



# *Beyond 2025* Shallow Water Habitats Small Team Recommendations

SAV WORKGROUP

WINTER 2024 MEETING

MARCH 13, 2024

GINA HUNT, CHAIR SWHT, HGIT CO-CHAIR

BROOKE LANDRY, CO-CHAIR SWHT, SAV WORKGROUP CHAIR



# Beyond 2025 Steering Committee

The Chesapeake Bay Executive Council (EC) charged the Principals' Staff Committee (PSC) with recommending a critical path forward that prioritizes and outlines the next steps for meeting the goals and outcomes of the *Chesapeake Bay Watershed Agreement* leading up to and beyond 2025. With that charge, the Chesapeake Bay Program's Beyond 2025 Steering Committee (B25SC) has created five "Small Groups" to form recommendations around cross-cutting, high-level topics, including Climate, Healthy Watersheds, Clean Water, People, and Shallow Water Habitats.

The Shallow Water Habitats Small Group (SWHSG) attended SWH-related workgroup meeting and held listening sessions and office hours to hear shallow water habitat ideas and gain feedback from stakeholders, communities, and shallow water habitat experts. This input was used to form shallow water habitat-specific recommendations for moving beyond 2025.

The Beyond 2025 Steering Committee is comprised of partner signatories, federal agencies, advisory committees, and GIT representatives.

<https://www.chesapeakebay.net/who/group/beyond-2025-steering-committee>

# Who We Are

## The Shallow Water Habitats Small Group:

### **LEADS-**

- ▶ Gina Hunt, Habitat GIT Co-Chair
- ▶ Brooke Landry, SAV Workgroup Chair

### **INVITED CESR CONTRIBUTORS-**

- ▶ Denice Wardrop – Chesapeake Research Consortium
- ▶ Kenneth Rose – University of Maryland Center for Environmental Science

### **MEMBERS-**

- ▶ Larry Sanford, Scientific and Technical Advisory Committee
- ▶ Bruce Vogt, Sustainable Fisheries GIT
- ▶ Laura Cattell Noll, Local Government Initiative Director
- ▶ Stefanie Tallion, VA Natural and Historic Resources
- ▶ Chris Guy, Fish & Wildlife Service
- ▶ Adrienne Kotula, Chesapeake Bay Commission
- ▶ Jessica Blackburn, Stakeholders' Advisory Committee



# Recommendations

- ▶ The recommendations to the EC are high level.
- ▶ This is the path forward. How to include new science and considerations.
- ▶ We are not recommending the specific language for new or revised goals.
- ▶ There may be another Phase of Beyond 2025 work after the EC.

## STEERING COMMITTEE PROPOSED PRODUCTS BY EC2024

### Where we are

#### Assessment of where we are with the 2014 Watershed Agreement

- Reaching 2025 Report
- CESR, Rising Temperatures, Forest Buffers & Wetlands Conference Reports, SRS meeting report, other

### Where do we want to be

#### Vision

- Current Partnership Vision – Reaffirm? Refine?

### Path Forward

#### Impact assessment

- What is the ability of our Partnership to positively impact each goal and outcome?
- Do we have the right outcomes for our goals and the right goals for our vision?

### What we do

#### Recommendation on what to do with the Watershed Agreement post-2025

- Extend? Amend? Rewrite?

### How we work

#### Assessment of and recommendations for our overall partnership

- Partnership Structure
- Governance and Adaptive Management

# Small Topic Groups

## Climate

- Recommendations to transform CBP partnership policies, programs, and projects to address the significant ongoing and future impacts climate change will impose on the Bay and its watershed and people across generations. Strategies to better incorporate climate mitigation, adaptation and resiliency across the watershed and tidal Bay.

## Healthy Watersheds

- Considering the spectrum of health across all catchments in the Bay watershed, to be able to characterize health at the local level
- Information for decision-making that supports protection of intact habitats, as well as restoration and maintenance of degraded habitats
- Opportunity to integrate with state wildlife action plans, due for update in 2025, with state-defined priority habits and living resources.

