Wetland Workgroup April Meeting Minutes

April 20, 2021

Conference Call

Pam Mason (VIMS)	Megan Ossmann (CRC)	Karl Blankenship (Bay Journal)	Jeremy Hanson (Virginia Tech)
Sarah Hilderbrand (MD DNR)	Michelle Campbell (DC DOEE)	Chris Spaur (USACE)	Kevin Du Bois (DoD CBP)
Amy Jacobs (TNC)	Dave Goerman (PA DEP)	Steve Strano (NRCS)	Emily Farr (NOAA)
Elizabeth Byers (WV DEP)	Michelle Henicheck (VA DEQ)	Mark Biddle (DE DNREC)	Alana Hartman (WV DEP)
Greg Noe (USGS)	Melissa Yearick (USC)	Labeeb Ahmed (USGS)	Joel Carr (USGS)
Danielle Algazi (EPA)	Greg Podniesinski (PA DCNR)	Jen Dietzen (DC DOEE)	Denise Clearwater (MDE)
Katherine Stahl (USFWS)	Scott Phillips (USGS)	Margaret Zacharias (EPA)	Leah Franzluebbers (USFWS)
Madison Fink (EPA)	Amanda Atwell (WSSI)		

Action Items:

- Peter and Labeeb will put together a brief description of the issues and questions, and proposed rationale for classification and wetland functional assessment to share with the workgroup. Megan will share this with the group and the workgroup members will provide their input in time for Peter and Labeeb to make a decision by May 24th.
- Danielle will share the details of the Mid-Atlantic Wetland Workgroup Meeting on May 11-13 with Megan, who will share it with the workgroup.
- Reach out to Pam and Megan with ideas for future meeting topics.
- Running list of future meeting topics/presentations:
    - USGS Chesapeake Bay Theme 2 – Joel Carr (June)
    - Wetland credit duration – Vanessa Van Note (June)
    - Alternative financing work – Erik Meyers (June)
    - Joint meeting with Forestry Workgroup
    - Wetland mowing
    - Restore America's Estuaries coastal restoration toolkit (https://restoreyourcoast.org/)
    - Tidal marsh loss in coastal bays due to grid ditching (Rich Mason)
    - Communications efforts (Rachel and Jake)

Presentations from the meeting can be accessed here

Wetland Classification and Mapping Efforts

Labeeb Ahmed, USGS

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

Questions/comments:

- Pam M: It might be useful to have a phone call with you and Peter and some of the GIS experts at CCRM VIMS.
    - Denise C: Would be in support of keeping orange polygons because it shows you have a continuous system, and this reflects the reality on the ground.
- Elizabeth B: Have you looked carefully at the attributes on the NWI? I have a long query that I can share with you that throws out all of the unvegetated lakes and rivers. Haven't tried it on version 2 NWI, but you could do this via a query on attributes.
    - Labeeb: That would be helpful. Agree that we want to keep the orange polygons, but sometimes the NHD doesn't align with the hydrography locally. We end up with two different flow paths, which complicates work down the line at the fine scale.
- Chris S (in the chat): NWI palustrine system does allow for tidal I believe. Better than 1 ft would be spring high tide as vertical if that can be done.
    - Chris S: The NWI palustrine system predominantly covers nontidal wetlands dominated by forest, scrub-shrub, or emergent vegetation. However, it also includes comparable tidal wetlands that occur in areas where salinities are less than 0.5 ppt.
    - Greg N: That's correct -- tidal freshwater swamps are in NWI, but they are not mapped very well, with much of them mapped as nontidal. Driving the definition by spring tide, or other actual tidal dynamic information, is best but not always viable to model then map those tidal dynamics, versus just draping a fixed vertical threshold.
- Labeeb: Questions for the workgroup:
    - Is any group and/or agency already pursuing watershed level functional assessment?
    - Given the challenges, does the workgroup still want us to pursue mapping headwater vs. floodplain wetlands?
    - Work towards wetland functional assessment for Phase 7
        - Mark B: We did use the NWI version 2 for mapping, which did incorporate the NHD data as separate polygons. That changed a lot of the acreage within different classifications for wetlands. We do functional assessment based on the classification and the LLWW classification – we have the entire state with the NWI version 2 methodology and the landscape level functional assessment data. I'd be happy to participate in any smaller group that forms to address this.
        - Pam: I don't have any issue with using a functional assessment. My question would be related to a determination at a project-level implementation scale. The BMP panels had some attribution for wetland load reduction rates related

