Chesapeake Bay Program
Watershed Technical Workgroup (WTWG)
Call Summary
Thursday, June 6, 2019
10:00 AM to 11:30 AM
Calendar Page: Link

Summary of Actions and Decisions:

Action: Michelle will check through March and April meeting minutes for records of Bill Keeling's request to correct non-legume fixation in the Phase 6 modeling tools. If not found, Michelle will amend the April meeting minutes with this record.

Decision: The WTWG approved correcting the N and P load reduction calculations for the Shoreline Management BMP for the category Non-conforming/Existing Practices, which is related to Protocol 1, Prevented Sediment. The adjustments will increase the nutrient benefits by 1.8X in MD and 3X in VA.

Action: The WTWG will consider including a regional approach to estimate slope at shoreline management sites within distinct hydrogeomorphic regions in the Chesapeake watershed, reducing the required amount of site-specific data collection and reporting by practitioners.

Action: The WTWG will consider requesting the BMP Expert Panel process incorporate feasibility of data collection and reporting requirements for specific practices, in order to simplify TMDL credit calculations for BMPs in the future.

Action: The WTWG will consider updating cover crop BMP names in NEIEN Scenario Builder to re-designate no-till cover crops from O (other) to D (drilled). VA and PA representatives will confirm whether this impacts their cover crop reporting. If VA and PA concur, the update will be approved.

10:00 AM – **Introductions and Announcements** – Ted Tesler, PA DEP

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Announcements:

- BayTAS is being retired: Both Phase 5.3.2 and BayTAS are retiring now that Phase 6 has been adopted. Reporting on numeric progress on targets is now done through CAST. After June 21, BayTAS and Phase 5.3.2 will no longer be publicly accessible. When the tools are retired, key information will be archived in case workgroup members or any other stakeholder need this data in the future. Contact CBPO staff if this need arises.
- Nitrogen Fixation in non-legumes –Bill Keeling
    - Bill Keeling: I'd like to make sure that the non-legume N fixation I mentioned at a previous WTWG call is recorded somewhere in the minutes. Working with Jess and Gary on rate of N fixation for certain crop types to determine accuracy.
    - Jeff Sweeney: We have not forgotten that issue, and we are discussing it at the next WTWG meeting.
    - Jason Keppler: Loretta and I have been discussing this and it will be discussed at the AgWG.
- CAST, 2017 Census of Agriculture, 2014-2015 Fertilizer Sales
- New CAST newsletter: topics include list of CBP deadlines, major updates, helpful functions of CAST that are under-utilized. Will also promote future webinars, once per month. First webinar is Th July 11 on CAST modeling 101.

10:15 AM – **Shoreline Management Expert Panel Recommendations** – Jeff Sweeney, EPA CBPO; VA DEQ

- Bill Keeling: I thought the issue wasn't the report itself, but how it's interpreted in CAST?
    - Sweeney: That could be, but I think there is also something off in the table,
- Protocol 1, Prevented Sediment and non-conforming/existing practices is the protocol of interest. Shoreline erosion is one of the inputs to the Water Quality Sediment Transport Model (WQSTM), and it's an output of CAST.
- Bill Stack: I chaired this workgroup. The expert panel was explicit that the sand reduction factor not be applied for the nutrient calculations. The feeling was there aren't that many nutrients in the sand component, so as it is now, the credit penalizes the user by applying the sand reduction factor prior to applying the nutrient concentrations. The WTWG was concerned about the load reductions that would be applied using such a generous credit. Previously, the WTWG decided to strip out the nutrient credit, leaving just the sediment. The Modeling Workgroup looked at the bioavailable nutrients associated with eroded sediment and determined what would be appropriate nutrient concentrations for this practice.

