

**Report of the Wetlands Policy Task Force
and the Secretary of Natural and Historic Resources**

**Policies Regarding Wetlands Identification, Protection, Restoration, Creation
and Mitigation; Emerging Science and Innovation to Ensure Wetland Health
and Survival**

December 2025

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I. Purpose

Chapter 647 of the 2025 Acts of Assembly (HB2034; Code of Virginia § 2.2-220.6) established the Wetlands Policy Task Force (WPTF) under the Secretary of Natural and Historic Resources and charged the WPTF with evaluating existing policies regarding wetlands protection, restoration, creation, and mitigation in the Commonwealth and other states; recommending policy changes necessary to accelerate tidal and nontidal wetland identification, restoration, creation, and protection; and exploring emerging science and innovation to ensure wetland health and survival, with a report every two years. This document serves as the first report to meet this requirement.

II. Background

While Virginia has been engaged in wetlands protection, restoration, enhancement, creation, and mitigation for decades, recent emphasis on the 2014 Chesapeake Bay Watershed Agreement's Wetlands Outcome¹ and new targets under the amended Agreement² have brought these topics to the forefront. A suite of existing Virginia laws and related regulations protect tidal and non-tidal wetlands across the Commonwealth, outlining permit requirements for activities that may impact these resources and mitigation requirements when impacts are unavoidable.

The law generally known as the “Virginia Tidal Wetlands Act,” Chapter 13 (§ 28.1-1300 et seq.) of Title 28.2 of the Code of Virginia, was passed in 1972³ and protects tidal wetlands by requiring a permit for any activity that would alter them. The Act outlines permitting and enforcement authorities, local administration, permitting processes, and exceptions. Amendments have been made to the Act since 1972 to address evolution in shoreline management techniques and changing environmental conditions. The Virginia Water Resources and Wetlands Protection Program, also referred to as the “Virginia Nontidal Wetlands Act,” Article 2.2 (§ 62.1-44.15:20 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia, was

¹ The 2014 Wetlands Outcome is to “Continually increase the capacity of wetlands to provide water quality and habitat benefits throughout the watershed. Create or reestablish 85,000 acres of tidal and non-tidal wetlands and enhance the function of an additional 150,000 acres of degraded wetlands by 2025. These activities may occur in any land use (including urban) but primarily occur in agricultural or natural landscapes.” See https://www.chesapeakebay.net/files/documents/FINAL_Ches_Bay_Watershed_Agreement.withsignatures-Hires.pdf

² The revised Wetlands Outcome is to “Restore, create, enhance and protect wetlands to support people and living resources, including waterbirds and fish, and provide water quality, flood and erosion protection, recreation and other valuable benefits to people.” See <https://www.chesapeakebay.net/files/documents/CBWA-2025-IV-Final-Facing.pdf>

³ Chapter 711 of the 1972 Acts of Assembly added Chapter 2.1, §§ 62.1-13.1 through 62.1-13.20, relating to protection of Virginia wetlands, to prescribe a Wetlands Ordinance, to provide for the creation of wetlands boards, to require permits for certain activities, and to provide for review and appeal of decisions regarding permits. Chapter 836 of the 1992 Acts of Assembly revised and recodified the tidal fishery and habitat laws of Virginia by, among other things, adding Title 28.2 and Chapter 13 to the Code of Virginia and repealing Chapter 2.1 (§§ 62.1-13.1 through 62.1-13.20) of the Code of Virginia.

passed in 2000⁴ and regulates activities in inland, non-coastal wetlands to achieve no net loss of wetland acreage and function. The Nontidal Wetlands Act also outlines permitting and enforcement authorities, permitting processes, and supplements federal regulations. The Chesapeake Bay Preservation Act, Article 2.5 (§ 62.1-44.15:67 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia, passed in 1988, is a cooperative state-local program that protects and improves water quality in the Chesapeake Bay in part through the local designation of Chesapeake Bay Preservation Areas (as either Resource Protection Areas and Resource Management Areas⁵), which include wetlands, tidal shores, and 100-foot buffer zones. Development in these areas is regulated to minimize disturbance and reduce non-point source pollution.

In the Chesapeake Bay watershed, there has been focused attention for more than a decade on the loss of wetlands over the past several centuries. The 2014 Chesapeake Bay Watershed Agreement established a targeted Wetlands outcome that described a goal of enhancing 150,000 acres and restoring/creating 85,000 acres in the watershed by 2025. In August 2021, the Chesapeake Bay Program Outcome Attainability Team, in its report to the Management Board and Principals' Staff Committee, identified the Wetlands Outcome as one of two that were considerably off target and in need of attention.⁶ At that time, there was general consensus that the outcome lacked jurisdiction-specific targets, making it challenging for partners to prioritize, plan, and fund projects, and was perhaps overly ambitious in that it failed to take into account the complexities of developing, permitting, and delivering restoration and enhancement projects at the identified scale. The Habitat Goal Implementation Team sponsored the Restoring Wetlands of the Chesapeake Bay Watershed Workshop in August 2022, bringing practitioners and policymakers together to identify barriers to and actions for improving the pace of restoration and enhancement of tidal and nontidal wetlands. The resulting Action Plan outlines a variety of actions and work occurring across the watershed since then has been undertaken through the lens of this plan. As a component of this effort, the Virginia Department of Wildlife Resources (DWR) led the development of a Virginia Wetlands Action Plan (Appendix C), which serves as an appendix to the more expansive watershed plan. This state-specific effort was adopted in January 2023 and identifies five focus areas: wetland tracking, strategic planning, capacity building, outreach, and sustainable funding. Accomplishment in each of these areas will be

⁴ Chapters 1032 and 1054 of the 2000 Acts of Assembly amended §§ 62.1-44.3, 62.1-44.5, 62.1-44.15, 62.1-44.15:5, and 62.1-44.29 of the Code of Virginia relating to wetlands. Amendments to § 62.1-44.15:5 added the requirement to have a Virginia Water Protection Permit to excavate in a wetland. Chapters 1032 and 1054 of the 2000 Acts of Assembly added Article 2.2, (the Virginia Water Resources and Wetlands Protection Program, § 62.1-44.15:20 et seq.) to Chapter 3.1 of Title 62.1 of the Code of Virginia and repealed § 62.1-44.15:5.

⁵ See 9VAC25-830-80, Resource Preservation Areas (lands adjacent to water bodies with perennial flow that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may cause significant degradation to the quality of state waters), and 9VAC25-830-90, Resource Management Areas (land types that, if improperly used or developed, have a potential for causing significant water quality degradation or for diminishing the functional value of the Resource Protection Area).

⁶ See [2021 Outcome Attainability.pdf](#), November 18, 2021. The Wetlands Outcome is summarized on p. 12 of 30.

critical to making meaningful progress beyond no net loss of wetlands and is largely dependent on voluntary actions implemented on public and private lands.

In December 2024, Governor Glenn Youngkin issued Executive Directive (ED) 10, “*Positioning the Commonwealth of Virginia for Continued Success in Chesapeake Bay Restoration Efforts.*”⁷ One specific directive in ED10 was the establishment of a Statewide Wetlands Technical Team, led by the DWR. The team is established to improve coordination and communication around wetlands restoration and creation and provide recommendations related to wetland tracking, strategic planning, capacity building, and sustainable funding, including partnerships that leverage private sector investment. Over the past 12 months, the Statewide Wetlands Technical Team has met three times, including a joint meeting with the WPTF. In its initial year, the Statewide Wetlands Technical Team facilitated inter-organizational discussions, breaking down silos, and enhancing the collective partnerships’ abilities to leverage resources towards projects of mutual interest.

In 2025, the General Assembly passed HB2034, directing the Secretary of Natural and Historic Resources to establish a wetlands policy task force. The primary purpose of the WPTF is three-fold: (1) evaluate existing policies regarding wetlands protection, restoration, creation, and mitigation in the Commonwealth and other states; (2) recommend policy changes necessary to accelerate tidal and nontidal wetland identification, restoration, creation, and protection; and (3) explore emerging science and innovation to ensure wetland health and survival. The bill requires the WPTF to include certain relevant stakeholders, to meet at least two times annually, to report its initial findings and recommendations to the Chairs of the Senate Committee on Agriculture, Conservation and Natural Resources and House Committee on Agriculture, Chesapeake and Natural Resources by December 31, 2025, and to update its report at least every two years. At least one meeting annually will be held jointly with the Statewide Wetlands Technical Team to allow that team to review and provide feedback on the WPTF’s proposed recommendations.

The Secretary of Natural and Historic Resources extended invitations to 25 different governmental and non-governmental entities to serve on the WPTF. These stakeholders included those specifically identified in the legislation, as well as other entities to ensure that the WPTF represents the full array of interests in wetlands management and conservation in the Commonwealth. Participation in this workgroup is not intended to fulfill statutorily required tribal consultation obligations. The following organizations currently serve on the WPFT:

- Chesapeake Bay Commission
- Chesapeake Bay Foundation

⁷ See <https://www.governor.virginia.gov/media/governorvirginiagov/governor-of-virginia/pdf/ed/ED-10---Positioning-the-Commonwealth-of-Virginia-for-Continued-Success-in-Chesapeake-Bay-Restoration-Efforts---FINAL.pdf>

- College of William & Mary
- Crater Planning District Commission
- Environmental Policy Innovation Center
- Hampton Roads Planning District Commission
- Indigenous Conservation Council of the Chesapeake Bay
- Middle Peninsula Planning District Commission
- Pamunkey Indian Tribe
- The Nature Conservancy, Virginia Office
- University of Virginia, Institute for Engagement and Negotiation
- U.S. Army Corps of Engineers (USACE), Norfolk District
- Virginia Association for Commercial Real Estate
- Virginia Association of Counties
- Virginia Department of Conservation and Recreation (DCR)
- Virginia Department of Environmental Quality (DEQ)
- Virginia Department of Forestry (DOF)
- Virginia Department of Wildlife Resources (DWR)
- Virginia Environmental Restoration Association
- Virginia Farm Bureau
- Virginia Institute of Marine Science (VIMS)
- Virginia Marine Resources Commission (VMRC)
- Virginia Municipal League
- Wetland Studies & Solutions, Inc.
- Wetlands Watch

