Chesapeake Bay Program

Watershed Technical Workgroup (WTWG)

Meeting Minutes

Thursday, February 1st, 2024
10:00 AM to 11:00 AM
Meeting Materials

Summary of Actions and Decisions

Decision: The WTWG approved the December and January meeting minutes for 2023 and 2024 respectively.

Meeting Minutes

10:00 **Introductions and Announcements** – Cassie Davis, NYSDEC (10 min).

- *Please put your name and affiliation in the chat box for attendance purposes. Thank you!*
- **Decision requested:** Approval of December and January Meeting Minutes.

Decision: The WTWG approved the December and January meeting minutes for 2023 and 2024 respectively.

- Update on TMDL Indicator – Sushanth Gupta, CRC
    - Sushanth provided a brief update on the new TMDL indicator, which Gary explained to the WQGIT at their January meeting.
    - Alana Hartman (in chat): It was me who requested this TMDL indicator explanation. Gary presented it to the WTWG at the October 2022 meeting and I thought it was interesting but didn't understand it 100%. I was looking to see if it had been changed since then and to have a refresher on how to read it.
    - Alana Hartman: On slides 10 and 11, when Gary comes, if he could go over each color and how that data arrived and got put together would be good. I would like to hear Gary's presentation again, see if anything changed and be able to explain this to our stakeholders.
    - Ruth Cassilly: There will be a webinar on the new indicator (METRIC) on February 6th where Gary and others will present.

10:10 **Progress and Verification Overview and Timeline** – Auston Smith, EPA and Chesapeake Bay Partnership (5 min)

Auston provided an update on the 2023 Progress Schedule. Partners had an opportunity to discuss their questions or concerns.

10:10 **2023 Progress Verification Insights and Feedback** – Auston Smith, EPA (5 min)

Auston provided an update on 2023 progress verification and solicited feedback from WTWG members to inform future verification efforts.

Discussion:

Tyler Trostle: I wanted to say thanks for being able to take the time for some separate meetings. The timeline worked for us really well in PA, having separate weekly meeting times to be able to work through some of our issues and persistent problems. The transition from last year to this year and some of the improvements that you all have made have been very helpful. A thank you as well to Olivia, Ruth, and Jess for being so open and quick with communication. If we have any further questions we definitely will be in touch.

Clint Gill (in chat): I would echo Tyler; it was a very productive back and forth to figure out our issues as well.

Alana Hartman (in chat): The process went well for WV. Thank you.

Emily Dekar: From NY's perspective it also went very well this year. Having the comments in advance to take a look at was fantastic and made our call more productive. It allowed us to have answers to what you guys had questions on.

Bill Keeling: I think I'd like it if in the off season, you introduced an objective criteria to be used for selecting which BMPs to talk about. There were some that were on the subjective side or context was not applied.

10:10 **Phase 7 Expert Panels Overview**– Auston Smith, EPA (5 min)

Auston provided an overview of items that have been brought up by workgroup partner members that may require an Expert Panel including the Volkswagen Transportation Settlement and the Stormwater Biochar Upgrades. Partners had an opportunity to discuss additions, questions, or concerns.

Discussion:

Norm Goulet: The VW settlement, when it came through this workgroup, there was a pretty strong voice that there was a need for an expert panel, because it was so complicated and would involve quite a few people. So, if we're trying to do something here really quick, I think I'd have to object to it.

Auston Smith: To make myself clear, what I've heard internally indicates that we should not try and push through anything quickly. The purpose of an expert panel is to determine efficiency rates or percentage adjustments to those rates and as I understand it, all of that will already be captured in a model that helps apportion who is responsible for loads. So, an adjustment on that topic probably won't be necessary from our workgroup. Adjustments to that model will go through the Modeling Workgroup unless I'm mistaken.

