Stream Health Workgroup June Meeting
Friday, June 17, 2022, 10:00-12:00 ET
Link to Meeting Materials

PARTICIPANTS:

Alison Santoro, MD DNR	**Brittney Flaten,** DE DNREC	**Brock Reggi,** VA DEQ	**Camille Liebnitzky,** City of Alexandria (VA)
Chris Guy, USFWS	**Claire Buchanan,** ICPRB	**Denise Clearwater,** MDE	**Derrick McDonald,** PA DEP
Emily Zollweg-Horan, NY DEC	**Erin Penzelik,** PA DEP	**Greg Noe,** USGS	**Iris Allen,** MD DNR
Katie Ombalski, Woods & Waters Consulting	**Katlyn Fuentes,** CRC	**Kelly Maloney,** USGS	**Kristen Saacke Blunk,** Headwaters LLC
Lydia Brinkley, Upper Susquehanna Coalition	**Mark Hoffman,** Chesapeake Bay Commission	**Mark Southerland,** TetraTech	**Megan Fitzgerald,** EPA
Sadie Drescher, Chesapeake Bay Trust	**Sally Claggett,** USFS	**Sandra Davis,** USFWS	**Sara Weglein,** MD DNR
Scott Heidel, PA DEP	**Scott Stranko,** MD DNR	**Taylor Woods,** USGS	

MEETING NOTES:

ANNOUNCEMENTS:

- **2021 GIT FUNDING PROJECT:** "*Data Review and Development of Multi-Metric Stream Health Indicators*"
  - Tetra Tech was awarded the project
  - Award letters were sent out from CBT
  - **Mark Southerland** will be the lead, along with Rich Starr
- **PERSONNEL CHANGES:**
  - **Dr. Kandis Boyd** has been named the new Director of the EPA's Chesapeake Bay Program. The press release can be viewed here: https://www.epa.gov/newsreleases/epa-names-dr-kandis-boyd-new-director-chesapeake-bay-program
  - **Emily Bialowas** no longer works for Izaak Walton League of Americas as of 5/13
  - **Kevin Krause** no longer works for USGS Ecological Science Center as of 6/3
  - **Scott Carney** has retired from PA DEP. Please send emails to Scott Heidel at scheidel@pa.gov

STREAM RESTORATION PERMIT COMMITTEE:
Alison Santoro & Sara Weglein, MD DNR

- Steering Committee is working on a survey to distribute to practitioners, regulators, and the community. This survey will help identify issues in the stream restoration permit process, with a

KEY: ACTION ITEMS, KEY TAKEAWAYS

goal of bringing practitioners and regulators together to identify issues and actions to streamline the permitting process moving forward. This is Action 4.1 of the 2022-2023 Logic and Action Plan.

- Following the April Steering Committee Meeting, a permitting survey was drafted. This survey is currently undergoing a final editorial phase and is under review by the Steering Committee as well as the Habitat GIT Chairs and Coordinator.
- An update on this project will be provided at the August Stream Health Workgroup meeting on 8/12, at which point, the survey will be distributed.
- **For those interested in participating in the steering committee, please contact Alison Santoro (alisona.santoro@maryland.gov), Sara Weglein (sara.weglein@maryland.gov), or Katlyn Fuentes (fuentesk@chesapeake.org)**

HOW WE'RE USING THE POOLED MONITORING INITIATIVE RESEARCH:
Sadie Drescher (Chesapeake Bay Trust)

- **POOLED MONITORING INITIATIVE:** Pools resources to support scientists who answer your key restoration questions and then provides those answers back to those that asked the question
  - Desire to support the best, most cost-effective practices at the most optimal sites, but difference of opinion sometimes exist and questions about the performance and function of some of these practices persist
  - Funders pool resources to answer restoration questions posed by regulatory community & practitioners
  - Increase power, objectiveness, and ability to know what works
  - Bring science back to those that can use it for their work
  - Provides solutions
- **PROGRAM HISTORY:**
  - MD DNR, US EPA CBPO, and the Trust Pooled funding to offer 1st Restoration Research Award Program
  - Request for Proposals contained the top questions from earlier meeting/discussions
- **RESTORATION RESEARCH AWARD PROGRAM:** Guided by the Pooled Monitoring Advisory Committee
  - Supported 38 projects since FY15 at >$7M
  - Uses scientific reviewers across the world to vet applications
  - Runs all applications through a "management review"
  - Projects are managed as contracts
  - Questions are cycled off/on the RFP each year
  - All awards, progress, and program products are online at: https://cbtrust.org/grants/restoration-research/
- **PROJECT EXAMPLE:** Tree-Tradeoffs in stream restoration projects: impact on riparian groundwater quality (**PI:** Suja Kaushal, University of Maryland)
- **IMPROVING THE SUCCESS OF STREAM RESTORATION PRACTICES:** research focused on 3 questions