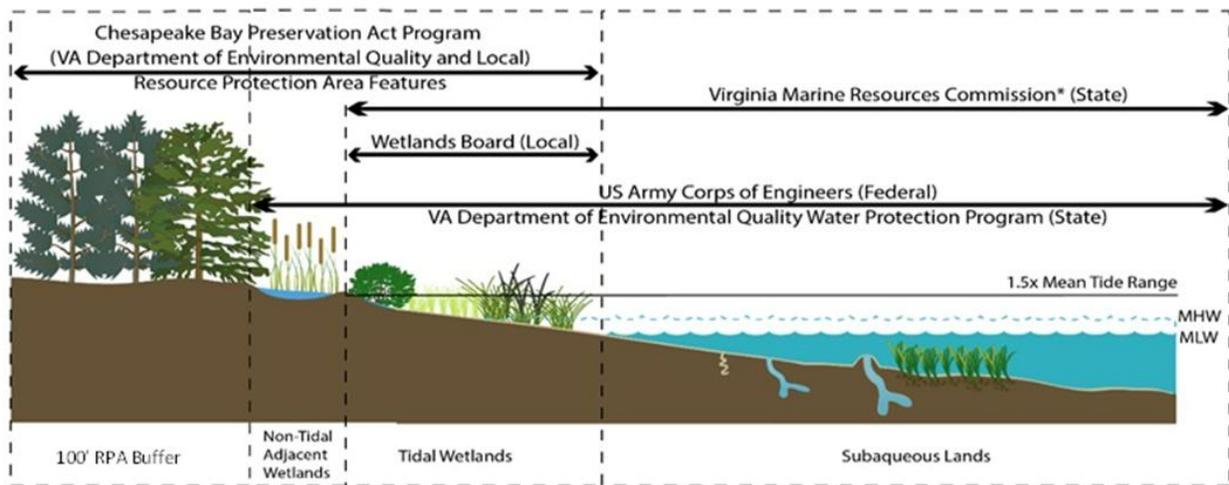
The WPTF met twice in 2025. At its first meeting on September 19, Secretary of Natural and Historic Resources Stefanie Taillon led the WPTF in a discussion of its charges, and the group heard presentations from state agency staff and researchers about existing Virginia wetlands policies (regulatory and non-regulatory) and emerging science. Members also provided initial feedback on existing policies. The second meeting was held on November 7 jointly with the Statewide Wetlands Technical Team. During that meeting, the group heard presentations on results of a WPTF survey conducted by the DWR and additional emerging science topics. Members also discussed the framework of this report and proposed schedule for completion.

As noted above, to help inform the content of this report and provide a baseline from which to continue discussions about wetlands policy, emerging science, and innovation, the DWR conducted an online survey of WPTF members in September and October 2025. The survey was used to gather information about organizational intersections with aspects of wetlands management and conservation; perceptions about existing wetlands policies; identification of barriers to implementation of wetlands projects; suggestions about wetlands policies from other

states or emerging science and innovation that the WPTF might explore further. Survey responses are presented in Appendix D.

III. Current Wetlands Policy in Virginia

Wetlands policy in Virginia includes statutory, regulatory, and non-regulatory components. As depicted in Figure 1, oversight of wetlands in Virginia can overlap, with federal, state, and/or local governments having complementary roles and responsibilities. These components recognize and help sustain the myriad of benefits that wetlands provide, including habitat for fish and wildlife, reduction of nutrient and sediment, enhancement and protection of surface waters and groundwater, flood mitigation, and resilience.



* VMRC has oversight authority for the Tidal Wetlands Act and administers the Act in localities without a wetlands zoning ordinance and local wetlands board.

Virginia Shorezone Jurisdictions: legally defined shoreline resources and the relevant local, state and federal authorities. Note that some authorities cross resource boundaries and most resources have at least two responsible regulatory authorities. Symbols courtesy of the Integration and Application Network (ian.umces.edu/symbols/), University of Maryland Center for Environmental Science.

Figure 1.

(Graphic: Virginia Institute of Marine Science)

Members of the WPTF provided information about, and feedback on, existing wetlands laws, regulations, and policies – what is working well, where opportunities exist for enhancement, and barriers to implementing wetlands projects – through the DWR survey. Survey responses and suggestions about policies in other states that the WPTF could consider are provided in Appendix D. The survey and responses will be useful in informing future discussions and recommendations of the WPTF to the General Assembly and Administration.

State Laws and Regulations

Virginia Tidal Wetlands Act (1972)

With the passage of the Tidal Wetlands Act in 1972 (and subsequent amendments), the Virginia Marine Resources Commission (VMRC) and the resulting local wetland boards were charged to “*preserve and prevent the despoliation and destruction of wetlands within its jurisdiction while*

accommodating necessary economic development in a manner consistent with wetlands preservation,” in accordance to any standards and guidelines set by the Commonwealth pursuant to § 28.2-1301 of the Code of Virginia and including those that ensure protection of shorelines and sensitive coastal habitats from sea level rise and coastal hazards.⁸ Wetlands Guidelines were developed and adopted by the VMRC in 1974, as required in the Tidal Wetlands Act, to guide that agency and local wetland boards in their deliberations on permitting actions. The need to incorporate additional standards within the Guidelines, necessary for the protection and coastal resilience of Virginia’s tidal wetland acreages, was addressed by the General Assembly with the passage of living shorelines legislation in 2011 and 2020.⁹ The Commission considered and approved an update to the Wetlands Guidelines at the required public hearing in May 2021.

Following the original adoption of the Wetlands Guidelines in 1974, the VMRC adopted regulations codifying wetlands mitigation-compensation policy and supplemental guidelines to provide for the compensation of permissible impacts to tidal wetlands. These guidelines were updated in 2005 to meet Virginia’s “no net loss” of wetlands pursuant to the Chesapeake 2000 Partnership Agreement. These guidelines were updated again in 2025, at the direction of the General Assembly, to provide further clarification on recommended sequencing of acceptable compensatory mitigation options.¹⁰ In 1998, the VMRC established and adopted Guidelines for Establishment, Use, and Operation of Tidal Wetland Mitigation Banks in Virginia to provide guidance to itself, local wetlands boards, and the public for the development and operation of tidal wetland mitigation banks. These Guidelines were update in 2024 to clarify the process for proposing a new tidal wetlands mitigation bank for consideration by the Interagency Review Team.

From the original implementation of the Wetlands Guidelines, the VMRC and local wetlands boards took a lead role in significant permitting activities in Virginia. For most activities that

⁸ § 28.2-1302 of the Code of Virginia.

⁹ Chapter 885 of the 2011 Acts of Assembly (SB964) amended and reenacted § 28.2-1100 of the Code of Virginia and added sections numbered 15.2-2223.2 and 28.2-104.1, relating to the Marine Resources Commission, Virginia Institute of Marine Science, and coastal resource management. The legislation established living shorelines as the preferred alternative for stabilizing tidal shorelines in the Commonwealth.

Chapter 809 of the 2020 Acts of Assembly (SB776) amended and reenacted §§ 28.2-104.1, 28.2-1301, 28.2-1302, and 28.2-1308 of the Code of Virginia, relating to wetlands protection and living shorelines. The legislation required the VMRC to promulgate and periodically update minimum standards within the Wetlands Guidelines for the protection and conservation of wetlands and to approve only living shoreline approaches to shoreline stabilization, unless the best available science shows that such approaches are not suitable.

¹⁰ Pursuant to Chapter 334 of the 2023 Acts of Assembly, the amendments to 4VAC20-390 (Wetlands Mitigation – Compensation Policy) provide for the generation of vegetated and unvegetated wetland credits from wetland creation, restoration, conversion, and enhancement activities, invasive species control, and the establishment of open water channels. The amendments require that the local wetlands board or the Marine Resources Commission select the compensatory mitigation option in the following order of preference: (i) use of an approved mitigation bank, (ii) use of an approved in-lieu fee program, (iii) permittee-responsible on-site and in-kind mitigation, or (iv) permittee-responsible mitigation through off-site or out-of-kind mitigation within the same watershed. 41:14 VA.R. 1555-1559 February 24, 2025.

would directly disturb either tidal or non-tidal wetlands or shallow water habitat, a permit is required. The permit process relies on a single Virginia joint local/state/federal permit application (JPA). The review process, for which this application was originally designed, considers various local state and federal statutes governing the disturbance or alteration of environmental resources. Applications receive independent yet concurrent review by local wetland boards, the VMRC, the Virginia Department of Environmental Quality (DEQ), and the U.S. Army Corps of Engineers (USACE). There is no specific sequencing of this review and decision-making between the agencies. The process can be brief or long depending on the size and complexity of the project and whether it is contested by an entity. Until September 2025, the VMRC's Habitat Management Division administered the JPA process; effective September 1, 2025, the USACE became the central point of receipt of all requests in the Commonwealth of Virginia (instead of the VMRC) as the result of a federal mandate.

The VMRC's Habitat Management Division, which coordinates that agency's participation in the JPA process, has also established several internal policies and procedures directly relevant to wetlands conservation. Habitat Management Division Procedures Policy #11-01 outlines the framework in which proposed eradication of *Phragmites australis* (an invasive reed) may or may not require permitting. Habitat Management Division Procedures Policy #13-01 clarifies certain wetland permit application fees.

Virginia Nontidal Wetlands Act (2000)

The Virginia Nontidal Wetlands Act, passed in 2000, regulates inland wetlands to achieve “no net loss” of their acreage and function.¹¹ It is administered by the DEQ through the Virginia Water Protection (VWP) Permit Program, and requires permits for activities like filling, excavating, or draining nontidal wetlands.¹² The Act provides state jurisdiction over nontidal wetlands, including those that may no longer be under federal protection, and requires a state permit in addition to any federal permits that might be needed (e.g., from the USACE). The VWP Permit Program follows state regulations and federal guidelines under the Clean Water Act, Section 401.

