Chesapeake Bay Program

Watershed Technical Workgroup (WTWG)

Meeting Minutes

Thursday, March 6th, 2025

10:00 AM to 11:10 AM

Meeting Materials

Summary of Actions and Decisions

Decision: The WTWG approved the December 2024 and February 2025 Meeting Minutes

Action: If you are interested in filling the open WTWG chair position, please email Caroline Kleis, CRC (kleis.caroline@epa.gov), and Auston Smith, EPA (smith.auston@epa.gov).

Action: Members with additional Phase 7 related inquiries on improved methodologies or new approaches should contact Auston Smith (smith.auston@epa.gov) and Caroline Kleis (kleis.caroline@epa.gov), and they will work to best direct these inquiries within the Bay Program.

Action: Please continue to provide spatial data related to construction in your jurisdiction to Peter Claggett (pclaggett@chesapeakebay.net).

Action: Peter will return to the WTWG in May for an update on construction data.

Action: Auston will continue to provide updates to the WTWG as needed as the timeline for progress solidifies.

Meeting Minutes

10:00 **Introductions and Announcements** – Auston Smith, EPA (15 min).

- *Please put your name and affiliation in the chat box for attendance purposes. Thank you!*
- **Decision:** The WTWG approved the December 2024 and February 2025 Meeting Minutes
- Call for WTWG Chair – WTWG Leadership
    - **Action:** If you are interested in filling the open WTWG chair position, please email Caroline Kleis, CRC (kleis.caroline@epa.gov), and Auston Smith, EPA (smith.auston@epa.gov).
- PA DEP Remote Sensing Announcement
    - Auston reminded the group of the ongoing efforts by PA DEP and Tom Howard of Resolve Hydro to present and approve an adjusted methodology for the verification of four categories of tillage utilizing remote sensing. As was mentioned last month, these conversations are taking place at the Agriculture Workgroup (AgWG), and members of the WTWG are encouraged to participate in those conversations if interested. The next AgWG meeting is March 20th. Auston will continue to provide updates at the WTWG meeting.
- Other announcements?
    - Helen Golimowski mentioned that there's been a lot of implementation of new oyster projects, so the CAST webinar this month will highlight the oyster BMPs. The webinar will feature a guest speaker who works in real life on those practices, and the discussion

will be tied back to oyster practices in CAST and how you can use CAST to calculate the load reductions. Helen also announced that the 2024 wastewater is now available for building scenarios in CAST, though progress isn't available yet.

- Auston noted that he has received a lot of questions and insight from members regarding how requests for Phase 7 updates may pertain to the WTWG and other relevant workgroups. Auston and Caroline are plugged into various efforts around the Phase 7 updates within the Bay Program, and will continue to direct those to the best workgroup/platform for in depth discussions. Generally, we are trying to finalize AMT/Ag efforts pertaining to Phase 7, as well as a lot of the land use efforts for Phase 7 by September 30th. Auston will work with management to determine a suitable end date for additional inquiries for potential Phase 7 improvements, and members are encouraged to continue to send Auston and Caroline improved methodologies or approaches that members would like to be considered for Phase 7.
    - **Action:** Members with additional Phase 7 related inquiries on improved methodologies or new approaches should contact Auston Smith (smith.auston@epa.gov) and Caroline Kleis (kleis.caroline@epa.gov), and they will work to best direct these inquiries within the Bay Program.

10:15 **Progress Schedule and Verification Calls Update –** Auston Smith, EPA (5 min).

Auston Smith, EPA, thanked members for their efforts leading up to the BMP submission deadline and noted that they should be receiving the finalized signed versions of the 2024 QAPPs and the associated memos. Things are now tied up for the internal review process for the finalized 2024 progress scenario, and Auston hopes the scenario will be able to go out around May. Communications and related updates will continue as the timeline for progress solidifies.

Action: Auston will continue to provide updates to the WTWG as needed as the timeline for progress solidifies.

10:20 **Update from Land Use Data Team** - Peter Claggett, USGS (45 min).

Following a presentation at last month's WTWG meeting and a subsequent discussion at the February WQGIT meeting, Peter Claggett, USGS, returned to the WTWG to discuss methods for updating construction acres for Phase 7. Peter asked the group for input to help move this item forward.

