

**Virginia Stormwater Best Management Practice (BMP) Clearinghouse
Stakeholder Meeting**
Henrico Training Center
7701 E. Parham Road, Henrico, VA 23294
June 23, 2016

Additional information pertinent to the meeting discussion but not provided during the meeting is included within brackets, [].

Meeting minutes by Jane Walker

Virginia Department of Environmental Quality (DEQ) Staff Present

Robert Cooper, DEQ-Central Office
Fred Cunningham, DEQ-Central Office
Melanie Davenport, DEQ-Central Office
Ben Leach, DEQ-Central Office

Contracted Administrative Personnel Present

Jane Walker, Virginia Water Resources Research Center (VWRRC)

Stakeholders Present

David Aho, DEQ-Piedmont Regional Office
Joe Battiata, City of Hopewell
Derek Berg, Contech Engineered Solutions
Kristin Burton, Chesapeake Bay Foundation
Scott Crafton, Louis Berger
Jacob Dorman, Contech Engineered Solutions
Chris French, Water Environment Federation (WEF)
Normand Goulet, Northern Virginia Regional Commission
Greg Johnson, City of Virginia Beach
Chris Kuhn, Stantec
Chuck Lacey, ADS
John McCutcheon, DEQ-Piedmont Regional Office
Mark Miller, AquaShield, Inc.
David Nunnally, Virginia Environmental Professionals' Organization (VAEPO)/Caroline County
Steve Rossi, CSI Concrete Specialties
Kateri Shreve, Luck Ecosystems
Corey Simonpietri, ACF Environmental
Sean Simonpietri, Exact Stormwater Management
Frank Sisk, Oldcastle Precast
Terry Siviter, Rotondo Environmental Solutions
Jill Sunderland, Hampton Roads Planning District Commission
Steve Sunderman, Terrazia PC (Roanoke Cement Co.)
Chris Swanson, Virginia Department of Transportation
David Vogelsong, CSI Concrete Specialties, Inc.
Joe Wood, Chesapeake Bay Foundation

Call to Order & Introductions

Fred Cunningham of DEQ called the meeting to order. Everyone introduced herself or himself.

Minutes from February 23, 2016 Meeting

No additions or corrections were proposed to the minutes.

Update: DEQ Stormwater Program

DEQ Staffing Changes:

Fred Cunningham reported on recent hires at DEQ: two positions associated with construction permitting (who also assists with plan review activities), an individual to review the standards and specs for utilities (electric and gas lines), and three positions in the regional offices associated with plan review. He also introduced Ben Leach, DEQ's new manager of the Office of Stormwater Management.

Virginia Stormwater Management Program (VSMP):

DEQ reissued the remaining Phase I Municipal Separate Storm Sewer System (MS4) permits at the beginning of June. These permits have an effective date of July 1, 2016.

DEQ has received 77 TMDL (total maximum daily load) action plans (mostly from Phase II MS4 localities) that identify what they intend to do to meet the first 5% reductions in their permit. DEQ has reviewed these plans and has either approved or conditionally approved all of them.

DEQ is initiating reissuances of the Phase II MS4 general permit. DEQ is almost ready to post the notice of intended regulatory action and will soon establish a technical advisory committee. They will also have stakeholder meetings (likely in the fall).

EPA conducted a mini-audit of DEQ's MS4 and Construction Programs in April. EPA looked at DEQ's files and met with DEQ staff. The initial feedback from EPA has been positive; DEQ expects a more-detailed report from EPA in late summer or fall.

DEQ released the revisions of the Virginia Runoff Reduction Method (VRRM) (version 3). The latest version corrected errors in the new development and redevelopment compliance spreadsheets and attempted to make them easier to use. DEQ also updated the guide that accompanies the VRRM spreadsheets. DEQ has scheduled a number of trainings on the use of the VRRM compliance spreadsheets and User's Guide. Details of the course are posted on DEQ's website [available at <http://www.deq.virginia.gov/connectwithdeq/trainingcertification/vrrmspreadsheetwebinars.aspx>].

Mr. Cunningham noted that Virginia has about 5,400 active construction permits. Since July 1, 2014, DEQ has received approximately 600 plans for DEQ review and has finished around 400 of them.