The VWP Permit Program was implemented in 2001, with the adoption of regulations by the State Water Control Board (9VAC25-210) that outline the process for application for a VWP permit and conditions under which permits may be issued. The DEQ has established general permits for certain specified categories of activities that are considered to have minimal impacts. Typically, general permits have low impact thresholds, are activity specific, and affect less than two (2) acres of nontidal wetlands or open water or less than 1,500 linear feet of nontidal stream. Examples include impacts of less than one-half of an acre (9VAC25-660) and linear transportation projects (9VAC25-880). Individual permits are generally required when impacts

¹¹ § 62.1-44.15:21 B of the Code of Virginia (“Permits shall contain requirements for compensating impacts on wetlands. Such compensation requirements shall be sufficient to achieve no net loss of existing wetland acreage and functions...”).

¹² § 62.1-44.15:20 A of the Code of Virginia

will be more significant (greater than 2 acres of nontidal wetlands, more than 1,500 linear feet of nontidal stream) or are in tidal waters and are project-specific. Of relevance to the WPTF, the VWP Permit Program does not regulate improvements to wetlands. The DEQ's VWP program also provides Section 401 Certification for federal Clean Water Act Section 404 permits for both tidal and nontidal wetlands, which is a crucial part of the regulatory process.

In 2007, Virginia established regulations that require no net loss of wetland acreage and function (9VAC25-210-116, "Compensatory mitigation for project impacts shall be sufficient to achieve no net loss of existing wetland acreage and no net loss of functions in all surface waters.") Additional information in this policy speaks to practicable and ecologically preferable compensation alternatives, how compensation mitigation proposals will be evaluated, in-lieu fee program approval, and use of mitigation banks.

Chesapeake Bay Preservation Act

The Chesapeake Bay Preservation Act (CBPA) was enacted in 1988 to improve water quality in the Chesapeake Bay through effective land management and planning. Specifically, the CBPA seeks to improve water quality through reducing non-point source pollution. The CBPA recognizes that local governments are primarily responsible for land management decisions and requires each Tidewater locality¹³ to adopt a program based on the CBPA and its associated regulations. Tidewater localities are required to establish a local Chesapeake Bay board to consider permit applications under the local CBPA ordinance. The DEQ is the administering authority for the state, and the agency provides guidance, technical assistance and program compliance reviews associated with the administration of local programs to implement the CBPA.

Pursuant to the CBPA, the State Water Control Board adopted regulations, the Chesapeake Bay Preservation Area Designation and Management Regulations (9VAC25-830), that establish the criteria that local governments use to determine the extent of the Chesapeake Bay Preservation Areas within their jurisdictions. The regulations also establish criteria for use by local governments in granting, denying or modifying requests to rezone, subdivide, or to use and develop land in Chesapeake Bay Preservation Areas. Generally, there are two types of protected land that fall under the Bay Act: Resource Protection Areas (RPAs) and Resource Management Areas (RMAs). RPAs improve water quality, while RMAs can impair water quality if managed improperly. RPAs are comprised of natural shoreline features plus a minimum 100-foot-wide

¹³ "Tidewater Virginia" means the following jurisdictions:

The Counties of Accomack, Arlington, Caroline, Charles City, Chesterfield, Essex, Fairfax, Gloucester, Hanover, Henrico, Isle of Wight, James City, King and Queen, King George, King William, Lancaster, Mathews, Middlesex, New Kent, Northampton, Northumberland, Prince George, Prince William, Richmond, Spotsylvania, Stafford, Surry, Westmoreland, and York, and the Cities of Alexandria, Chesapeake, Colonial Heights, Fairfax, Falls Church, Fredericksburg, Hampton, Hopewell, Newport News, Norfolk, Petersburg, Poquoson, Portsmouth, Richmond, Suffolk, Virginia Beach, and Williamsburg. § 62.1-44.15:68 of the Code of Virginia.

landward buffer. Amongst a number of features, RPAs include tidal wetlands and nontidal wetlands adjacent to tidal or perennial waters and connected by surface water.

Other State Regulations

In addition to the regulations noted with particular state laws above, other state regulations that have some relevance to wetlands management and conservation in Virginia include the Certification of Nonpoint Source Nutrient Credits (9VAC25-900), which describes allowance of wetland restoration for nutrient credit generation and mitigation projects; the General Virginia Pollution Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9VAC25-820), which governs owners of facilities holding individual VPDES permits that discharge or propose to discharge total nitrogen or total phosphorus to the Chesapeake Bay or its tributaries, which may have impacts on wetlands; and the Climate Change Resilience and Adaptation Criteria (9VAC25-830-155), which provides criteria and requirements to address coastal resilience and adaptation to sea-level rise and changing environmental conditions and references tidal wetlands and living shorelines.

Non-Regulatory Components

Virginia Wetlands Action Plan

The Virginia Wetlands Action Plan was developed in 2022 and approved in 2023 as part of the development of the Chesapeake Bay Program's Wetlands Action Plan. The DWR led the development of the Virginia Wetlands Action Plan, and the document now serves as a cornerstone to inter-organizational collaboration to advance protection, restoration and enhancement of tidal and nontidal wetlands in Virginia. The Virginia Wetlands Action Plan identifies five key areas of emphasis:

- Wetlands tracking (development of an effective reporting and accounting system; definition of activities that count towards the Wetlands Outcome; and development of specific targets for tidal and nontidal wetlands);
- Strategic planning (development of the Statewide Wetlands Technical Team; leverage of existing plans and tools; restoration and enhancement of wetland habitats for priority species; and implementation of projects on both public and private lands, with emphasis on private lands);
- Capacity building (leverage existing regional partnerships; increase staff focused on wetland restoration; address barriers to voluntary efforts; and expansion of native nursery and other restoration capacity);
- Outreach (identification and promotion of demonstration sites; identification and targeting of focal areas; coordination with partners that regularly interact with private landowners); and

- Sustainable funding (address match requirements that may limit participation; seek opportunities to increase current funding streams for public and private landowners; evaluate and consider new and dedicated sources of funding).

Virginia Wetlands Program Plan

Developed with guidance from the Environmental Protection Agency (EPA), Virginia’s Wetlands Program Plan provides a blueprint for increasing Virginia’s wetland acreage and ecological function. Staff and scientists from VIMS Center for Coastal Resources Management (CCRM), DEQ, and VMRC authored the plan with funding from the EPA. Staff from these agencies continue to implement actions spelled out in Virginia’s Wetlands Plan, with the overall goal of preserving, restoring, and enhancing the Commonwealth’s wetland resources. The Virginia Wetlands Program Plan (2021-2025) is the third iteration of the planning process to advance Virginia’s wetlands programs. As in the previous two planning periods, the current plan addresses the four core elements identified by the EPA for a robust and effective program, plus two additional elements that have been identified by Virginia as critical for a successful program. The elements in the Virginia Plan are:

- Monitoring and assessment (core element), understanding wetlands health and changes;
- Regulatory (core element), administered by the DEQ for permits and enforcing no-net-loss;
- Voluntary restoration and protection (core element), developing protocols, methods, and tools to assess and promote wetland restoration and protection practices to maximize co-benefits;
- Water quality standards (core element), protecting wetlands as vital filters;
- Planning and sustainability (Virginia element), integrating wetlands into local watershed plans, focusing on long-term resilience; and
- Education (Virginia element), engaging communities and stakeholders.

Virginia Migratory Waterfowl Conservation Stamp

In 2015, the first mandatory Virginia Migratory Waterfowl Conservation Stamp was issued for hunters pursuing migratory waterfowl in Virginia. Administered by the DWR, this stamp is required in addition to the federal duck stamp. Funds collected from the sale of the Virginia stamp are deposited into a dedicated fund and used to cover administrative costs, waterfowl habitat improvement projects, and protecting, preserving, restoring, enhancing, and developing waterfowl habitat in Virginia. (§29.1-339.2 of the Code of Virginia.) As of 2025, these funds have been leveraged to secure, restore or enhance more than 17,300 acres of wetlands in Virginia.

Shoreline Erosion Advisory Service (SEAS)

Administered by the DCR, the SEAS program provides consultation services to shoreline property owners to advise on reducing shoreline erosion, which often includes recommendations and guidance on establishing living shorelines.

Virginia Conservation Assistance Program (VCAP)

The Virginia Conservation Assistance Program is a residential cost-share program administered by the Virginia Association of Soil and Water Conservation Districts and implemented by local Soil and Water Conservation Districts. District staff provide technical assistance to landowners regarding practices such as living shorelines, constructed wetlands, and rain gardens.

Virginia Agricultural Cost-share Program (VACS)

The VACS program provides Virginia's farmers with financial and technical assistance to implement conservation practices that protect water quality, improve soil health and support the long-term sustainability of agricultural operations across the Commonwealth. Administered by DCR in partnership with local Soil and Water Conservation Districts, the VACS program helps farmers offset the cost of implementing a wide range of best management practices, including for living shoreline practices (specifically, the SE-2 practice) on agricultural lands.

Conservation Reserve Enhancement Program

This program, housed in the DCR, is a joint state and federal Farm Services Agency cost-share program for wetland restoration (specifically, the CRWO-6B wetland restoration practice) on agricultural lands. The program has state-specific targets for wetlands restoration, including 3,000 acres in the Chesapeake Bay CREP region and 1,500 acres in the Southern Rivers CREP target watersheds.

Virginia Coastal Zone Management Program (Virginia CZM)

The DEQ serves as the lead agency for the Virginia CZM, a networked program of state agencies¹⁴ and local governments that collectively implement coastal laws and work to resolve interjurisdictional coastal resource management issues. The DEQ's Office of Environmental Impact Review coordinates review of federal actions/permits in Virginia's coastal zone to ensure they are consistent with Virginia CZM's enforceable policies, which include Virginia code addressing tidal wetlands, nontidal wetlands, and subaqueous lands.

¹⁴ State agencies that are part of the Virginia CZM network include: DEQ, DCR, VMRC, DWR, Department of Health, Department of Agriculture and Consumer Affairs, Department of Forestry, Department of Historic Resources, Department of Energy, Department of Transportation, Virginia Economic Development Partnership, and Virginia Institute of Marine Science.

