

Advancing the Protection, Restoration, Enhancement, and Creation of Tidal and Nontidal Wetlands in the Chesapeake Bay Watershed



Strategy for the Chesapeake Bay Program September 17, 2024



STRATEGIC PURPOSE

To decrease and reverse wetland loss and to accelerate the protection, restoration, enhancement, and creation of tidal and nontidal wetlands in the Chesapeake Bay watershed by identifying, engaging, targeting, and leveraging partnerships and agency mandates/missions/initiatives.

STRATEGIC OBJECTIVES

- Identify **sustainable funding and regulatory tools** to advance tidal and nontidal wetland creation, protection, enhancement, and restoration.
- Support **amending the Wetlands Outcome** under the *2014 Chesapeake Watershed Agreement* as part of the Beyond 2025 process to reflect current understanding and future conditions; continue to track progress towards meeting the amended Wetlands Outcome.
- Foster and expand **private-public partnerships and networks** (e.g., cost-share programs) to increase wetland acreage.
- Increase internal and external **partner coordination** on tidal and nontidal wetlands and integrate efforts where appropriate.
- Provide resources (e.g., technical and financial) to **better understand the impacts of climate change** on tidal and nontidal wetlands and to **incorporate DEIJ considerations** to understand community response to these climate impacts, given the interface between human populations and wetlands. These increased understandings are intended to inform Chesapeake Bay Program (CBP) partnership actions.
- Continue to **support efforts underway** that are intended to advance wetland protection and restoration (e.g., [Restoring the Wetlands of the Chesapeake Bay Watershed Action Plan](#) and the deliverables under the EPA-Chesapeake Bay Trust Grant entitled “Wetlands Capacity Building and Green Streets”).
- Support the **science needs’** efforts of the Wetland Workgroup and other Goal Teams and workgroups with wetland related outcomes.



KEY ACTIVE PARTNERS

- **Federal Agencies**, in particular EPA Region 3, including the Chesapeake Bay Program Office (CBPO), Fish and Wildlife Service (FWS), U.S. Army Corps of Engineers (USACE), the U.S. Geological Survey (USGS), the U.S. Department of Agriculture (USDA), Department of Defense (DoD), USDA Natural Resources Conservation Service (NRCS) and the National Oceanic and Atmospheric Administration (NOAA)
- Chesapeake Bay watershed **jurisdictions**
- **Chesapeake Bay Trust** and **National Fish and Wildlife Foundation** (Small Watershed Grants, Innovative Nutrient and Sediment Reduction Grants, and Chesapeake WILD), and the **NOAA grant programs**
- Chesapeake Bay Program (CBP) **partnership’s Habitat Goal Implementation Team and Wetlands Workgroup**

- **Nongovernmental partners** interested in supporting wetland goals, including the National Association of Wetland Managers

KEY ACTIVITIES UNDERWAY

- ✓ **CBP Wetlands Workgroup:** The Wetlands Workgroup facilitates the implementation of projects to restore and enhance tidal and non-tidal wetlands across the Chesapeake Bay watershed. In 2023, the Habitat Goal Implementation Team (Habitat GIT), in coordination with the Wetlands Workgroup – released the action plan, [*Restoring the Wetlands of the Chesapeake Bay Watershed*](#). This action plan is a result of a workshop held to understand the barriers and opportunities to the protection and restoration of tidal and non-tidal wetlands. The action plan provides specific recommendations to address these barriers, as well as details of specific federal and state responsibilities and actions to advance the protection and restoration of tidal and non-tidal wetlands, including funding sources and expenditures.
 - ✓ The Habitat GIT partnered with the Franklin and Marshall College Public Service Summer Institute Intern to work with the Habitat GIT and the Wetlands Workgroup to develop a white paper that provides standard definitions for creation, restoration, and enhancement techniques that will be used to enhance wetland communications and wetlands tracking across the watershed. It is recommended to utilize and build off of existing and available resources on thinking through possible definitions.
 - ✓ The Wetland Workgroup Chairs are collaborating with Masters’ degree students at the University of Michigan School for Environment and Sustainability on development of a project to promote wetlands projects with a focus on non-tidal wetlands. The project includes elements of communication, policy, and GIS.
 - ✓ Given the impact of climate change on tidal wetlands, the Wetlands Workgroup has been coordinating closely with the Climate Resiliency Workgroup on understanding marsh adaptation and mitigation strategies and opportunities. This effort has largely focused on tidal wetlands, but the Wetlands Workgroup plans to expand the climate resiliency work to non-tidal wetlands in the future.
 - ✓ The lack of consistent and thorough reporting on restoration, creation, and enhancement implementation activities has been identified as a significant barrier to measuring progress toward achieving the *2014 Chesapeake Watershed Agreement’s* Wetlands Outcome. The Habitat GIT and Wetlands Workgroup has worked with the CBPO over the last 3 years to create the Habitat Tracker and hire a Living Resource Analyst to help fill this information and measurement gap. The Habitat Tracker is a tracking tool to assess progress towards the Wetland and Black Duck outcomes of the *2014 Chesapeake Watershed Agreement’s* Vital Habitat Goal. The tracker is used to collect data and evaluate the functional benefits of wetlands and for indicator species.
- ❖ **EPA CBPO Grant with the Chesapeake Bay Trust:** Awarded in January 2023, the grant is intended to advance the CBP’s Wetlands Outcome through tidal wetland strategic planning, capacity building, landowner/community engagement, program sustainability/financing, and project design. The grant was developed in response to the recommendations reflected in the action plan *Restoring the Wetlands of the Chesapeake Bay Watershed*. The potential for whether these grant deliverables could serve as a model for other areas within the watershed can be explored. These deliverables include:
- ✓ Develop and implement a single blueprint that outlines how to develop tidal wetland siting criteria, including permit considerations.
 - ✓ Develop standardized tidal wetland restoration techniques and monitoring to allow continuity within the jurisdictions and help maintain expertise through changing staff.