Discussion:

Auston Smith: Thanks a lot, Samuel for providing some data to help kind of illuminate this follow-up discussion. If others can reach out to Peter, Caroline, and I with additional data sets, that'd be really helpful to inform the discussion at a future meeting. I am going to try and not get dug in on the construction versus compacted pervious discussion the Water Quality GIT was largely focused on. You mentioned on a previous slide how cropland had even been misinterpreted based on what you've got on here on the right as moving to barren. In some cases, it was near succession which is compacted. Determining where it would or would not be a compacted land use- could referencing what the previous satellite pass may have been on several of these other

land uses that we're kind of seeing as maybe more commonly confusing such as construction, barren land, or succession, help tease out whether it should fall into the compacted versus non compacted categories?
Peter Claggett: Looking back, we can see that the area used to be cropland and uncompacted. Looking forward, we see that it's most likely no longer cropland based on context, and the fact that it's barred in the context tells us that it may no longer be crop land and, therefore, probably compacted.
Auston Smith: Barren is assumed that it is compacted, and, because of the removal of the cropland, that is the general assumption that it has now moved from non-compacted to compacted.
Peter Claggett: Context is what high-resolution data provide that course resolution don't. Spatial context is the key here because if it were tree to barren, in a rural setting, we would really question whether it was compacted, unless there were new buildings around it. We have two change periods. We have change from 2013 to 2018, we've got change from 2017/18 to 2021/22. So, we can look back and be like were there buildings or was there construction in the early part of the 2010's in this surrounding area, and do we see that continuing on? The more data we have, the more temporal and spatial context we can use to inform our classification. This is why the classification is going to continue to improve. It's just going to get more and more accurate. When we map with 2025/2026 imagery, we are going to be using machine learning, a different technique, and we are going to be going back through time and making corrections all the way back to 2013, and if we have ancillary data that improve our classification like we may be receiving from Pennsylvania, we can then use that to make corrections back in time as well. What this last hour has enforced to me for construction is that construction is an ephemeral state. It's not a permanent state of the land, unlike other land uses which are a lot more permanent. If you build a structure, you are kind of confident it will be there four years in the future. But, with construction, you are expecting it to disappear, and that construction can be drawn out over years or months. It depends. It presents a unique challenge that mapping other unique land uses doesn't really have.
Norm Goulet: Peter, to get into the construction/developed construction/compacted, we obviously aren't going to match up between what we are reporting for E&S in the ground and what you are going to be mapping. How are we going to handle that?
Peter Claggett: The default is to make no change. The default is to move forward with all there is in Phase 6 and the approach to Phase 6. This group, and myself included, would only recommend a change if we think there's a way we can improve what we did in Phase 6. I think there's a possibility we could improve it. I don't have an answer to your question now, Norm. I think this is going to require more investigation. Like I said, I need more data. I need data from Delaware. I need data from Virginia. I need more data that I can look at different situations and different cases where maybe for certain types of construction activities. My guess is the mapped data is going to be more accurate. For other types of construction activities, I think the reported data is going to be more accurate. It very well may be, especially with staff constraints, that between now and September we can't come to a conclusion on how we are going to improve the process. In which case, we default to what we were doing in the past. At this point, I think we are still in exploratory mode. I don't think I'm going to be ready in a month from now to have answers either. I think the next time I should come back to you guys is maybe in two months.
Olivia Devereux: I know you've mentioned Delaware a couple of times. I got this data from Delaware several years ago for a separate project, and I got it from Elaine Webb. I just asked for

the NOI data, so maybe asking a different way might be helpful. The other thing is that I, too, would like to compare the BMPs that go on construction, those acres, with what you end up mapping. I know you are showing one county, but if you've got West Virginia, we can compare to the amount of Erosion and Sediment Control BMPs that they submitted in a particular year and see if that matches what you are mapping. If it doesn't match, then the logical conclusion is that maybe their BMP data is not right or maybe the land use isn't right even with these enhanced mapping capabilities, and I think we would need to sort that out before making a decision to move on. I was in the WQGIT when you all were talking about it, and the conversation did get distracting because it was all about what the soil quality is, compacted or not, which is not really what construction has represented in the past. It's really just represented the land use on which erosion and sediment control can be applied for BMP crediting. I just want to be able to do that comparison, so the states can report their BMPs. I always come around to the BMPs. I want to make sure that they can report it, get credit for it, and if it's not going to work for that purpose, maybe we need to think about the land uses a slightly different way in terms of classification. They'll be a barren or something else, but we need something for that BMP to be applied to.
Peter Claggett: That's a related issue. I think we need to make some adjustments to what we consider to be construction and what we roll up to be construction. Then we can look at those acres and aggregate at the county level compared to what's reported. Do we have enough acres mapped so that we can take construction from that? How do we do that? That's a related but separate question. What I was exploring here was just for the single year, what is the relationship between what is reported and what's mapped. It gets more complicated as you go back through time, because we only map every four years. So, how do you interpret what's happened in the interim? I'll look at the Delaware data, and I recall, Olivia, I think you sent me a link to the NOI data. The reason I am harping on Delaware is because that's a location where we have 40 years of LANDSAT data, 8 years of sentinel data on a monthly/bi-monthly basis. So, our temporal precision as far as how the landscape condition has changed, is a lot greater where we have those data. The new agreement between the EPA and Chesapeake Conservancy will expand that analysis to whole watershed. It just won't happen between now and September. It will take another year for those data to be completed, like September of 2026.
Olivia Devereux: Currently in Phase 6, the states report the acres of construction each year. During the progress reporting window, they report the acres of the BMP. So, we would need something updated to be accurate on an annual basis for BMP reporting, and I'm just not sure how that fits into the big picture.
Eugenia Hart (in chat): I'm sitting on the call for DE today. I can't speak to what data they have but I'll pass your request on to Holly Walker. Hopefully she can help you find what you need.
Auston Smith: If you had a particular county in Delaware where you have all their implemented BMPs, and we do from 2018-2022, which is that range of temporal change that you illuminated as the more recent one we will be looking at for Phase 7, could that not be used to provide additional QAQC opportunities? Could we use that to say we know what may have happened in four years, but maybe if there were construction BMPs in the first couple of years but suddenly there weren't based on permitted data, then might that provide a more accurate product?
Peter Claggett: Yeah.
Auston Smith: I don't know how we might begin to go about that process. Like Olivia, I live in BMP implementation world. Let us know if as you go over these suggestions, we can help with that.

