



Habitat Goal Implementation Spring 2022 – Meeting Minutes

May 4th - 5th, 2022

All Meeting Materials from both days can be found on the CBP Calendar ([DAY 1](#)) ([DAY 2](#))

DAY 1: Wednesday, May 4, 2022; 13:00-17:00 ET

[Link to Day 1 Meeting Materials](#)

13:00 – INTRODUCTIONS & ANNOUNCEMENTS

Habitat GIT Co-chairs, Bill Jenkins (EPA) and Gina Hunt (MD DNR)

- **PERSONNEL CHANGES:** Megan Ossmann (CRC) is no longer a Staffer at the CBP. Katlyn Fuentes is now the sole HGIT Staffer until a new hire is brought on later this summer.
- **GIT FUNDING ANNOUNCEMENTS:** 4 projects (Brook Trout, Fish Passage, Stream Health, & Wetlands Workgroups) were selected for funding and project bids are currently under review.
 - **UPDATE AS OF 07/2022** – Both the Brook Trout and Wetlands proposals will be readvertised for bids in the next several weeks.
- **NEWS:** NOAA selected the Middle Peninsula in Virginia as the new Habitat Focus Area. [Read the press release here.](#)

UPCOMING FUNDING OPPORTUNITIES: These documents and additional information on these opportunities can be found on the [CBP Calendar](#).

- **America the Beautiful** (provided by Jake Reilly): the RFP has been released: <https://www.nfwf.org/programs/america-beautiful-challenge/america-beautiful-challenge-2022-request-proposals>
 - **Deadline:** July 21, 2022; First round of awards will be announced in November 2022.
 - Majority of 1st year funding for the Chesapeake Bay is from the DOI and is restricted to States and Tribes. NFWF will be looking for larger projects in the \$1-5M range.
- **BIL Matrix** (provided by Amy Handen): this table displays funding sources, points of contact, and the potential applicability to the CBP outcomes, with links to additional information. **Please note that this is a living document and is only as accurate as when it was last updated**
- **BIL/Infrastructure Investment & Jobs Act funding info** (provided by Serena McClain): these outreach materials, created by [American Rivers](#), contain information on what will be funded, funding constraints, actions to take, and links to additional information. Additional information from American Rivers on federal funding opportunities can be found here: <https://www.tenstrategies.net/newfederalfunding>
 - **Dam Removal and Western Water Opportunities:** this is a presentation given by Serena McClain on BIL funding applicable to dam removal, culverts, and fish passage.

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- **AGENCY-SPECIFIC FACT SHEETS:** *these materials were drafted in February 2022 and the information may be dated*
 - **FEMA Funding:** Flood Mitigation Assistance (\$3.5B over 5 years); Building Resilient Infrastructure & Communities (\$1B over 5 years)
 - **USFWS National Fish Passage Program Funding:** National Fish Passage Program - \$200M over 5 years
 - **FEMA Dam Removal Funding:** Rehabilitation of High Hazard Potential Dams Grant Program - \$75M for dam removal to remain available until expended
 - **NOAA Community-Based Restoration Funding:** Community-Based Restoration Program \$400M over 5 years
 - **US Army Corps of Engineers Dam Removal Funding:** Section 206 Aquatic Ecosystem Restoration Program - \$115M for dam removal to remain available until expended

13:20 – HGIT MANAGEMENT STRATEGY

HGIT Coordinator, Chris Guy (USFWS)

- Chris provided an update on the HGIT Management Strategy, and how the Habitat GIT should focus their energy over the next six months and beyond. Two categories of priorities have emerged from these ongoing discussions at the semiannual meeting these categories are identified as indirect priorities and direct priorities.
- **INDIRECT PRIORITIES:**
 - Infusing Social Science and Ecosystem Service valuation into our work
 - Ensuring Diversity Equity Inclusion and Justice considerations into workgroup/HGIT decisions
 - Coordinating and working across Goal Implementation Teams (GITs), STAR, and federal/state/local groups to ensure we are leveraging resources towards common goals
- **DIRECT PRIORITIES:**
 - Shallow water habitat conflicts
 - Incorporating climate change into workgroup activities
 - More focus on creating habitat in the urban portions of the watershed
 - Improve outcome tracking/reporting for the Wetlands, Black Duck, and Brook Trout Workgroups.
- Moving forward, the **HGIT Management Strategy** will be updated following the Fall and Spring Meetings, and workgroup members and those within the Bay Program will have the opportunity to provide feedback during HGIT meetings, or during the HGIT Workgroup Chairs Meetings. The HGIT Chairs meeting will occur at least once in between the Fall & Spring meetings.

13:30 – WORKGROUP UPDATES

BLACK DUCK WORKGROUP (*Ben Lewis, VA DWR*)

- **Black Duck Decision Support Tool:** [LINK](#)
 - Have been working for the past several years on this project with the Atlantic Coast Joint Venture and Ducks Unlimited.

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- This is a living tool that requires continuous updates. Recent updates have been completed and this tool is operational.
- The tool is currently being expanded to show data outside of the Chesapeake Bay Watershed.
- **VA Conservation Highlight:**
 - Recent land acquisition on Eastern Shore: over 8,000 acres in a primary Black Duck winter habitat. This acreage includes over 6,000 acres of wetlands!
- **Conservation Highlights from Maryland Partners:**
 - Recently restored approx. 35 acres of their moist soil Wildlife Management Areas (WMAs). There are currently plans for an additional 50 acres of restoration in the next couple years.
 - There are two large-scale ongoing projects using dredging to restore bay islands and tidal marshes. Virginia hopes to do a similar project soon.
- A new intern has been brought on to help with NRCS Working Lands for Wildlife's Black Duck Program
- **Black Duck Telemetry Project:** VA, MD, DE, NY, PA just completed the first year of the telemetry project. Radios were deployed on 196 wintering female black ducks. The marked birds are currently in route to their breeding grounds. This research will aid in the further development of conservation efforts.
- **QUESTIONS/COMMENTS:**
 - **Bruce Vogt:** Is the telemetry work being used to identify habitat use by black duck? How will the telemetry more broadly be used and perhaps linked with wetland restoration?
 - **Ben Lewis:** Yes, it's being used to identify habitat use. One of the birds marked in MD spent a significant amount of time post-capture at Poplar Island.
 - **Bruce:** If there are overlapping tidal wetland needs and/or critical areas by black duck and fishes (striped bass, key forage species, blue crab) it could help with both siting and designing projects to meet multiple outcomes.
 - **Ben:** I am sure there are many overlapping habitats especially in the tidal rivers of the Bay.