Bill Keeling: If I remember correctly, Norm had concerns about potential double counting and if it would be captured in CMAQ. If it's going to be captured in CMAQ, there's no need to have an expert panel on how to deal with it in CAST. Back to your comment about abandoned mine lands, there was no abandoned mine lands in Phase 6, there was in Phase 5, so is the proposal to bring that land use back in or if we don't have a source then what will the BMP be treating? Bioreactors are also on the list to be looked at and finalized.

Ruth Cassilly: The Abandoned Mine Reclamation BMP, right now those abandoned mine lands are considered 'mixed open' for land use in CAST. In 2016 there was a decision made that the Abandoned Mine Reclamation BMP would change the land use from 'mixed open' to 'forest' when that was submitted. That change has yet to occur and is scheduled for CAST-23. You can submit the Abandoned Mine Reclamation BMP but there is no credit given since the land use doesn't change. That's scheduled to change and that's what the discussion is about. We'd like to start tracking the Abandoned Mine Reclamation BMP submissions, if the reclamation just involved establishing grass cover versus a forested area. We'd like to be able to track them separately in NEIEN and we're planning on coming back to the WTWG in March or April with that. Jess and I will work together on prepping that; it will result in credited land use in CAST-23.
Bill Keeling: The agency that deals with abandoned mine lands was overjoyed to hear that they weren't going to be involved with the Bay Program anymore when it came to Phase 6. I don't think there's going to be a lot of enthusiasm for resurrecting that effort.
Ruth Cassilly: Well in PA they have quite a lot of that going on and they've gotten more funding for it. I can't speak for the PA stakeholders, but I do know they are submitting the Abandoned Mine Reclamation BMP. I think it's worth having a conversation about and that's why we intend to bring it back to the group.
Bill Keeling: I remember part of the issue was the definition of abandoned mine land. Is that a moonscape, i.e., what's left over if you walked away from a surface mine, or are we talking something else? Reclamation involved a wide range of things, so defining the initial situation and then taking that to either forest or open land is the question and I don't know if we solved any of that in Phase 5.
Auston Smith: I spoke with USGS on this, and it might be a possible update to include the level of compaction on the ground. Leaning on what Ruth had said, the difference between grass versus forest being applied and how that would correspond to a different land use on the ground. An expert panel may not be needed, but several intricacies could be looked at even further to support the CAST-23 update, is what I was hearing. It may be beneficial for us to bring a more comprehensive summary on this BMP next month.
Norm Goulet: I just pulled up an older presentation from Peter on the generalized Phase 7 Land Use/Land Cover classes. There is an extractive land use cover.
Bill Keeling: The problem is how that's interpreted. You have extractive that are current quarries with giant holes in the ground, not contributing to surficial loads. All the way to an abandoned coal mine that was a surface strip mine. You can't characterize them all the same, like we tend to do, with some kind of average.
Norm Goulet: I'm not disagreeing with you, but there is a 'barren cover' planned for Phase 7.
Bill Keeling: Barren would also include beaches and bedrock outcrops at the top of mountains.
Norm Goulet: This is specifically extractive barren; I can send you a copy.
Auston Smith: Appreciate the context, that's really helpful. Maybe an email to the workgroup on some additional findings that we're able to unearth about how this could move forward alongside the CAST-23 update would be helpful. We can include that on our action items. Bill, you also mentioned bioreactors, could you go through how you might like to see an update look?

Bill Keeling: I don't know if its an expert panel or what; it's my understanding that we have springs in the Shenandoah valley and other places where the groundwater has high concentrations of nutrients. They have a method of treating that, the problem is that its sort of like a wastewater point source discharge. The issue is that the area loading the spring may not be proximal to the spring; in karst areas it could be on the other side of the mountain. The issue is, how do we credit if VA is doing these spring bioreactors and producing reductions in the streams' nitrate concentrations, since that's not a source per se in the model. I don't know if we have a groundwater concentration value for different reaches of the stream network and how an effective in stream treatment process would benefit us, and how to represent that in the model. When it comes to Phase 7 the issue is there are already bioreactors related to ag fields with subsurface drainage that have been approved, VA is exploring the spring bioreactors and how we can get credit for those.