- Keeling: We were concerned with explicitly calculated reductions applied to an implicitly calibrated source. When we did this there was no shoreline load source.
- Sweeney: The proposal is to apply the nutrient concentrations to the appropriate sediment erosion rates, not the erosion rates after the sand reduction factors have been applied. Sand has vary little nutrients — we assume that most nutrients are in the fines.
- Keppler: This is not related to upland sources, correct?
    - Sweeney: Correct, this is shoreline only.
- Sweeney: We need to address where to appropriately apply the nutrient concentrations. I will revisit the technical appendix to include the corrections.
    - Hanson: The technical appendix was revised in June 2017, so this is a change from the 2017 numbers.
    - Devereux: The June 2017 update is in CAST if you want to see the change.
- Sweeney: The protocols are project-specific, so you would be reporting those values for each project. The default for shoreline management is where this default nutrient calculation is done.
- Keeling: If I'm reporting the protocols, should I not report nutrients if we think it is not providing any nutrient reductions?
    - Devereux: You have to submit the pounds of sediment, and you can choose to submit 0 pounds for N and P. If you are submitting default shoreline management, that's feet of shoreline and that has a default for sediment, N and P.
    - Keeling: One issue is the sand reduction factor. The other issue is the default 50% reduction of the credit, and the WQGIT felt that state/local agencies should have flexibility to reduce credit on site-by-site basis.
    - Stack: This language is in there because there was significant objection from members of the expert panel, who submitted a dissenting opinion.
- Keeling: For submitting protocol-specific practices, if we provide protocol numbers for each project, then there is not a basis for the 50% reduction. If we are providing data and there is no benefit, we would be submitting sediment reductions only and not N or P.
- Sweeney: This is all rooted in the slope, if the slope is too high and there is a risk of failure, and that's the concern that triggers the 50% reduction. If you don't have that slope you're fine.
    - Keeling: We don't have slope information in our reporting.
    - Sweeney: Right, I think it was assumed that this would be part of the verification.
- Norm Goulet: Sounds like you'd need the slope information then.
- Sandi: We don't include slope information for each project, but we have a pretty good idea of the general slope in each biogeographical region. Shoreline management on the

Eastern Shore, for instance, can be assumed to be pretty flat. We are also at capacity in terms of reporting—we cannot keep collecting more and more data as we already have too much data to manage. I understand the perspective of the expert panels, but the people at the practitioner level just don't care and they don't collect this data. It's just too complex, and we need to draw the line and find some sanity.
    - Goulet: I agree, but we constantly get complaints from practitioners who complain that our removal values are too conservative.
    - Sandi: Yes, I agree. We also have issues in MD with companies using these values to try and game our permitting system.
    - Goulet: I think we need to pass along the directive to the expert panels that they have to ask for less data, and also be more conservative in their estimates.
- Keeling: Could we take a regional approach to estimate where there are steeper slopes?
    - Sandi: That's what I'm suggesting.
    - Sweeney: That's a hydrogeomorphic regional approach that we have taken in the past, which might give us more information on which shoreline practices may be on steeper slopes depending on their regional location.
- Sweeney: So, we are agreed on correcting the application of nutrient concentrations to sediment erosions rates. I also wonder if we should put a cap on the allowable amount of nutrients you can credit from a single project.
    - Devereux: Shoreline BMPs implemented 2008 or later are allowed, and 2008 and before are not allowed.
    - Jeremy: It would be good to see the numbers to understand how that changes.
- Jason Keppler: Can we simplify the technical appendix, and merge agricultural and urban shoreline? If shoreline is its own load source, it's misleading to categorize as ag or urban.
    - Devereux: That was a request from MD to keep those separate.
    - Hanson: Is that distinction useful for managers and planners?
    - Sandi: We don't really make that distinction. MD does not rely that much on shoreline management, but if it becomes more important to us in the future, that might be a distinction we want to make.
    - Keeling: VA has a lot of shoreline management in the WIP, but a lot of that is from historic data cleanup that wasn't previously reported. It's confusing to planners since its in the natural sector and it doesn't affect the urban load.
    - Goulet: That is an issue in Northern VA too, since our urban managers are doing a lot of shoreline management and not seeing the reductions in the MS4s' urban sectors. It's a bean-counting issue, but there is a lot of money behind this.
    - Goulet: Let's leave that urban-ag distinction alone right now and revisit later if we need to.

- Keeling: At least now, you can do a back-calculation on the back of an envelope to see what those reductions would map to.

Decision: The WTWG approved correcting the N and P load reduction calculations for the Shoreline Management BMP for the category Non-conforming/Existing Practices, which is related to Protocol 1, Prevented Sediment. The adjustments will increase the nutrient benefits by 1.8X in MD and 3X in VA.

Action: The WTWG will consider requesting the BMP Expert Panel process incorporate feasibility of data collection and reporting requirements for specific practices, in order to simplify TMDL credit calculations for BMPs in the future.

Action: The WTWG will consider including a regional approach to estimate slope at shoreline management sites within distinct hydrogeomorphic regions in the Chesapeake watershed, reducing the required amount of site-specific data collection and reporting by practitioners.

