

Virginia Stormwater BMP Clearinghouse Committee Meeting

Demonstration Kitchen Meeting Room
Human Services Building, 2nd Floor
8600 Dixon Powers Drive
Henrico, VA 23228
July 15, 2013

Meeting minutes by Jane Walker

Committee Members Present

Joe Battiata, Center for Watershed Protection (CWP)
Danielle Bishop, City of Roanoke
Scott Crafton, Department of Environmental Quality (DEQ)
Chuck Dietz, Virginia Tech
Jacob Dorman, City of Lynchburg
Normand Goulet, Northern Virginia Regional Commission
Charlene Harper, Geosyntec Consultants
Greg Johnson, City of Virginia Beach
Chris Kuhn, Williamsburg Environmental Group (WEG)
Roy Mills, Virginia Department of Transportation (VDOT)
Scott Perry, Imbrium Systems
David Powers, WEG
Jim Rakestraw, Stafford County
Colleen Rizzi, Loudon Water
Brian Stokes, Campbell County
Jenny Tribo, Hampton Roads Planning District Commission (HRPDC)
Joe Wilder, Frederick County

Agency Staff Present

Melanie Davenport, DEQ
Ginny Snead, DEQ

Contracted Technical and Administrative Personnel Present

David Sample, Biological Systems Engineering/Hampton Roads Agricultural Research and
Extension Center, Virginia Tech
Jane Walker, Virginia Water Resources Research Center (VWRRC)
Haibo Zhang, Biological Systems Engineering/Hampton Roads Agricultural Research and
Extension Center, Virginia Tech

Others Present

Derek Berg, Contech Engineered Solutions
Nick Burns, Hydro International
Mark Fendig, Luminaire Technologies
Chris French, Filterra, represented Stormwater Equipment Manufacturers Association (SWEMA)
in Ryan Janoch's absence

Tom Grizzard, Department of Civil and Environmental Engineering and Occoquan Watershed
Monitoring Laboratory, Virginia Tech
Randy Hardman, Hanover County
Mindy Hills, Filterra
Lisa Lemont, Hydro International
Steve Matezak, Oldcastle
Bill Nell, Thirsty Duck
John Olenik, VDOT
Steve Rossi, C.S.I.
Liz Scheessele, Timmons Group
Terry Siviter, Rotondo Environmental Solutions

Call to Order and Introductions

Scott Crafton of DEQ called the meeting to order and thanked everyone for coming. Each person introduced herself or himself. David Sample introduced Haibo Zhang, a post doctorate in Virginia Tech's Department of Biological Systems Engineering who is working with him at the Hampton Roads Agricultural Research and Extension Center. Dr. Sample provided a brief background of Dr. Zhang's knowledge and skills, and Dr. Zhang explained her research background. Dr. Zhang will be assisting Dr. Sample with the review and recommendations of submitted stormwater best management practice (BMP) applications.

Minutes from Meeting on April 22, 2013

No corrections or comments were received regarding the minutes from the last Clearinghouse Committee meeting.

[NOTE: The minutes have been posted on the Virginia Regulatory Town Hall Website:
[http://townhall.virginia.gov/.](http://townhall.virginia.gov/)]

Agency Transfer Update

Mr. Crafton explained that effective July 1, 2013, the DEQ became the Commonwealth's lead agency for managing stormwater and related nonpoint source pollution programs. This change came about following legislation passed by the 2013 General Assembly that consolidates stormwater programs previously managed by the Department of Conservation and Recreation (DCR) under DEQ's management. The transfer was well planned, and there has been a relatively smooth transition.

The organization chart for DEQ's Stormwater Management Program is in place, and everyone is poised to move the program forward. The stormwater staff in DCR's central office physically moved to DEQ's central office at 629 East Main Street, 10th Floor, on June 25, 2013. Some of the regional staff working in stormwater have moved to DEQ regional offices, and some have stayed in the DCR office (for the time-being) when not close to a DEQ regional office.