BROOK TROUT WORKGROUP (*Stephen Faulkner, USGS*)

- Current focus is on primary barriers and compiling conservation/restoration actions
- The Workgroup recently finalized the [2022-2023 Logic & Action Plan](#)
- Current challenges/science needs: <https://star.chesapeakebay.net/>
 - Need metrics to quantify conservation actions protecting current brook trout habitat
 - Need a reporting framework to collect and quantify all watershed restoration activities
 - More capacity to engage/coordinate large-scale priority action items with the greatest impact
- **New Publications:**
 - "Population Genetics of Brook Trout in the Southern Appalachian Mountains" – [Link](#)
 - "Genetic Structure of Maryland Brook Trout Populations: Management Implications for a Threatened Species" – [Link](#)
 - "Bedrock depth influences spatial patterns of summer baseflow, temperature, and flow disconnection for mountainous headwater streams" – [Link](#)
 - "Life history strategies of stream fishes linked to predictors of hydrologic stability" – [Link](#)
- **Genetics Web Viewer** - <https://bte.ecosheds.org/>
- **2021 GIT-Funded Project:** "Facilitating Brook Trout Outcome Attainability through Coordination with CBP Jurisdictions and Partners"

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- The Contractor will identify opportunities for cross-GIT collaboration, strengthen communication and coordination with other stakeholders, and collect and compile existing data from stakeholders and analyze monitoring and implementation data necessary to adequately track progress. The Contractor will also work with the CBP EPA Data Center Team to develop a tracking/reporting application that will support quality assurance procedures and a complete database
- **Development of a Rapid eDNA Tool to Detect Brook Trout Presence in the Field:** this project will be achieved through the **UMBC ICARE Program** – an NSF-funded Master’s program committed to increasing the diversity of the environmental workforce
 - **Goal:** Apply existing qPCR eDNA brook trout assays in the Watershed to evaluate various approaches
 - UMBC’s **Dr. Tamra Mendelson** (Professor), will be the advisor to the Master’s Student, and **Dr. Aaron Aunins** and **Dr. Cheryl Morrison** (USGS-EESC Geneticists) will also be involved with the project.
- **QUESTIONS/COMMENTS:**
 - **Kristin Saunders:** Regarding the need for technical assistance and landowner outreach, are the technical assistance and landowner outreach folks cross trained and serving many disciplines? Or are they specialized and in silos?
 - **Seth Coffman (TU):** Yes, these folks are equally cross-trained to provide recommendations for other BMPs, for example. If there’s interest from the landowner, TU will invite partners to speak more specifically on these conservation practices.

FISH PASSAGE WORKGROUP *(Mary Andrews, NOAA)*

- Significant funding available for dam removals, fish passage projects and road-stream crossing upgrades over the next 5 years
- **CHESAPEAKE FISH PASSAGE PRIORITIZATION TOOL:** Highlights highest priority dam removal and fish passage projects
 - RFP for needed upgrades to this tool underway with Bay Program funding – upgrades will include more information on road-stream crossings and assessments
 - To spend the money effectively, need to consider new partners, incentives and expanding capacity
- **QUESTIONS/COMMENTS:** **If you have additional questions or comments, please contact Mary Andrews (mary.andrews@noaa.gov).**
 - **Kristin Saunders:** Can any of the money for fish passage be used as incentives for landowner participation or just to remove the dam?
 - **Mary Andrews:** Instead of purchasing dams outright, NOAA has discussed the possibility of providing monetary incentives for dam-owners to remove the dams. This is not explicitly denied in the RFP – it’s possible.
 - **Katie Brownson:** Are there opportunities to incorporate stream temperature/climate change considerations into the fish passage prioritization tool? In other words, targeting fish passage projects that will improve access to thermal refugia under future climate scenarios?
 - **Mary Andrews:** Yes, if you have this data and are able to provide it so the Fish Passage Workgroup can use it as a factor for the Fish Passage Prioritization Tool, please reach out.

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SAV WORKGROUP (*Brooke Landry, MDNR*)

- **OUTCOME PROGRESS:** <https://www.chesapeakeprogress.com/abundant-life/sav>
 - The SAV Outcome is off course to achieving the target of 130,000 acres by 2025. Although **the 62,169 acres mapped in 2020 is:**
 - A 60% increase from the 38,958 acres observed during the first survey in 1984
 - A 20% decrease from the current 10-year average of 78,168 acres
 - A 7% decrease from 2019 when 66,684 acres of underwater grasses were mapped
 - 48% of the 2025 target of 130,000 acres
 - 34% of the ultimate 185,000-acre goal
- Both the [SAV Management Strategy](#) and the [2022-2023 Logic & Action Plan](#) have been updated.
- Current Science & Research needs can be viewed here: <https://star.chesapeakebay.net/>
- **2020 GIT-FUNDED PROJECT:** *"SAV Restoration Guide and Associated Outreach Materials"*
 - This project was contracted to Green Fin Studio (Dave Jasinski is lead) with SAV consultation by Cassie Gurbisz (SMCM) and was completed in December 2021.
- **2021 GIT-FUNDED PROJECT:** *"A STAR/SAV Workgroup Collaboration to Model Climate Impacts on SAV in Chesapeake Bay"*
 - This project is addressing the role of climate stressors on Chesapeake Bay SAV, including warming temperatures, rising sea levels, chronic low oxygen concentrations, and increased runoff driven by greater precipitation and more frequent, intense storm activity.
 - Contracted to VIMS (Chris Patrick's team is lead) with sub-contract to Jon Lefcheck at SERC.
- **CHESAPEAKE BAY SAV MONITORING WEBPAGES:** coming soon on www.chesapeakebay.net
- **SAV SYN SEGMENT DESCRIPTIONS:** working on automated updates
 - Data Dashboard: <https://gis.chesapeakebay.net/sav/>
 - VIMS Maps: <https://www.vims.edu/research/units/programs/sav/access/maps/index.php>
 - CAST: <https://cast.chesapeakebay.net/Home/TMDLTracking#SAVReportsSection>
- **SAV WORKGROUP AND STAC WORKSHOPS:**
 - Rising Watershed and Bay Water Temperatures—Ecological Implications and Management Responses – [LINK](#)
 - Advancing Monitoring Approaches to Enhance Tidal Chesapeake Bay Habitat Assessment including Water Quality Standards for Chesapeake Bay Dissolved Oxygen, Water Clarity/SAV and Chlorophyll a Criteria – [LINK](#)
 - Evaluating a Systems Approach to Wetland Crediting – [LINK](#)
- **World Sea Grass Conference 2022 & International Seagrass Biology Workshop**
 - When: August 7th-12th, 2022
 - Where: The Graduate Annapolis in Annapolis, MD
 - More information: <http://www.isbw14.org>