Jessica Rigelman: Because these are like point sources, they would be monitored values for TN and TP that would be reported, not the in general efficiency?

Bill Keeling: Yes, as I understand it, they would have a concentration going in and a percentage reduction related to the amount of that that's treated. Some of these have very large volume outputs and I don't believe they're set up to treat 100% of the flow, but they divert a good portion through the bioreactor. There would be monitored inflow and a monitored outflow, and we would like to get credit for the delta.

Jessica Rigelman: These are not on ag lands? I believe we have a monitored bioreactor BMP in the model, but it's only available to ag lands. In this case you're saying its not necessarily an ag land BMP.

Bill Keeling: Think of a karst spring where water is bubbling out of the ground and is the source of a creek or contributing flows to a stream. They have monitored these springs, and some have very high nitrogen concentrations, i.e., 60mg/L. They've developed the technology to treat at least part of those flows and produce significant nitrogen reductions through it. We're interested in employing that BMP because it's in effect a point source and if we can treat it and reduce concentrations in the stream, we see that as a plus. It's just how do we credit that in modelworld. If there are no groundwater sources, in Phase 5, 4, 3 there was a subsurface flow and I believe it may have had a concentration. That would have been one way to go at it, but if we're not simulating flows then that's where things get a little more questionable.

Norm Goulet: [Referring to biochar] The easiest way to do this is through an enhancement to an existing BMP. We've done that quite a bit in the urban stormwater workgroup. To come out with a BMP that's biochar would be very problematic because you're not going to get the same removal efficiencies for each source.

Samuel Canfield: There was a STAC meeting on biochar where there was a lot of discussion on uses of biochar. I don't know where it was started in terms of using it as an enhancement. Echoing Norm that it may be more appropriate for an enhancement.

Norm Goulet: In general, any of the BMP enhancements or new BMPs are going to come through the source sector workgroup, not the WTWG. We are to look at the appendices and how its going to go into CAST. An argument could be made that, i.e., the VW BMP where there is no source sector workgroup, or the bioreactor issue, that the WTWG could sponsor an expert

panel for those items. For the most part, they're going to come through a source sector workgroup and the WTWG will be on the receiving end.
Bill Keeling: Is there ever going to be an effort to put together a panel for proprietary stormwater treatment devices? For all those many records we have of those that its currently addressed, as a BMP.
Norm Goulet: That's still dead in the water. We're still waiting to see if this supposed process that EPA blessed through STEM (?) is going to come to fruition, but I haven't heard anything on that process in a long time. Until EPA changes their mind on proprietary devices, we're just going to keep stacking them in the watershed and not getting credit for it.
Bill Keeling: I was hoping we could come to some general low-grade benefit that we could at least apply; something the experts could say OK I can swallow that, not necessarily what the manufacturers are claiming, but something. They just keep growing and growing and it's beginning to be a pretty large reservoir of BMPs that I would argue is doing something.
Norm Goulet: No argument here. If you voice your concern to your USWG rep, we can try to resurrect something again, but I wouldn't hold my breath on it.
Kevin DuBois: One related item and one unrelated. I actively participate in the wetlands workgroup, and they've got a GIT funded project looking at the prevalence of mowed wetlands across the bay. The work hasn't been published yet, but just based on my work with the steering committee, it seems like the prevalence is much greater than most people anticipated. I think it would be interesting to develop an expert panel to look at the water quality benefit of ceasing that practice. Intuitively you might imagine that a productive tidal wetland that's being mowed to half an inch is not taking up as much nitrogen or phosphorus or trapping as much sediment as an unaffected marsh. It would be a compelling argument if we could determine that there is a water quality benefit to a locality to enforce the law and keep people from mowing their wetlands if they understood that they would get a TMDL benefit and it would contribute to the wetland enhancement goals from the Watershed Agreement.
Alana Hartman: The first thing that comes to mind is that I don't know what load that reduction would be applied to, because wetlands have one of the lowest load sources.
Kevin DuBois: It would still be a BMP; it would address that load. I'm not sure I understand the question.
Alana Hartman: I just think of wetlands and forests as unactionable, but I'm not sure if that's technically true, I could be corrected.
Kevin DuBois: So if you cut down your forest, there's no BMP implication or load implication?
Alana Hartman: I think that's different because it changes to harvested forest and then you apply the BMP to that. So, in your case you'd need a new land use for mowed wetland, and you'd apply your BMP to that.
Kevin DuBois: I think that's exactly what we're going to generate – a map that shows where all the mowed wetlands are.
Bill Keeling: There was a lot of consternation about how wetlands were determined in Phase 6 when we are developing it. In part because the current available data, at least in some states, was exceedingly sparse, or the interpretation was very difficult. It's not necessarily something