10:50 AM – **Cover Crop Mapping** – Jeff Sweeney, EPA CBPO; MDA

- Jeff Sweeney: Jason Keppler raised this concern that cover crops are not mapped correctly from NEIEN to CAST. Has anyone else noticed this?
- Bill Keeling: There was some confusion in the past no-till drills vs regular grain drills. Both are drills, but one leaves residue and one does not. Regular grain drilling is done on soil tillage, on a seed bed. I'm not sure if that ever got cleared up.
    - Sweeney: Aren't they both drilled?
    - Keeling: One leaves residue, so it can be employed in the high-residue tillage system.
- Jason Keppler: Both conventional and no-till cover crops are treated the same, there's direct seed-to-soil contact, although no-till does leave residue on the surface. No-till currently goes to "other", which is just a general seed broadcast application. However, no-till with the direct seed-to-soil contact is more efficient because it has a higher germination rate. Therefore, Maryland recommends that the no-till option should be treated the same as conventional cover crops—changing the final letter in the scenario builder BMP name from O (other) to D (drilled).
    - Sweeney: Couldn't you just report it as the CAST name if you know what it is? Rather than automatically mapping which could be wrong, you could just do that manually and report it as the CAST designation. There's nothing in the model for no-till. It's more a matter of you understanding what the practice is and where it falls best in the model.

    - Keppler: We could do that, as long as you don't have an issue with us reporting the BMP short name rather than the full name. However, for consistency, in the full name table, it should still map to drilled as opposed to other.
    - Keeling: I think that would be ok, but I would have to check with our warehouse and see what's possible in VA.
- Sweeney: I think if MD is the only state using this, that shouldn't be a problem to update the mapping.
- Emily Dekar: Our two designations are either drilled or other, whether its conventional or no-till drilled, both of those are coded as drilled.
- Sweeney: There's no designation in CAST for drilled or not. That drilled designation is just in NEIEN.
- Wade Cope: We don't know if PA DEP is using these names but I can follow up.
- Keeling: It is not the names that would change, just the mapping from NEIEN to CAST. It makes sense to me, but I'd have to check with our other mappings in VA.

Action: The WTWG will consider updating cover crop BMP names through NEIEN-CAST to re-designate no-till cover crops from O (other) to D (drilled). VA and PA representatives will confirm whether this impacts their cover crop reporting. If VA and PA concur, the update will be approved.

11:00 AM – **Ongoing Discussion of Progress Scenarios, Verification and Model Schedule** – Jeff Sweeney, EPA CBPO

- Jeff updated the workgroup on the status and schedule for draft Phase3 WIPs, data for CAST for the next Milestone period, Progress model scenarios and verification, etc.
- The new Ag Census is available for 2017. We will be doing an interpolation between 2012 and 2017 and use that for our projections. Once we have that we will go to the workgroups and discuss the particular places in the forecasting that were off and discuss how that will change scenarios.
- Bill Keeling asked about the ag stormwater management BMP. I thought it was a released BMP but I didn't see it in the appendix.
    - Keppler: I thought that was an approved practice. It was just a modification of the existing urban practice.
    - Sweeney: I and Olivia will check that and get back to you.
    - Keeling: Even if its still a draft BMP it should be in the appendix.
- Greg Sandi asked if there is a list of changes occuring in the new version of CAST?
    - Devereux: We will have that list of changes when the new version goes out.
    - Sweeney: For now, there is not a lot of information until the new version of CAST is released in November.

- Keppler: When might the AgWG see the results of all the changes going into CAST from the new Ag Census?
    - Sweeney: We just got that data, and we are digging into it now. We will be going to the AgWG in July to discuss broad changes by state for crops and animals.
- Emily Dekar: When would we need to have an approved QAPP?
    - Sweeney: Between September and December we will be reviewing the QAPP. But, I won't know what's in your new data until I see it December 2. The timing is off but there is no change as of now from my superiors.

11:00 AM – Adjourned

Call Participants:

Ted Tesler, PA DEP
Jeff Sweeney, EPA CBPO
Michelle Williams, CRC
Greg Sandi, MDE
Jason Keppler, MDA
Bill Keeling, VA DEQ
Alanna Hartman, WV DEP
Wade Cope, PA DEP
Megan Crunkleton
Daniel Proctor, StanTec
Bill Stack, CWP
Jeremy Hanson, VT
Olivia Devereux, Devereux Consulting
Norm Goulet, NoVA Regional Commission
Emily Dekar, USC