STREAM HEALTH WORKGROUP (*Katlyn Fuentes, CRC*)

- **Update on the Chessie BIBI:** The objective is to combine the monitored Chessie BIBI scores/ratings with the modeled scores/ratings from Kelly Maloney's random forest model for each period (2000-2005, 2006-2011, 2012-2017). So far, sample coordinates have been matched to NHD flowlines and EcoSHED catchments and assigned a confidence rating for each. Figures calculated include: the count, average, min, and max BIBI score per EcoSHED catchment, followed by a reassigned narrative rating

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for the averaged BIBI scores by bioregion. A method for combining the monitored results with the modeled results has been drafted and discussed by ICPRB and USGS but is not yet finalized.

- **Status of the Stressors Project:** this is the workgroup's three phase project "*Management Approaches to Reduce Stressors of Stream Health*". An update will be provided at the upcoming [Workgroup Meeting on June 17th, 2022 from 10:00-12:00 ET](#).
- **Stream Restoration Permitting Committee:** 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 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.
- **Stream Restoration STAC Workshop** the STAC workshop proposal for the "*State of the Science of Stream Restoration*" has been approved. Workgroup members will begin developing the STAC workshop over the next year.
- **New GIT Funded Project:** "*Data Review & Development of Multi-metric Stream Health Indicators*"
 - **Goal:** to create a matrix of stream health metrics (geomorphology & hydraulics), which can be used as indicators for stream health. Project results will complement the Chessie BIBI.
- **Upcoming Meetings:** the next Workgroup Meeting will be on June 17th, 2022, from 10:00-12:00 ET. Additional information can be found here: https://www.chesapeakebay.net/what/event/wetland_workgroup_june_2022_meeting
- **QUESTIONS/COMMENTS:**
 - **Dave O'Brien:** Where can I find information regarding the stream health group's decision that there is a need to improve stream restoration permitting? Which state or Corps District?
 - **Katlyn Fuentes:** This information is contained in the [2022-2023 Logic & Action Plan](#).

WETLANDS WORKGROUP (Pam Mason, VIMS)

- The recent Wetland BMP Crediting workshop was a success.
- **Workgroup Meetings:** The May Wetland Workgroup Meeting has been cancelled. The next workgroup meeting will be in June. Additional information on this meeting will be posted on the [CBP Calendar](#).
- **2021 GIT Funding Project:** The proposed GIT Funding Project proposal to develop a protocol to determine the effects of wetland mowing received no bids during the advertisement period. The workgroup will be working with the Chesapeake Bay Trust to refine the project scope and readvertise the proposal this summer.
 - Presently, there is a group who is skilled in ArcGIS and satellite imagery and is interested in bidding on this project. However, due to a conflict of interest with the current Technical Lead, they were unable to bid.
 - **If you are interested in acting as the Technical Lead for this project, please contact Pam Mason (mason@vims.edu).**
 - **UPDATE AS OF 07/2022 – The Wetlands proposal will be readvertised in the next several weeks.**
- **QUESTIONS/COMMENTS:**
 - **Sarah Koser** will be reaching out to Pam directly tomorrow to follow-up on the status of the project readvertisement.

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- **Kristin Saunders:** I will also follow up with Greg Allen to see what creative solutions we can offer the wetland team.

15:15 – DISCUSSION ON CROSS-WORKGROUP COORDINATION, STRUCTURED DECISION-MAKING, AND SHALLOW-WATER HABITATS

INTRO TO SDM:

Mike Runge (USGS)

- **Structured Decision Making:** the use of a broad set of tools to aid decision makers.
 - Draws from the fields of decision analysis, operations research, economics, human dimensions, management science, behavioral psychology, expert judgment
 - A key benefit is to help structure conversations about complex decisions, which values focused thinking and problem decomposition.

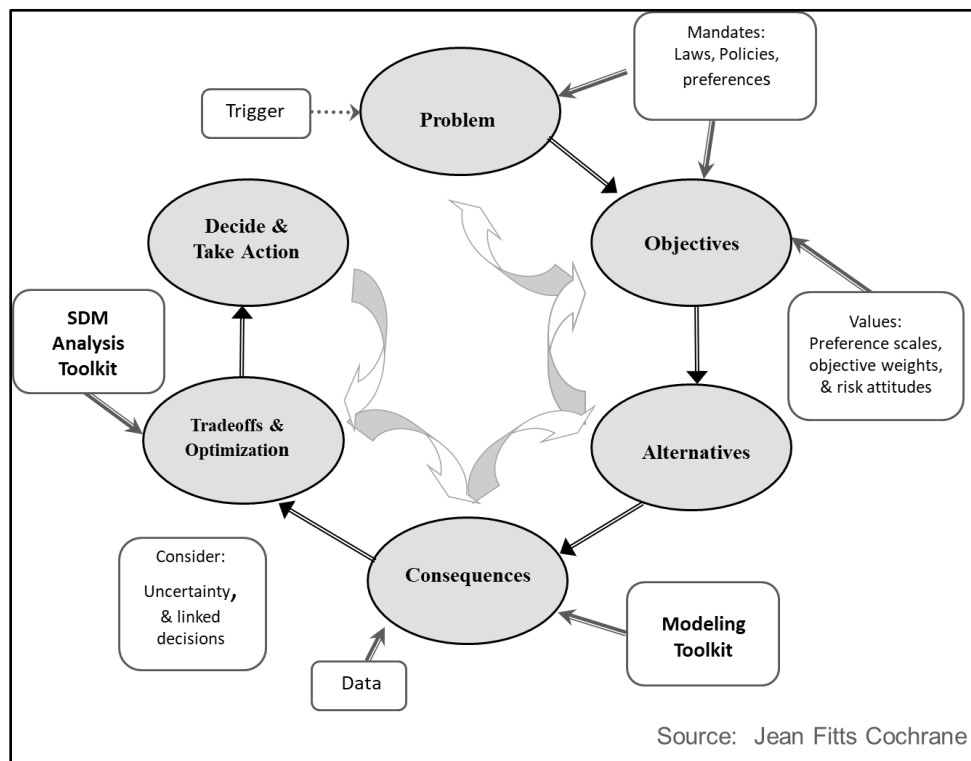


Fig. 1: This diagram, created by Jean Fitts Cochrane, displays the Structured Decision-Making Process.

