

Wetland Workgroup December Meeting Minutes

December 15, 2020

Conference Call

Pam Mason (VIMS)	Megan Ossmann (CRC)	Chris Guy (USFWS)	Alison Santoro (MD DNR)
Sarah Hilderbrand (MD DNR)	Scott McGill (Ecotone)	Chris Spaur (USACE)	Kevin Du Bois (DoD)
Christine Conn (MD DNR)	Dave Goerman (PA DEP)	Todd Lutte (EPA)	Peter Claggett (USGS)
Elizabeth Feinberg (NFWF)	Michelle Henicheck (VA DEQ)	Mark Biddle (DE DNREC)	Alana Hartman (WV DEP)
Julianna Greenberg (CRC)	Melissa Yearick (USC)	Karl Blakenship	Joel Carr (USGS)
Danielle Algazi (EPA)	Greg Podniesinski (PA DCNR)	Katherine Stahl	Denise Clearwater (MDE)
Jake McPherson (Ducks Unlimited)	Carin Bisland (EPA CBPO)	Nita Settina (MD DNR)	Labeeb Ahmed (USGS)
Ann Wakeford (WV DNR)			

Action Items:

- Reach out to Pam and Megan if you are interested in working on the proposal for the STAC workshop on a systems approach to BMP crediting.
- Provide comments on the Virginia wetlands fact sheet to Kevin Du Bois (kevin.dubois@navy.mil) by **January 8th, 2021**.
- Reach out to Pam and Megan with ideas for future meeting topics.
- Running list of future meeting topics/presentations:
 - Joint meeting with Forestry Workgroup
 - Wetland mowing
 - Proposed changes to stream restoration protocol 1
 - Restore America's Estuaries coastal restoration toolkit (<https://restoreyourcoast.org/>)

Beaver Management as a Wetland Restoration Practice

Scott McGill, Ecotone Inc.

Scott gave a presentation on the ecological value of beavers and their role as partners in watershed restoration.

Questions/comments:

- Chris Spaur: How do you deal with existing forests that are in a dry floodplain? Do you want to avoid raising the water table in these areas?
 - When we're proposing beaver dam analogs and raising the water table we will probably lose some trees. Species that belong there and coevolve with beaver like sycamore and maple and river birch and willow can withstand quite a bit of inundation, a foot or more above the trunk. Some of the poplars and oaks won't be able to withstand that. A fully shaded system may not have enough forage for the beaver anyway.

Wetland Classification and Mapping Efforts

Peter Claggett and Labeeb Ahmed, USGS Lower Mississippi-Gulf Water Science Center

As a follow-up from their presentation at the October meeting, Peter and Labeeb provided an update on the CBP's wetland classification and mapping efforts.

Questions/comments:

- Pam: Where there is a lot of topography, I would assume that if you buffer that terrene wetland it would become a headwater wetland. In my neck of the woods where we have truly isolated wetlands they are pocosins or coastal bays, and truly not connected by surface water. It's hard to find those in the topography of the lower Susquehanna, they would be more likely to be seeps on slopes. There is a difference in the hydrology, surface vs. groundwater that you can't see in this map.
- Peter C: When we overlay the frequently flooded soils and the FEMA floodplains, in some cases they go all the way up to the head of the first order stream and in other cases they don't. FEMA only maps near structures and soils is a little more unbiased, but in terms of what people typically think of with first and second order streams, that's not what you're getting when you classify based on soils and FEMA. So this approach tries to go after the floodplain wetlands first and everything else becomes headwater, but we can also do it the opposite way. If it's a first or second order stream with a wetland near it, then it's a headwater wetland, or if it's a higher order than that, we can call it a high order wetland or floodplain wetland. There are 2 different approaches we can take.
 - Pam: I would be interested in the latter approach, but a concern with the FEMA floodplain mapping is that it is more accurate in some places than others. In this analysis the hyper-resolution streams is probably the best data you have.
 - Peter: Does anyone have any concerns with using first and second order to define headwater?
 - Dave G: We have experienced issues with stream ordering due to diverse geography and physiography. We had a study that came up with drainage area cutoffs for classifying streams with common geochemistry, biology, slopes, etc. We found it useful in our regulatory program and we are using it in our compensatory mitigation process.
 - Pam: I'm wondering if any of this has been applied in western piedmont areas of MD and VA? Is this data something Peter has access to?

- Dave: The data is available through the Natural Heritage Program website and has the attribute information.
 - Peter: It sounds like the drainage area is a good way to go. Do you have a publication with the drainage area thresholds?
 - Dave: Yes I can send that as well as a manual that has all the information. It crosses over into HGM classification nicely. Most areas in PA don't have truly terrene wetlands – even the ones that appear isolated are usually connected in some way.
- Pam: The preference is to develop a universal process, but given the fact that wetlands are so linked to hydrology and hydrology is so varied, we might need slightly different analyses for different regions. May need somewhat variable and hybrid approach.
- Labeeb: Dave – In the analysis that you are talking about, are the metrics for the drainage thresholds based on physiographic regions?
 - Dave: I don't think it's broken down that way – it's a 3-level classification system for streams and drainage area/watershed size class is one element of it. There's also a geology and gradient class and when you put all three together it gives you the classification.
 - Pam: This approach might be really powerful for the western part of the southern states and would work for PA and NY, and other areas would be okay with the approach you've already used.
 - Dave: I agree, this approach wouldn't work in the coastal plain.
- Alana H: I want to look at the hyper-res hydrography.
 - Peter: It's not available everywhere, the lower Susquehanna is the first place it was done. I'll share a viewer link that shows where it is available.
 - Alana: When I use GIS and try to bring in the NHD layer it shows all the little drainages, but in the field we can't find the streams because it's not wet all the time. I'm worried that this would overestimate the headwater wetlands, but maybe not since the other layers wouldn't show wet soils.
 - Peter: What we don't know with the hyper res streams is whether they are dry gulleys, or ephemeral, or intermittent. We know it's a concentrated flowpath.
- Chris S: Are any lacustrine systems also classified for the area? If so, what minimum criteria do you use to separate lacustrine systems from other systems?
 - Peter: Lacustrine systems will be classified as ponds and lakes in our current schema, not as non-tidal wetlands.
- Chris S: Is the extent of FEMA modeling considered? We hit situations sometimes where FEMA floodplains are mapped but in reality sites can be well upstream of where FEMA modeling is applicable?
 - Peter: Yes, extent of FEMA floodplains was considered which is why we incorporated frequently flooded soils too.
- Dave G: Aquatic communities classification:
<https://www.naturalheritage.state.pa.us/aquatic.aspx>