IV. Emerging Science and Innovation

The WPTF received several presentations from scientists regarding emerging science and innovation. Topics included marsh migration, living shoreline economic benefits, ribbed mussel living shoreline enhancement, the National Wetland Condition Assessment (maintained by the U.S. Environmental Protection Agency), and barriers to private landowner participation in wetland restoration. Marsh migration is a topic of considerable interest to the WPTF, as it has the most significant potential for net marsh gain (see VIMS Consensus Document “Tidal Marsh Response to Changing Environmental Conditions” for additional background). There is a need to develop guidance regarding how to facilitate migration in a manner that allows for the continued benefits provided by marshes, recognizes landowner needs, and addresses local government priorities. Marsh resilience to changing water levels is dependent on sediment availability, particularly in areas without migration corridors. Integrating sediment transport dynamics and budgets into marsh sustainability models will help to better predict marsh longevity and identify priority conservation or marsh enhancement areas.

Additionally, gains realized through participation of private and public landowners in voluntary wetland restoration and enhancement will be key to improving overall acres of tidal and nontidal wetlands available in Virginia. Encouraging living shoreline designs that maximize marsh restoration and are resilient to changing conditions is an approach to gain marsh acreage and associated ecosystem services, as well as strengthen long-term wetland protection. Several entities are evaluating barriers to participation that should help inform actions needed to reduce or removal barriers and strengthen incentives. For example, in a targeted survey of landowners conducted by The Nature Conservancy across the Chesapeake Bay watershed in 2024, landowners in Virginia indicated strong interest in discussing restoration opportunities on their lands, but indicated that paying up front for a portion of the restoration costs is a barrier to participation and that program rules and requirements may, in some cases, impose too many restrictions on use of their lands.

In addition to these topics, which warrant more discussion, WPTF members identified other topics of interest that the Task Force could consider to ensure wetland health and survival. Survey responses are provided in Appendix C and will be useful in informing ongoing discussions and recommendations of this body to the General Assembly and Administration.

V. Funding for Wetlands Protection, Creation, Restoration, and Enhancement

Numerous funding sources are available to support wetlands protection, creation, restoration and enhancement. Notable examples include:

- **Federal Programs**
 - **Environmental Quality Incentives Program (EQIP):** The Environmental Quality Incentives Program (EQIP) is the NRCS' flagship conservation program to help farmers, ranchers, and forest landowners integrate conservation into working lands, including practices which create, restore, and enhance wetland habitats.
 - **Conservation Reserve Enhancement Program (CREP):** A partnership between the USDA and Virginia that offers financial incentives, cost-share, and rental payments to farmers for restoring wetlands and planting riparian buffers. Item 359 of the State Budget for the 2024 – 2026 biennium, Chapter 725 of the 2025 Acts of Assembly (HB1600), includes \$2,000,000 for the Commonwealth's match for participation in the CREP.
 - **Wetland Reserve Easements (WRE):** The NRCS offers Wetlands Reserve Easements to help private and tribal landowners protect, restore, and enhance wetlands which have been previously degraded due to agricultural practices.
 - **Wetland Reserve Enhancement Partnership (WREP):** Through the NRCS, this program partners with other organizations to fund wetland protection, restoration, and enhancement projects.
 - **Wetlands Program Development Grants:** The EPA offers grants to states and other eligible entities for projects that improve the coordination of wetland research and protection efforts.
 - **North American Wetlands Conservation Act (NAWCA) Grants:** The U.S. Fish and Wildlife Service (USFWS) administers these competitive, matching grants for public-private partnerships to advance projects that work towards the long-term protection, restoration and/or enhancement of wetlands and associated upland habitats for the benefit of waterfowl and other migratory birds, consistent with objectives of the North American Waterfowl Management Plan (NAWMP). These efforts address the needs of wetland-dependent species throughout their life cycle, while also benefiting people by improving water quality, flood control, and recreational opportunities.
 - **National Coastal Wetlands Conservation Grants:** The USFWS administered National Coastal Wetlands Conservation Grants Program annually provides grants to coastal and Great Lakes states, as well as U.S. territories to protect, restore and enhance coastal wetland ecosystems and associated uplands. Eligible projects include the acquisition of real property interest in coastal lands or waters and the restoration, enhancement, or management of coastal wetlands ecosystems.
- **State, Local, and Private Programs**
 - **Virginia Conservation Assistance Program (VCAP):** The VCAP is an urban cost-share program administered by the Virginia Association of Soil and Water Conservation Districts and implemented by local Soil and Water Conservation

Districts that provides financial incentives and technical and educational assistance to property owners installing eligible Best Management Practices (BMPs) to improve water quality. Living shorelines and constructed non-tidal wetlands are eligible practices in the VCAP. Item 359 of the State Budget for the 2024 – 2026 biennium, Chapter 725 of the 2025 Acts of Assembly (HB1600), includes \$4,000,000 for the VCAP. Program information indicates that most practices are eligible for up to 80% financial reimbursement.¹⁵

- **Shoreline Erosion Advisory Service (SEAS):** Administered by the DCR, the SEARS program provides consultation services to shoreline property owners to advise on reducing shoreline erosion, which often includes recommendations and guidance on establishing living shorelines. The SEAS program makes funding available to implement living shoreline projects.
- **Virginia Agricultural Cost-share Program (VACS):** The VACS program provides Virginia’s farmers with financial and technical assistance to implement conservation practices that protect water quality, improve soil health and support the long-term sustainability of agricultural operations across the Commonwealth. Administered by DCR in partnership with local Soil and Water Conservation Districts, the VACS program helps farmers offset the cost of implementing a wide range of best management practices, including for living shoreline practices (specifically, the SE-2 practice) on agricultural lands. Item 359 of the State Budget for the 2024 – 2026 biennium, Chapter 725 of the 2025 Acts of Assembly (HB1600), includes \$1,300,000 for technical assistance to farmers implementing agricultural best management practices, and \$8,700,000 for Agricultural Best Management Practices Cost-Share Assistance.
- **Coastal Resilience & Trees Fund:** Provides grants to localities, organizations, and landowners for coastal wetland restoration and conservation projects through a partnership between the Virginia Outdoors Foundation and Wetlands Watch.
- **Clean Water Revolving Loan Fund (CWRLF):** Administered by the Virginia Department of Environmental Quality (DEQ) and the Virginia Resources Authority, this provides low-interest loans for water quality improvement projects, including living shorelines. For fiscal year 2026, the State Water Control Board approved a list of 22 projects for a total of \$255,742,977 in loan assistance from available and anticipated CWLRF resources.¹⁶
- **Clean Water Act Section 319 Nonpoint Source Management Implementation Grants:** The 1987 amendments to the Clean Water Act (CWA) established the Section 319 Nonpoint Source Management Program. Under Section 319, states,

¹⁵ See <https://vaswcd.org/vcap/>

¹⁶ See pp. 525-530 of the State Water Control Board’s November 18, 2025 meeting agenda at https://www.townhall.virginia.gov/L/GetFile.cfm?File=Meeting\103\42632\Agenda_DEQ_new_v1.pdf and the meeting minutes: https://www.townhall.virginia.gov/L/GetFile.cfm?File=Meeting\103\42632\Minutes_DEQ_42632_v1.pdf

territories and tribes receive grant money that supports a wide variety of activities including technical assistance, financial assistance, education, training, technology transfer, demonstration projects and monitoring to assess the success of specific nonpoint source implementation projects. In Virginia, DEQ receives federal funding under CWA Section 319 to support its Nonpoint Source Management Program¹⁷ and fund the implementation of eligible best management practices (BMPs) in approved locations. Eligible BMPs include wetlands restoration, riparian buffers, land conservation, and more.

- **Virginia CZM:** Virginia CZM provides funding dedicated to advancing programmatic changes for enhancement areas that the program determines as high priority. From 2026-2030 this funding will be available to support wetlands work in the coastal zone, with specific funding reserved to support forthcoming initiatives of the WPTF and the Statewide Wetlands Technical Team. Funding is dependent on federal appropriations each year and does not require a state match. If funding continues at its current level, DEQ will have about \$800,000 available over the next five years.
- **Pay-For-Outcomes Nonpoint Source Pollution Reduction Grant Program:** The 2025-2026 State Budget contained \$20 million for DEQ to establish a Pay-For-Outcomes Nonpoint Source Pollution Reduction Grant Program.¹⁸ In May 2025, the one-year pilot program resulted in DEQ providing \$19 million in awards for nine innovative projects that will remove approximately 580,000 pounds of nitrogen from the Chesapeake Bay at an average cost of \$32.73 per pound. The Pay-For-Outcomes Nonpoint Source payments are based on the number of pounds of pollution actually removed or prevented.
- **Stream and Wetland Mitigation Program:** Formerly known as the Virginia Aquatic Resources Trust Fund, this program collects funds from developers who have unavoidable impacts to streams or wetlands and uses these funds for large-scale restoration and protection efforts across the state. The program is co-administered by the DEQ and USACE, and The Nature Conservancy carries out the restoration and protection projects.
- **Virginia Migratory Waterfowl Stamp Grant Program:** Section 29.1-339.2 of the Code of Virginia specifies that the DWR is required to use funds to cover the administrative costs associated with the production and issuance of the Stamp. Of the remaining funds, the DWR shall contract 50% with appropriate nonprofit organizations for cooperative waterfowl habitat improvement projects (i.e. wetland restoration and enhancement projects) and shall use the remaining 50% to protect, preserve, restore, enhance, and develop waterfowl habitat in Virginia.

¹⁷ Section 319 funding depends on annual federal appropriations. Virginia typically receives about \$1.5 million annually for project implementation.

¹⁸ Chapter 2 of the 2024 Acts of Assembly (HB6001), Item 365 L. See <https://budget.lis.virginia.gov/item/2024/2/HB6001/Chapter/1/365/>

- **James River Living Shoreline Cost Share Program:** This program is administered by the James River Association and is available to homeowners whose property is within the James River watershed.
- **Fight the Flood Program:** A regional funding initiative led by the Middle Peninsula Planning District Commission that connects localities, homeowners, and small businesses with financial resources to support living shoreline projects and coastal resilience improvements. It is currently the only program in Virginia that offers both low-interest loans and grant funding for living shoreline construction and directly connects property owners with qualified contractors.
- **Private Mitigation Banking:** Private mitigation banks provide creation, restoration, and/or enhancement of wetlands resources prior to the release of credits, potentially avoiding the temporal loss of wetlands associated with the use of advanced credits from in-lieu-fee programs. Private mitigation banks provide a significant benefit, based on private investment and risk, with no financial support from state or federal sources.