- **Decision Context:** who is the decision maker? What is their authority to act? What decisions do they face and what is the timeframe/spatial scope of the decision? What is the trigger for the decision?
- **Fundamental Objectives:** the desired future conditions that the decision maker is seeking to achieve. These objectives can be multi-faceted, conflicting, and contentious, and will guide the rest of the planning.
- **Alternatives:** a decision is a choice among alternatives, but the range of alternatives that are possible is often not considered.
- **Competing Objectives:**

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- How do these arise? → Resource constraints (e.g., space, money), inherent antagonism, and complicated negative feedbacks in the system
- What can we do? → Change the decision frame, develop new alternatives, and balance objectives
- **Shallow-water Habitats:** Are there difficult decisions about resource allocation in tidal or non-tidal habitats that involve competing objectives? Would any benefit from a formal SDM process?
 - **Where are there apparent competing objectives:** How well do we understand the trade-offs? Is there uncertainty about whether we can find solutions that remove the trade-offs? Are there some places where we just need to grapple with the trade-offs and balance objectives?
- **QUESTIONS/COMMENTS:**
 - **Jonathan Leiman:** When in the process, should objectives become prioritized as values and who needs to make that decision?
 - **Mike:** Objectives *are* values and we should be talking about them sooner rather than later. The CBP does well in stating what we clearly need to achieve. The decision-maker is the one who decides what objectives will be sought.
 - **Gina Hunt:** We don't get to pick the decision-maker, but it certainly influences the result. For this example, in MD - the legislature is the decision maker.
 - **Scott Phillips:** In the CBP there's often not one clear decision-maker - there's multiple. How do you tackle this?
 - **Mike:** The Bay Program Partnership has recognized this, and various jurisdictions have come to an agreement on cooperative governance. An alternative would be an outright competition, which should be avoided.
 - **Scott Phillips:** Some of the conflict in water-quality improvement is a regulatory mandate, while the rest of the CBP outcomes are voluntary.
 - **Katie Brownson:** The CBP has 31 Outcomes which are competing for resources and attention. When is it too many objectives?
 - **Mike Runge:** In practice, what happens is that systems are so complex that you don't have to take on all of them at once.
 - **Katie Brownson:** Our outcomes do seem to be a mix of fundamental and means objectives, which further complicates the picture.
 - **Carin Bisland:** Water quality is a means - our endgame is living resources. One of the things I'm grappling with regarding collective decision makers is that we must make sure that the selected decision makers are the right people.
 - **Chris Guy:** Bay Program objectives were about living resources and Water Quality was the stressor hampering these living resources.
 - **Kristin Saunders:** I often have to reference water quality as a factor that influences our ability to achieve some of the other goals.
 - **Stephen Faulkner:** Is our HGIT goal here fixing outcome achievement or a smaller objective like how do we increase collaboration across relevant GITs/Workgroups? I don't see how we "fix" the CBP 31 Outcomes/Water Quality vs. living resources questions.
 - **Denise Clearwater:** The disconnect is more than just water quality. Progress is measured in part by modeled rather than actual reductions and presumed water quality improvements and claimed resource improvements.

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BREAKOUT SESSIONS & JAMBOARD:

- Following the introduction to Structured Decision-Making, meeting attendees were divided into 5 breakout groups and had 30 minutes to brainstorm tradeoffs in shallow-water habitats. Breakout groups were either “Tidal”, or “Watershed” (non-tidal streams, wetlands, and floodplains) focused, and attendees self-selected which group they wished to attend during this discussion period.
- **During these breakout discussions, attendees were tasked to:** Brainstorm shallow water tradeoffs they would like evaluated in an SDM process. In addition to identifying these topics, attendees worked within their groups to identify 3 topics to discuss further in the plenary session.
- **While the HGIT is acting as the Host for these SDM discussions, the topics discussed won't necessarily be HGIT Priorities. Additionally, while the HGIT may sponsor a related SDM project for GIT Funding, this project may not be a specific HGIT Priority as mentioned in the HGIT Action Plan.**

PLENARY DISCUSSION:

Kristin Saunders (UMCES)

- During this part of the SDM discussion, Kristin Saunders presented the results from the JamBoard.
- **The ideas captured in the JamBoard have been organized into an Excel File and posted [here](#).** This file contains the raw data and the ideas have been organized into categories that best suit the topic. Some ideas may be listed multiple times in different sheets/categories, due to the topic of the idea (e.g., topics related to stream restoration will be listed in both “Streams” and “Restoration”.)
 - **ACTION: Once the notes are finalized, Katlyn Fuentes will send out the SDM excel file meeting minutes to the meeting attendees and other HGIT members who were unable to attend the Spring Meeting.**
- **QUESTIONS/COMMENTS:**
 - **If anyone has topics on stream restoration in Virginia that they would like to discuss, please contact Brock Reggi (brock.Reggi@deq.virginia.gov).**

17:00 – DAY 1 OF MEETING ADJOURNED.

DAY 2: Thursday, May 5, 2022; 09:00-13:00 ET

[Link to Day 2 Meeting Materials](#)

09:00 WELCOME BACK & ANNOUNCEMENTS

HGIT Co-chair Gina Hunt (MDNR)

- **Scott Phillips** (USGS) is part of a team working with the CBP Office, US EPA, NOAA, and the Chesapeake Conservancy to provide science-based information for a more strategic approach to targeting resources. USGS is leading the initial effort to interact with stakeholders for management decisions and are identifying tools used in making management decisions, to include in a website. This website will serve as a centralized “hub” to access tools, data, and other resources.
 - Draft version of the website: <https://gis.chesapeakebay.net/targeting/>

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- Executive Summary on Targeting Chesapeake Resources to Achieve Multiple Outcomes and Local Benefits: https://www.chesapeakebay.net/channel_files/44966/approaches_for_targeting_cbp_resources_latest_updated_may_4_2022.pdf
- **QUESTIONS/COMMENTS:**
 - **Kathy Boomer** recommended this project to be presented and discussed with STAC.