to headwater or floodplain (floodplain considered to have a greater opportunity for load reduction, so they were awarded extra credit). I don't think we need to be able to map it to still credit it, but just wanted to point out that this differentiation does exist, at least in terms of BMP credit. From the wetland panel perspective, or concern wasn't so much headwater, but more grafton ponds, carolina bays, and wetlands that are truly not within a meter of surface flow water.

    - Essentially, if we can't find a reasonable, repeatable, scientific rationale for separating floodplain vs. headwater, then we just have to deal with that.
- Elizabeth B: Did you ever have a chance to look at the landscape position method that I sent you that we use to tag our headwater wetlands?
    - Labeeb: Peter and I spoke about implementing something similar, but we don't have a lot of the data that is necessary at a fine scale, which is necessary for hyper-res.
- Pam: It would be helpful to know when you really need an answer to this question Labeeb. We can share this slide with other members who weren't able to make this call to get their input.
- Follow-up action: Peter and Labeeb will put together a brief description of the issues and questions, and proposed rationale for wetland functional assessment to share with the workgroup. The workgroup members will provide their input in time to make a decision by May 24th.

Sediment Science in the Chesapeake

Greg Noe, USGS

The USGS recently published a review of sediment science in the Chesapeake, with implications for management. Greg provided an overview of the summary, including what is known about fine sediment impacts on ecosystems, where sediment comes from, and what we know about how to manage to reduce sediment loads and impacts.

Questions/comments:

- Chris S**:** I would caution you to be aware of the drama that is often assigned to sediment and its effect on the Bay – the Bay can handle phenomenal sediment loading, were it not for the nutrient level. This fear of sediment can detract from the efforts made to reduce nutrient loading.
    - Greg: I agree with you – in absence of added stressors, it's not an issue. But there are stressors, which leads to a synergistic effect.
- Kevin D: What has changed over time that the sediment used to get to the coast, but now it's being captured?
    - Greg: It's two factors – 1) the magnitude of the watershed sediment load has dramatically decreased compared to peak sediment loading over the past 200 years.

Decreased by about half from 1900-1980. 2) With SLR, there is more accommodation space. Intertidal wetlands are trapping sediment, and as SLR rates have increased, rates of trapping are also increasing → less source, more sink.

