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Description automatically generated**Stream Health Workgroup Meeting Minutes**

February 19, 2021, 10:00am-12:00pm

*Participants:*

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| --- | --- | --- | --- |
| Emily Bialowas (Isaac Walton Leauge) | Claire Buchanan (ICPRB) | Matthew Cashman (USGS) | Liz Chudoba (Alliance for the Chesapeake Bay) |
| Denise Clearwater (MDE) | Sandra Davis (US FWS) | Sadie Drescher (CBT) | Ari Engelberg (MD DNR) |
| Rosemary Fanelli (USGS) | Steve Faulkner (USGS) | Liz Feinberg (NFWF) | Julianna Greenberg (CRC) |
| Anne Hariston-Strang (MD DNR) | Alan Hartman (WV DEP) | Ken Hyer (USGS) | Rikke Jepsen (ICPRB) |
| Neely Law (Fairfax County) | Mike Lovegreen (Upper Susquehanna Colaition) | Mike Mallonee (ICPRB) | Kelly Maloney (USGS) |
| Derrick McDonald (PA DEP) | Kip Mumaw (Ecosystem Services LLC) | Greg Noe (USGS) | Greg Pond (EPA) |
| Scott Phillips (USGS) | Nancy Roth (Tetratech) | Mark Southerland (AKRF) | Chris Spaur (US ACoE) |
| Bill Stack (Center for Watershed Protection) | Scott Stranko (MD DNR) | Peter Tango (USGS) | Renee Thompson (USGS) |
| Rich Walker (USGS) | Amy Williams (PA DEP) |  |  |

**Introductions and Announcements *– Co-Chair Neely Law, Julianna Greenberg (CRC)***

* 2021 Meeting Dates
* Updates from the Habitat Goal Implementation Team Fall Meeting
* Wetland Riparian Area STAC Workshop
* Water Temperature STAC Workshop
* Update on status of the GIT funding proposal

**USGS White Paper Updates – *Rosemary Fanelli (USGS)***

* Bill Stack: Did you include state BSID studies that are used to establish biological TMDLs?
  + Matthew Cashman: This literature review only includes scientific journals but we do have a separate analysis to compare/contrast to state 303d listings and TMDLs.
* Scott Stranko: Please present to the Toxic Contaminants Workgroup
  + Rosemary Fanelli: Yes, Anecdotal evidence says that toxics have been important but they are often not measured. Still a great deal of uncertainty there are just not that many studies that measure toxics right now
* Scott Stranko: Can you expand on 303d lists? What is your plan on assessing that in your results?
  + Rosemary Fanelli: Anyone who reported ecological thresholds could be compared to the 303d list. Haven’t finalized what we’re planning to do with that though.
* Peter Tango: Did you investigate the influence of Invasive Species on bug communities?
  + Rosemary Fanelli: So far we have not found any studies looking at this. If you have any, please send them to us.
* Scott Phillips: I am surprised that sediment was not found to be important in urban settings.
  + Matthew Cashman: An aspect of this may be reflected in the habitat variable. Many (though not all) of those are reflecting bed habitat conditions, which are often sediment related.
  + Chris Spaur: Excess sediment is generally most important stressor nationally but not in circumstances where other stressors can be more extreme (urban, mined, etc)
  + Rosemary Fanelli: Yes, it was a bit surprising to us as well and it could be how we identified specific stressor measures into general sediment vs habitat categories. I plan to lean on Matthew’s geomorphology expertise to finalize categories.
  + Chris Spaur: I think clarifying when/where excess sediment is likely to be a principal stressor could be an important contribution to this work. My opinion is that it’s over-emphasized to the point of confusion.
  + Scott Phillips: Based on state 305b reports, sediment is the main cause of water quality impairments in streams. Interesting to see this more detailed analysis showing some differences based on landscape setting.
* Denise Clearwater: Sediment from eroding banks may also be associated with riparian condition and increased discharge.
* Anne Haristron-Strang: Why are riparian habitat and leaf litter not directly affecting the biological community? Or stream temperature?
  + Rosemary Fanelli: They probably are, But studies may not report or measure those factors. If they only report a riparian metric, we have to infer what it is about that riparian factor that is driving community patterns.
* Sadie Drescher: It will be very important to convey clearly to multiple audiences the limitations of this work (ie the lack of data presented/studied) and how that’s used for the findings, to try and avoid unintended use of the results.