09:15 – PRESENTATION ON LANDSCAPING AS A METHOD OF CONSERVATION, CLIMATE MITIGATION, AND SOCIAL JUSTICE

Alex Smith (Division Street Landscaping) and BeKura Shabazz (First Alliance Consulting, LLC)

- Alex Smith and BeKura Shabazz present on environmental justice and landscaping as a method of conservation, climate mitigation, and social justice. Here, they discussed the importance of working with diverse partners and provided recommendations such as making sure that engagement isn't transactional – authentic relationships and partnerships are important!
- In 2017, Alex Smith founded Division Street Landscaping, a company that hires previously incarcerated individuals. Together, his team works on a variety of projects in the Baltimore Area, including community gardens and tree-plantings.
- “Environmentalism is synonymous with humanity.” – Bekura
- Alex's Facebook: <https://www.facebook.com/profile.php?id=100055774713769> *This Facebook Profile is not affiliated with the Habitat GIT nor the Chesapeake Bay Program.
- **QUESTIONS/COMMENTS:** **If you have additional comments or questions, please contact BeKura Shabazz (firstallianceconsulting@gmail.com) or Alex Smith (alexs@divisionstlandscaping.com).**
 - **Chris Guy:** As we are beginning to explore these ideas with the HGIT (as part of our Management Strategy), there are barriers to funding. One of the things that we're not doing well is engaging these communities with this type of effort.
 - **Sally Claggett** suggested that Alex and BeKura can speak at the [2022 Chesapeake Watershed Forum](#) in November.
 - **Megan Fitzgerald:** It seems like there could be an opportunity to focus on funding capacity building efforts as well.

09:45 – DEIJ AT THE CHESAPEAKE BAY PROGRAM

Briana Yancy and Bo Williams (EPA)

- **DEIJ STRATEGY & IMPLEMENTATION PLAN: “Restoration from the Inside Out”**
 - **Diversity Outcome:** Identify stakeholder groups not currently represented in the leadership, decision making and implementation of conservation and restoration activities, and create meaningful opportunities/programs to recruit and engage them in the partnership's efforts.
 - The DEIJ Strategy provides recommendations to all levels of CBP (including leadership, Goal Implementation Teams, and Workgroups) to:
 - Inform the activities in the Logic & Action Plans
 - Integrate DEIJ in the implementation of Management Strategies
- **WHAT ARE WE BEING ASKED TO DO?**

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- Update Work Plans and Management Strategies
- Recruit & retain people from underrepresented groups, incorporating them into decision-making processes
- Participate and discuss DEIJ issues, attend trainings, etc.
- Include underrepresented groups in the development and implementation of the Chesapeake Bay Watershed Agreement
- Report DEIJ-related work that has been completed via the SRS Quarterly Progress Meetings
- **IMPLEMENTATION IDEAS:** updated Work Plans and Management Strategies can include projects/action items like:
 - **Brook Trout:** develop a cache of multilingual outreach/communication products for quick response to requests
 - **Wetlands:** improve [WetlandsWork.org](#) by adding new success stories, increase site traffic, and add accessibility widget to insure site access to all
 - **SAV:** continue restoration efforts through planting seeds/propagules to establish viable SAV beds in areas that correspond to locations on the [Environmental Justice & Equity Dashboard](#)
 - **Black Duck:** improve methods of monitoring outcome progress by partnering with HBCU and other MSI to create monitoring programs
 - **Stream Health:** provide training & education to new stakeholders by partnering with BIPOC organizations
 - **Fish Passage:** conduct target species monitoring via community science at select dam removals in VA
- **UPCOMING EVENTS/OPPORTUNITIES:**
 - Naturally Latinos Conference – [website](#)
 - Taking Nature Black – [website](#)
 - 2022 National Environmental Justice Conference & Training Program – [website](#)
 - 8th UMD Symposium on Environmental Justice & Health Disparities; Aug. 11-13th, 2022 - [website](#)
- **RECRUITMENT & RETENTION OPPORTUNITIES:**
 - C-StREAM Internships - [website](#)
 - Charting Careers - [website](#)
- **ENVIRONMENTAL JUSTICE & HABITAT:**
 - Building capacity & assisting others → What can you do for others?
 - Protecting species & equitable benefits for people; examples:
 - Increase endangered species & decrease non-native species
 - Increase in groundwater conservation of the Edwards Aquifer
 - Mitigate impact of water use in restrictions & advance benefits of public access to overburdened groups
- *"It is incumbent upon scientists to see the world through the lens of impacted people."*
- **RESOURCES:**
 - [CBP's Diversity Workgroup Website](#)
 - [Chesapeake Bay: Environmental Justice and Equity Dashboard](#)
 - [DEIJ Action Team](#)
 - [Implementation Plan](#)
- **QUESTIONS/COMMENTS:**

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- **Danielle Algazi:** There are not a lot of people of color working in wetland science. Any thoughts on why? Mentoring and getting HBCU's would be a good start.
 - **Pam Mason:** NASA has a new program to support POC and women to enter STEM.
- **Katie Brownson:** Has there been any progress in hiring the DEIJ coordinator who would help implementing the implementation plan?
 - **Kristin Saunders:** Briana was hired as the new DEIJ Coordinator for the Diversity Workgroup. There is also an effort in the works (but not yet completed) to bring on a DEIJ expert to focus on the implementation plan.
 - **Bo Williams:** The DEIJ Coordinator is a funded position and CBPO is working with DC to bring in a person.
- **Katie Brownson:** It's also important to recognize that many CBP staff don't have the needed expertise/training to meaningfully engage and collaborate with communities.
- **Bo Williams:** It's also important to consider that bias plays out in setting of research agendas and priorities - in the research that is done and how it's completed.