DEQ continues to receive manufactured treatment device (MTD) applications and reviews the applications on an ongoing basis.

2016 General Assembly:

Melanie Davenport reported that the Stormwater and Erosion Consolidation Bill [HB 1250] was passed by the General Assembly, and the Governor signed it. The effective date of the bill is the later of July 1, 2017 or 30 days after the State Water Control Board adopts regulations to carry out the purposes of the bill. The bill has a clause to give relief from some of the steps in the Administrative Process Act (APA); however, this relief does not release DEQ from seeking public comment and participation.

The bill does not make changes to permitting thresholds, triggers for when erosion and sediment control (ESC) applies, or post-construction technical requirements; it predominately fixes inconsistencies that happened when the three statutory programs (VSMP, ESC, and Chesapeake Bay Preservation Act) were folded into the State Water Control Law.

There is still a “doughnut hole” issue. Consistent with previous legislation, the bill continues to require E&S land-disturbing activity that disturbs 10,000 square feet or more to meet the energy balance for water quantity; and for 2,500 square feet or more of land disturbance in a Chesapeake Bay Preservation Area, water quality must meet 0.41 lb/acre phosphorus for water quality and energy balance for water quantity. Some localities feel these requirements were not clearly established in previous legislation. Delegate Hodges is kicking off a workgroup to study this “doughnut hole” issue.

The Virginia Coastal Policy Center at William and Mary will review the language in the bill to establish what the bill does and does not say and do, interview targeted individuals, and write white papers on options for resolution of the doughnut hole. Delegate Hodges will bring together a workgroup to discuss this work. Melanie Davenport will be representing DEQ in this effort with the workgroup. The workgroup is expected to offer recommendations by mid-November 2016. The workgroup meetings will not be posted on the Virginia Regulatory Town Hall website because they are not DEQ convened meetings; they will likely be posted on the General Assembly website. (The meetings may be posted on the Virginia Stormwater BMP Clearinghouse website simply for informational purposes but not in any official capacity.)

There is an enactment clause that gives DEQ direction to reexamine fees. Ms. Davenport noted that many localities expressed concern that DEQ retains 28% of the fees. DEQ was directed to gather information from localities on the costs of running VSMP and/or ESC programs. DEQ distributed a survey to all localities at the beginning of June, and localities are asked to respond to the survey before August 1, 2016. DEQ will be convening a stakeholder advisory group (SAG) meeting in August or September to review DEQ’s findings and discuss the fees. DEQ will be reporting its findings and feedback to the General Assembly before it convenes in January 2017.

Update: WEF’s Stormwater Testing and Evaluation for Products and Practices (STEPP) Initiative

Chris French with WEF provided an update on the organization’s initiative known as STEPP. [Following the meeting, the PowerPoint slides from Mr. French’s presentation were posted on the Stormwater BMP Clearinghouse website: <http://www.vwrrc.vt.edu/swc/WhatsNew.html>]

Presentation Summary:

Mr. French explained that WEF's new Stormwater Institute is designed to respond to MS4 professionals and provide a platform to develop best practices and share better approaches to stormwater management. For example, WEF's Stormwater Institute is partnering with DC Water to develop the National Green Infrastructure Certification Program. The program looks to certify individuals to install, inspect, or maintain green infrastructure practices. WEF is attempting to use a similar process to propose a national testing and evaluation process for stormwater public domain practices and manufactured products.

Mr. French offered that the nature of the problem depends upon one's point of view. Manufacturers tend to see the product/practice approval process as a challenge and a barrier to innovation and competition. Consumers want independent testing and without it, they lose confidence in product/practice performance. Regulators fear that untested products and practices may lead to under-performing stormwater programs and ultimately impact water quality.

Mr. French presented different maps to show several past and current stormwater BMP evaluation programs throughout the U.S. The maps also show which states recognize various programs via reciprocity, but he also noted the maps do not reflect localities that provide reciprocity (e.g. Portland, Denver area, etc.). He emphasized that there are a wide variety of opinions and standards and not much collaboration. In response to a question, he explained that some larger cities are establishing their own testing programs, and some states are not attempting to establish any type of testing program.

