

**SUMMARY**  
**Watershed Technical Workgroup (WTWG)**  
**Teleconference**  
**Thursday, March 6<sup>th</sup>, 2014**  
[www.chesapeakebay.net/calendar/event/21244/](http://www.chesapeakebay.net/calendar/event/21244/)

**SUMMARY OF ACTIONS AND DECISIONS**

**DECISION:** The February minutes were approved as submitted.

**ACTION:** CBPO staff to work with WV, VA, and MD, to develop revised language for the WTWG's consideration.

**ACTION:** CBPO staff will work with Degen to draft a technical appendix describing how Scenario Builder will credit different types of on-site wastewater treatment systems. The WTWG will be asked to review and approve the report and technical appendix at its April meeting.

**MINUTES**

**Welcome, Introduction and Announcements**

- Ted Tesler (PA DEP; WTWG Chair) convened the call, verified participants, and reviewed the [agenda](#).
- Tesler called for comments or edits to the February workgroup minutes ([Attachment A](#)). None were raised; the minutes were approved.
  - **DECISION:** The February minutes were approved as submitted.

**Erosion and sediment control expert panel report**

- Matt Johnston (University of Maryland, CBPO; WTWG Coordinator) directed participants' attention to the [BMP review protocol](#). He described the WTWG's role as described in the protocol.
- Tom Schueler (Chesapeake Stormwater Network; Urban Stormwater Workgroup Coordinator) explained there was a follow-up discussion with West Virginia, Virginia, and Maryland after the February WTWG. He noted they were unable to reach a consensus and the states were asked to develop a brief memo similar to [Attachment B](#) to describe their preferred technical approach as it differs from the panel's recommendations. He noted there was agreement to use the rates for Phase 5.3.2 to avoid violating the calibration.
- Randy Greer (DE DNREC; ESC panel member) noted that the ESC panel was privileged to have researchers who were very well-respected and intelligent researchers in the field. The results from the available literature were pretty clear that the new practices are much more effective at reducing sediments, but the results are more ambiguous for nutrients.

- Johnston noted that the [Scenario Builder Appendix for the ESC Report \(Appendix H\)](#) was available, but he would reserve discussion of that for later in the call.
- Jim George (MDE) thanked Schueler for his additional time spent meeting with the states and the continued work. He did not feel comfortable making a decision on the report at that time. Would like to defer a decision until April if possible.
- James Davis-Martin (VA DEQ) expressed that the WTWG has a larger role than described by Johnston. Agree with postponing a decision.
- Goulet agreed with Davis-Martin that the WTWG has a role to review cross-sector issues, in addition to how panel recommendations fit into the Watershed Model. Agree that it's an excellent recommendation to have the Urban Nutrient Management (UNM) BMP available for construction lands.
  - Davis-Martin: Is the language in Attachment B for UNM sufficient for amending the UNM BMP, or is there more to the process?
  - Goulet: That is ultimately a decision of the WQGIT.
- Tesler: would that relate in any special way to the loading rates in Table E-3? Would like a little more background on the phosphorus loading rates. Source sector workgroups are not always familiar with the loading rates used in the Model.
  - Schueler explained there were CBPO modelers engaged throughout the panel process. Appendix A addresses the sediment calculations from the panel and Appendix B addresses nutrients.
- Davis-Martin: if the process for adding the UNM statement is acceptable, that's fine. Still some technical questions and concerns about the zero removal rates for nutrients. If one of the pathways for nutrients is what is bound to sediment, would argue there should be a removal rate if the panel found that sediments are indeed more effectively trapped.
- Greer explained that based on his own experience and observations during the active construction phase there is not a nutrient problem. When they start to stabilize the sites there is a nutrient problem due to high fertilization and these erosion and sediment control practices are not effective in removing those nutrients. Suspect that a lot of nutrient loads come from that transition to the post-construction phase.
- Johnston: As the asterisk indicates, the zero removal efficiency can change if there are new monitoring data available before the Phase 6 Model calibration.
- Schueler: In addition to those calculations the panel documented the limited available research for nutrient loading rates on construction sites. The research is very bipolar, with about half the studies showing that construction runoff has nutrient loads twice as high as regular urban runoff. This is one reason why the panel was so concerned about the risk for fertilizer washoff, particularly since the nutrients are in a soluble form that is not susceptible to the ESC practices. This is why the panel recommends additional monitoring studies to help improve the science.
- Johnston asked if the current Attachment B addresses VA's and MD's concerns.
- Jim George (MDE): Suggest changing the text in the asterisk to "is proposed to be applied..." instead of "will be applied." Would like another stoplight to ensure there is another stoplight so we do not default to zero. Want the record to show that we don't know because we don't have the data. Think it is better to say "we don't know" as opposed to zero.
- Gary Shenk (EPA, CBPO): That language is fine. Correct that if we have no other documentation or default, we would go with the best number, which is the zero in this

case. Do not think anyone is opposed to getting more data and putting a better number in there or a zero if the additional data produces the same result. For that research to happen, the partnership has to make it a priority.