10:15 – BUILDING & MAINTAINING COASTAL COMMUNITY RESILIENCE THROUGH BLUE CARBON UPDATES

Emily Trentacoste (EPA) & Lana Kashuba (EPA)

- **TRACKING COASTAL RESILIENCE WITH COMMUNITIES:**
 - **GOAL:** Work with a local Bay coastal community over multi-year effort to help solve its coastal resilience issues while benefiting other local priorities and mitigating climate change.
 - **PROCESS:** Co-develop research by engaging community throughout, beginning with formulating the problems to be addressed. Partnering with existing networks/initiatives to identify and address current research gaps.
 - **FOCUS:** Hoping to incorporate/investigate natural infrastructure options, such as tidal wetlands, salt marshes, seagrass, and quantify associated ecosystem services and co-benefits (e.g., flooding mitigation, blue carbon sequestration, habitat creation, water quality improvement, community health).
 - **COMMUNITY:** Aiming to work with underserved, underrepresented, and/or vulnerable communities.
- **SOLUTIONS-DRIVEN RESEARCH:** addresses real-world problems to make timely decisions based on science and emphasizes stakeholder engagement/integration; outputs should drive research development.
- **TIMELINE OF ENGAGEMENTS AND INPUT THIS FAR:**
 - **September 2021:** Met with EPA Region 3 and CBP to discuss coastal resilience and blue carbon research needs
 - **October-November 2021:** Met with individual recommended stakeholders for input
 - **November 2021:** Met with EPA Region 3 and CBP for feedback on communities and potential project components
 - **December 2021:** Met with MD DNR to discuss related project and interest in coordinating
 - **January 2022:** Development of EPA ORD and Regional research funding components and proposals

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- **February-April 2022:** Narrow down location
 - **07/2022 UPDATE:** Crisfield has been selected as the community.
- **POTENTIAL PROJECT COMPONENTS:** *these would ultimately be co-developed with the community*
 - Explore natural infrastructure options
 - How and where to site coastal resilience solutions for the greatest impact
 - Economic, social, and/or ecosystem service benefits and tradeoffs of coastal resilience solutions
 - Impacts of climate change on natural infrastructure benefits
 - Blue carbon potential of natural infrastructure options
 - Gaps in blue carbon data needed for markets
- **RELEVANT ORD SCIENCE AND RESEARCH SKILLSETS:** community engagement; monitoring; ecosystem services and benefits; siting and implementing coastal resilience solutions; and blue carbon assessment.
- **POTENTIAL COMMUNITY:**
 - **CAMBRIDGE, MD:** has historically under-served communities, flooding issues, interested in incorporating natural infrastructure options, CBP connections. MD DNR considering Little Choptank River for Targeted Resiliency Area.
 - **CRISFIELD, MD:** has historically under-served communities, coastal nuisance flooding, surrounded by salt marsh and SAV, American Black Duck habitat, and CBP connections. MD DNR considering Pocomoke corridor area as a Targeted Resiliency Area.
- **NEXT STEPS:**
 - Gather partner feedback
 - Select community & coordinate with ongoing work in area
 - Organize research capabilities within EPA & partners
 - Engage community and identify community needs
 - Co-develop problem formulation
 - Co-design and scope research approach
 - Engage iteratively with community throughout
- **QUESTIONS/COMMENTS:**
 - **Katie Brownson:** Another group you might consider engaging is the Middle Chesapeake Sentinel Landscape- they are focusing a lot on coastal resilience right now.
 - **Emily:** we will look into this.
 - **Peter Tango:** Our community science conferences and practitioners have stated the same thing: engage with the stakeholders from the start of the idea brainstorming to develop programming and solutions together throughout the process to establish relationships and sustaining buy-in for the collaborative solutions to the issue(s).
 - **Peter Tango:** The general location of the lower Eastern Shore connects with island communities facing perhaps even more extreme resiliency challenges under current impact trajectories. Is it possible to consider inviting representatives from Smith Island, Tangier Island to participate or listen in on the Cambridge and Crisfield meetings so as to have them familiar with what might be coming for their consideration? Can you just slightly load up the attendees such that you are focused on say Crisfield, but interested parties likely to be part of a near future community engagement effort are primed for collaboration?

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- **Peter Tango:** Do you have a threshold of consideration where no reasonable amount of resources will make a community resilient to sea level rise for example, and part of the discussion becomes strategic retreat - is that part of your potential decision-option co-development/co-design framework?

10:50 – SOCIAL SCIENCE AND THE CHESAPEAKE BEHAVIOR CHANGE WEBSITE

Rachel Felver (EPA) and Amy Handen (EPA)

- Chesapeake Behavior Change - [website](#)
- **CITIZEN STEWARDSHIP OUTCOME:** increase the number and diversity of trained and mobilized volunteers with the knowledge and skills needed to enhance the health of their local watersheds
- **STEP-BY-STEP GUIDE TO PLANING & IMPLEMENTING BEHAVIOUR CHANGE CAMPAIGN:**
 - Identify a single, end-state behavior you want to change
 - Identify your Priority Audience and measure the behavior baseline
 - Identify barriers & benefits
 - Develop your campaign (strategies & tools)
 - Implement your behavior change campaign
 - Measure and evaluate behavior change
- **CHESAPEAKE BEHAVIOR CHANGE WEBSITE:** <https://www.chesapeakebehaviorchange.org/>
- **QUESTIONS/COMMENTS:**
 - **Peter Tango:** I appreciate the SAV-centric approach, but based on our SDM discussions yesterday, I would suggest there were many other tension points to options like extending a dock to deeper water from aesthetics/viewshed issues, navigation challenges, critical fisheries habitat impacts, negative effects on waterbird community bird integrity and more.
 - **Pamela Mason:** SAV was not a single focus for the project
 - **Danielle Algazi:** The behavior website would be an added benefit to the Environmental Science Center at the University of Maryland's Sustainable Maryland Program.
 - **Rachel Felver:** The SAV CBSM project (different from the living shorelines project), initially started off with the question, "how do we get private property to stop ripping out SAV?" Based on what we recovered, those were the behaviors that were chosen to pursue based on many factors.
 - **Brooke Landry:** The SAV CBSM project was intentionally focused on behaviors (primarily removal at docks) that are allowed from a regulatory standpoint but not ecologically advantageous. Waterfront property owners are allowed to remove SAV for navigational purposes at their docks, but they have an option not to. It was a straightforward example and beneficial behavior we were hoping to promote with this project, and as one of the CBP's first attempts at targeted CBSM, we attempted to keep it simple.
 - **Peter Tango:** Interesting that converting lawns to trees is considered on the lower end of the spectrum of feasibility. I would love to pursue that item more - why we favor lawn area over trees. I recognize that there are some safety reasons, but what are personal preferences?