[NOTE: DEQ stormwater management regional offices are posted on the agency's website at
[http://www.deq.virginia.gov/Locations/StormwaterManagementOffices.aspx.](http://www.deq.virginia.gov/Locations/StormwaterManagementOffices.aspx)]

Mr. Crafton added that the transfer to DEQ has distracted him from his regular work because of added responsibilities associated with the transition, including website migration, etc. Mr. Crafton noted a few glitches encountered during the move to DEQ, such as delays in the transfer

of some email archives and documents/databases on DCR servers. Mr. Crafton stated that DEQ is in the process of setting up a vtap@deq.virginia.gov address where people can ask questions that will be forwarded to him. Until the address is functioning, individuals with questions should send them to Scott.Crafton@deq.virginia.gov. Furthermore, anyone who sent a message to vtap@dcr.virginia.gov within the last month should forward the message to Mr. Crafton at DEQ because he has not had access to that mail box for several weeks. Ginny Snead added that messages sent to the former DCR email addresses are no longer being forwarded to DEQ.

NOTE: The vtap@deq.virginia.gov email address was established within a week of this meeting.

Status of Fast Track Regulations

Mr. Crafton reported that DCR filed fast track regulations regarding the procedures for reviewing and approving design specifications and pollutant removal credits for BMPs in mid-April 2013. The regulations cleared the Department of Planning and Budget but have stalled with the Secretary of Natural Resources. Melanie Davenport added that DEQ's upper management is also looking at the proposed fast track regulations and trying to understand them. DEQ staff and staff from the Secretary's office will be meeting later this week to determine how to move forward. A representative of a BMP manufacturer asked what the delay means for implementation. Ms. Davenport responded that DEQ has not lost sight of the July 1, 2014 deadline and wants the application process to begin. A committee member asked if DEQ could begin receiving applications before the regulations are officially approved. Mr. Crafton offered that applications are not currently being accepted but added that maybe they would be in the future if some type of agreement could be worked out with everyone. He noted the need for flexibility until passage of the regulations.

Updates to Stormwater BMP Clearinghouse Website

Jane Walker explained that the Clearinghouse website has been updated in two places (under "What's New" and "BMP Evaluation and Certification" page) to link to DCR's webpages http://dcr.virginia.gov/laws_and_regulations/index.shtml and http://www.dcr.virginia.gov/other/deq/laws_and_regulations/lr2j.shtml. From these pages, individuals can download the final regulations approved by the Virginia Soil and Water Conservation Board, the *Virginia Technology Assessment Protocol For Evaluating Stormwater Manufactured Treatment Devices* (VTAP, December 11, 2012 version), and associated forms.

The Clearinghouse website needs to be updated to reflect the transfer from DCR to DEQ. The DEQ logo and links to DEQ website need to replace those currently included for DCR. VWRRC and DEQ personnel are working to draft these changes, and the site will hopefully soon be up to date.

Status of Guidance on the Use of Manufactured Treatment Devices Prior To and After July 1, 2014

Mr. Crafton explained that the Clearinghouse Committee and others requested guidance on the use of innovative and alternate BMPs not currently listed in the *Virginia Stormwater Management Handbook* (Handbook) or in a technical bulletin. He began drafting guidance to address this need last spring (2012), but when DCR decided to allow unlimited sales during VTAP testing, the agency determined that this guidance would not be necessary in anticipation that manufacturers would apply soon to begin testing and thus be able to sell their devices prior

to July 1, 2014. In addition, the manufactured treatment devices (MTDs) listed in the 1999 Handbook and Filterra (via Technical Bulletin 6) would be eligible to continue those credits through grandfathered or otherwise permitted projects moving forward, and other vendors could promote their products prior to July 1, 2014 through the local stormwater management (SWM) programs.