Some claim the numerous different programs are needed due to field variables. There are different rainfall distribution patterns, different soil types, and different state BMP design criteria. Mr. French offered that the differences can be accounted for through existing tools, such as models (e.g., SWMM, WinSLAMM, HSPF) and on-site soil investigations for infiltration practices (to address variability of soils). He added that these variability issues have been addressed in the agricultural sector.

WEF published a 24-page STEPP White Paper in February 2014 as part of its Phase I efforts to develop a national testing program. WEF also held a webcast on STEPP (March 5, 2014), and more than 750 registered for the event. Both the paper and the webcast are available at: www.wef.org/STEPP.

EPA funded Phase II of WEF's efforts. In this phase, WEF established an advisory committee that includes representatives of industry, regulatory agencies, research entities, non-government organizations (NGOs), and MS4 communities, from both across the U.S. and outside the U.S. (representatives from Australia and Canada).

WEF developed two products to help inform the advisory committee: (1) a synthesis of past and current evaluation programs and (2) summarized results from two informal surveys, one for state governments and one for MS4 permittees. Of the survey respondents, 75-87% believed their organizations would benefit from a national testing/evaluation/verification/certification program.

The report is in the process of being finalized and expected to soon be published. It is a 36-page report, not including appendices, that proposes a conceptual design of a national program. The report provides a description of the various aspects that a national program should include. It is broken into three sections: (1) General Programmatic Area Findings and Rationales, (2) Individual Program Aspect Findings and Rationales, and (3) Advisory Committee Recommendations.

General Programmatic Area Findings and Rationales

Mr. French summarized the general programmatic area findings:

1. There is a need to get states and others on board for developing a national program.
2. There is a need to evaluate both public domain BMPs and MTDs.
3. The evaluation program should allow for both lab and field testing options.
4. The program is expected to evolve over time.

Individual Program Aspect Findings and Rationales

The individual program aspects covered ten areas:

1. Mission and Objectives
2. Program Services
3. Organizational Relationships
4. Operational Structure
5. Governance
6. Funding
7. Stakeholder Engagement Transparency
8. Testing Purpose and Scope
9. Testing Setting
10. Reciprocity

The national program intends to incorporate testing evaluation and verification but not certification (at least initially). The 50 states, District of Columbia, and territories have specific, individual regulatory design storm criteria and rules; and these requirements need to be accounted for individually within the context for BMP certification. In response to a question, Mr. French explained that the definitions of these terms (evaluation, verification, and certification) are in the 2014 WEF White Paper. He further explained that the program can “verify” that a baseline standard was met when testing the practice/product, but it is up to the individual states to decide what must be met for “certification” (e.g., credit given to a practice/product to meet state regulations).

The national program is to draw from the programs in New Jersey (New Jersey Corporation for Advanced Technology, known as NJCAT) and the state of Washington (Technology Assessment Protocol – Ecology, referred to as TAPE). The national program will not be housed at WEF, but WEF is willing to help get the program off the ground. It is envisioned that the program will be housed within an existing NGO or a new organization will be created to administer it. Sustainable funding for the program is needed and could be obtained through various funding sources, e.g. grants, government support, fees, etc.

There will be protocols for both lab and field testing. There is a desire to utilize stormwater research centers at universities (e.g., University of New Hampshire, the Washington Stormwater Center at the University of Washington-Tacoma) and also provide flexibility to allow researchers and MTD proponents to perform off-site studies.

One common protocol across the country would equate to reciprocity, where everyone is being held to the same standards.

Advisory Committee Recommendations

Going forward, the STEPP Advisory Committee recommends a two-phase plan and has outlined items to be accomplished within each phase (see the presentation slides). The first phase should take 6-9 months; some of the planned tasks are underway already. The second phase is expected to take about 24 months. During this time, both Washington state and New Jersey will keep their programs going; and will continue to do so until they are confident that the national program is up and running and financially stable.

The report includes eight appendices, including the 2014 White Paper, the synthesis of analogous programs, and the survey questions and results. Appendix E. provides a business plan framework. At this time, a subcommittee of the advisory committee estimates annual expenses of the program could range from \$235,000 for the first year to \$370,000 by the fourth year. Estimates of the annual revenue for the program range from \$50,000 for the first year to \$468,500 for the fourth year (which would generate a profit). It is envisioned that the revenue would come from diverse sources to be more sustainable. For example, fees from both jurisdictions and industry have been proposed. EPA is looking into other sources as well.