- https://www.naturalheritage.state.pa.us/Aquatic_GIS.aspx
- Denise Clearwater: It would be very interesting to apply high resolution LiDAR to identify small streams in the Coastal Plain – we know many areas are not identified on existing maps.
- Peter: High-res landcover and hyper-res hydrography live status map: <https://cicgis.org/portal/apps/webappviewer/index.html?id=262ce838a60048e9a0f136d904639f66>
- Peter: We need to finalize our classification in February. We will be able to present in February to propose the final classification and we can show examples from different physiographies.

Wetland Restoration Fact Sheets

Kevin DuBois, DoD Chesapeake Bay Program

Kevin talked about the joint effort between the workgroup and the CBP communications team to develop state-specific fact sheets that highlight how wetland restoration benefits other state programs, plans, and initiatives. A draft factsheet for Virginia has been completed and Kevin is soliciting feedback from the workgroup before the factsheet design and content is finalized.

Questions/comments:

- Carin Bisland: This is very attractive-looking, and I do think the communications folks were right to focus on these topics. Is this something you think will be useful for the Wetlands Work website or is that a different audience?
 - Kevin: I don't see why not- this can be used by regulatory decision-makers, it can be provided to landowners to show how wetlands are beneficial. We are hoping it will apply to more than just one audience.
- Pam: Is the idea to send this out as a draft for people to start looking at and send back comments?
 - Kevin: We would love to get VA-specific comments, but also feedback on the framework and how it could work in other jurisdictions. We have not chosen the next jurisdiction yet.
- Pam: One thing that occurred to me was the value of bird and wildlife watching as an economic value that should be relatively easy to find.
- **Action: Provide feedback on the factsheet to Kevin by January 8th, 2021.**

STAC Workshop Proposal: A Systems Approach to BMP Crediting

Pam Mason, VIMS/Co-chair

Pam led discussion revisiting the idea for a STAC workshop regarding a systems approach to BMP crediting. This 2021 STAC workshop would address emphasizing the habitat co-benefits associated with certain BMPs, such as wetland restoration, in addition to their impact on water quality. The discussion included a process for forming a steering committee and suggestions for engaging other GITs and workgroups.

Questions/comments:

- Pam: The thinking behind this was conversations around potential conflicts or lack of synergies in how we do BMP crediting, and how the credits themselves drive practitioners to different types of practices. Are there any dis-incentives to wetland restoration and creation due to other equally attractive practices that may be easier to do, or the projects may not be accounted for correctly?
- STAC has funding for a workshop that are typically convened live. Must be convened by 2022. The workshop funding helps cover the cost of people to attend and participate. We need to put together a team and after the workshop a report must be written. This proposal would fall under the first category – how would the Program address this issue?
- Pam: Is this still something members of the workgroup are interested in pursuing? We would like to partner with other GITs and WGs, particularly some of the other habitat-focused groups (stream health, forests, etc.)
- Carin: It would be great to figure out whether there is science behind the additive approach of restoring a system as compared to choosing one over the other. If there's science behind us being able to articulate what the efficiency would be, it would be great to do that.
 - Pam: Part of it is that wetlands are very infrequently chosen as the approach, so we want to make sure wetlands are on equal footing. If we can bring in experts on a systems approach, especially on BMP crediting, maybe we can find a way to remove dis-incentives. The forest buffer folks have a similar issue, so we are talking about this being a collaborative effort among different groups.
- Chris S: There have been other CBP workshops on the bioavailability of nutrients that the BMPs deal with that should come into play here particularly with regard to TN as a metric.
- Dave G: I think it is worth pursuing this. There are two prongs to this approach – PA supports a systems approach to crediting because its is more realistic and gives us the opportunity to explore ways of preventing this exclusionary BMP process. I also don't want to lose sight of the conflict incentive problem because we do see a lot of that, where structural BMPs are employed over natural BMPs because it is easier. I would participate.
- Kevin: I wonder if Scott McGill did any analysis of TMDL credits on his older stream projects and then again after he introduced beaver habitat (streamside trees) that then created wetlands - from single restoration strategy to a multi-ecosystem approach.
- Dave: Nature provides the best template possible, and when you look at nutrient pathways, there's not just one way of nutrient being fixed, etc. If you're too selective in BMPs, you lose some of those additional options.
- Denise Clearwater: I would be glad to participate. An added benefit would be that this system approach may help address issues of resource tradeoffs.
- Chris S: Use of TN is ecologically questionable BMP metric potentially disfavoring wetlands vs. streams. TN includes N forms that are poorly bioavailable. Suitable metric – it may disincentive wetlands vs. streams.
- **Action: If you are interested in developing this proposal, make sure you let Pam or Megan know. We will aim to plan a meeting for the first week or two of January.**

The Way Forward

- The next meeting: February 16th, 2021 2-4 pm