However, at the most recent Clearinghouse Committee meeting (April 22, 2013), many commented that there is still need for such guidance because of delays in opening the testing process. Mr. Crafton, therefore, began updating the draft guidance. In the process of making changes to the draft guidance document, Mr. Crafton learned that local governments no longer have the authority to approve innovative or alternate BMPs. The change came about during the exempt regulatory action following adoption of DCR's Stormwater Integration legislation (2012 General Assembly session), which was designed to eliminate inconsistencies among three stormwater-related programs: Stormwater Management, Erosion Control, and Chesapeake Bay Preservation. The associated regulatory language of these three programs was altered, and as a result only a Virginia Stormwater Management Program (VSMP) authority may approve innovative or alternate BMPs. Until July 1, 2014, localities are not recognized VSMP authorities. Therefore, until July 1, 2014, DEQ is the only recognized VSMP authority and has the sole discretion over such decisions. Making such decisions would be time consuming for DEQ, and the agency has not established a means to approve such BMPs. Dr. Sample offered that he may have some availability to assist in reviewing the guidance for DEQ. A member of the public asked for clarification, stating his understanding that local governments are expected to become VSMPs on July 1, 2014; Mr. Crafton stated that this interpretation is correct.

DEQ's Ms. Davenport asked for additional clarification. She did not understand why local governments would be making such approvals if the Commonwealth has a state program for approvals (VTAP). A representative of a BMP manufacturer offered that this approval was to be an interim approval until the VTAP process opens.

A committee member stated there would be a bottleneck and log jam once the VTAP opened and thus requested that guidance be developed within 10 days. Mr. Crafton noted that with the transfer to DEQ and all of the associated changes, he has not had the time to discuss this issue with DEQ management or to work on the guidance. Mr. Crafton stressed that this issue is still a priority and, hopefully, he will be able to get to it soon.

A committee member who represents a local government asked if DEQ could generate an email message to send to all localities explaining this issue to them. Mr. Crafton stated that they have contacts for the local governments so have the means to do this but would not proceed until upper management at DEQ has a better understanding of the issue.

A representative of a BMP manufacturer suggested that all affected by the decision should be contacted, including the Virginia Municipal League, Virginia Association of Counties, and BMP manufacturers. Ms. Snead offered that the Stormwater Local Government Advisory Committee is meeting on August 7, 2013, and she proposed discussing this at that meeting. The individual expressed that many localities and the BMP manufacturers would not be in attendance at the meeting and thought the suggestion for an email distribution should be followed. Mr. Crafton

requested SWEMA's assistance in distributing the information to its membership. Any explanation should also be posted on the Clearinghouse website.

A committee member who represents a local government stated that his locality has been approached by BMP manufacturers, and his locality has been granting approvals. He wonders how to handle credit changes from what was approved to what would be approved through the VTAP process. Mr. Crafton offered that projects that are in the pipelines generally fall under a traditional "hold harmless" policy. A committee member suggested that any such clause be in writing. Dr. Sample pointed out his understanding that localities falling under the Bay TMDL (total maximum daily load) will, at some point, need to make up any differences between what was awarded previously and what removal credit is found through the VTAP testing, if the total aggregate of reductions from the locality is below its target.

A committee member observed that being perfect seems to be the obstacle to good -- the localities and others just want information, but DEQ is hung up on making sure the language is perfect. Mr. Crafton offered that when working with the regulatory process, the language needs to be right.

A committee member asked if DEQ could establish a memorandum of agreement (MOA) as an interim step. Another committee member and representative of a locality voiced support for this suggestion, envisioning that a MOA could be awarded for a particular MTD at "x" credit. He wants to be able to use more than one manufacturer; he stated a desire for competition.

A third committee member and representative of a locality stated that the target keeps moving. There are multiple budgets and deadlines so localities do not have much confidence in the process.

