

Virginia Stormwater BMP Clearinghouse Committee Meeting
Virginia Department of Forestry (DOF) Building, Board Room
Charlottesville, VA
July 23, 2012

Meeting minutes by Jane Walker

Committee Members Present

Dean Bork, Department of Landscape Architecture, Virginia Tech
Scott Crafton, Committee Chair, Virginia Department of Conservation and Recreation (DCR)
Jacob Dorman, City of Lynchburg
Ryan Janoch, Stormwater Equipment Manufacturers Association (SWEMA) / Terraphase Engineering, Inc.
Greg Johnson, City of Virginia Beach
Mary Johnson, Thomas Jefferson Soil and Water Conservation District/Virginia Association of Soil and Water Conservation Districts
Roy Mills, Virginia Department of Transportation (VDOT)
Scott Perry, Imbrium Systems Corp.
David Powers, Williamsburg Environmental Group (WEG)
David Sample, Biological Systems Engineering, Virginia Tech
Jenny Tribo, Hampton Roads Planning District Commission

Virginia Water Resources Research Center (VWRRC) Staff Present

Jane Walker

Others Present

Derek Berg, Contech
Chris French, Filterra
Matt Gooch, Office of the Attorney General
Tom Grizzard, Department of Civil Engineering, Virginia Tech
Lee Hill, Joyce Engineering
Wood Hudson, Thomas Jefferson Planning District Commission
Edward Kay, Imbrium Systems, alternate for Scott Perry
Marc Lelong, Kristar
John Olenik, VDOT, alternate for Roy Mills
Brian Rustia, ADS
Corey Simonpietri, ACF Environmental

Introductions and Welcome

Clearinghouse Committee Chairman, Scott Crafton of DCR, called the meeting to order. Everyone introduced herself or himself. A special welcome was extended to new committee member Ryan Janoch, who is representing SWEMA, the Stormwater Equipment Manufacturers Association, for the 2012 to 2014 term.

Minutes of the Previous Meeting

Jane Walker of the VWRRC reviewed the minutes from the meeting held April 23, 2012. No changes to the minutes were proposed.

Regulatory Update

Scott Crafton explained that DCR's first phase of outreach regarding the new stormwater regulations includes speaking at each planning district commission meeting to provide information to elected officials about the new regulations.

The second phase of outreach consists of 3-hour training sessions held in 10 or 11 different areas of the state. These sessions will be primarily for local government staff, but consultants and others can attend. Two or three of these training sessions have already occurred, and others are expected to be completed by late August or early September. The sessions will focus on how the old regulations and new regulations differ and will explain what local governments need to do to meet the new regulations. As part of the training, DCR explains that localities operating a stormwater management program will need to adopt an ordinance or modify their existing ordinances to be consistent with the state VSMP General Permit requirements. Scott further offered that DCR has drafted model ordinance language that is under review by the General Attorney's office and is expected to be released in early September.

A member of the committee who participated in one of the 3-hour training sessions stated that the attendees seemed to find it useful. The participants asked many questions. Their biggest concern seems to be getting ready in time. They need to get their programs submitted to the Virginia Soil and Water Conservation Board prior to the Board's July 2013 meeting. [NOTE: A timetable is being developed to guide program submittals to DCR for review in advance of the Board meeting.]

The third phase of the outreach activities by DCR includes the development of an e-permitting website to facilitate reporting and tracking of permits between the local governments and DCR. DCR employees are meeting with localities that already have electronic reporting systems to ensure that the new program can work with the existing programs and does not result in the duplication of work for these localities.

Other tools that DCR is developing include a checklist of required program elements and guidance documents, including one that deals with grandfathering provisions [Drafts of these documents are posted on DCR's website: <http://www.dcr.virginia.gov/lrswlgac01.shtml>]. Also, DCR is receiving advice from a local government advisory committee. A training program being developed by DCR will include modifications to its training for erosion and sediment control certification at the project inspector, plan reviewer, and program administrator levels to encompass the new responsibilities as a result of the new regulations. DCR is also working to develop training for an additional level of plan reviewer certification that includes the stormwater management piece. DCR is working with the Virginia Chapter of the American Society of Civil Engineers (ASCE) to have professional engineers (PEs) teach the hydraulic and hydrologic calculation components for which participants can take the certification test.