In many instances, these programs are over-subscribed, with demand exceeding available funding. Lack of funding and match requirements have been identified by several WPTF members as barriers to project implementation.

VI. On-Going Coordination and Implementation

There is significant effort at local, regional, state, and national levels to coordinate, address and implement work associated with wetlands in Virginia. This work includes:

- Technical assistance to governmental entities, non-governmental entities, businesses, industries, tribes, landowners, and partners related to permitting, wetlands delineation, Indigenous knowledge, project identification and planning, and compliance monitoring;
- Action on wetlands policy, including streamlining permitting of restoration projects, incentives related to creation and restoration of wetlands, and development and implementation of the Virginia Wetlands Action Plan and the Statewide Wetlands Technical Team;
- Research into legal and policy issues associated with wetlands;
- Legal obligations, including regulatory permitting, water quality inspections of timber harvests, protection via fee-simple acquisition and conservation easements; and
- Direct management, enhancement, and restoration of wetlands, including development and implementation of on-the-ground projects, operation of the Virginia Stream and Wetland Mitigation Program, project financing, and restoration of culturally important wetland plant species.

A notable example of on-going coordination related to voluntary wetlands restoration is recent discussions between the Department of Environmental Quality and numerous stakeholder

restoration partners relative to regulatory barriers that delay wetlands and stream restoration projects. The DEQ acknowledged that the Virginia Water Protection permitting program was designed to regulate impacts, not improvements, and that the DEQ lacks permitting mechanisms able to effectively regulate activities that are expected to improve wetland habitat and function. Additional challenges can arise when the DEQ attempts to apply stormwater regulatory requirements to voluntary restoration projects. Wetlands restoration projects typically improve stormwater quality and reduce quantity, while the regulations are designed for projects that negatively affect stormwater conditions. Recognizing that restoration of aquatic resources is not an impact, but rather an improvement, the DEQ Director issued a memorandum on September 9, 2025, directing staff to follow guidance in DEQ's Virginia Stormwater Management Handbook and outlining ways to streamline review and approval of restoration projects that may involve grading, filling, or temporary flooding, but have an ultimate goal of improving the overall ecological condition, functions, and value of aquatic resources.¹⁹ This outcome should significantly accelerate permitting timelines, reduce related regulatory burden, and reduce the time taken to complete voluntary wetland restoration projects.²⁰

Additionally, in December 2025, the Chesapeake Executive Council (CEC) adopted major revisions to the Chesapeake Bay Watershed Agreement to extend its deadline to 2040 and to update various goals and targets, including the Wetlands Outcome. The WPTF, Statewide Wetlands Technical Team, and other partners are continuing the many activities that will underpin Virginia's accomplishments towards this revised Outcome. Additionally, the CEC adopted a new charge directing the development of a framework for Tribal participation in the Chesapeake Bay Program, reflecting growing recognition that Indigenous Knowledge and Tribal governance are essential to achieving Bay restoration goals. Recognition of Tribal Nations as meaningful partners will be essential in wetlands planning, restoration and protection efforts.

More details about on-going coordination and implementation efforts are found in the WPTF survey responses in Appendix D.

VII. Next Steps

Given the limited time between its inception and the deadline for this report, the Wetlands Policy Task Force did not consider, as a body, existing policies or emerging science and innovation to the extent of providing recommendations. Focus was placed on ensuring a thorough, common

¹⁹ The memorandum is available on DEQ's website at <https://www.deq.virginia.gov/home/showpublisheddocument/31324/638943991637970000>

²⁰ Another example is a March 27, 2025 letter from DEQ and the USACE, Norfolk District, that clarifies their position on the eligibility of managed loblolly pine (*Pinus taeda*) plantations as potential sites for wetland establishment and/or restoration. The DEQ and USACE will generally accept proposals for wetland establishment and/or restoration on a managed loblolly pine plantation, provided all other mitigation banking or permittee responsible compensation requirements are satisfied. The letter is available on DEQ's website at <https://www.deq.virginia.gov/home/showpublisheddocument/28335/638787041965200000>

understanding of existing policies and work to set the stage for thoughtful, consensus-based future recommendations. The input provided by Task Force members during the two meetings in 2025, and the considerable information provided in response to the survey, serve as significant launching points for discussions in 2026 and beyond. The DWR will continue to provide staff support to the Secretary of Natural and Historic Resources and the WPTF to facilitate these discussions. Additional next steps include evaluating and determining the most effective means for the Task Force to pursue topics in more detail, such as establishing topical workgroups that provide recommendations or findings to the full Task Force. If such an approach is pursued, opportunities exist to incorporate members of the Statewide Wetlands Technical Team and other relevant subject matter experts to help inform discussions. Going forward, it is critical to utilize existing avenues for work, including the Statewide Wetlands Technical Team, to avoid redundancies and duplication of efforts.

VIII. Conclusion

With the establishment of the Wetlands Policy Task Force, the Commonwealth is advancing an integrated and holistic approach in its consideration of policies regarding wetlands identification, protection, restoration, creation and mitigation, and in the evaluation of emerging science and innovation that will ensure wetland health and survival. This work will be vital to success of the updated Chesapeake Bay Partnership Agreement and revised Wetlands Outcome established therein and to areas of Virginia outside of the Chesapeake Bay watershed. The Wetland Policy Task Force, in conjunction with the Statewide Wetlands Technical Team, provides a permanent forum for collaboration, bringing existing professional, academic, and financial resources to the most important issues to be addressed for wetlands to continue to provide benefits to wildlife, communities, and Virginians now and in the future. Future reports will build upon this initial report to capture successes and recommendations for policy updates, emerging science, and innovations that will keep Virginia's wetlands healthy and resilient.

IX. Appendices

Appendix A - Acronym List

BMP – Best Management Practice

CBPA – Chesapeake Bay Preservation Act

CEC – Chesapeake Executive Council

CREP – Conservation Reserve Enhancement Program

CWA – Clean Water Act

CWRLF – Clean Water Revolving Loan Fund

CZM – Coastal Zone Management Program (Virginia program housed within DEQ)

DCR – Department of Conservation and Recreation

DEQ – Department of Environmental Quality

DHR – Department of Historic Resources

DOF – Department of Forestry

DWR – Department of Wildlife Resources

ED – Executive Directive

EPA – U.S. Environmental Protection Agency

EQIP – Environmental Quality Incentives Program

IIJA – Infrastructure Investment and Jobs Act

JPA – Joint Permit Application

NAWCA – North American Wetlands Conservation Act

NFWF – National Fish and Wildlife Foundation

NOAA – U.S. National Oceanic and Atmospheric Administration

NRCS – U.S. Natural Resources Conservation Service

RMA – Resource Management Area

RPA – Resource Protection Area

SEAS – Shoreline Erosion Advisory Service

SWCD – Soil and Water Conservation District
SWMP – Stream and Wetland Mitigation Program
USACE – U.S. Army Corps of Engineers
USDA – U.S. Department of Agriculture
USFWS – U.S. Fish and Wildlife Service
VACS – Virginia Agricultural Cost-share Program
VCAP – Virginia Conservation Assistance Program
VIMS – Virginia Institute of Marine Science
VMRC – Virginia Marine Resource Commission
VPDES – Virginia Pollution Discharge Elimination System
WOTUS – Waters of the United States
WPTF – Wetlands Policy Task Force
WRE – Wetland Reserve Easements
WREP – Wetland Reserve Enhancement Program

Appendix B – Enabling Legislation

CHAPTER 647

An Act to direct the Secretary of Natural and Historic Resources to establish a policy task force to evaluate existing policies regarding wetlands protection, restoration, creation, and mitigation in the Commonwealth and other states; recommend policy changes necessary to accelerate tidal and nontidal wetland identification, restoration, creation, and protection; and explore emerging science and innovation to ensure wetland health and survival; report.

[H 2034]

Approved April 2, 2025

Be it enacted by the General Assembly of Virginia:

1. § 1. *That the Secretary of Natural and Historic Resources shall establish a policy task force to (i) evaluate existing policies regarding wetlands protection, restoration, creation, and mitigation in the Commonwealth and other states; (ii) recommend policy changes necessary to accelerate tidal and nontidal wetland identification, restoration, creation, and protection; and (iii) explore emerging science and innovation to ensure wetland health and survival. The task force shall report its initial findings and recommendations to the Chairs of the Senate Committee on Agriculture, Conservation and Natural Resources and House Committee on Agriculture, Chesapeake and Natural Resources by December 31, 2025, and shall update its report at least every two years. The task force shall not meet less than twice annually to evaluate emerging science, policy, and best practices and one meeting shall be held jointly with the Statewide Wetlands Technical Team led by the Department of Wildlife Resources to allow such team to review and provide feedback on the task force's proposed recommendations. Membership of the task force shall include relevant representatives of nonprofit organizations, academic institutions, the Virginia Farm Bureau, the federal government, local governments or regional planning commissions, industry, and state entities, including the Chesapeake Bay Commission, Department of Wildlife Resources, Department of Environmental Quality, Marine Resources Commission, Department of Conservation and Recreation, and Virginia Institute of Marine Science.*

Appendix C – Virginia Wetlands Action Plan (November 2022)

Five major themes emerged when developing this plan of action to move closer to the wetlands outcome listed in the 2014 Chesapeake Bay Watershed Agreement: 1) Wetland Tracking; 2) Strategic Planning; 3) Capacity Building; 4) Outreach (landowner/community engagement); and 5) Sustainable Funding. This Plan highlights several current actions and suggests new ideas to advance efforts within each theme.