**Updates on the Healthy Watersheds Assessment – *Renee Thompson (USGS)***

* Link to the Healthy Watersheds Assessment (HWA) that Renee Thompson presented
  + <https://gis.chesapeakebay.net/healthywatersheds/assessment>
* Chesapeake Bay Open Data Portal
  + https://data-chesbay.opendata.arcgis.com
* Please follow up directly with Renee Thompson regarding any questions about the HWA

**Filling Sampling gaps through Chesapeake Monitoring Collaborative – *Liz Chudoba and Emily Bialowas (Chesapeake Monitoring Collaborative)***

* Rikke Jepsen: We are always looking to improve our pool of reference sites. If you have a way to select sites that you expect that to be of interest for that we would appreciate it.
  + Kelly Maloney: Reference sites are key. Also, some areas around the cities have been well sampled and have high density. Would like to aim towards gap filling if we can. We’re doing landscape scale analysis work that might help. Are you only focusing on smaller scale sites?
    - Emily Bialowas: We’re only going to wadable streams.
* Neely Law: Sometimes we’re basing BIBI scores on one sample. Is there a strong need to go to those watersheds that only have one or two samples and add samples to decrease statistical uncertainty?
  + Claire Buchanan: When you have fairly uniform land use and water use, increasing sample size within a HUC 12 isn’t that important. If the land use is heterogeneous, we absolutely need multiple samples.
  + Neely Law: That would be something to consider. Given how many samples you think you can generate, it would be great if you could work to improve our understanding of the watershed. Supplement areas that have insufficient sample size or areas where there are none.
* Kelly Maloney: Date of sampling is also really important. More data from places that haven’t been sampled in a while would be good.
  + Emily Bialowas: All of the samples are based on the last two six-year cycles, so they are 2006-2011 and 2012-2017. Should we only be looking at the last six-year cycle? Are both recent enough?
    - Neely Law: Are the samples taken from the same location between the two periods?
    - Claire Buchanan: Most of the sampling are random stratified. There is a strong randomness, so it’s by chance if an area doesn’t have any samples.
    - Kelly Maloney: There are just some areas that get sampled more than others. Maryland has both the state and some counties doing sampling, but that’s not the same elsewhere. PA has a really large area to sample.
* Greg Pond: A lot of the samples seem to be longitudinal in the Carlisle area. I would say focus on sampling more streams rather than more on the same stream. I would also advocate for more reference sites
  + Emily Bialowas: How should we select those reference sites?
  + Greg Pond: Landowner permission will narrow it down for you. Focus on state and county lands and you often end up in more forested areas
* Liz Chudoba: Should we focus more on the more recent sampling dates from the BIBI?
  + Claire Buchanan: Just do what is possible and Kelly will fill in the gaps with his model.
* Peter Tango: Is the HWA something that could be informative for picking reference areas?
  + Renee Thompson: Perhaps in MD, Tier II watersheds are the healthy watersheds in MD. I will defer to Scott. Happy to work with Liz and Emily to set up a filter or filters to look more into it.
  + Peter Tango: The brook trout vulnerability assessment at 6o C temp change would also be informative for selecting high quality reference areas.
  + Renee Thompson: Sure, high riparian forest, highly protected areas. We can also look at catchment by percent impervious surface
* Kelly Maloney: The National Fish Habitat Partnership also has a disturbance measure for 1:100,000 NHD catchments based on fish (<http://www.fishhabitat.org/>) that may also be useful to identify sites. StreamCat (<https://www.epa.gov/national-aquatic-resource-surveys/streamcat-dataset-0>) may also be helpful.

**Final Thoughts**

* Nany Roth: The Maryland Water Monitoring Council has a subcommittee on stream restoration monitoring. Bill Stack is heading up the reboot of the group. Bring people together and look at stream restoration and the outcomes that we’re getting from it. This week’s meeting was mostly a brainstorming session so stay tuned for more.
* Greg Noe: I will offer to present the USGS review of sediment science and impacts at a future WG meeting.

**Adjourn**