[NOTE: On July 18, 2013, Clearinghouse Committee members and individuals from the public who have expressed interest in the BMP Clearinghouse were sent an email message from Ms. Snead that stated DEQ's intended action: As part of the exempt regulatory action to address the transfer of authorities from DCR to DEQ, DEQ plans to restore the language to the regulations that allows local governments the authority to approve innovative or alternate BMPs. This regulatory change will be presented to the Water Control Board at their August meeting and is expected to become final and effective in October. Therefore DEQ plans to continue to allow local approvals of innovative and alternate BMPs prior to July 1, 2014. On and after July 1, 2014, only BMPs approved and posted on the Clearinghouse website or posted on the website as being in the VTAP testing process will be allowed to be used.]

Review of the MTD Assessment Submission Process

Mr. Crafton explained that because the VTAP regulation process is moving more slowly than expected, DEQ management is planning to discuss how to move it forward. The discussion will include options for allowing manufacturers to soon begin testing. In talking with MTD manufacturers, there appears to be two areas of confusion:

- 1) When they submit an application, what do they need to include?
- 2) Can an applicant submit the QAPP (quality assurance project plan) at the same time as their application?

Mr. Crafton offered to summarize the process to address these areas of confusion, and encouraged MTD manufacturers to review the regulations because the requirements are described there.

When submitting an application, the applicant must submit the following: 1) completed Use-Designation Application Form, 2) completed MTD Site Demonstration Summary Form for each field test site, 3) Technical Evaluation Report (TER), and 4) signed and dated Certification and Authorization Statement. The applicant will indicate what use-level designation (in the Use-Designation Application Form) and pollutant removal credit (through the performance claim in the TER) are being sought. After July 1, 2014, the permit fee (and Application Fee Form) must be submitted with the application. If appropriate, the applicant may also submit a Confidentiality and Non-Disclosure Agreement, pertaining to protection of proprietary hardware or methods. Prior to July 1, 2014, applicants will need to submit the fee before DEQ awards a use level designation and pollutant removal credit.

Mr. Crafton offered that the assessment process would begin with a review of the submitted application materials to ensure they are complete and then follow the general process outlined below:

Stage I (see 4VAC50-60-1380):

- Assuming the application is complete, the DEQ Technical Evaluator (TE) will review the application and associated documentation and prepare a recommendation of a use designation level and a pollutant removal credit for the BMP Clearinghouse Committee and the DEQ Director.
- Once the TE's assessment is complete, the applicant's TER will be posted on the Clearinghouse website for 30 days of public comment.
- The TE will review and evaluate responses to the public comments.
- The entire application package, along with the TE's recommendation, the public comments, and responses to the public comments will be forwarded to the BMP Clearinghouse Committee members for consideration at their next meeting.
- At that meeting, members may adopt the TE's recommendation or develop their own recommendation, in which case both recommendations will be advanced to the DEQ Director for a decision on a use level designation and pollutant removal credit.

Stage II (see 4VAC50-60-1450):

- Once the Director has approved a device for testing at the pilot use designation (PUD) or conditional use designation (CUD), and the following have been established: use conditions regarding design specifications, pollutant removal credits, and installation timing, the applicant submits a QAPP and associated materials for each field test site.
- The TE will review the materials, and BMP Clearinghouse Committee members will be provided an opportunity to review each QAPP as well.
- The Director or his designee will review all comments and recommendations received for each QAPP and shall approve or disapprove each QAPP. Once a QAPP is approved by DEQ, then testing begins and the two-year time limit starts; if necessary, the applicant may apply for an extension of the two-year time frame. During testing, the applicant must submit quarterly reports, and at the end of the testing period, the applicant submits an application for a higher use designation that goes through the same evaluation process.

A member of the public asked if notifications would be sent whenever TERs were posted on the Clearinghouse website. Ms. Davenport answered that such notices are generally posted on the DEQ website and are likely posted on the Virginia Regulatory Town Hall website as well. Mr. Crafton added that anyone can sign up to receive announcements when information on a subject of interest to them is posted on the Town Hall website.