A member of the committee stated that given the new Integration Law (removes inconsistencies among the Erosion and Sediment Control Act, Stormwater Management Act, and Chesapeake Bay Preservation Act), he assumes DCR will need to re-open all of the stormwater regulations and asked Scott Crafton what this might entail. Scott explained that the regulations will need to be opened for exempt regulatory actions to make changes associated with the new Integration Law. The committee member further asked what takes precedence starting July 1, 2012 – the new regulations or the new Integration Law. Scott Crafton offered to look into this question and report his findings later. [Scott has learned that DCR’s model local Stormwater Management ordinance has been drafted to reflect the changes made in the Integration Law, anticipating that the exempt regulation amendment processes will have been completed prior to July 1, 2014, when the modified state stormwater management regulations take effect at the local level. However, between now and then, the existing stormwater management regulations are in effect.]

The member further asked about the status of the new Stormwater Management (SWM) Handbook. Scott Crafton explained that DCR contracted with the Center for Watershed Protection (CWP) to develop the engineering sections of the Handbook, and CWP is finishing up its work. The new SWM Handbook will have new chapters, including one on the Runoff Reduction Method spreadsheet, one on equations for sizing BMPs, and one that focuses on low impact development (LID) sites. The completion target is the end of summer or early fall. A member of the committee suggested that once complete, DCR should release a draft of the SWM Handbook for review.

Scott Crafton stated that CWP is also in the process of correcting errors in the standards and specifications for non-proprietary BMPs that are posted on the Clearinghouse website and included in the regulations. For example, the P-index is not used correctly, and there are errors associated with some of the graphics. Scott added that DCR will likely need to update the regulations at some point to reference the correct information and to include the Virginia Technology Assessment Protocol (VTAP) in the regulations. A committee member asked if the current versions of the standards and specifications would be removed and replaced with a new number. Scott Crafton offered that CWP is not changing the version; it is just correcting errors that will result in the regulations indicating a new date. A member of the committee stated that she felt it prudent to have a full review of the standards and specifications so DCR could get input from stakeholders. She added that many errors were missed on the current version that could have been avoided had the document been reviewed.

A committee member offered that in his mind one of the main purposes for having the Clearinghouse Committee – to provide a means for updating BMPs as the science improves – has been removed by the requirement to accept the specific version listed in the regulations. Scott Crafton explained that builders felt the need to be able to reference a specific version to provide them with some certainty about practices they can use, so the initial design version that can be used is listed in the regulations. Newer versions may also be used at the discretion of the local government with approval. Some local governments may have concerns about tracking different versions. They may not want to provide training for different versions and may not want to learn how to inspect for multiple versions. Scott expressed his hope that with the next iteration of the stormwater regulations, developers and local governments will see the advantages of using newer versions, which are expected to improve performance and/or reduce costs. If

these improvements are evident, more should be willing to rely on the newest information posted on the Clearinghouse without so much concern about having them listed in the regulations. This would provide greater flexibility in the future.

Scott Crafton offered that he wants to work with the committee to develop an assessment protocol for use in evaluating the performance of non-proprietary BMPs. He envisions two main challenges: (1) how to generate funding to test non-proprietary BMPs, and (2) how to incentivize the use of such a protocol. Scott explained that most testing of non-proprietary BMPs takes place by members of academia who have established their own protocols and are comfortable with their protocols. There is no way to require academics, particularly those outside of Virginia, to use a Virginia protocol. Furthermore, the cost of monitoring non-proprietary BMPs in the local government or academic setting is typically much lower because budgets are tight and there is no profit motive associated with the practices.

One member of the committee asked how a protocol for evaluating non-proprietary BMPs would deviate from the protocol for testing proprietary BMPs (the VTAP). Scott Crafton explained that it may not deviate from the VTAP; stating that he has not considered whether or not any changes are needed. However, the cost factor is a much more sensitive variable in testing non-proprietary BMPs.

Another member asked about the status of the VTAP. Scott Crafton explained that DCR wants to have a completed version of the VTAP by this fall. A representative of a BMP manufacturer asked if DCR's preference is to fast-track the VTAP approval process. Scott Crafton replied that DCR has not established an official way to proceed at this time. Scott offered that the status of DCR's ability to charge fees is currently under review. He stated that if the agency is not able to charge fees, approval of the VTAP with its established fees, may require the full regulatory process. He added that DCR will likely conduct a financial review of the fee rate to ensure that the fees are appropriate for the costs. He suggested that DCR may need to start the assessment process without having manufacturers pay fees and find the funding to cover the evaluation elsewhere.

A representative of a BMP manufacturer asked if his company can move forward with testing or should they wait for approval of the VTAP. He worries that monitoring will take nearly 24 months and that is all the time available before the July 1, 2014 deadline. Scott Crafton acknowledged awareness of this concern and offered that he does not have sufficient information to give the go ahead to begin testing. DCR would like to see companies begin testing, but they understand the risk that companies perceive in starting before the protocol is completed.