you can remote sense. There'll be a lot of interference with current open areas, mixed open, some form of turf or ag open, or even pasture hay.

Kevin DuBois: Maybe that's true of freshwater wetlands, but what we're talking about are tidal wetlands. It's pretty easy to distinguish between ag lands and tidal wetlands even just by looking at aerial photography. It's probably something that once the GIT project is completed is going to be the next logical step, so I think it'll come back around. Just FYI that its coming.

Jessica Rigelman: One comment on that, and again, I don't know what's going to move forward for Phase 7, but tidal wetlands aren't part of the watershed model in Phase 6, they're part of the estuarine model, so those are excluded from CAST. If we're talking Phase 6 this is a non-issue for CAST and it would be part of the estuarine model, but that could change during Phase 7.

Kevin DuBois: The other thing I wanted to bring to the group's attention, and this is not necessarily a Phase 7 BMP, but I was told by Olivia Devereux that this was the right forum to bring this up when considering Phase 7. The Department of Defense, right now the way their loads and BMPs are applied in CAST adds the US Army Corps of Engineers loads and BMPs. These are two separate entities with their own programs. The Army Corps of Engineers is not part of the DoD but for whatever reason back in the day they were combined in CAST. According to Olivia this is the right forum to bring that issue up so that when there are considerations for Phase 7 and what should be done in Phase 7. That is a really important consideration from the DoD because its hard for us to accurately look at our progress when the data gets mixed together and there's no way for us to separate it. Going forward in Phase 7 we're looking for the ability to separate US Army Corps of Engineers loads from the DoD.

Jessica Rigelman: In order to do that we would need a separate land use for the Army Corps of Engineers. The Land Use Workgroup has that but like Kevin said it was included with the DoD for Phase 6. The BMPs are reported separately so we could map them to the Army Corps of Engineers as opposed to grouping them with DoD and the land use is separate but that would be a Phase 7 change. We can split up the BMPs and remove the Army Corps of Engineers ones and only give the DoD reduction, but that includes the Army Corps of Engineers land. It's a Phase 7 issue, it's not a hard issue but needs to be agreed upon by the partnership.

Bill Keeling: As I understand it there's a Federal Facilities layer, so you would have to have the Army Corps polygons cut away from the DoD ones. Tangentially with this, in Phase 7, I would suggest that the federal land uses include septic and other currently barred land uses. We do get reporting of Ag BMPs, Septic BMPs, and harvested forest on federal land. Currently we can't report any of that, so just that we actually have some of those on federal facilities.

` Kevin DuBois: So, who do I talk to about separating the land polygons in the Federal Facilities layer?

Bill Keeling: You're going to need to talk with Peter Claggett and he's going to need the data for Army Corps facilities in terms of the metes and bounds on those polygons.

Kevin DuBois: If you're talking about the federal facility viewer, in the description it says whether they're Army Corps of Engineers of DoD properties.