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1. Linking stream restoration success with watershed and design characteristics
2. Design, project, and watershed factors that affect structure success
3. Comparison of 1-D and 2-D HEC-RAS modeling for stream restoration design

- **PROJECT EXAMPLE:** To Evaluate existing instream structures with the aim of informing structure design and siting
  - Structures were evaluated in the field and watershed project and design characteristics were correlated to structure assessment
  - **What is structure success?**
    - Increased urbanization post-construction is negatively correlated with structure performance
    - Constructed riffles with downstream grade control perform better
    - Determining the effects of legacy sediment removal and floodplain reconnection on ecosystem function & nutrient export
  - **Likely outcomes and questions about legacy sediment removal & floodplain reconnection:**
    - **Vegetation:** increased dominance of hydric vegetation; change in community composition
    - **Water chemistry:** decrease in N, P, and TSS due to increased overbank events and longer residence time
  - **STUDY SITES:** 6 restored watersheds and 3 others (4 agricultural, 2 suburban, 1 large-scale, and 2 forested watersheds)
  - **FIRST MINE BRANCH:** Carbon availability appears to be limiting denitrification
- **SUMMARY – WATER: Link to final report**
  - Agricultural land use is the biggest driver of N concentrations
  - Denitrification appears to be limited by carbon
  - No significant difference in N after restoration
  - During stormflow:
    - Hints of slightly lower fluxes on downstream end
    - Of interest: storm N shifts with more ammonia & dissolved organic N (or NO_3 decreases more than total dissolved N)
- **RESULTS:**
  - Stormflow more important in headwater streams and baseflow more important in lowland streams – **REPORT**
  - Urban stream restorations didn't improve the benthics for ecological uplift – **REPORT**
  - 23 to 43 weeks of sampling are needed to "see" restoration impact and determine loads – **REPORT**
  - Most monitoring programs are coarse and likely ineffective at evaluating the program's success; a decision support tool was developed to help decide if monitoring will be worthwhile; evolution to hypothesis-driven monitoring is recommended - **REPORT**
  - **Climate impacts to restoration practices: REPORT, FACT SHEET, FORUM .ppt**
  - Living shorelines accreted sediment & SAV beds were not impacted by living shoreline **– REPORT**

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- o **Evaluating impacts of freshwater salinization on mobilization of nutrients and metals from stormwater best management practices:** FINAL REPORT
- **COMMUNICATING RESULTS:**
  - o Annual Pooled Monitoring Forum in June
  - o Webinars relay results to the Pooled Monitoring Advisory Committee throughout the year
  - o Fact sheets are created for each project
- **COMMENTS/QUESTIONS:** If you have additional questions or comments, please contact Sadie Drescher (CBT Vice President of Programs for Restoration; sdresher@cbtrust.org; 410-974-2941 xt 105) or Jana Davis, PhD (CBT President; jdavis@cbtrust.org; 410-974-2941 xt 100)
  - o **Mark Hoffman:** What do you mean by "MD MS-4 permit offers pooled monitoring option"?
    - ▪ **Sadie:** There is an option to put funding towards the Pooled Monitoring Initiative instead of BMP effectiveness.

UPDATE ON THE CHESSIE BIBI ANALYSES:
Claire Buchanan (Interstate Commission on the Potomac River Basin)

- **Questions that can be answered using monitoring data on a Bay Watershed scale:**
  - o What is the overall percentage of "healthy" streams in the Chesapeake Bay Watershed?
  - o Is the overall percentage of "healthy" streams increasing over time?
- **More complex questions that require Monitoring & Modeling data at a catchment scale to answer:**
  - o Can restoration efforts improve stream health?
  - o What efforts (e.g., protections, BMPs, etc.) are most effective?
- Area-weighted method is used to answer Bay-scale questions
- Discrepancies in data are largely related to differences in sample distributions. There is a heavy concentration of samples in the DC Metropolitan area.
- Not all HUC12s are sampled in each of these periods.
  - o Conservative estimating might give a better idea of watershed stream health
- The odds of sampling streams of higher quality appears to be increasing
- Creating a Stream Health Baseline for the Chesapeake Basin from Monitoring and Model Data (Buchanan et al, 2018): baseline period (2005-2011)
  - o Monitoring results combined with early modeling results
  - o Almost entire area of Chesapeake Watershed had a stream health rating
- **RESULTS:**
  - o Models were redone for land use layer closest in time
  - o Model results available for almost all catchments in Chesapeake Bay Watershed
  - o Results currently in review
- Still waiting approval for Kelly Maloney's modeling data
- The next data period will be from 2018-2023, and another data call will be going out in 2023 for data starting in 2024.
- There are several publications in the works right now.