- Davis-Martin: It is a problem if the TMDL requires reductions from the construction land use and the principal BMP for that land use no longer yields nutrient reductions.
- Shenk: That is why we are keeping the rates constant for this version of the Watershed Model, through the Midpoint Assessment. We want to make the WIPs put in place still work the same way as they did before. In terms of the Midpoint Assessment, nobody knows exactly what will happen. and crafting the phase 3 WIPs....Nobody knows exactly how we would do allocations in crafting the Phase 3 WIPs. There's a lot of different options for making allocations in the phase 3 WIPs. If there is no BMP to reduce nutrients for a specific land use, then that would factor into the allocations.
  - Davis-Martin noted that to date there has been no indication that there will be Phase 3 WIPs or a change in allocations.
- Dave Montali (WV DEP) explained that he was still working with Maryland and Virginia on alternative language.
- Dave Montali noted concerns with the target loading rates for the phase 6 model. He referenced Table 24 in the report.
- Goulet: We clearly will not reach consensus on these issues today. He reiterated there is a lot of time and effort put into these reports by the panelists.
- Schueler mentioned the West Virginia panelist was great and contributed a lot to the panel and she provided over 100 comments on the report, which were all addressed.
- Johnston noted it is the Phase 6 recommendations that seem to be the remaining issue.
- Shenk: This is a very useful discussion, but perhaps the WTWG can send Attachment B as it is to the WQGIT along with the documents and concerns from the WTWG, for WQGIT consideration and a decision.
  - Davis-Martin objected to that approach.
- Tesler felt it would be best to continue the discussion at the WTWG level and provide the full WTWG opinions to the WQGIT.
- Montali: Major concern is the calibration targets for Phase 6. Can provide the proposed language to CBPO staff.
- Johnston: We will share that proposed language with the WTWG before our April call. We will also share a revised version of Appendix H based on the updated language.
- Davis-Martin: Still have concerns about sticking with the current load targets for nutrients that are based on 3 studies. Why not go with different rates based on the 20 or so studies that the panel reviewed?
  - Schueler: There were about 20 studies for sediment and about 6 or 7 that looked at nutrients.
  - Greer noted the nutrient studies were bipolar and some even indicated an increase in nutrients.
- Shenk: The panels are charged and have a lot of authority regarding the reduction rates. The modeling team and Modeling Workgroup appreciate the panel's input on the loading rates, but the loading rates will be determined on the water quality data and a literature review. So going into Phase 6 we will consider the panel's recommendations, but we will not be completely bound by the panel's recommendations for the loading targets.
  - Johnston: Great point. We can add some language to include that clarification.

- Shenk noted the construction land use is small in terms of acreage and there is not a lot of information. The calibration cannot be bound by the panel recommendations as absolutes. Will certainly consider using the recommendations as a starting point and will consider other available sources of information.
- George: What is the process for reviewing the number when the modelers look at it
  - Greer: It was not our main focus because most of the data was on sediment. The workgroup is struggling with a lot of the same questions we had. Some studies showed low nutrient loads because they barely had any runoff to begin with. Have to consider those factors as well. Sites are very vulnerable to nutrient losses during the transition to stabilization.
- Johnston: We can share the proposed language back to the workgroup. Depending on progress over next month, will bring it back to WTWG in April if we do not resolve the issues over email.
  - **ACTION:** CBPO staff to work with WV, VA, and MD, to develop revised language for the WTWG's consideration.
- Tesler: Fine with this approach and bringing it back in April if needed. Feel that including a lot of the proposed language will address concerns.