A committee member asked for a review of the fee structure. Mr. Crafton answered that the fee structure is outline in the proposed fast-track regulations (4VAC50-60-1540). He summarized that the fee schedule as proposed includes:

- \$10,000 per Use Designation Application Form submitted for total phosphorus and total suspended solids evaluation.
- \$15,000 per Use Designation Application Form submitted for total phosphorus, total suspended solids, and total nitrogen evaluation.
- \$3,000 per Use Designation Application Form submitted for reciprocal consideration as a pre-treatment MTD.

Presentation and Discussion: “A Review of Monitoring Practices for Assessing BMP Performance – the Good and the Not so Good” (Part I)

Drs. Sample and Zhang gave an introductory presentation on BMP testing that they put together in cooperation with Tom Grizzard, Paul LeBel, and Chih-Yu Wang. Dr. Sample explained that the presenters are representing Virginia Tech, not DEQ. He further explained that the presentation would include their personal opinions, not those of the university or DEQ. The presentations would provide a review of BMP monitoring practices, examples of issues likely to be encountered, observations from monitoring a bioretention cell in a large city, and a summary of lessons learned.

Review of BMP Monitoring Practices

Dr. Sample stated that BMP assessment usually includes hydraulic monitoring whereby the mass of the pollutant of interest going into the BMP is compared to that of the mass of the pollutant coming out of the BMP. This type of physical monitoring is strongly supported by the expert panel that assisted with the development of the VTAP. BMP monitoring studies include BMP input and output evaluations (preferred for MTDs), comparing paired watersheds with and without the BMP in time or space, randomized sampling of outputs (e.g., a harvesting BMP whereby the researchers take a random sample of the harvested material to evaluate its pollutant removal effectiveness), modeling the effectiveness of the BMP based on physical properties, and the use an expert panel to provide best professional judgment.

To determine the mass of the pollutant (load of the pollutant) when conducting hydraulic monitoring, it is necessary to know the concentration of the pollutant in the stormwater and the amount of stormwater being treated.

To measure the amount of stormwater entering and exiting a BMP, it is necessary to know its flow or discharge, i.e., the amount of water going past a certain reference point in a specific period of time; flow is measured in units of volume per unit of time. The VTAP recommends the use of both primary and secondary flow measurement devices whenever feasible. Primary measurement devices are hydraulic structures placed in the flow such as weirs and flumes that

change the height of the water column by adding restrictions or obstacles. The expert panel that contributed to the development of the VTAP recommended the use of flumes because weirs have issues with trapping sediment, which is not as much an issue on the outlet side. Secondary devices measure the change of the water level in the primary device and convert this to flow according to the known level/flow rate relationship of the primary device. Secondary flow measurement devices include: float gage, bubbler tube, ultrasonic depth sensor, pressure probe, or measurement stick.

The area-velocity (AV) method for determining flow relies on knowing the area of the channel (its depth and width) and the velocity of the water (its speed and direction of movement) in that area. AV methods used to measure water flow have improved, resulting in an improvement of the quality of data one gets from them. AV methods of estimating flow include the use of ultrasonic (Doppler) sensors, electromagnetic sensors, acoustic path, rotating-element current meters, pressure sensors, and acoustical sensors.

In order to calculate the mass load of a pollutant, one must not only know the flow but must also know the concentration of the pollutant of interest. The event mean concentration (EMC) can be estimated for a storm by analyzing composited samples derived from combined subsamples of equal volume collected throughout the storm. In this way, the composited sample will give the average concentration of the pollutant across the entire hydrograph.

Examples of Issues Likely to be Encountered

When reviewing monitoring data collected in association with the assessment of a BMP, it is important to recognize the variability of stormwater runoff. For example, stormwater inflow quality is highly variable with respect to phosphorus concentration (the pollutant of most interest in Virginia), which is partially due to its propensity to attach and detach from particles in the stormwater, particularly clay particles. In an effort to address some of the variability, it is advisable to monitor homogenous land uses.