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11:20 – FINDINGS FROM THE RECENT STAC RISING TEMPERATURES WORKSHOP

Katie Brownson (USFS)

- **BACKGROUND:** Chesapeake Bay tidal and non-tidal water temperatures have been increasing, driven largely by atmospheric forces and the warming ocean boundary. Increasing stream and river temperatures have been driven by rising air temperatures, but other drivers have a strong influence.
- **WATERSHED → ECOLOGICAL IMPACTS:**
 - **SPECIES:**
 - Strongest negative impacts on coldwater species (e.g., trout) and their habitats
 - Watershed-wide warmwater aquatic species are most common. While more tolerant to temperature increases, they're sensitive to extreme temperatures
 - More study needed of temperature effects on lower food web
 - **OTHER STRESSORS:**
 - Low dissolved oxygen
 - Invasive species
 - Algal blooms
 - Bacteria/viral outbreaks
 - Distribution & toxicity of pollutants
- **WATERSHED → STATE TEMPERATURE WATER QUALITY STANDARDS (WQS):**
 - Modernize WQS to make them more effective in combatting rising water temperatures
 - Strengthen anti-degradation measures
 - Improve criteria to reflect a better understanding of thermal tolerances and ecology for a broader suite of species
 - Improve interstate cooperation through information-sharing, problem solving and monitoring-modeling support
- **WATERSHED → MONITORING, MODELING AND SCIENCE NEEDS:**
 - Improve monitoring networks to better include small streams and incorporate more continuous data collection
 - Evaluate the relative influence of BMPs and habitat restoration on water temperature, including cost-effectiveness
 - Develop models that better simulate land use and groundwater effects on local stream temperatures to better understand how stream temperature and living resources will respond to management
 - Establish multi-species prioritization tools and science-based targets for restoration and conservation to mitigate rising water temperatures
- **TIDAL → SCIENCE NEEDS:**
 - Effects of reduced water clarity & salinity from increased precipitation and habitat loss/change on SAV & oysters
 - Effects of SAV community changes on habitat-use by fishes and crabs
 - Changes in the intensity/duration/frequency of marine heat wave events & effects on survival
- **MANAGEMENT RECOMMENDATIONS:**
 - **Ecosystem-Based Management:**
 - Continue water quality improvement to support SAV essential fish habitat
 - Adjust within same season fisheries catch limits using a two prong approach:

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- Develop management triggers based on temperature thresholds for determining seasonal closures
- Incorporate an educational/human behavioral warning tool to communicate when fishes are most stressed/vulnerable & how to modify fishing behavior outside of closures
- **Nearshore Habitats:**
 - Target use of natural/green infrastructure where ecological & climate resilience benefits are highest
 - Amplify the urgency to manage shoreline development & condition based on ecological thresholds already established for SAV, blue crab and fishes
- **Multiple Stressors:**
 - Implement TMDL to its fullest potential & better connect to living resource outcomes
 - Develop a public facing heat wave warning system that incorporates dissolved oxygen and is linked to habitat preferences of key species such as striped bass, blue crabs, oyster, and SAV
- **New Temperature Regime:**
 - Improve long-term monitoring networks to better connect to managing living resources
 - Explore ways to support fisheries in the development of more strategic, long-term climate predictions for management
- **NEXT STEPS:**
 - Steering Committee will review & synthesize information
 - Participant review of draft report will occur in May-June 2022 (approx.)
 - Final Report will be released Summer 2022 (approx.)
 - Outreach will be conducted with CBP & Partners to discuss strategies to implement report recommendations
- **For additional comments and questions, please contact Katherine Brownson (Katherine.brownson@usda.gov).**

11:50 – FOREST BUFFERS WORKSHOP

Sally Claggett (USFS)

- Forest Buffers is not on track to achieving their 2025 Outcome
 - Annual target: 900 miles of planted riparian forest buffers
 - 2,539 miles/year would be required to meet WIP3 goals for 2021-2025
- **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
- **[Chesapeake Riparian Forest Buffer 2022 Leadership Workshop: Summary and Next Steps](#)**

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- **QUESTIONS/COMMENTS:** For additional comments and questions, please contact Sally Claggett (sally.claggett@usda.gov).
 - **Peter Tango:** It seems that some agriculture practices are supported by subsidies - farm owners are in the business of maximizing yields from the available arable land right down the edge of stream. Are there considerations that buffers could be subsidized as an ag product zone, managed with short rotations to produce trees in a selective thinning, patch cut strategies that offer economic feedback and more ecological benefits than no buffers? Has that economic subsidy and ag product perspective with a managed buffer zone been considered in the buffer development strategy?
 - **Kristin Saunders:** This was discussed at great length in the workshop.
 - **Stephen Faulkner:** The purpose of buffer zones is to minimize disturbance next to the stream and their nutrient/sediment retention capacities. Harvesting trees in that zone seems to contradict that purpose.
 - **Peter Tango:** Think about the ability to manage temperature with shading in fast growing species while applying harvest approaches that are minimally invasive. Patch cuts and thinning cuts are different than clear cut rotation strategies. Retaining the function while having a crop to work with is a consideration in that perspective. It also gets into details of how wide a buffer could be, such that the area closest to the stream is minimally disturbed and managed for longer growth stability while those closer to the edge are managed more vigorously.
 - **Stephen Faulkner:** My experience is that it is difficult to enforce the “with care” aspects to avoid detrimental impacts; not enough monitoring/enforcement. My take is just pay more upfront for the full conservation easement rather than trying to manage the zone details.

12:20 – STAC BMP CREDITING WORKSHOP DISCUSSION

Pam Mason (VIMS)

This presentation contained preliminary results and as such, the .ppt will not be uploaded to the website, as it cannot be distributed at this time. If you have questions, please contact Pam Mason (mason@vims.edu).

- **WORKSHOP TITLE:** “Evaluating an Improved Systems Approach to Crediting: Consideration of Wetland Ecosystem Services” (was previously known as “Evaluating a Systems Approach to BMP Crediting”)
- This two-day hybrid workshop took place on March 22-23, 2022, at the Chesapeake Bay Program Phillip Merrill Center in Annapolis, MD.
- [Link to workshop website](#)
- **TOPICS DISCUSSED DURING THE WORKSHOP:**
 - **Day 1:**
 - How do landscape interactions influence ecosystem services around wetlands?
 - How would we account for landscape factors that influence ecosystem services?
 - How do we account for things other than water quality (‘accounting system’)?
 - How do we track unintended consequences?