Currently, EPA is providing staff support to help continue the effort. For example, an EPA economist, Todd Doley, is running an analysis of the potential cost savings to states if they adopt STEPP. EPA is supportive of providing continued/future staff resources and is agreeable to communicating agency support and buy-in.

The Interstate Technology & Regulatory Council (ITRC), a subdivision of the Environmental Council of the States (ECOS), has begun work to develop guidance for states and federal agencies regarding stormwater BMP efficiency evaluations. Their work is expected to be complete in three years but is considered to be a project with a specified timeline versus an ongoing program. The ITRC coordinators are working closely in alignment with WEF to ensure, to the extent possible, duplication of efforts is minimized.

WEF is looking at ways to work in concert with everyone with a stake in this process.

Discussion

A stakeholder asked why this program is different from other programs so that it will be successful (when others have failed). Mr. French stated that the timing is better because we are getting enough people saying that a national program will help and thus are willing to support it. Furthermore, the history of verification and certification programs with program stumbles and/or failures provides an opportunity for lessons learned and avoidance of similar pitfalls.

Ms. Davenport asked if WEF intends to issue invitations to states to join it so that it can move the concept forward to reality. Mr. French replied that several states – Washington, New Jersey, and Michigan – have submitted letters of support for a national program [available at <http://www.wef.org/STEPP>]. He requested that Virginia officials send him a letter if the state has a similar view that such a process is needed and offered to continue the discussion with DEQ staff at a later time.

Mr. Cunningham asked if WEF had communicated with states that are not performing any type of evaluation. Mr. French explained that WEF received survey responses from some states (e.g., Wisconsin, Minnesota) that do not currently recognize the results of any type of verification program.

Mr. Cunningham asked if products already certified under the Washington or New Jersey programs would have reciprocity with the national program. Mr. French responded in the affirmative, noting that there are limitations of the two state certifications. He mentioned, for example, that New Jersey does lab testing, and some are opposed to accepting lab tests results. Mr. French added that states would be able to pick and choose what programs and program elements they accept.

A stakeholder asked how the program expects to get equity between public domain practices and MTDs. Mr. French noted that the program would not discount past work, but it could be applied to new research. He added that a national evaluation program would complement the efforts of the International Stormwater BMP Database; potentially a future phase of the database could recognize which protocols were used. The testing protocol would be applicable to all practices to the degree possible; researchers who use the protocol in their future efforts could publish papers stating the protocol was used. Another stakeholder commented that public domain practices offer no economic incentive for testing and gaining approval, yet it costs a lot of money to have them tested. Thus, it has not been practical to evaluate public domain practices. Mr. French stated that grant programs can provide funding for such research and added that public domain practices have been evaluated in the state of Washington. He added that for a limited time period, the state of Washington required Phase I MS4s to monitor BMPs utilizing the TAPE field protocols as part of their permit conditions. Much was learned regarding public domain BMP function as a result. A stakeholder asked who pays for testing of non-proprietary BMPs. Mr. French explained that there is no one source of funding. He offered that if grants, such as the Chesapeake Bay Small Watershed Grants Program, made using the protocol part of its requirements, such funds could be used to test non-proprietary BMPs.

Ms. Davenport stated she is most interested in knowing how well practices work years after being installed. She wondered if the proposed national program would look at operation and maintenance issues and long-term performance. Mr. French agreed that this is an area where research is needed. He noted both researcher and regulator interest in this issue continues to grow both nationally and internationally.

Mr. Cooper asked if treatment trains would be evaluated. Mr. French replied that this was possible so long as monitoring samples were collected between practices at designated water flow entry points. This approach would allow analysis of individual treatment train components

in addition to the entire system. Both North Carolina State University and Villanova University have demonstrated successful monitoring of stormwater BMP treatment trains.

A stakeholder summarized that the goal of the STEPP is to offer the best way to collect robust, reliable data and verify that it was collected in that manner. What happens once the data have been verified is up to the individual states.