#### **Recommendations of the expert panel for on-site wastewater treatment systems**

- Johnston noted that the WTWG would not be approving the report during this call, since a Technical Appendix for Scenario Builder needed to be developed first. The WTWG will seek approval of the report in April.
- Marcia Degen (VDH) described the On-site Wastewater Treatment Systems (OWTS) expert panel, its charge, and its recommendations.
  - View [her presentation](#) for more details
  - View [the panel report](#) for the full set of detailed recommendations
- Davis-Martin noted there are really only a few reduction efficiencies for the 17 different combinations, so would it make sense to define them as four or five different practices in Scenario Builder?
  - Johnston: That is one possibility for the WTWG to consider.
  - Davis-Martin mentioned that one potential downside to that approach would be that it would be harder to extract or change those practices down the road if they are lumped together.
- Johnston: what kind of data do the states have for these systems? Do they have specific enough data to distinguish these systems?
  - Eric Aschenbach (VDH): Virginia's database has that kind of specificity. Like Davis-Martin's idea to combine them into four or five different "buckets" for the sake of simplicity.
  - Prager: we do not have that data right now in MD, but if we need the data for credit we will move in the direction to get that data.
  - Tesler: It would be very difficult for us to get this data and do not expect Pennsylvania would be able to take this approach. Septics being only about 2% of our load, may be not worth the effort, but if other states have the data then no problems going forward with the report so they can earn the credit.

- Steve Gladding (NYS DEC): our Department of Health oversees our septic systems. Would be surprised if they have the ability to track that kind of data. The only septic BMP we are interested in is for connection to sewer.
  - Montali: We will have to design the system for tracking and reporting these systems in WV.
- Davis-Martin: given the concerns about capturing details of these systems, would the panel recommend a default denitrification system? They may know it is an alternative system, but not have the details for in-situ and ex-situ.
  - Degen: that may depend on the definition of alternative system in the states.
  - Prager: Without knowing exactly what kind of system it is, it would be hard to assign a value. We talked a lot about what credit should be given for each technology. Would be reluctant to give a generic value to an unspecified system.
  - Davis-Martin: If tracking systems are not sufficient at this point, perhaps there is a way they could earn some default credit for basic information as they improve tracking systems going forward.
- Jeff Sweeney (EPA, CBPO) asked for more information about how the panel derived the 4.0 kg TN/person/day load.
  - Degen: It came directly out of the model documentation.
  - Prager: We also looked at the current literature and what typical effluent rates were into on-site systems. The panel felt the model number was reasonable.
  - Sweeney asked if failed systems would influence the average loading rate at all.
    - Prager: The percentage of failed systems is small enough that it would not affect the whole. There is not enough data to suggest a failing system would have a lower nitrogen removal. A failing systems is definitely a health concern and possible disease vector, but cannot say for certain that the nitrogen load would be higher.
    - Sweeney: We need the load for modeling purposes, but we do other projects as well so it is helpful to have documentation on these numbers and components.
- Dave Sample (Virginia Tech) thanked the panelists and Degen for the excellent report and presentation.
- Johnston noted the time and called for any final questions for Degen.
- Davis-Martin asked why the workgroup was not seeking approval for the report that day.
  - Johnston explained the goal was to get feedback from the states and develop the technical appendix for approval in April.
  - **ACTION:** CBPO staff will work with Degen to draft a technical appendix describing how Scenario Builder will credit different types of on-site wastewater treatment systems. The WTWG will be asked to review and approve the report and technical appendix at its April meeting.
- Johnston thanked participants for their time and discussion.

**Adjourned**

## Participants

<u>Name</u>	<u>Affiliation</u>
Ted Tesler (Chair)	PA DEP
Matt Johnston (Coord.)	UMD, CBPO
Jeremy Hanson (Staff)	CRC, CBPO
Eric Aschenbach	VA Dept. of Health
Karl Berger	MWCOG
Greg Busch	MDE
Sally Claggett	US Forest Service, CBPO
James Davis-Martin	VA DEQ
Marcia Degen	VA Dept. of Health
Jim George	MDE
Steve Gladding	NYS DEC
Norm Goulet	Northern VA Regional Commission
Randy Greer	DE DNREC
Sarah Lane	UMD, MD DNR
Marya Levelev	MDE
Dave Montali	WV DEP
Robin Pellicano	MDE
Jay Prager	MDE
Jess Rigelman	J7 LLC
David Sample	Virginia Tech
Greg Sandi	MDE
Tom Schueler	CSN
Gary Shenk	EPA, CBPO
Jeff Sweeney	EPA, CBPO
Jenn Volk	U. of Delaware