Also, reviewers should be aware that the placement of monitoring devices can impact the results. For example, peak flow varies across a channel depending on the shape of channel (e.g., trapezoidal, triangular, rectangular, etc.). Dr. Sample showed various channel shapes and the location of peak flow for each shape, noting that the sides of the channel have the effect of slowing the velocity of the water in these areas due to increased roughness.

Dr. Sample offered that researchers should mitigate pitfalls as best they can, but at the same time, the Clearinghouse Committee should understand that “unexpected things happen in the field.”

Because flow measurement is crucial to determining the mass balance of the pollutant of interest, the monitoring device should be calibrated. Furthermore, the technical evaluators will be looking for equipment calibration as part of the QAPP. As an example, flumes typically have a rating curve; however, installation is not always perfect, which may alter the rating relationship. Therefore, calibration of the equipment is needed. In an example shown by Dr. Sample, the Palmer- Bowlus flume gave lower results than did the lithium-chloride computed discharge. Other flow-related issues to consider include the following:

- Flow splitters may impact flow measurements.
- Primary flow measurement is required because the flow is not uniform.
- Proper placement of the probe is critical.
- Flumes are preferred for inflows with potential for solids and debris.
- Weirs can be used at the outfall if clean.

Other potential pitfalls mentioned include the following:

- Power failure to sampling equipment
- Failure of the logging software (e.g., program deleted the data instead of downloading it)
- Laboratory unprepared for low detection limits for chosen constituents
- Clogging of weirs or flumes with debris
- Sediment resuspension (This process is the reason why applicants must measure consecutive storms).
- Cross contamination of samples.

Observations from Monitoring a Bioretention Cell in a Large City

Dr. Zhang showed a test site in a residential neighborhood in New York City where she monitored stormwater treatment by a bioretention cell. She showed a view of the monitoring setup. It consisted of an inlet from a street connected to a flume, stilling pond, and flow diverter box. Dr. Zhang used an underground influent housing that held an ISCO water sampler and inline flow meter for sampling the influent. The flow was then directed to a weighing lysimeter, which was designed to mimic the conditions of the rest of the bioretention area (The lysimeter works by constantly weighing a block of soil at the site to detect losses of soil moisture.). Arrays of soil moisture monitors and tensiometers, which measure the soil moisture tension in the vadose zone, were vertically distributed to show the vertical movement of the water through the soil. The effluent discharge was measured via a water container equipped with pressure transducer, and the effluent water samples were collected with an ISCO water sampler. By comparing the influent and effluent conditions, Dr. Zhang was able to determine the effectiveness of the bioretention cell.

Dr. Zhang explained that it is critical to know both the water mass balance and the water quality conditions. She had to understand the hydraulic performance of the site, e.g., how much water was going into the site, being retained by the site, and exiting the site. The site had a full climate station for measuring the weather conditions, such as precipitation, wind speed, and wind direction. Any overflow was measured using a Thel-Mar weir and diverted to the sewer. Dr. Zhang used soil moisture arrays external to the lysimeter for comparison purposes, and the site had a slotted shallow well (1 m) to measure surface ponding depth and a groundwater well (10 m) to measure groundwater table and water quality in the groundwater.

Issues experienced during the study at the inlet flume and stilling pond included the following:

- Accumulation of sediment at the inlet meant that the site needed to be maintained regularly to remove the accumulated sediment.
- Blockage of the inlet screen by leaves, papers and other debris also required that regular maintenance be performed to remove such blockages.
- Damage of screens by human activities.

Issues with the equipment housing (influent and effluent) and lysimeter included:

- Water pipe leakage resulted in the loss of monitored water.
- Flooding of equipment housing from a leaking pipe and from outside sources of water (design flaw) led to equipment failure.
- Battery corrosion caused a loss of sensor data.
- Water sampler errors resulted because of power outages and loose tubing that caused a loss of water.
- Corrosion of level actuator caused a loss of water samples.
- Unwanted animals got into the water container.