- Pam: When we look at preventing stream bank erosion, is it possible to refine our understanding of soil make-up, so we can better target where we should or shouldn't prevent erosion based on grain sizes, etc.?
    - Greg: We are starting to get there – we have 68 sites with this type of data. We make predictions based on this and are working on models to have better geospatially explicit predictions of what the sediment characteristics are so we can better target sites.
    - Pam: I'm curious how this would apply to shoreline BMP, which has protocols to prevent erosion. The panel had concerns over the unintended consequences from shoreline stabilization methods that are being used to prevent sediment to get credit.
    - Greg: Our network is entirely non-tidal. But yes, this highlights the importance of our STAC workshop on unintended consequences.
- Publications:
    - Noe, G.B., M. Cashman, K. Skalak, A. Gellis, K. Hopkins, D. Moyer, J. Webber, A. Benthem, K. Maloney, J. Brakebill, A. Sekellick, M. Langland, Q. Zhang, G. Shenk, J. Keisman, and C. Hupp. 2020. Sediment dynamics and implications for management: state of the science from long-term research in the Chesapeake Bay watershed, USA. Wiley Interdisciplinary Reviews: Water 7:e1454. https://doi.org/10.1002/wat2.1454
    - Noe, G., K. Skalak, M. Cashman, A. Gellis, K. Hopkins, C. Hupp, D. Moyer, J. Brakebill, M. Langland, A. Sekellick, A. Benthem, K. Maloney, Q. Zhang, D. Hogan, G. Shenk, J. Keisman, and J. Webber. 2018. Reviewing sediment sources, transport, delivery, and impacts in the Chesapeake Bay watershed to guide management actions. USGS Presentation, IP-100396. doi.org/10.5066/P92JVLSP.
    - Noe, G.B., Hupp, C.R., Schenk, E.R., Doody, T.R., and Hopkins, K.G., 2020, Physico-chemical characteristics and sediment and nutrient fluxes of floodplains, streambanks, and streambeds in the Chesapeake Bay and Delaware River watersheds: U.S. Geological Survey data release, https://doi.org/10.5066/P9QLJYPX.
    - Noe, G.B., Hopkins, K.G., Metes, M.J., Ahmed, L., Claggett, P.R., Doody, T.R., Schenk, E.R., and Hupp, C.R., 2020, Predictions of floodplain and streambank geomorphic change and flux, streambed characteristics, and catchment inputs and exports of sediment and nutrients for stream reaches in the Chesapeake Bay and Delaware River watersheds: U.S. Geological Survey data release, https://doi.org/10.5066/P93OUWYZ.
    - Hopkins, K.G., Ahmed, L., Metes, M.J., Claggett, P.R., Lamont, S., and Noe, G.B, 2020, Geomorphometry for Streams and Floodplains in the Chesapeake and Delaware Watersheds: U.S. Geological Survey data release, https://doi.org/10.5066/P9RQJPT1.
    - Noe, G., K. Hopkins, P. Claggett, E. Schenk, M. Metes, L. Ahmed, T. Doody, and C. Hupp. In review. Erosional and depositional streams: Measuring and modeling geomorphic change and watershed material budgets.

STAC Workshop Overview: A Systems Approach to BMP Crediting

Megan Ossmann, CRC

Megan provided a brief overview of the recently approved STAC Workshop that is being led by the Wetland Workgroup. We then held a group discussion to seek suggestions for additional steering committee members and speakers for the workshop.

Questions/comments:

- Chris S: The example you brought up was perfect. The shorelines of the Bay erode naturally. Is giving BMP credit for shoreline stabilization an example of unintended consequences, in that we are preventing the development of shallow-water habitat?
- Pam: Stream restoration in PA is another great example – you get a lot of bang for your buck in terms of credit. Rather than just addressing the incision of a stream, there may be opportunities to include floodplain connection, or wetland restoration – that's what we mean by a systems approach.
- Denise C: I suggest we try to get someone from the Forestry WG on board.
- Kevin D: Is there an opportunity to hear from someone at the Trust or grant agencies to talk about how RFPs might be amended to provide the incentives for some of the concepts that we are talking about?
    - Pam: I think that could be a good opportunity because money is a big driver. Also NRCS would be good to hear from (potential speakers?).
- Pam: People are welcome to sit in on the steering committee at the beginning and provide input. We will also keep the workgroup up to date as we move along.
    - Kevin: I can't provide the expertise, but if you think I could play a role let me know.

The Way Forward

- Next meeting date: June 15th, 2021
- Announcements:
    - Danielle A: We are having a Mid-Atlantic Wetland Workgroup Meeting on the mornings of May 11-13. It's a free, technical workshop that we hold annually. Follow-up action: Megan will share the details of this meeting in the follow-up email.
    - Danielle A: Our RFA is coming out in the next two weeks, so keep an eye out for that.
    - Kevin D: We presented the VA wetland factsheet to the Management Board. There was some concern that the primary audience was the VMRC, so they wanted to get feedback from VMRC before we distribute it to wetlands boards. We are waiting to hear back.

Adjourn