Mr. French stated that the STEPP Advisory Committee may recommend multiple studies be conducted for a specific technology, but this is a topic for future conversation. In response to a question, he added that local or state governments may require more than one verified study for a BMP in order to provide a level of confidence, ensure scientific repeatability, confirm BMP design sizing, etc. States will have to consider these issues individually.

Update: MTD Sizing

Mr. Cunningham stated that a group of stakeholders proposed that DEQ address two issues pertaining to MTD sizing:

1. Calculating a peak water quality flow to be treated based on the required water quality volume, and
2. Establishing approved flow/hydraulic loading rates for each approved MTD.

Mr. Cunningham stated that DEQ intends to address both issues and added that Ben Leach will take the lead in this effort. To address the first issue, the guidance document will be updated and the new version will be posted on the BMP Clearinghouse website. To address the second issue, Jane Walker will contact the manufacturers about the hydraulic loading rates for each approved MTD and the information will be posted on the BMP Clearinghouse website. A stakeholder recommended that when communicating with the manufacturers, ask that they provide the sizing used in the actual studies that DEQ reviewed. The stakeholder also asked if Ben Leach has been given all of the background information provided by the stakeholders to DEQ. Mr. Cunningham answered in the affirmative.

Update: House Joint Resolution 587

This resolution requests the DEQ to conduct a two-year study of the application of the post-development stormwater management technical criteria, as established in the VSMP regulations, in areas with a seasonal high groundwater table (SHGT). This is year two of the study.

Mr. Cooper explained that DEQ is still in the research side of this work and needs to move forward in developing recommendations to address the issues. He stated that Ms. Walker has been collecting research documentation for the volume reduction numbers used in the Runoff Reduction Method to get a better handle on whether the volume reductions can be adjusted. It may be possible to provide credit to practices that currently are not receiving credit. In addition, VDOT is conducting literature research on certain topics. For example, VDOT is looking at the chemical and biological processes occurring in the unsaturated zone to better understand the amount of separation needed between a BMP and the water table. DEQ is also looking at other states in Coastal Plain areas to see what they are doing and how they handle issues associated with SHGTs.

The next step is a stakeholder meeting to discuss what has been found and what is included in the first year report. A report is due to the General Assembly at the beginning of the 2017 session so DEQ needs to wrap up the work prior to the end of the year.

A stakeholder commented that more research has occurred since the Runoff Reduction Method was documented in 2008. He mentioned a study by Bill Hunt's research group at North Carolina State University that found significant volume reduction for constructed wetlands, which currently receive no runoff reduction credit in Virginia. He asked if more current information is on the table for discussion, and Mr. Cooper replied that it is and added that Ms. Walker has also been searching for more current studies.

An individual asked who DEQ wants on the review committee. Mr. Cunningham replied that DEQ has not discussed specific individuals but noted the committee would likely include localities impacted by a SHGT, VDOT, and experts in the field. He added that the meetings will be open to all who are interested in attending. The stakeholder cautioned that time is getting away to organize such a committee, given that a report is due at the end of the year. Mr. Cunningham agreed that it is time for DEQ to take the next step by getting stakeholder meetings scheduled.

Mr. Cunningham concluded that DEQ's goal is to see if it can identify additional tools for use by localities impacted by SHGTs while still giving realistic reductions.

General Comments

A representative of a MTD manufacturer asked if DEQ sees the 50% ceiling on TP (total phosphorus) removal credit being lifted for filtering MTDs. He mentioned that some studies show removal efficiencies higher than 50%. Mr. Cunningham replied that eventually DEQ will need to reconsider its cap but not within the next year or so. He added that as time goes on and more information is obtained, the possibility exists for DEQ to raise the ceiling. A representative of a local government added his concern for the long-term effectiveness of BMPs, citing maintenance concerns. Mr. Cunningham stated his belief that DEQ will need to place more emphasis on BMP maintenance in the future.

Next Meeting Dates

Mr. Cunningham noted the next two stakeholder meetings have been scheduled:

- September 21, 2016 at the DEQ Piedmont Regional Office and
- November 16, 2016 at the Henrico Training Center.

Adjournment

With no further business, Mr. Cunningham thanked everyone for participating and adjourned the meeting.