Bill Keeling: I'm not familiar with the viewer. I'm just saying that in my mind there's a layer that's used to say this is federal land and the type of land uses inside this polygon.

Jessica Rigelman: You're both correct. They are actually separate. The Land Use Workgroup and Peter's team has those all separate. It was a decision for Phase 6 to group several agencies under DoD and several agencies under fed other. A decision just needs to be blessed, and I don't know who needs to make the ultimate decision, but we have that data. So, I'm pretty sure there will be a call to the federal agencies for updating their polygons if they have any updates. Both DoD and Army Corps of Engineers and EPA, etc. Then someone will need to make the decision to instead of having 11 federal agencies have 12 since we're splitting out the Army Corps of Engineers. I would assume that would go through the Land Use Workgroup and then the WTWG and then the WQGIT. I don't want to say it's a non-issue because the decision needs to be made but all of the pieces are already separated so it's not hard for us to go ahead and do that. You might want to start with talking to Peter Claggett and the Land Use Workgroup.

Norm Goulet: You have to pull in Peter, not so much the Land Use Workgroup, but pull Peter in for a meeting with the Federal Facilities Workgroup. The Federal Facilities Workgroup would have to bless it and then it would probably go to the WQGIT at the same time as it comes to us.

Kevin DuBois: I brought it up at the Federal Facilities Workgroup and I was told to go to the WQGIT and this group.

Norm Goulet: You'll need explicit approval for someone to do that from the Federal Facilities Workgroup.

Auston Smith: I'm working with both Greg Allen and Sophie Waterman from that workgroup to make sure that this is brought forward as an agenda item. Whether it would be approved at that same meeting, to us after maybe talking with Peter or going through the Land Use Workgroup I can't speak to, but we're working to limit the circling around.

Next Meeting: Thursday, March 7th, 2024, from 10:00 AM – 12:00 PM.

Participants

Alana Hartman, WV DEP
Alicia Ritzenthaler, DC DOEE
Andy Miller, UMBC
Arianna Johns, VA DEQ
Ashley Hullinger, PA DEP
Auston Smith, EPA
Bill Keeling, VA DEQ
Caitlin Bolton, MWCOG
Clint Gill, DDA
Dave Montali, Tetra Tech WV
Emily Dekar, USC
Eugenia Hart, Tetra Tech
Fernando Pasquel, Arcadis
Helen Golimowski, Devereux Consulting
Jeff Sweeney, EPA
Jessica Rigelman, J7 Consulting
Joshua Glace, Larson Design Group
Karl Blankenship. Bay Journal
Kevin DuBois, DoD
Kimberly Dagen, SRBC
Mark Dubin, UMD
Matthew Kofroth, LCCD
Megan Thynge, EPA
Nicole Christ, MDE
Normand Goulet, NVRC
Ruth Cassilly, UMD
Samuel Canfield, WVDEP
Sushanth Gupta, CRC
Tyler Trostle, PA DEP

Acronym List

BMP: Best Management Practice
CMAQ: [The] Community Multiscale Air Quality Modeling [System]
[DC] DOEE: DC Department of Energy and Environment
CRC: Chesapeake Research Consortium
DDA: Delaware Department of Agriculture
DoD: [US] Department of Defense
DEP: [PA] or [WV] Department of Environmental Protection
[VA] DEQ: Virginia Department of Environmental Quality
DoD: [U.S.] Department of Defense
EPA: [U.S.] Environmental Protection Agency
LCCD: Lancaster County Conservation District
MDE: Maryland Department of the Environment
MWCOG: Metropolitan Washington Council of Governments
NVRC: Northern Virginia Regional Commission
NYSDEC: New York State Department of Environmental Conservation
TMDL: Total Maximum Daily Load
UMBC: University of Maryland, Baltimore County
UMD: University of Maryland
USC: Upper Susquehanna Coalition
WQGIT: Water Quality Goal Implementation Team
WTWG: Watershed Technical Workgroup