Status of Webpage Development: Operation, Inspection, and Maintenance

Jane Walker reported that the subcommittee formed to develop the Clearinghouse webpage on maintenance met April 23, 2012, immediately following the last Clearinghouse Committee meeting. Fourteen people were in attendance for this brainstorming session. Jane offered that the purpose of the webpage is to provide information needed to correctly maintain BMPs. The subcommittee recommended that the page be organized into three main sections: general information, information pertaining specifically to non-proprietary BMPs, and information pertaining specifically to proprietary BMPs. She offered that under the section on general

information, the subcommittee recommended linking to Chapter 9 (BMP Maintenance) of the SWM Handbook, the e-permitting program, and other suggested pages. The section concerning non-proprietary BMPs should link to the BMP Clearinghouse webpage regarding standards and specifications for non-proprietary BMPs. The section providing information about proprietary BMPs should link to the certified BMPs listed on Clearinghouse website and/or link to the MTD Registry.

Jane Walker added that the subcommittee recommended incorporating advice on how to fix BMPs when something goes wrong, similar to the way information is presented in a handbook developed by North Carolina State University for one of their training workshops. She added that others suggested including maintenance effort costs for the first year, second year, third year, etc. for 20 years. A member of the subcommittee added that it was suggested to incorporate photos to help identify BMPs.

A committee member offered that California has recently developed a web portal that covers maintenance issues and suggested that the Clearinghouse website may want to link to the California website. He offered to send the web address to the California portal.

Scott Crafton asked what steps are to be taken to move the process forward. Jane Walker replied that she has looked up several of the suggested webpages for their links but noted that no specific plans have been made. She offered to draft a version of what the page could include. Scott Crafton suggested that he and Jane work together to move the development of the webpage forward.

“Draft Guidance Regarding the Continual Use of Design Specifications for Manufactured Treatment Devices Provided in the 1999 Virginia Stormwater Management Handbook”

Scott Crafton stated that the MTD Registry Subcommittee met, and as a follow up to that meeting, he drafted guidance that is under review by the Attorney General’s office. He is hoping to get feedback on the guidance soon and when he does, he will share it with the subcommittee and the Clearinghouse Committee. Also as a result of the meeting, a list of minimum standards has been developed to determine if BMPs not listed in the 1999 SWM Handbook are eligible to receive phosphorus removal credit as filtering or hydrodynamic devices during the grace period, which has been suggested to be a period of 24 months from the official start of VTAP testing. Scott concluded that he hopes the Clearinghouse Committee can finalize the information for the MTD Registry at its October meeting.

A member of the Clearinghouse Committee and MTD Registry Subcommittee asked Scott Crafton if he had found documentation of a DCR policy providing target phosphorus efficiency removal for BMPs that meet the minimum conditions but are not listed in the 1999 SWM Handbook. Scott Crafton replied that some staff members at DCR recall the policy, but no one has located an email message or other documentation of the policy.

MTD Registry

Jane Walker reported that following the MTD Registry subcommittee meeting, she requested that the website programmer stop work on the project until there is more certainty that the programming aspects would not change as a result of the requests made at the MTD Registry

subcommittee meeting. She noted that the text on the MTD Registry has been updated to remove references to information in subsections, as requested at the last Clearinghouse Committee meeting. She mentioned that text has been added to some questions to prompt those filling out the questionnaire to include information that can be used in assessing whether or not a product meets the minimum requirements for being a filtering device or hydrodynamic separator. The programmer has developed an automatic email reminder that instructs those who have submitted information to update their submissions. Otherwise, not much progress has been made since May.

Next Meeting Dates

The next meeting dates are October 22, 2012 and January 28, 2013. The location of the meetings will be decided closer to the date. The committee members confirmed that Charlottesville is the preferred meeting location.

General Comments

Status of VTAP

A representative of a BMP manufacturer asked if academic review of the VTAP would be an open process whereby interested members of the public could listen to the discussions. Scott Crafton replied that he was unsure how the process would be conducted. Scott mentioned that there would need to be internal discussions at DCR to address this request and added that it may somewhat depend on the manner in which the meeting takes place (in person or via conference call). The individual requested that the process be transparent.

A committee member asked for clarification with regards to having another committee of academics reexamine the VTAP. Scott Crafton offered that if review of the VTAP goes to a committee, it would go back to the same committee, but added that this has not been discussed. Scott reported that DCR has received many comments on the VTAP in the past several weeks, and the comments raise questions and concerns that need to be examined and considered. For example, Scott Crafton offered that questions have been raised regarding the requirement for 24 storms with 10 consecutive storms being measured without breaks. Those bringing up the issue mention that monitoring three or four sequential storms is typically feasible, but not 10 sequential storms.