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RIPARIAN FOREST BUFFERS WORKSHOP:

Sally Claggett (USFS)

- Forest Buffers is not on track to achieving their 2025 Outcome
  - Target: 900 miles of planted riparian forest buffers annually
  - 2,539 miles/year would be required to meet WIP3 goals for 2021-2025
- **This workshop took place on April 27th, 2022, and was sponsored by the CBP Management Board and Principal Staff Committee members.**
- **Workshop Purpose:** the workshop focused on accelerating Riparian Forest Buffer (RFB) implementation to address the scale and immediacy of the needed effort on a state-by-state basis. Each state presented their draft Action Strategy for Buffers, and these strategies were the core of the workshop.
- **Workshop Objectives:**
  - Discuss state RFP Action Strategies for expanding forest buffers
  - Develop recommendations for specific roles for the Partnership in advancing buffer goals
- During the workshop, each state had the opportunity to share their own Action Strategies and facilitate feedback from those in attendance.
- States agreed to finalize all of their plans within a two-month timeframe and would have their completed plans by end of June 2022.
- **[Chesapeake Riparian Forest Buffer 2022 Leadership Workshop: Summary and Next Steps](#)**
- **QUESTIONS/COMMENTS: If you have any additional questions or comments pertaining to the workshop, please contact Sally Claggett (sally.claggett@usda.gov).**
  - **Alison:** What efforts are being made to make distinctions between forested buffers, forested wetlands, upland areas, etc.?
    - **Chris Guy:** The Wetlands Workgroup has three efforts regarding crediting, one of which is BMPs. The second effort is direct funding from EPA to revamp the accounting system, to determine how best to categorize these things, and get credits for them. This project is currently in its infancy and is approximately one year out from being able to be used. The third effort is the [Wetland Outcome Attainability Workshop](#), which will be held August 2-3, 2022.
  - **Denise Clearwater:** Regarding crediting, if the wetland is within the area claimed for the increased floodplain connection, the wetland is not counted for crediting - it might be counted toward other gains.
  - **Greg Noe:** I had thought that forested wetland = emergent wetland with respect to wetland restoration and creation BMPs?

CHRIS GUY's UPDATE ON WETLAND BMPs:

- *Chris Guy shared the following table summarizing analyses he recently conducted regarding Jurisdictional Wetland Commitments in Watershed Implementation Plans.*

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Watershed Implementation Plan Wetland Commitments by Jurisdictions

State	Wetland Restoration (acres)	Wetlands Creation (acres)	Wetlands Enhancement (acres)	Other Restoration (acres) (ORA)
DC	0	0	0	164
DE	14,174	1,125	39,298	13,765
MD	13,620	0	0	87,473
NY	6,289	0	0	89,905
PA	4,400	0	0	88,035
VA	3,666	376	522	385,029
Total Acreage	**42,149**	**1,501**	**39,820**	**664,372**
Outcome	**85,000**		**150,000**	
Remaining acreage (= Total Acreage - Outcome)	**-41,350**		**-110,180**	
Surplus acreage (= ORA - Outcome)				**429,372**

Red color indicates BMPs in the jurisdictional WIP that may or may not be wetlands, but have been identified in another category (e.g., stream restoration or living shoreline, forest buffers, etc.).

WIP restorations that were identified by feet were converted to acreage by using the formula **Acres= Restoration feet/(209*4)**

FIGURE 1 – *This analysis, completed by Chris Guy (USFWS, HGIT Coordinator), explored the current Watershed Implementation Plans (WIPs) by jurisdiction and their Wetland Commitments. **Please note that all numbers contained herein should be considered rough estimates and the data have not been reviewed for QA/QC.***

- **QUESTIONS/COMMENTS PERTAINING TO THIS TABLE:**
  - **Denise Clearwater:** Does restoration include rehabilitation?
    - **Chris:** No that is not an outcome for wetlands. It's Restoration, Creation, and Enhancement.
  - **Denise Clearwater:** Living shorelines are a shoreline stabilization practice in terms of a BMP but not as wetlands

MEETING ADJOURNED.

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