- ✓ Develop consistent monitoring protocols – work with the Wetlands Workgroup and the Scientific, Technical Assessment and Reporting team to develop a pooled monitoring protocol that outlines assessment metrics for tidal wetlands. Work with Delaware, Maryland, Virginia, and the District of Columbia to develop and design a pilot project that incorporates the techniques and monitoring protocol.
- ✓ Education and outreach to landowners and local communities. This includes local and social media outreach campaigns on tidal wetland functions, services, benefits, and value. Develop and maintain an action network of local community organizations and community influencers that can work with staff to

share strategic messaging on wetlands within their spheres of social influence.

- ✓ Develop a strategy for how the partnership can enhance capacity and expertise in wetland programs. Explore how the CBP partnership can capitalize on revenue generated and other benefits by utilizing ecosystem service information and credits to sustain and build capacity across the watershed.
- ✓ Develop conceptual designs for a large-scale tidal wetland restoration project in Pocomoke Sound on the lower Chesapeake Bay eastern shore.



- ❖ [Sentinel Landscapes](#): The Sentinel Landscapes Partnership enables USDA, DOD, and Department of the Interior (DOI) to collaborate for greater impact in locations where significant agricultural and natural resources, species habitat, and military training needs intersect. The USDA, DOD, and DOI established the Sentinel Landscapes Partnership through a Memorandum of Understanding in 2013 (updated in 2022).

KEY CHALLENGES TO ADDRESS

→ Gap in comprehensive accounting of tidal wetlands – **need better tracking and reporting mechanisms**, including improved data reporting in the Habitat Tracker, as well as increased coordination with the data providers.

→ **Coordination is difficult** as no single agency is responsible for wetlands (especially with tracking and reporting).

→ The recent Supreme Court decision on *Sackett v. EPA* has raised concerns that **fewer wetlands are protected by federal law, which could result in significant impacts to habitat and water quality**, and hinder progress towards meeting the Wetlands Outcome in the *2014 Chesapeake Watershed Agreement*.



→ **More research is needed on wetlands and climate resilience**, where wetland loss is more likely due to climate impacts, the best locations for wetland migration corridors, and restoration and creation activities to enable marsh migration.

→ There is **no sustainable funding** to support the protection and restoration of tidal and nontidal wetlands.

→ Ongoing practice of treating wetland restoration as a 'co-benefit' as opposed to its own 'benefit' or end goal as one of the 31 outcomes in the *2014 Chesapeake Bay Watershed Agreement*. Therefore, there are concerns that **wetlands are not being prioritized for protection/restoration**.

RECOMMENDED OPPORTUNITIES AND ACTIONS

Explore sustainable funding options and integrated approaches with federal (in particular, FWS, DOD, USACE, NOAA, EPA, and USDA/NRCS), state and non-governmental organization partners

- ψ Work with DOD and other state and federal partners on additional sentinel landscapes in the watershed.
Explore whether EPA can be included into the existing [Sentinel Landscape MOU](#) (EPA is currently not listed as a partner on the four sentinel landscapes in the Chesapeake Bay watershed).
 - The Sentinel Landscapes program provides an opportunity for “fed-to-fed” funding.
- ψ New and increased **funding should be directed to the states to build wetland capacity**. This is critical to be able to access and leverage increased federal funds that will be available.
- ψ Embrace and **adopt an integrated approach to wetland restoration with federal partners (perhaps via an MOU)**, as opposed to supporting individual projects:
 - Target wetlands more vulnerable following the *Sackett v. EPA* decision.
 - Incorporate **nature-based solutions** that can better withstand the effects of climate change.
 - Take a landscape-level approach to assessing and prioritizing areas for wetland protection, restoration, creation, and enhancement.
- ψ **Promote Carbon Stewardship**: Wetland conservation, management, and restoration deliver climate mitigation benefits while ensuring ecosystems also maintain the health, function, and resiliency needed to continue delivering water quality benefits.
- ψ Continue and **increase technical assistance capacity**: Outreach and design are priority areas to grow capacity to increase the pipeline of projects and advance them to implementation.