## Clean Water

- How interim goals focused on the 92 segments that make up the TMDL may change how we work and where and when we see improvements.
- What monitoring data and networks we have, how to make the best use of those before filling small watershed monitoring gaps

## People

- Focus on systems-level and process-based recommendations that will ensure people are part of the vision for the Bay program.
- Define who the people of the Bay watershed are and who we need to reach.
- Ask whether and how people in each jurisdiction are or are not a part of the Bay partnership's work.

## Shallow Water Habitats







# Shallow Water Habitats

## VISION-

Healthy and sustainable shallow water habitats that support resources, communities, and economies that are resilient to long-term changes in watershed conditions.

## SCOPE-

Edges and Nearshore Waters of 3 Ecological Zones: Non-tidal Fresh, Tidal Fresh, and Tidal Estuarine. This includes the rivers and streams that flow to the waters of the Chesapeake Bay and the nearshore habitats where plants and animals live and people interact with the water.

# Five Recommendations

(these are currently being

- Reorient Bay outcomes/funding around achieving a broad suite of ecosystem service benefits.
- Larger focus on socio-ecological research that integrates both people and nature's science needs.
- Fill knowledge and data gaps on direct stressor to habitat condition and fishes
- Incentivization for projects/actions that influence multiple goals. This includes disincentivizing for efforts that harm other goals.





# Climate-Resilient Restoration

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## **Recommendation:**

Prioritize system-scale shallow water habitat restoration that provides social, economic, and ecological benefits while also providing resilience and connectivity under changing land-use and climate conditions.



# Climate-Resilient Restoration

## Strategies:

- Prioritize restoration efforts in areas benefiting from existing large-scale initiatives and investments, focusing on shallow water habitats vulnerable to climate change.
- Emphasize the restoration and maintenance of multiple habit types in project planning to reestablish ecological connectivity. A disconnected restoration project will have limited benefits, particularly in upstream areas of the watershed.
- Incentivize ecosystem services (including carbon sequestration) and social needs and use these as success metrics in restoration efforts, on balance with nutrient and sediment reductions for TMDL credits. **Alignment with Climate recommendation for carbon stewardship.**
- Consider project and habitat function overtime based on new realities and climate conditions. **Alignment with Climate recommendation to track change in habitat function.**
- Set realistic goals and account for offsetting losses and possible trade-offs. Current goals are based on habitat acres “restored” but do not account for those lost.
- Target locations that consider and address stressors of shallow water habitats.
- Improve training opportunities and consistency among practitioners.



# Integrated Modeling and Monitoring 2

**Issue:** Shallow water habitats in Chesapeake Bay and its watershed are not adequately monitored or modeled. There is limited understanding of the connectivity between upstream, downstream, land, and water and how shallow water habitats and living resources respond to changes in water quality and management actions.



**Recommendation:** Improve understanding of connectivity and habitat function under changing conditions by expanding Chesapeake Bay and watershed monitoring and modeling to include continuous shallow water habitats.



# Integrated Modeling and Monitoring

2

## Strategies:

- Implement continuous, long-term shallow water living resource monitoring and assessment to understand habitat connectivity and habitat function under changing conditions. **Modeling consistent with Climate recommendation.**
- Explore new methodologies for long-term habitat monitoring and modeling, potentially including the use of satellite technology and artificial intelligence (AI) to quantify parameters such as temperature, clarity, and chlorophyll-a in shallow water habitats.
- For all restoration projects, include pre- and post-restoration monitoring of sufficient duration to detect long-term causes of failure or success.
- Develop and implement a shallow water habitat sentinel site program.
- Develop economic valuations of ecosystem services for shallow water habitats.



# Adaptation Strategy to inform Habitat Management and Project Planning

**Recommendation:** Implement a process for climate adaptation in shallow water habitats that integrates adaptation science and community engagement elements.

Primary steps include conducting vulnerability assessments and modeling habitat transitions under alternative future scenarios, engaging the community in setting priorities for planning, implementing measures at both local and system scales while sharing knowledge, and evaluating effectiveness of the measures to improve the desired outcomes.