Scott added that DCR's purpose remains the same; the agency wants scientifically defensible information that is consistent across all studies and obtained at a reasonable cost. Some vendors have reported that costs are about \$10,000 per storm monitored so the process could cost \$240,000 just for monitoring 24 storms and, after adding staff time to prepare quarterly and final reports and attend to issues in the field, a total cost of \$400,000 to \$500,000 is not unusual for a single test site. Someone noted that the VTAP originally proposed adding one or two storms at the end of the monitoring for each storm missed. The manufacturers complained that at that rate, monitoring could go on indefinitely. As a compromise, the VTAP was altered to include 10 consecutive storms and 5 paired storms. Another individual added that we are at 24 months and counting so we need to get the protocol finished so that monitoring may begin. Scott added that DCR may ask the Clearinghouse Committee to weigh in on the issues and may involve the public.

A committee member asked if there is a way to develop a provisional guidance as a means of addressing the uncertainty surrounding the protocol, so manufacturers could begin testing soon with more confidence. He noted that monitoring of consecutive events was based on advice from an expert panel and recalled that the VTAP allows for the monitoring expert who conducts the study to justify why their monitoring deviates from the protocol. Scott Crafton agreed that the document allows for this provision but stated that we want to make sure that the standard does not require constant justification. The member voiced concern that if the VTAP becomes regulation, it cannot be changed without changing the regulation. Scott Crafton noted that either the document will become regulation, undergo public comment, and thus not easily be altered or be guidance that undergoes an informal review process that can be changed as lessons are learned.

Innovative BMPs

A committee member mentioned that Virginia Beach is considering harvesting phragmites and wondered if this action could count towards nutrient removal credit. He later noted that the city is also considering urban tree plantings. He asked if practices like these could be included as miscellaneous BMPs. Scott Crafton commented that he personally feels that they could, but noted this would be something that DCR would need to look into in more depth. He added that the Chesapeake Bay Program is looking at stream restoration as a BMP. Scott recommended that the individual take the initiative to submit a proposal to DCR.

Chesapeake Bay Program

A committee member asked if Virginia would recognize and give credit for BMPs approved by the Bay Program for offsite BMPs and others, e.g., stream restoration, harvesting phragmites, and tree plantings. Scott Crafton explained that the old stormwater management regulations allowed the use of “innovative” BMPs, but the new regulations state that only BMPs on the BMP Clearinghouse website can be used. He added that ultimately, DCR will need to determine how to handle BMPs approved by the Bay Program. Another person noted that coordinating the decisions by the Bay Program with those of the Virginia Stormwater Management Program has always been an issue. For example, the Bay Program may accept a particular BMP that DCR does not. Alternatively, as another example, Virginia may award a higher efficiency for use of a BMP than does the Bay Program.

A committee member who also serves on the Small MS4 (Municipal Separate Storm Sewer Systems) Regulatory Advisory panel commented that he was interested in knowing DCR’s view regarding the degree to which the state is obligated through the MS4 Program to meet the directive of the Bay Program. This member expressed hope that both DCR and the Bay Program appear to recognize the need for standardization. Scott Crafton commented that EPA seems to be pushing the MS4s to establish what the Bay Program considers as norms and threatens if not satisfied with the progress and nature of the permits, they can designate more MS4s. Because the MS4 permits are federal permits delegated to the Commonwealth to implement, EPA has a lot to say about what criteria get into those permits when they are updated every five years. DCR’s position is that it needs to support the nature of its criteria.

BMP Studies

A member of the committee announced that VDOT and the Virginia Asphalt Institute are conducting a study of pervious asphalt pavement in a Park & Ride lot in Prince William County (at Route 234 and I-66). The study will consider maintenance issues. They are not looking at the water quality aspects. The committee member offered to send the design plans to Scott Crafton for distribution to other interested individuals. North Carolina has reported issues with pervious asphalt liquefying and filling in the pores during hot weather. Improvements in the mixture are expected to have remedied this problem. The University of New Hampshire conducted studies on pervious pavement in a parking lot and in a section of I-95. It was suggested that those conducting the VDOT study check with Rob Roseen of the University of New Hampshire to see how they recommend improving the mixture. Another person mentioned studies that took place in a subdivision in the Twin Cities area, and he offered to provide Scott Crafton with more information on this study.

VDOT wants to also perform studies with pervious concrete. Several other studies examining the use of pervious concrete in parking lots were cited, e.g., at a hospital in Virginia Beach and at the Virginia Science Museum in Richmond. Another example cited was for permeable paving blocks used on two green alley ways in Richmond.

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With no further business, the meeting was adjourned.