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- What habitat services should receive extra credit if they are improved or restored?
- What other services should receive extra credit if they are improved or restored?
- **Day 2:**
 - What habitat services should receive extra credit if they are improved or restored?
 - What other services should receive extra credit if they are improved or restored?
 - Where and how could an improved systems approach to accounting/incentive/framework protocol be applied?
- **LANDSCAPE FACTORS CONSIDERED:** Hydrology, landuse/landcover, and landscape scale indicator species (i.e., colonial nesting birds). Workshop participants also discussed accounting, and what habitat or other services should receive extra credit if they are improved/restored.
- **POSSIBLE WAYS IN WHICH PROTOCOL COULD BE APPLIED:**
 - State implementation plans for milestones
 - Funders checklist or template
 - NFWF project review
 - When appropriate, consider all wetland actions – not just water quality BMPs
 - Consider peer-pressure case studies
 - Better outreach/communication to the public for wetlands
- **QUESTIONS/COMMENTS:** **If you have additional comments or questions, please contact Pam Mason (mason@vims.edu).**
 - **Chris Guy:** One possible solution is to make Water Quality a workgroup in the HGIT
 - **Denise Clearwater:** Giving more credit for retaining existing wetlands would be an incentive to reduce adverse effects which may result from a related constructed restoration project.

13:00 MEETING ADJOURNED.

THE NEXT HABITAT GIT MEETING WILL OCCUR ON: November 15, 2022, from 1:00-5:00 ET, and November 16, 2022 from 9:00-1:00 ET. Additional meeting information will be sent out and posted to the [CBP Calendar](#) as it gets closer.

THE HGIT CO-CHAIRS MEETING WILL OCCUR ON: September 21, 2022, from 10:00-12:00 ET. Additional meeting information will be sent out in the near future.

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APPENDIX A: MEEETING PARTICIPANTS

DAY 1 PARTICIPANTS: 70

Alan Weaver, VA DWR; **Alison Rogerson**, DNREC; **Amy Goldfischer**, CRC; **Amy Handen**, EPA; **Aurelia Gracia**, NPS; **Becky Golden**, MDNR; **BeKura Shabazz**, First Alliance Consulting; **Ben Lewis**, VA DWR; **Bill Jenkins**, EPA; **Bob Murphy**, Tetra Tech; **Briana Yancy**, EPA; **Britt Slattery**, NPS; **Brittney Flaten**, DNREC; **Brock Reggi**, VA DEQ; **Brooke Landry**, MDNR; **Bruce Vogt**, NOAA; **Carin Bisland**, EPA; **Chris Adriance**, DC Fisheries; **Chris Guy**, USFWS; **Clint Morgeson**, VA DWR; **Danielle Algazi**, EPA; **Dave O'Brien**, NOAA; **Denise Clearwater**, MDE; **Erin Reilly**, James River Association; **Gina Hunt**, MDNR; **Gwen Brewer**, MDNR; **Iris Allen**, MDNR; **Jamileh Soueidan**, CRC; **Jim Thompson**, MDNR; **John Levitsky**, Luzerne Conservation District; **Jonathan Leiman**, MDE; **Jonathan Watson**, NOAA; **Julie Devers**, NRCS; **Justin Shapiro**, CRC; **Kathy Boomer**, Foundation for Food & Agriculture Research; **Katie Brownson**, USFS; **Katlyn Fuentes**, CRC; **Kayla Clauson**, DNREC; **Kevin Krause**, USGS; **Kristen Saacke Blunk**, Headwaters LLC; **Kristin Saunders**, UMCES; **Lisa Moss**, USFWS; **Lori Maloney**, EBTJV; **Lydia Brinkley**, Upper Susquehanna Coalition; **Marek Topolski**, MDNR; **Mark Biddle**, DNREC; **Mark Southerland**, Tetra Tech; **Mary Andrews**, NOAA; **Melissa Yearick**, Upper Susquehanna Coalition; **Mike Bednarski**, VA DWR; **Mike Runge**, USGS; **Mitch Hartley**, USFWS; **Nancy Roth**, Tetra Tech; **Olivia Devereux**, Devereux Consulting; **Pamela Mason**, VIMS; **Peter Tango**, USGS; **Rachael Peabody**, VMRC; **Rachel Felver**, CBP; **Rebecca Thur**, MDNR; **Renee Thompson**, USGS; **Robert Isdell**, VIMS; **Sadie Drescher**, CBT; **Sally Claggett**, USFS; **Scott Phillips**, USGS; **Sean Corson**, NOAA; **Seth Coffman**, Trout Unlimited; **Sophie Waterman**, CRC; **Stephen Faulkner**, USGS; **Than Hitt**, USGS; **Woody Fancis**, USACE Baltimore.

DAY 2 PARTICIPANTS: 52

Alex Smith, Division Street Landscaping; **Alison Rogerson**, DNREC; **Amy Handen**, EPA; **Angie Sowers**, USACE-Baltimore; **Becky Golden**, MDNR; **BeKura W. Shabazz**, First Alliance Consulting; **Bo Williams**, EPA; **Briana Yancy**, EPA; **Brittney Flaten**, DNREC; **Brock Reggi**, VA DEQ; **Brooke Landry**, MDNR; **Chris Guy**, USFWS; **Clint Morgeson**, VA DWR; **Danielle Algazi**, EPA; **David Goerman**, PA DEP; **Denise Clearwater**, MDE; **Doug Myers**, CBF; **Emily Trentacoste**, EPA; **Gina Hunt**, MDNR; **Iris Allen**, MDNR; **John Maleri**, DC DOEE; **Jonathan Watson**, NOAA; **Karina Nunez**, VIMS; **Kathy Boomer**, Foundation for Food & Agriculture Research; **Katie Brownson**, USFS; **Katlyn Fuentes**, CRC; **Kayla Clauson**, DNREC; **Kevin Krause**, USGS; **Kristin Saunders**, UMCES; **Lori Maloney**, EBTJV; **Lydia Brinkley**, Upper Susquehanna Coalition; **Marek Topolski**, MDNR; **Mark Biddle**, DNREC; **Mark Southerland**, Tetra Tech; **Mary Andrews**, NOAA; **Megan Fitzgerald**, EPA; **Melissa Yearick**, Upper Susquehanna Coalition; **Nancy Roth**, Tetra Tech; **Olivia Devereux**, Devereux Consulting; **Pamela Mason**, VIMS; **Peter Tango**, USGS; **Rachel Felver**, CBP; **Rebecca Thur**, MDNR; **Robert Isdell**, VIMS; **Roxolana Kashuba**, EPA; **Sadie Drescher**, Chesapeake Bay Trust; **Sally Claggett**, USFS; **Sarah Hilderbrand**, MDNR; **Scott Phillips**, USGS; **Sophie Waterman**, CRC; **Stephanie Jacobs**, EPA; **Stephen Faulkner**, USGS.