they work here, and then promote practices to developers, engineers, etc. Now that the Center for Watershed Protection has done this literature review, the TAC needs to decide what to do next.

The group spent most of the rest of the meeting discussing possible next steps. Kristel suggested the TAC think about what of this research they can or should validate in the Rivanna watershed. The City just did a project where they identified 5 stormwater retrofit opportunities, and will likely move forward with at least 3 of them in the next 6-12 months. These could be good opportunities for monitoring. The City doesn't have the resources or capacity to do the monitoring, so this could be a niche that the Commission fills. Ridge said that the TAC could go in multiple paths – they could try to improve upon practices by research, install practices and monitor them here, or assume a level of effectiveness based on the Center's work and do a basic modeling exercise to determine how close we could get to restoring the hydrology if all new development put these practices in place. Dave added that in addition to the science analysis, the TAC could do a decision matrix to see what practices meet multiple goals. Greg mentioned that monitoring would cost a lot of money and would take a long time, and he's not sure this is the right place for the Commission to be involved. He also said there are other places like this in the Piedmont so monitoring here may not be necessary. Greg added that one thing the Commission could do is propose runoff limit rules to our local governments, as was done by the Etowah group in Georgia. Sam said he sees a need to start working in numerous places, such as monitoring, modeling, and implementation all in parallel. Jeff added that they need to establish baseline conditions as well. Dave mentioned that the TAC could work on bridging the gap and working to make practices better for the future. He added that the Center will be putting together a monitoring consortium and a monitoring workshop which will be held in a couple of years.

The TAC discussed the need to really get specific about what the Commission should do, and put on paper the direction they are going. Ridge mentioned that a lot of different questions, ideas, and goals have been suggested by TAC members, and thinks it would be helpful to go through the minutes of previous TAC meetings and list these in categories. Then the TAC can decide which of these questions/goals should be addressed by the Commission and what the next steps should be. Ridge said that TNC would start this process and would post to the weblog the list they cull from the minutes.

Report from Alyson Sappington on subcommittee's research on non-development practices
Alyson reported that the subcommittee didn't find much literature on agricultural practices related to runoff reduction. Most of the literature is on nutrient reduction. She thinks that

agricultural land use is a small part of the contribution of altered hydrology in the watershed and is decreasing, so suggests they don't include it. She was able to get some information from Virginia Tech but said they don't have much confidence in their numbers. Someone from Virginia Tech will be sending her some studies. They found a wide range of effectiveness numbers. Alyson thinks the point is that it is really hard to get a handle on agricultural impacts. There is a little information out there but she doesn't think it is worth it to include agricultural BMPs for this watershed.

Dave mentioned that the Center's model does include riparian buffers, as a site design practice rather than a stormwater practice. The model has runoff reduction coefficients for different land covers, such as buffers. They would like to see people do the site design practices first, followed by the stormwater practices. He added that he thinks the TAC needs to look at these open land strategies as well as stormwater BMPs.

Report from Rochelle Garwood on NFWF grant

Rochelle reported that she passed off the work on the NFWF grant for rainwater harvesting at Fluvanna High School to Pat Grute who is the grant writer for Fluvanna County. The timeline for construction of the high school was not in line with this grant. The idea is still alive and well but they will wait until they are further along with site development for the school to apply for grant funding.

Discuss John Murphy's suggestion of inviting Ken Hyer of USGS as guest speaker to future TAC meeting

John Murphy made a request to the weblog to invite Ken Hyer to a future TAC meeting. Ken is very knowledgeable about sedimentation and monitoring. The group agreed to invite Ken to the next meeting. Dave also suggested inviting Professor Hantman from the UVA Anthropology Department at some point.

Appointing new TAC members

Sam mentioned that Leslie Middleton and Joanna Curan are two local citizens who are interested in joining the TAC. Joanna is in the Civil Engineering Department at UVA and is working with Jeff Sitler on monitoring Meadow Creek. She has great technical expertise in the areas the TAC and Commission are working on. Leslie was most recently working for the Alliance for the Chesapeake Bay and produces the Rivanna Rambler radio show. The group discussed whether or not to add new members to the TAC. Under the Commission's charter, the TAC can be comprised of no more than 12 members that are not staff members of the localities. Right now there are 11 non-staff TAC members, so there is room to add one more. The group felt that the non-staff members should be very technical. They also discussed the fact that TAC meetings are open to the public and any interested citizen can sit in. The TAC is also short right now of one staff member from Charlottesville and one from Greene. The group decided to discuss this further at the next TAC meeting and develop a recommendation to the Commission for appointing any new staff and non-staff members to the TAC.

John Martin mentioned that the Rivanna Water and Sewer Authority recently removed \$150,000 from their budget for a bathymetric study of the South Fork Rivanna Reservoir. He asked if the TAC felt this would be a useful piece of information to have. Alyson mentioned that the Commission talked about this at their meeting last night and decided not to get involved because they were not sure that the study would provide information important to their work and they were concerned it could be contentious. Several members said they thought it would be interesting information to have, but that it wouldn't tell us anything about where the sediment is coming from. John suggested that if the TAC thinks it would be useful information, the TAC should write a letter to Sally Thomas suggesting the Commission request RWSA put the study back into their budget. Sam suggested the TAC continue this conversation and make a decision about this at the next TAC meeting.

The next meeting was set for March 27 at 9:30 am at TNC.

Compiled by Diane Frisbee and respectfully submitted by Samuel H. Austin, TAC Chair.

Attachments:

A. CWP Draft Report 08Feb29