Olivia Devereux (in chat): Eugenia, Thanks for passing on Peter's request. The data are in the Sediment and Stormwater Division where Ashley is the lead, not Holly's CHiP division.
Peter Claggett: Just to be clear, the data that Samuel sent, that's just giving the acreages on which BMPs can be applied. Those permit acres are not the same as the BMP acres. Or they are the same as the BMP acres?
Olivia Devereux: In some states they are the same, and in some states it's 95% or something like that. The states should be speaking up. These are their data. Sometimes it's like 95% of the acres they submit as construction are what's covered by erosion and sediment control. I think many states assume some noncompliance, even though it's a regulation. Maybe Bill, Arianna, people from the states can talk about how they do that currently to help Peter understand what's being done now compared to what can be done in the future?
Samuel Canfield: For West Virginia, and I don't know exactly what decision-making processes occur for this, and I'd have to look back at the QAPP, but currently erosion and sediment control level 2 is applied to 100% of the construction acres reported. So, we're making the assumption of 100% application of it at the moment. I'd have to look at the QAPP to understand why in full.
Olivia Devereux: Samuel, when you gave the acres to Peter, where did those acres come from? I understand where the BMP came from. Was it just the same data set?
Samuel Canfield: That was 2022 data for construction acres that we acquired from a database from environmental enforcement that they use. So, at that time, it would have been the same acres for construction acres and the same for the BMP acre for that erosion and sediment control BMP. It will be the same as the construction acres for that year. Did that answer your question?
Olivia Devereux: I think West Virginia is not alone. I think most states submit the same acres of construction land as the acres they plan to submit for the erosion of sediment control BMPs, and that's not exactly how Peter is thinking about it, or how Peter is doing it. I love that Peter is improving the land use, but I still want to make sure the BMP stuff works for the states.
Alicia Ritzenthaler: The way that DC is currently doing it is we're estimating construction acres based upon a five-year average of either development trends in the city or implemented acres. Then we're assuming there's 90 or 95% compliance, I'd have to go back and look, with our erosion and control plans. We do assume that there's some failure there. We're thinking about maybe revising how we estimate those construction acres, but that's sort of the framework. We estimate the number of acres and then we apply like a 90 or 95% level 2 erosion and sediment control, and that's what we provide to Jess and the Bay Program.
Bill Keeling: I go into the stormwater construction general permits database that has the permitted acres, and they list the disturbed acres in there. But, that is allowed to be disturbed over the five year period. Since 2014, our program does level 2, so I take the total acres disturbed, and I multiply that by a 40% factor. They would assume at any time, 40% is disturbed, and that's what we report as the disturbed acres to Jess, and we report 75% of that as being treated based on compliance estimates. So, I don't believe I have coordinates to give you, Peter.
Peter Claggett: Norm, if you do for Northern Virginia or something, that would be helpful.
Auston Smith: Samuel, thanks for sighting the QAPP. I've got the more recent version you helped me work through. Corroborating what Samuel said, it is assuming 100% for West Virginia. But, currently, acres of under 1 acre are not noted in that. For the history, 1993-2002, it is assumed anything between 1-3 acres may not have been captured. Peter, let me know if short summaries of E&S control from other jurisdiction's QAPPs might be useful.

