Stream Health Workgroup Meeting Minutes

June 11, 2021, 10:00am-12:00pm

Participants:

Neely Law (Fairfax County)	Sara Weglein (MD DNR)	Alison Santoro (MD DNR)	Anne Hairston-Strang (MD DNR)
Denise Clearwater (MDE)	Zach Norris (Cacapon Institute)	Matthew Cashman (USGS)	Ari Engelberg (MD DNR)
Renee Thompson (USGS)	Kristen Saacke Blunk (Headwaters LLC)	Claire Buchanan (ICPRB)	Mike Lovegreen (USC)
Emily Bialowas (Isaac Walton Leauge)	Alana Hartman (WV DEP)	Rich Walker (USGS)	Rikke Jepsen (ICPRB)
Kip Mumaw (Ecosystem LLC)	Nancy Roth (Tetratech)	Greg Noe (USGS)	Kelly Maloney (USGS)
Chris Spaur (US ACoE)	Frank Rodgers (Cacapon Institute)	Scott Stranko (MD DNR)	Brock Reggi (VA DEQ)
Louise Finger (VA DGIF)	Mark Southerland (AKRF)	Amy Williams (PA DEP)	Nathaniel Gillespie (USFS)
Mike Mallonee (ICPRB)	Cora Alderman	Katie Ombalski (Woods Waters)	

Introductions and Announcements

No announcements.

Membership Check-in

- Alison S: We are putting together a survey to verify representation to make sure all jurisdictions are represented – keep an eye out for that.
    - Renee T: We also struggle with engagement in the Healthy Watersheds GIT. Can you give some background on how this survey came about?
    - Alison S: This type of survey was done about 2 years ago. We haven't seen much participation from groups less connected to the Bay. The survey will help us determine who the representative is for each state, as well as try to increase diversity and representation in our membership.

Culvert Assessment for Fish Passage: A West Virginia Case Study – Zach Norris, Cacapon Institute

Presentation can be viewed here

Questions/comments:

- Frank R: As a citizen science exercise, the interns we engaged with the pre-surveys now all see culverts in a different light. This was eye-opening about the impacts of culverts.
- Greg P: Is magnitude and length of upstream sediment deposition considered?
    - Zach: Not that I know of. Part of the data we collect at each survey is whether there is an inlet drop, which in some cases may show that there is sediment deposit upstream.
- Neely L: Is there any developing guidance for culvert designs, specific to stream restoration projects?
    - Kip M: We've done a handful of stream simulation with Forest Service guidance, and I will put that in the chat.
        - https://www.fs.fed.us/eng/pubs/pdf/StreamSimulation/hi_res/%20FullDoc.pdf
    - Kip M: We also have found fish xing program to be useful for individual site and species assessment: https://www.fs.fed.us/restoration/Aquatic_Organism_Passage/index.shtml
    - Nat G: USFS holds stream simulation training every year. This working group could request a training in 2022 or 2023 for team members and work with some partners to cover the cost.

SHWG Work Plan Review

Highlighted workplan

Presentation can be downloaded here

- Neely L: We will be breaking out into groups to review our workplan. Green items are on track, yellow items have encountered minor barriers, and red items have not had any progress/encountered major barriers.
    - We will have 40 minutes in the groups and a 20-minute report-out. We will use Jamboard to record our thoughts in each of the groups. Four topics of discussion (1 per breakout group):
        - DEIJ
        - Climate Change
        - Permits, Training, and Coordination
        - BIBI/Metrics

- Goal: Review existing workplan actions under relevant management strategies, determine if remaining work should be included in next two-year workplan and if changes are needed, and discuss potential new actions to be added.

Summaries from breakout groups/notes from Jamboard:

1) **DEIJ**
    a. Siting and resources to stream health restoration project could better account for equitable distribution of funding.
    b. Using EPA's map of low-income, disadvantaged (etc) communities when prioritizing projects
    c. Prioritize streams that are on public lands/public use, ex: 303d list
    d. Work with Education Workgroup to include students for restoration education, opportunities to work in the field; "trout in the classroom" etc, include schools that may not have funds to implement
    e. Bringing representatives of disadvantaged communities into the SHWG
        i. Anacostia Watershed group, DC Green Work
    f. Add DEIJ to strategy 5.1, like perhaps internships, mentorships, work with job corps groups to train more stream restoration professionals or citizen scientist
    g. Climate Change and DEIJ - increased flooding, etc; lower income communities don't have resources to fix/leave the area
    h. Outreach to other community groups focused on urban or disadvantaged communities to join the working group.
    i. How can we increase inclusion of local community needs and wished for stream restoration? E.g. local residents may prioritize different elements in the design, such as "save more trees" or "don't flood the backyard"
    j. Educational opportunities for local communities to understand stream health
2) **Climate Change**
    a. Climate change could have a deleterious effect despite stream restoration efforts. Kelly's study found that climate change and land use change cannot easily be separately addressed.
    b. Wetter, warmer weather with flash droughts and rising air temperatures combined with urbanization would call for more stormwater BMPs (incl. the culvert projects), more forest buffers, and more infiltration practices.
    c. Bring spatial analysis and ecological assessment technical assistance to support community engagement to identify projects that meet community needs and environmental priorities.
    d. Use the BIBI assessment data to highlight areas where temperature and streamflow changes would be most critical to address in conjunction with Climate Resilience and other workgroups
    e. Need for 'agreed upon' water temperature models and forecasts. Some exists of various benefits, but no universal or 'accepted' model

f. M Cashman was involved in NOAA Northeast Habitat Climate Vulnerability Assessment. Rivers was a small part, but there were concerns about how it was done/not best for river
g. More uncertainty with flow and precipitation pattern in regional models compared to air temperature
h. Might need new metrics (not use BIBI) that might be more sensitive to climate change stressors (water temperature and flow differences, erosion). Potential w/ fish or bugs

3) **Permit, Training, and Coordination**
   a. Still relevant to have a restoration permit committee because it is inconsistent among different regions
   b. SHWG started some work on recommendations for restoration permitting in MD and with USACE – there is the nationwide permit 27 (it is going to be renewed) – might be an opportunity to work with USACE
   c. Useful to define what states and what agencies are integral to the permitting process
   d. A few years ago there was a committee, information did come out, but it did not necessarily go beyond a survey
   e. Stream restoration practices for TMDL credit may have unintended consequences which affect other Bay Program commitments.
   f. MDE also needs to be part of discussion on permitting in MD. MDE would have conditions added to NW 27 via WQC and CZM.
   g. Other work groups related to stream health include Forestry, fish passage, wetlands, fish habitat, urban stormwater. More coordination is needed between groups
      i. It seems that a coordinating meeting should take place first to see where goals overlap and where some other activities may be in conflict, and come to a resolution, and meet periodically to ensure that goals are on track
   h. There are many opportunities for education and sharing research on restoration and stream health – SHWG does not have to create something new
      i. Need a point person to identify these training opportunities to put them on a calendar for SHWG
   i. What other workgroups would SHWG be interested in being connected to – the Habitat WGs? People already attend other WG meetings – do they need to attend in the capacity of a SHWG member to complete this performance target?

4) **BIBI/Metrics**
   a. What do we mean by % change? e.g., good to excellent. There is a lot of variability within each site. Overall NET change from very poor, poor, fair, good, excellent.
   b. Net overall change in either Area or Stream Mile

c. for example: collapse into 2 categories Good to Poor, Poor to Good
d. Broader categories are harder to explain the why
e. Look at the data first (analyze first, assure you can explain why, then simplify)
f. Two step approach (very poor, poor) (fair) (good, very good)...? 100 runs calculation program randomly chooses, good stays good, but there is more variability in the fair category. Kelly M. random forest model does not perform as well with Fair.
g. Keeping target audience in mind: CBP report cards, Chesapeake Progress (more simplified). Other may want or need more detail.
h. 0-100 is more robust, mean, median, error bars (can help with understanding natural variability) communication can be more simplified to categories.
i. Bibi Score and Bibi rating will be available.
j. Scores are relative for each bioregion. So you have to be careful comparing across regions.
k. Link modelled and monitored results to land use change metrics?
l. Thresholds of fair, good, poor etc and why are useful for other groups to understand signals of change, vulnerability and resilience.
m. Can the Chessie Bibi be utilized to relate the Chesapeake Healthy Watershed Assessment metrics to in stream health? (similar to MBSS in the Maryland pilot healthy watersheds assessment)
n. Report at catchment or miles?

Wrap up and Next Steps

- Neely: A draft workplan is due to the MB in August, which will likely be before our next meeting. We will be checking in over email while we update the workplan.
- Link to the report on Zach's project: https://www.chesapeakebay.net/channel_files/42367/cbp_git_scope_6,_2019,_culvert_report,_cacapon_institute.pdf

Adjourn