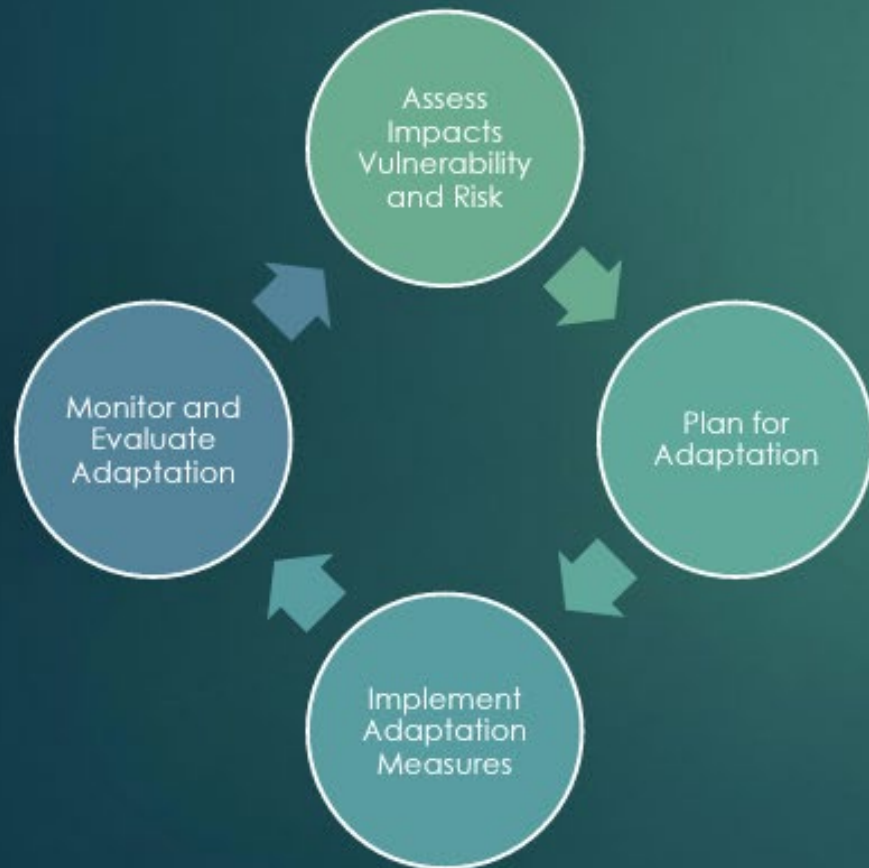




# Adaptation Strategy to inform Habitat Management and Project Planning

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Similar to Adaptation framework for Climate



## Assess Impacts Vulnerability and Risk

- Model habitat transitions, species shifts, and invasive species dynamics due to warming, sea level rise, saltwater intrusion, and precipitation changes, all under a range of future scenarios.
- Standardize terms, models, and methods for local-use or restoration planning. Model impacts of alternative decisions.

## Plan for Adaptation

- Co-develop adaptation strategies with communities to take advantage of local knowledge and collaborate with local planning and zoning entities to provide a holistic approach that aligns with local priorities.
- Use alternative future scenarios to provide decision-makers with options reflecting local community priorities.
- Identify critical habitat areas in both tidal and non-tidal waters and develop targeting approaches aligned with maximizing shallow water health.



# Adaptation Strategy to inform Habitat Management and Project Planning



## Implement Adaptation Measures

- Focus on conserving existing functional shallow water habitats such as marsh migration corridors, fish spawning and nursery areas, and riparian buffers.
- Limit shoreline hardening and promote the conversion of hardened shorelines to nature-based alternatives.
- Create incentives or rewards for decisions that conserve and protect shallow water habitats. **Consistent with Climate recommendation.**

## Monitor and Evaluate Adaptation

- Develop ecosystem service metrics of success for conservation and restoration projects.
- Identify successful local programs and initiatives and scale up these efforts.
- Formally and periodically assess effectiveness and implement learnings into updated assessments, modeling, and planning.