Wetland Tracking

Based on data shared at the August 2022 wetlands outcome attainability workshop, Virginia has currently documented 3,666 acres of wetland restoration, 367 acres of wetland creation, 522 acres of wetland enhancement, and 385,029 acres of “other restoration.” This represents approximately 4% progress towards the Bay-wide wetland restoration goal of 85,000 acres and less than 1% of the Bay-wide wetland enhancement goal of 150,000 acres, both of which are to be achieved by 2025. While still acknowledging the overall lack of progress towards this goal, these wetland estimates appear low. To improve accountability for the wetlands outcome, Virginia advocates for the creation of an effective reporting and accounting system for voluntary wetland restoration and enhancement activities and supports ongoing Chesapeake Bay Program (CBP) efforts to create the Habitat Outcome and Attainment Tracking System. To accurately account for wetland restoration successes, the activities that count towards the wetlands outcome need to be thoroughly defined and reported. Because wetlands are often considered a co-benefit and not the primary driver for restoration projects, some gains are not being realized. Many best management practices (BMPs) like living shorelines, stream restoration projects, wet ponds, and riparian buffer projects ultimately do create, restore, and/or enhance wetlands. These successes need to be evaluated and reported even when they are considered a co-benefit, and more emphasis should be placed on wetland restoration as a primary driver for project selection and implementation.

Virginia also sees value in a coordinated effort to determine how large-scale historic impacts are distributed throughout the Chesapeake Bay watershed. This could lead to jurisdiction-specific restoration and enhancement targets for both tidal and non-tidal wetlands. The identification of historically impacted wetland areas is necessary to implement restoration and enhancement if creation projects (i.e., wetlands created in uplands) are not counted toward the wetlands outcome.

Strategic Planning

For Virginia to effectively plan and implement more wetland projects within the Chesapeake Bay watershed, a diverse partnership involving all current wetland practitioners in the state needs to be established. This partnership should include members from the many state, federal, and

non-governmental organizations (NGOs) working to plan and implement voluntary wetland projects throughout Virginia. Although a few partnerships like this already exist, none are primarily focused on furthering the wetlands outcome. The Virginia Department of Wildlife Resources (DWR) has recently been identified as the lead agency for this state-wide initiative, given its current and past efforts to create, restore, protect, and enhance wetlands across the Commonwealth. DWR will seek clarity on the scope of its roles and responsibilities and will continue to increase coordination between wetland practitioners and the CBP to work more pointedly towards the wetlands outcome.

Virginia's wetland planning efforts will focus on building capacity, expanding outreach, and generating tools to determine high priority restoration areas. This will ensure the state is prepared to identify and implement wetland restoration and enhancement opportunities as funding arises. Restoration planning is currently guided by the Virginia Coastal Resilience Master Plan, the Virginia Phase III Watershed Implementation Plan, the State Lands Watershed Implementation Plan, the Virginia State Wetlands Program Plan, and many other decision-making support tools such as WetCAT (Wetland Condition Assessment Tool), the Natural Heritage Data Explorer/ConserveVirginia, the Wetlands Catalog, Adapt VA, Coastal GEMS (Geospatial and Educational Mapping System), the Eastern Shore Coastal Resilience tool, the Saltmarsh Sparrow and Black Duck support tools, and the Elizabeth River Environmental Justice Tool.

Planning efforts will acknowledge the consequences of climate change, including the disproportionate impacts on disadvantaged populations in both urban and rural areas. The effects of climate change, like sea-level rise and increases in extreme weather frequency and intensity, will continue to contribute to additional wetland losses and weaken our natural infrastructure. The southern portion of the Chesapeake Bay is experiencing substantial land subsidence in addition to global sea-level rise which has caused areas in Virginia to have the highest rates of observed relative sea-level rise along the Atlantic Coast. Because these coastal areas are densely populated and developed, natural processes, like marsh migration, will be in conflict with many existing human uses and activities. This puts Virginia's coastal wetland habitats at an increased risk of experiencing widespread flooding and loss. The state will explore opportunities to work with the Virginia Department of Emergency Management and the Federal Emergency Management Agency to target wetland restoration in areas of frequent flooding in association with retreat efforts.

Virginia's Wildlife Action Plan has identified 883 Species of Greatest Conservation Need (SGCN), more than 80% of which rely on aquatic ecosystems for habitat. Some of the highest priority conservation actions that can be taken to address threats to these species is the protection, restoration, and enhancement of wetlands in priority areas, many of which occur in the Chesapeake Bay watershed. Three SGCN species, Saltmarsh Sparrow, Black Rail, and American Black Duck, are also flagship species for the Atlantic Coast Joint Venture (ACJV).

Where practical, tidal wetland restoration efforts should seek to enhance habitat for these species, as they occupy a range of coastal marsh habitats that are highly threatened by sea-level rise and urbanization. Efforts aimed at enhancing habitat for these species would also benefit a host of other marsh-dependent fish and wildlife species.

Virginia's strategic plans should promote increasing wetland restoration on both private and public lands. Given that the outcomes state the vast majority of these activities should occur on agricultural lands, planning efforts should emphasize increasing implementation on private lands. Local staff from the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), U.S. Fish and Wildlife Service (USFWS), DWR, Virginia Institute of Marine Science (VIMS), and private lands biologists (employed through a diverse collaborative) provide critical technical assistance on private land projects. Virginia will continue to pursue projects on state-owned lands as they present some of the most efficient opportunities to implement voluntary activities. The state will also continue to work with state and federally recognized Native American tribes to help them reacquire and restore ancestral lands. Increased engagement with federal agencies could lead to restoration opportunities located on National Wildlife Refuges, National Forests, National Parks Service lands, and Department of Defense facilities.

Capacity Building

Virginia can leverage capacity by building on existing diverse partnerships working to advance restoration efforts across the state, including the York River Roundtable Habitat Restoration Steering Committee, the Rappahannock Wetlands Team, the James River Living Shoreline Collaborative, and the Virginia Eastern Shore Conservation Alliance. Wetland practitioners in Virginia will also work with other multi-state groups like the ACJV, the Delmarva Restoration Conservation Network, and the Atlantic Flyway Council. Partnerships like these can identify projects and expedite planning and implementation as they take advantage of the synergistic capabilities of the different organizations. They can ensure expertise is available to identify high quality sites, develop effective restoration designs, secure funding resources, and oversee project implementation.

Although many government and NGO employees in the state work with wetlands, Virginia recognizes a strong need for agencies and organizations to create more positions focused on advancing voluntary wetland projects. This includes positions that provide outreach, financial incentive program support, and technical assistance for both private and public landowners. Previous efforts in other states (i.e., Delaware and Maryland) show most landowners willing to participate require assistance from planning through implementation. Additional staff capacity is needed to reach willing landowners and support them through the wetland project process. In addition, permit and funding application preparation is time consuming, demanding, and costly, causing many private landowners to get overwhelmed or simply lose interest. Virginia supports

efforts to streamline permitting, grant, and other financial incentive program applications for voluntary restoration efforts. Low barrier applications for projects that demonstrate a clear ecological benefit would alleviate some capacity concerns and result in more implementation.

Virginia is currently limited by the lack of native plant nurseries and seed producers available to supply large-scale restoration projects. To address this shortage, a large-scale effort proposed on Virginia's Middle Peninsula is working to acquire additional permits to sustainably harvest wetland grasses from intact wetlands. Native plant nursery capacity must scale-up to supply ongoing and future restoration projects. The Plant Virginia Natives Initiative and the Virginia Pollinator-Smart Solar Program both have goals to kick-start a robust native plant and seed industry. In addition, Virginia recognizes a need to develop a strong cohort of experienced contractors who are available to design, build, and maintain (i.e., treat invasive species) projects to effectively work towards the wetlands outcome.

Outreach (landowner/community engagement)

Landowner interest may be the most critical component to increasing the scale of wetland project implementation across the watershed. Virginia will continue to communicate the myriad of benefits that wetlands provide to both people and wildlife, and seeks to develop a method to share wetlands information directly to the organizations actively engaging with local landowners. Virginia also plans to identify several demonstration sites representing the different types of restoration and enhancement activities. These sites can help educate both professionals and the public, highlight successes, and improve landowner engagement. Outreach efforts should target grant funding focal areas, like the NOAA designated Middle Peninsula Habitat Focus Area. Target outreach areas could be further identified and refined using conservation decision-making support tools.

Active coordination with planning district commissions (PDCs) and soil and water conservation districts (SWCDs), particularly those in rural coastal Virginia where large acreage of agricultural lands remain, is needed to promote effective landowner outreach efforts. These organizations have staff that frequently work with farmers and agricultural landowners. They need to be knowledgeable of the existing opportunities and should be able to direct a landowner with wetland project interests to the technical expertise they need. Depending on the type of project, this could include local NRCS, USFWS, DWR, VIMS, non-governmental, and private lands biologist staff. Private lands biologists are employed through collaborative efforts with federal, state, and non-governmental natural resource management agencies to engage with land owners and producers, and facilitate wildlife habitat implementation and improvement practices through planning and incentive programs. They are a great initial contact for landowners interested in implementing wetland restoration. Another resource for shoreline landowners and communities is Virginia's Shoreline Erosion Advisory Service (SEAS), a program of the Virginia Department

of Conservation and Recreation (DCR). DCR-SEAS provides technical assistance on tidal shoreline management alternatives (including living shorelines) to private property owners and public land management agencies.

Sustainable Funding

Similar to most Bay states, the limited number of voluntary wetland projects completed in Virginia have been funded through landowner incentive programs and competitive federal grant programs. The NRCS oversees several cost-share and financial incentive programs for private landowners, though few NRCS wetland projects have been implemented in Virginia. This may be in part because until recently these programs could only fund a portion of most wetland restoration projects and left the landowner to pay the rest. In July 2022, the USDA, in partnership with DCR, announced expanded funding through the Conservation Reserve Enhancement Program, allowing farmers in Virginia to implement wetland restoration at no cost. Private land wetland projects can also be funded through the Wetland Reserve Easements component of the USDA Agricultural Conservation Easement Program. The Virginia Conservation Assistance Program and Virginia Agricultural BMP Cost-Share Program are state managed funds administered locally through SWCDs, and are available to support living shorelines and other BMPs that have the potential to restore and enhance wetlands.