- ψ Explore **stronger collaboration opportunities with the USACE technical assistance program** (which is currently an “untapped” resource) and other assistance programs (e.g., [Silver Jackets](#)). Identify what, if any, additional funding and partner expansion might be needed.
- ψ Explore **funding an additional position under the FWS-EPA interagency agreement to support and promote wetlands restoration and creation**, to focus on aligning resources and operations of the U.S. FWS Partners for Fish and Wildlife and Coastal Programs in the watershed to help address the CBP Wetlands Outcome by sharing in Wetlands Workgroup priorities.
 - The position would focus on FWS priorities like tidal wetland restoration and salt marsh sparrow conservation, in alignment with the Wetlands Outcome.
 - This would allow EPA and the FWS to leverage and influence resources not only from the respective agencies, but also from the rest of the federal family – USACE, NOAA, and NRCS are important contributors to the Wetlands Outcome – and from the CBP partnership as a whole.

Continue to support and prioritize implementation of EPA CBPO’s grant with the Chesapeake Bay Trust

- ψ Fully **fund the agreement through the lifetime of the grant**, in addition to planning for post-agreement implementation of deliverables, outputs, etc.
 - While CBT is pursuing alternative funding sources to fully fund the design and implementation of a Pocomoke Sound demonstration project, **additional funding might be needed**.
 - Explore opportunities to partner with states, and to utilize the EPA Wetland Program Development Grants and other federal agency grants.

Provide strategic support to the CBP’s Wetlands Workgroup

- ψ Assist in **directing resources to the Wetlands Workgroup to revisit and revise the 2014 Chesapeake Watershed Agreement’s Wetlands Outcome** (i.e., create or re-establish 85,000 acres of tidal and non-tidal wetlands).
 - The outcome is currently water quality based and instead should focus on multiple benefits including habitat/living resource, climate resilience, and water quality.
 - A more meaningful outcome would be one that is also based on an evaluation that considers where wetlands were historically in the watershed, where they have been lost (including consideration of ecosystem functions), and where it is possible to restore wetlands considering the effects of climate change. What is the acreage of healthy wetlands that we want to have in 2035? 2050?
- ψ **Build in more accountability** by working with each of the jurisdictions to identify applicable accountability mechanisms (e.g., either jurisdictional or watershed wetland goals/targets), and that progress toward goals/targets will be effectively tracked over time.
- ψ Support and **fund the use of Artificial Intelligence technology, including high-resolution land use/land cover data, for the identification and location of wetlands** to determine where the tidal and nontidal wetlands are in the watershed. Utilize predictive models, as available, on where wetland creation and restoration should occur.



- ψ **Direct resources towards climate research** to identify climate projections, research, and data/vulnerability assessments that could help inform the siting of wetlands, and to understand the vulnerability of existing wetlands in more climate-risk geographies.

Enhance collaboration between the federal agencies and the CBP Partnership

- ψ Continue monthly coordination meetings between EPA Region 3 and the CBP partnership.
- ψ Leverage existing regulatory tools to protect and/or restore tidal and nontidal wetlands within the Chesapeake Bay watershed.
- ψ **Explore and cultivate innovative public/private partnerships** and promote landowner participation in voluntary stewardship of wetlands.
- ψ Identify opportunities to **further implement [Executive Order 11990--Protection of wetlands](#)**.
- ψ Address and resolve concerns with shallow water use conflicts (e.g., living shoreline permitting projects and loss of SAV beds). This will require inter-agency coordination at both the state and federal levels (e.g., NOAA, EPA Region 3 Water Division, USACE, USDA NRCS, and FWS).
- ψ Determine the utility of **incorporating common terminology for wetland restoration and enhancement techniques (currently being developed by the Wetlands Workgroup) into wetland restoration, protection, and enhancement efforts** and associate guidance.
- ψ Explore the use and eligibility of State Revolving Funds (SRF) to target wetlands restoration (coordination with states is necessary).
- ψ Infuse EPA Region 3 wetland scientist expertise into the life cycle of those CBP grants that support wetland restoration, enhancement, etc. This could lead to the **CBP adopting a watershed wide approach for implementing grants using science to strategically identify where we can best leverage limited resources to maximize wetlands** (subject to constraints like state borders, budget limitations, and Justice40). This expertise can serve to:
 - design grant guidance for wetlands, and
 - be available for states to consult when siting their CBP-funded projects for maximum individual and landscape network (migratory bird corridor, etc.) effect.

Collaborate with CBP State Wetland Champions

- ψ Identify a jurisdictional wetlands champion at the level of the Management Board and/or Principals' Staff Committee.
 - Determine the scope, expectations, and role of a jurisdictional wetlands champion. In addition, identify (any) support needed to serve in this role.
 - It will be particularly important that state champions work with the Management Board and Principals' Staff Committee members to ensure there is engagement and support on wetlands-related efforts.
 - Work with USDA, FWS, EPA, state environmental agencies, and nonprofit organizations like Ducks Unlimited, Audubon and The Nature Conservancy to use state and federal Farm Bill, America the Beautiful Act, and other funding for creating, restoring, preserving and buffering wetlands on farmland as BMPs and for bird migration.