# Communication and Engagement

**Recommendation:** Strengthen the connection between people and shallow water habitats by communicating the importance of these ecosystems and their socio-economic benefits to stakeholders.

Develop active and sustained engagement with communities to understand their values and utilize social science strategies to develop stewards of their local waterways. Align actions and funding to these values and socio-economic considerations.





# Communication and Engagement

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## Strategies:

- Set reasonable goals that consider population growth and climate change that can demonstrate progress to people connected to their quality of life. **Aligned with Climate.**
- Determine opportunities for increased landowner incentives through expanded state and federal cost-share programs.
- Fully integrate **social science best practices**, like community based social marketing, to encourage environmentally friendly practices. **Aligned with People recommendation .**
- **Increase public engagement** in habitat enhancement projects, by understanding local priorities, seeking feedback on the project at multiple touch points and adjusting course to meaningfully respond to public comments.
- Invest in technical training and regional technical assistance to strengthen outreach capacity. **Aligned with People recommendation on capacity.**
- Highlight economic and ecological values to shift perspectives. Improved habitats provide community benefits.
- Emphasize public access to improve and enhance public stewardship.



# Effective Governance, Collaboration, and Innovative Funding

**Recommendation:** Balance the accountability, resources, and effort in an equitable way across the outcomes. Manage shallow water habitats as an interconnected ecosystem that leverages collaboration among the Bay Program partnership and organization structure by minimizing rigid bureaucracy without sacrificing inclusivity and adjusting outcomes and funding accordingly.





# Effective Governance, Collaboration, and Innovative Funding

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## Strategies:

- Program should be more relatable, and people driven. **People Team!**
- Establish accountability mechanisms that focus on partnerships and trust, not regulatory approaches, and foster this through periodic training for partnership building.
- Develop mechanisms that track all outcomes (habitat improvements) as consistently and closely as water quality. The water quality tool engages jurisdictions and local government, but Chesapeake Progress does not. Jurisdictions provide data for water quality BMPs, but there is no similar data tool for the other outcomes. **A multi-objective system that engages jurisdictions and local government is needed for other outcomes.** These can be used to recognize local priorities and improve collaboration among different levels of government.
- Reward preventative measures, not just corrective measures.
- Develop a definition of sustainable funding as a marker of progress. For example: dedicated funding mechanisms tied to **building capacity**, including the creation of markets for **nature-based solutions**.



# Schedule

- ▶ June – Oct- Steering Committee met to discuss vision, topics, and process.
- ▶ Nov. – Feb. 2024: Topical groups convene, discuss, and develop recommendations to be considered by the Beyond 2025 SC.
  - ▶ Fish Habitat, Wetlands and Stream Health Workgroup Meetings in December
  - ▶ SAV Workgroup meeting on Friday January 12th
- ▶ Feb. 2024: 2-day SC Meeting to discuss small group recommendations.
- ▶ Mar.-April 2024: SC Meetings to review and adopt the first draft of recommendations.
- ▶ June- July 2024: Solicit public feedback on the Beyond 2025 SC recommendations.
- ▶ July-Aug. 2024: Revise and affirm the Beyond 2025 SC recommendations based on public input.
- ▶ Sept.-Oct 2024: Seek approval of Beyond 2025 SC recommendations from the Management Board and Principals' Staff Committee.
- ▶ Oct.- Dec. 2024: Present and request approval of Beyond 2025 SC recommendations from the Executive Council.





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A red kayak is positioned in the lower-left foreground on a body of water. The sun is setting on the horizon, creating a bright orange glow and a long, clear reflection on the water's surface. The sky is filled with wispy clouds, some of which are illuminated by the sunset. A black paddle with the brand name "Blades" is resting across the kayak. On the right side of the image, there is a dark teal vertical banner. At the top of this banner is a red square containing a white question mark. Below the square, the words "Questions & Discussion" are written in a white, sans-serif font.

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# Questions & Discussion