Public land projects have been largely funded through competitive federal grant programs administered by the USFWS, the National Fish and Wildlife Foundation (NFWF), and the National Oceanic and Atmospheric Administration (NOAA). The IJA has expanded funding for many existing programs and has opened new opportunities, like the America the Beautiful Challenge administered by NFWF and three NOAA-administered grants – Coastal Zone Management grants, Transformational Habitat Restoration and Coastal Resilience Grants, and Coastal Habitat Restoration and Resilience Grants for Underserved Communities. Funding from these sources can support land acquisition and habitat restoration planning, design, and implementation. Several of these sources offer funding for capacity building activities and demonstration projects, particularly for disadvantaged and under-resourced communities. Virginia will work to increase the amount of wetland projects pursued within the Chesapeake Bay watershed during this period of expanded federal funding.

Although promising, it is important to note that this temporary boost in funding is ultimately not enough to sustain the efforts needed to meet the wetlands outcome. For most of these grant opportunities, wetland proposals are competing with, and being outcompeted by, other priority conservation needs across the watershed and country. The North American Wetlands Conservation Act and the National Coastal Wetlands Conservation Grants administered by USFWS are the only long-standing funding sources available for voluntary wetland restoration projects and have supported many previous efforts in Virginia. All of these competitive grant

opportunities require or strongly prefer projects that offer match dollars, which is a major limit factor in Virginia. Currently, match dollars are being provided by a mix of NGO contributions, state funds, and smaller non-federal grant opportunities. Although there are a few state-administered restoration funding opportunities, only the Virginia Waterfowl Stamp Grant is dedicated to supporting voluntary wetland restoration activities through cooperative waterfowl habitat improvement projects. It is clear that Virginia should work to establish a dedicated funding source to support voluntary wetland restoration and enhancement projects. Maryland has a very successful program, the Chesapeake and Atlantic Coastal Bays Trust Fund, which can serve as a model for a Virginia program. Dedicated state-sponsored funding programs ensure that wetland projects have the funds they need to be planned and implemented.

Appendix D – Wetlands Policy Task Force Baseline Survey Responses (October 2025)

The DWR coordinated an online survey of the Wetlands Policy Task Force members to gather additional information that informs this report and potential future work of the Task Force. Responses were received from 15 of the 25 Task Force entities. To minimize redundancy of duplicate responses, some information was summarized or consolidated. The below responses are the opinions of individual entities and should not be considered recommendations of the Wetlands Policy Task Force.

1. Describe your organizational connections to wetlands protection, restoration, enhancement, creation and/or mitigation:

- Provide technical assistance to governmental entities, non-governmental entities, businesses, industries, tribes, landowners, and partners related to:
 - Project identification, mapping, planning and implementation
 - Floodplain administration
 - Environmental impact reviews
 - Compliance monitoring
 - Permitting
 - Development of mitigation banks
 - Resiliency
 - Mitigation projects
 - Wetlands delineation
 - Ordinance updates
 - Comprehensive planning
 - Indigenous knowledge
 - Outdoor recreation access
 - Funding options
 - Policy
 - Training
 - Facilitation of community discussions and engagement
- Active at local, state, regional and national levels to advance policy:
 - Streamlining the permitting of restoration projects
 - Incentives related to creation and restoration in advance of impacts
 - Development and implementation of Virginia Wetlands Action Plan
 - Development and implementation of Statewide Wetlands Technical Team
- Research into legal and policy wetlands-related issues
- Legal obligations:
 - Regulatory permitting to avoid or minimize and/or mitigate impacts to wetlands and wetland functions
 - Water quality inspections of timber harvests

- Protection via fee-simple acquisition and conservation easements
- Virginia Wetlands Catalog – statewide inventory of wetlands and potential wetlands, with prioritization for conservation and restoration
- Implementation of Virginia Migratory Waterfowl Conservation Stamp and related grant program for protection, enhancement and restoration of wetlands
- Science advisor to the Commonwealth on wetlands issues
- Direct management, enhancement and restoration of wetlands
 - Development and implementation of protection, restoration and enhancement projects
 - Operation of the Virginia Stream and Wetland Mitigation Program, through which wetland and stream restoration projects are identified and completed to mitigate for impacts permitted by the DEQ and the U.S. Army Corps of Engineers
 - Identification and engagement with landowners regarding potential wetland restoration and enhancement projects
 - Restoration of culturally important wetland plant species
 - Project financing
 - Long-term monitoring and maintenance of restored/enhanced wetlands
 - Mapping and data collection

Specific examples that address one or more of these topics included:

- Southern Rivers Roundtable
- Fight the Flood Program
- Chesapeake Bay Public Access Authority

2. Describe existing policies that impact your organization and in what way:

General Regulatory/Permitting Policies

- Clean Water Act Sections 404 and 401 and related state statutes and state and federal agency regulations and guidance drive much of the need for tidal and nontidal wetland mitigation credits generated by various sectors.
- Policies that impact regional and local governments include the Virginia Tidal Wetlands Act, the Chesapeake Bay Preservation Act (CBPA), the Virginia Water Protection Permit Program, the Living Shoreline General Permit, and the Coastal Primary Sand Dune and Beaches Act, all of which guide projects such as living shorelines, beneficial use of dredged material, thin-layer placement, and marsh or island reclamation and large scale protection and enhancement projects. While these policies provide critical protection, gaps and limitations hinder large-scale restoration efforts.
 - There is limited interest from VIMS and VMRC in identifying permitting pathways or offering technical or policy guidance for innovative projects like thin-layer spreading and beneficial use of dredged material, and no clear

framework for how VIMS policy perspectives influence project approvals—general policy positions can outweigh sound science, and the absence of site-specific data is sometimes used to delay or prevent projects despite the availability of best-available science from comparable systems.

- Living Shoreline General Permits and project reviews restrict designs that enhance long-term resilience, such as placing created marshes at higher elevations than existing reference marshes to account for sea level rise, and VMRC no longer maintains a staff position focused on implementing Bay Program goals or advancing policy development to support innovative wetland restoration.
 - There is a need for a more robust state-wide tidal wetland in-lieu fee program for localities without mitigation banks, and DCR's current prohibition on funding projects on private property limits restoration opportunities even though more than 80% of Virginia's wetlands are privately owned.
 - Recommendations include stronger agency engagement, clearer permitting pathways, a science-first approach that accepts regional or national data when local data are limited, enhanced VMRC policy capacity, expansion of the tidal wetland in-lieu fee program, and greater flexibility in both funding eligibility and the Living Shoreline General Permit to enable resilient, cost-effective wetland restoration.
- Organizations highlight Virginia laws, regulations, Executive Orders, and non-regulatory policies as good examples to other states that have more barriers than Virginia.
 - Despite the admirable benefits of Virginia's permitting timeline technology (VPT and PEEP), the state has the opportunity to expand e-permitting, including for wetland restoration projects.
 - Virginia has other policy opportunities, including creating a different 'fast-track' permitting pathway for wetland projects, expanding permitting exemptions, or expanding the types of projects that the Corps' Regional General or State Programmatic General Permits, as examples.
 - Silvicultural Activities Affecting Water Quality (§10.1-1181.1-§10.1-1181.7): The Department of Forestry works with owner/operators to mitigate any pollution affecting water quality resulting from a silvicultural activity, up to and including the issuance of special orders. It should be noted, in Virginia, normal silvicultural activities are exempt from the Virginia Water Protection Permit for impacts to wetlands (which is good and critical for sustainable forest management).
 - Legal barriers currently preclude Tribes from holding conservation easements (including those protective of wetlands) under Virginia law.
 - Tribal Nation eligibility is limited in key funding programs and should be expanded.
 - State agencies are impacted by policies from other state and federal agencies with direct regulatory authority over wetlands. For example, the Virginia Department of Environmental Quality (DEQ) administers the Virginia Water Protection (VWP) permit

program for non-tidal wetlands, while the Virginia Marine Resources Commission (VMRC) manages changes to tidal wetlands. Agencies' projects, like those within state parks, natural area preserves, wildlife management areas or boating access sites, must comply with these permit requirements. The Virginia State Wetlands Program Plan (WPP), which aims for a no-net-loss of wetland acreage and a net resource gain through restoration, also guides agency work.

- Current practices seem to favor large-scale mitigation banks as the best strategy for achieving no net loss. This strategy may work well for some communities but is not possible for others. Some examples suggested for “streamlining mitigation process” may be trying to make large-scale mitigation fit situations where small-scale mitigation would do a better job of ensuring no net loss of wetlands while maintaining like habitat types and same geographic service area standards. Small-scale mitigation projects can be successful, and the State should consider streamlining permitting and increasing funding for small-scale mitigation in communities that do not have good mitigation bank options. Local Wetlands Boards, with oversight from the VMRC, should determine which mitigation strategy best meets the State’s no net loss goal and protects the affected waterway. Payments into in-lieu fee programs should be used to support small-scale mitigation projects in the impacted area.
- Caution should be used when considering in-lieu-fee programs since many have failed to meet expectations, leading to inadequate compensatory mitigation of wetlands and loss of wetland resources.
- With respect to wetlands restoration, in a memorandum dated September 9, 2025, DEQ provided information to agency staff about permitting for surface water restoration and reforestation. The memorandum acknowledges stakeholders’ concerns about regulatory barriers that delay wetlands and stream restoration projects, particularly voluntary projects undertaken by the Natural Resources Conservation Service (NRCS), The Nature Conservancy (TNC), the Virginia Department of Wildlife Resources (DWR), and the Virginia Department of Conservation and Recreation (DCR). Additional challenges can arise when DEQ attempts to apply stormwater regulatory requirements to restoration projects. These projects typically improve stormwater quality and reduce quantity, while the regulations are designed for projects that negatively affect stormwater conditions. Recognizing that restoration of aquatic resources is not an impact, but rather an improvement, the procedures in the memorandum direct staff to guidance in DEQ’s Virginia Stormwater Management Handbook, Version 1.1, effective August 14, 2024, and outline ways to streamline review and approval of projects that may involve grading, filling, or temporary flooding, but have an ultimate goal of improving the overall ecological condition, functions, and value of aquatic resources. The memorandum is available on DEQ’s website: [DEQ Wetlands & Stream Restoration Memo to Stakeholders_20250909](#).