Tyler Trostle: For PA, the method is being looked into a little further. The current way we have is similar to Virginia. Our chapter 102 section has disturbed acres per county. Those disturbed acres per county are reported basically into a power BI report, and those are used as direct inputs. I don't know exactly what our QAPP says off the top of my head, but we use those numbers directly out of there. I know the program itself is looking at ways to improve that way there are no potential overlaps between the first initial permitted disturbed acres versus renewal of permitted disturbed acres, because there's potential for overlap there. They are looking at new ways to be able to track and maintain this right now.
Peter Claggett: Tyler, do you guys have point data for area disturbed?
Tyler Trostle: I can look into it a bit further. Just from this report alone, there is not point data. It's a very generalized overview per county, but I will look into it a little bit further for you, Peter.
Peter Claggett: Even if you don't have it for the whole state, if a county has it that ends up rolling up to that report, then that would be helpful.
Alicia Ritzenthaler: We can probably get you some sort of point data, it might look like polygons, but we could make them into points. Based on the permits that are submitted for our approval for construction, we know where all those locations are. It's possible that we might be able to work together to get something out of our stormwater and groundwater database that has the location information you are hoping to get.
Peter Claggett: Polygons are better. Polygons are what I want. On the left-hand side of this slide, we don't know what is intended for this. 2.9 and 2.99. Are those overlapping areas? Are those mutually exclusive? Where's the polygon? What area does it actually cover, what area does it not cover, and how come there's no points out here for the rest of it? Having polygon data, you don't have to make them into points. Please don't. Just pass on the polygons, and that will be really helpful because it gives us a lot of insight.
Alicia Ritzenthaler: In the case of D.C., our polygons are probably going to be our parcels as opposed to disturbed area. I guess in our unique urban context, a lot of times the disturbance and construction is close to the extent of a parcel. It might be a reasonable comparison. You'd have to spot check that, but that's what we would maybe have for you.
Bill Keeling: In Virginia, make sure you are clear it is aggregated at the HUC. It's not individual permit information. It's the sum total for the HUC.
Peter Claggett: I do understand that, but I would want is where do those data come from that were aggregated by HUC and is there, at some point in the chain, georeferenced point or polygon data that was used anywhere in Virginia for the HUC 12 aggregation?
Bill Keeling: There are no polygons. The coordinates, in many cases, are suspect.
Peter Claggett: We have aggregated our land use data, the high-res stuff, the latest that we are going to roll out hopefully next month. We have summarized those by HUC 12 so at least in aggregate in Virginia, we can do a comparison of acreages of different classes and different change combinations with what you report to see how they align. Marilyn Yang did do a summary of the QAPPs for me, a bulleted summary of some of the techniques. We'll start putting this into a white paper so we can kind of track it and follow it. There's a lot of things that we all discuss at these meetings, and we need to make sense of it all and have a game plan moving forward. So, starting a kind of construction white paper for Phase 7 makes sense.
Samuel Canfield: This isn't exactly with the construction acres, but would it be beneficial to you to have either point or polygon data on forest harvesting? I know this is a completely different BMP land use topic, but I just was wondering about that.

Peter Claggett: I think we have that from you guys because Sarah was collecting that data, and she said she received forest harvest polygons from every state, or I think almost every state. I think maybe New York didn't have it. I'll double check with her and see where she got it from, but I think we have it, Samuel.

Action: Please continue to provide spatial data related to construction in your jurisdiction to Peter Claggett (pclaggett@chesapeakebay.net).

Action: Peter will return to the WTWG in May for an update on construction data.

11:05 **Recap of Actions and Decisions** (5 min).

11:10 **Adjourn**

Next Meeting: Thursday, April 3, 2025 from 10:00 AM – 12:00 PM.

Participants

Auston Smith, EPA
Caroline Kleis, CRC
Bill Keeling, VA DEQ
Olivia Devereux, Devereux Consulting
Jeff Sweeney, EPA
Scott Heidel, PA DEP
Norm Goulet, NVRC
Megan Thynge, EPA
Sam Canfield, WVDEP
George Doumit, DNREC
Tyler Trostle, PA DEP
Alicia Ritzenthaler, DOEE
Eugenia Hart, Tetra Tech
Arianna Johns, VA DEQ
Helen Golimowski, Devereux Consulting
Jessica Rigelman, CBPO Contractor
Mark Dubin, UMD/CBPO
Joshua Glace, Larson Design Group
Marilyn Yang, CRC
Bailey Robertory, MD DNR
Sabine Miller, MDE
Ruth Cassilly, UMD/CBPO
Peter Claggett, USGS
Elizabeth Hoffman, MDA
Eric Hughes, EPA

Acronym List

BMP: Best Management Practice
CBP: Chesapeake Bay Program
EPA: [US] Environmental Protection Agency
NRCS: [USDA] Natural Resource Conservation Service
TA: Technical Appendix
USDA: United States Department of Agriculture
WTWG: Watershed Technical Workgroup