Based on Dr. Zhang's research experience at this site, she made the following recommendations:

- Conduct dry runs to ensure that every piece of equipment is working properly and to identify problem areas that need high attention during the monitoring period.
- Perform equipment and site maintenance regularly to ensure site performance.
- Educate and involve the neighborhood if the BMP is installed in a residential area in an effort to reduce damages made purposely by human activities.

Summary of Lessons Learned

Dr. Sample offered that monitoring stormwater is not easy and requires compromises and tradeoffs. For example, researchers should use storm event predictions to minimize missing qualified storms and to minimize false alarms whereby all associated with the project are mobilized yet the storm does not meet the required minimal threshold. Because storm event prediction is not perfect, however, researchers may miss some qualified storms so the Clearinghouse Committee should understand if such occurs. Furthermore, because equipment can malfunction, it is advisable to have "dry runs" to test the functionality of the equipment once set up in the field. Committee members should expect that compromises in the field equipment used, placement of the equipment, etc. can affect the quality of collected data. The reliance on appropriate statistical methods can help – the collected data should be censored to remove outliers. Applicants should use the Effluent Probability Method (EPM) and the Summation of Loads (SOL) for analysis. Whereas these methods are robust, they essentially ignore any autocorrelation or sequencing of the data. Furthermore, these tests usually have a statistical distribution requirement (i.e., normal or lognormal) which must be met, or alternative nonparametric tests such as bootstrapping must be used.

Questions and Comments

There was a request to post the presentation on the Clearinghouse website, and Ms. Walker replied that this is possible.

Someone asked if the area-velocity method for measuring flow is an option; Dr. Grizzard replied that it could be if verified with another method.

Another individual asked what the equipment costs run. There was general discussion that the costs are extremely variable. As a general guideline: flumes tend to be around \$1,500-\$2,000. Most researchers use automatic samplers, which run about \$5,000. Some researchers use graduate students to collect grab samples so in these studies, the equipment cost would be relatively low, but labor costs would be high. Six students were involved in the study at the New

York City site, but only one was responsible for maintenance; Dr. Zhang recommended having more than one person associated with the project be on-site. Because of a lack of on-site personnel and equipment failures, only one storm per month for the four-month test period was obtained for the New York City study.

A committee member noted that effluent from a bioretention site is often negligible or even non-existing. He wondered how something like that should be addressed. Dr. Grizzard replied that researchers need to account for the outflow that does occur, and if there is no outflow, that result must be included in the data set. Dr. Grizzard offered to address this situation in more detail as part of the presentation at the next meeting.

Mr. Crafton asked the group if the presentation was helpful. He had asked Dr. Sample to begin with a general and broad overview and told him that more detailed issues could be addressed later.

Next Meeting Dates

The next Clearinghouse Committee meeting was announced: October 28, 2013. The meeting location will likely be in Charlottesville. The upcoming winter meeting is scheduled for January 27, 2014.

General Comments

A representative of a BMP manufacturer requested clarification on the accuracy of his understanding of the fast track regulatory process: Individuals can comment on whether or not the proposed regulation for the VTAP should be approved as fast track regulation, but the public cannot comment on the content of the regulation. The DEQ agency personnel confirmed this statement, adding that it is a stipulation for any fast track regulatory process as outlined in the Virginia Administrative Process Act.

This individual also stated that a number of past BMP Clearinghouse Committee minutes were posted on the Virginia Regulatory Town Hall website just prior to the transfer to DEQ. He noticed that one set was almost three years old. The individual expressed his personal opinion that he expected better of a regulatory agency. DEQ staff agreed that meeting minutes need to be posted on the Virginia Regulatory Town Hall website in a timely manner.

Adjourn

With no further business, Mr. Crafton adjourned the meeting.