- The state timeline for project review has been significantly improved but the federal review and approval process still lags. Review sequencing can also hinder or delay projects. For example, multiple agencies and interested-party involvement prior to more basic feasibility analysis is time-consuming and expensive without certainty that a project is viable. Suggestions for improvements include:
 - Resume pre-application site visits or allow DEQ to take over this role and as technical reviewer. This will reduce costs, reduce questions and time after application submittal and speed bank development and credit supply.
 - Provide for fast-track mitigation bank approval: Accelerate review and approval timeframe where Sponsors: (i) follow the current MBI template without any material deviations; (ii) have at least one approved successful mitigation bank in Virginia; and (iii) provide enhanced financial assurances.
- Rigid buffer requirements and increased difficulty in identifying potential restoration sites especially in more developed areas significantly limits available wetland restoration sites and areas that may be used for mitigation. Suggestions for improvements include:
 - Reduce wetland buffer requirements: A 100-foot upland buffer requirement around all credited wetland areas is currently being imposed. This is overly restrictive and leads to the disqualification of many suitable wetland sites, particularly in areas where supply is at critical levels. The buffer requirement does not appear to be a formal written policy of either the Corps or DEQ, and in any event is overly restrictive relative to most other states/districts.
 - Reduction to a more reasonable buffer width and enhanced crediting within buffers will increase the number of potential mitigation bank sites, reduce the cost of mitigation, and stimulate wetland restoration and credit supply.
- Low acreage thresholds before an individual permit, rather than a general or no permit, is needed for restoration projects, particularly for tidal wetland restoration projects, causing delays and increased costs. Suggestions for improvement include:
 - Recognize that restoration projects have net wetland, water quality and habitat benefits that should reduce or eliminate the need for cumbersome, expensive and lengthy permitting processes.
- Permittee-responsible mitigation (PRM) and its associated wetland restoration and protection is not being used to its full potential, leading to the utilization of mitigation bank credits that may be in short supply.
 - Encourage agency and permittee consideration of PRM for larger wetland impacts. In appropriate circumstances, PRM can be a viable environmentally/ecologically preferable mitigation option that preserves credit supply for other projects for which PRM is not practical. Larger projects typically have a longer planning horizon so that PRM identification and planning can more easily be conducted.

- Multiple PRM projects should be allowed on same site. Mitigation bankers previously have been allowed to have up to three PRM projects on the same property. For example, a property may have three stream reaches (Stream Reaches #1 – 3). To date, a banker has been able to do a PRM project on Stream Reach 1, another on Stream Reach 2, and then another on Stream Reach 3. These would typically be done at separate times and to meet different permittee needs. The same has been allowed for wetland restoration projects on a property. Eliminating the ability to do this (i) significantly reduces sites available to perform PRM, (ii) exacerbates the increasing difficulties in finding suitable sites, (iii) severely hampers the ability to provide permittees with compensatory mitigation especially in credit starved areas, and (iv) will significantly increase credit costs. The inability to have multiple PRM projects on the same property will also lead to increased burdens on an already slow IRT process and will unnecessarily deplete bank credits if, and when, they become available.
- For tidal wetland mitigation, mitigation should be prioritized for like habitat types with less emphasis on geographic service areas. Such a change would require statutory and regulatory changes.
- Greater flexibility is needed in both tidal and non-tidal wetlands programs for crediting or incentivizing wetland preservation. Due to larger development project sizes (industrial, utility) and increased population growth there are increased pressure and impacts to wetlands and riparian corridor connection. With the increases in development activity the competition for land has also increased, which drives up the cost of suitable wetland restoration. Provided more crediting for preservation could improve the economics for more wetland restoration.
- Invasive species control is not credited in tidal restoration projects. Tidal wetlands restoration should allow crediting for invasive species removal.
- Thin layer placement of dredged material is not being utilized for tidal wetland restoration. Permit restoring historic tidal wetlands using thin layer placement or other nature-based methods to convert existing open water conditions to vegetated wetlands or mud flats.
- Living shoreline projects limitations on thresholds are problematic.
- Thin layer dredged material placement – there is no federal or state resolved set of steps or procedures.
- Corps and VMRC often requiring mitigation for mud flats and sandflats (formally tidal non-vegetated wetlands), at 1:1 ratio using Tidal Vegetated Wetlands – with no written policy in place. Mitigation Cost is exceeding dredging costs for residents.
- Corps is requiring mitigation for loss of shallow water habitat (dredging and/or fill) – with no written policy in place. This started in the Eliz River, at the beginning of the Elizabeth River Project and seems to be moving to other watersheds.

- Some policy considerations for continuing to advance living shoreline implementation include 1) prohibiting shoreline stabilization in areas where erosion is controlled and back loss mitigated, 2) prohibiting "gap-filling" policies that connect or "align" existing permitted seawalls or armoring, 3) requiring living shorelines in areas where a minimum percentage (10-25%) of tidal shoreline is already armored, and 4) requiring the replacement of hard armoring with living shorelines when repair is required or certain sea-level rise projections are met. See Jones & Pippin, Towards principles and policy levers for advancing living shorelines, *Journal of Environmental Management* 311.
- The State should continue to evaluate taking over the Section 404 permitting of the Corps. While Corps would retain permitting over Section 10 waters, by eliminating Section 404 from the Corps it would "right size their workload" by having them focus only on tidal/navigable freshwater projects.
- The no net loss policy appears to be working well to preserve wetlands. However, the recent change that prioritizes the use of mitigation banks and allows for banks in adjacent HUCs has created situations where mitigation is both expensive and has no or minimal benefit in the area where the impacts are occurring.

Non-Regulatory Policies

- Funding for certain conservation programs, such as the Virginia Land Conservation Fund, is related, in part, to the presence and amount of wetland vegetation present. Those projects containing wetlands and a firm commitment to their permanent protection receive more scoring points than those lacking wetlands.
- Existing natural area preserve establishment policies favor intact and high-quality natural features and to date, have avoided inclusion of manmade wetland features, including constructed wetland mitigation bank sites, and the presence of features such as rip-rap, shore hardening, etc. In at least one instance, the existence of such wetlands negatively precluded what would otherwise have been a Natural Area acquisition. These establishment policies have also dictated that any impoundments, creating artificial wetlands, must either be removed or avoided in potential acquisition projects. Finally, tracts and sites likely to be impacted by inundation due to the statewide projections and models of sea-level rise are under intense scrutiny and debate before consideration for permanent protection as Natural Area Preserves; are such sites worth a long-term investment?
- Agencies and organizations are also affected by policies that guide broader conservation and land use decisions. For instance, ConserveVirginia (<https://www.dcr.virginia.gov/conservevirginia/>), the Commonwealth's land conservation strategy, includes wetlands as high-conservation-value lands for their roles in natural habitat, flood resilience, and water quality.
- Establishment and coordination of the Statewide Wetlands Technical Team, via Governor Youngkin's Executive Directive 10, has provided a structured forum through which

practitioners are able to network, share information, identify common priorities, and leverage resources to advance wetlands protection, restoration, creation and enhancement.

- In Virginia, tidal shorelines are managed through a patchwork of programs that divide responsibility among multiple jurisdictions—local governments oversee riparian zones under the Chesapeake Bay Preservation Act, local wetlands boards regulate intertidal areas, and the Virginia Marine Resources Commission manages subaqueous lands. While each program works to prevent impacts within its own authority, this segmented approach can overlook the cumulative effects of activities across the entire shoreline system. To protect coastal resilience, water quality, and property more effectively, Virginia would benefit from stronger coordination and integration among these programs. Providing clear, science-based technical guidance to support more unified shoreline management decisions could bridge current jurisdictional gaps and lead to more efficient, consistent, and sustainable outcomes statewide.
- We are indirectly affected by wetlands and CBPA laws and regulations through their impacts to localities. Changes to laws and regulations can require PDCs to assist localities with implementing the new requirements, and localities often desire regional consistency. From a project perspective, although the PDC is not implementing wetlands projects, we have heard that interpretations of wetlands regulations, specifically in regard to SAV, negatively impact the ability of localities to implement both traditional restoration projects and innovative wetlands creation or enhancement projects.
- Many ICC member Tribes have expressed concerns over agricultural and industrial pollution such as excess nutrients, sediment, PFAS and other heavy metals that have contaminated waterways and their ability to consume fish from those waters. Fishing is a culturally important activity as well an important and healthy source of subsistence for our member Tribes. While wetlands cannot buffer all pollutants, they do offer important filtration and protection to waterways. Additionally, some of our tidewater Tribal communities are experiencing disproportionate impacts from sea level rise on their tribal lands such as erosion and flooding. Often, they are unable to create wetland buffers on adjacent lands that are not owned by the Tribes. The increase in development and agriculture is further causing a decline in wetlands. A lack of policy or incentives to promote wetland protection, or restoration on nearby agricultural lands close to Tribal lands increases the vulnerability of those lands to flooding, pollution, and other impacts. In some cases, invasive species are also causing a decline in culturally important native plant species found in wetlands such as river cane, wild rice and many others. These plants are not always part of mitigation, restoration, or protection specifications. The following are general concerns that have been expressed by Tribal environmental and natural resource staff. However, more discussion and feedback from Tribes is needed before ICC can make recommendations.

3. *Are there other barriers to the implementation of wetlands projects?*

Capacity

- Local capacity across the Crater region is very limited. Many communities have one or two staff members to for all planning, zoning, and site plan review. Not only are they being stretched far too thin by serving many functions for local governments, but also the generalist nature of their work means many do not have the same level of expertise in environmental/resilience/wetlands topics. High turnover creates a lack of embedded institutional knowledge, which only contributes to this issue. Organization silos and internal tension between development and conservation result in a sort of gridlock, with intra-governmental tensions bruising trust between departments, councils, and planning commissions.
- From reviewing PEEP reporting data for wetland mitigation and nutrient banking timeline data, one can see that the entities that are going beyond their target timelines are the USACE, and the sponsor. <https://portal.deq.virginia.gov/reports/tableau/deq-performance-report> USACE processes &/or staffing levels may be a barrier.
- Limited capacity and expertise in wetland programs at federal agencies including NRCS and FSA are impeding the implementation of CREP, CRP, ACEP, EQIP, and WRE wetland programs. Ducks Unlimited has an agreement with NRCS to help deliver goals set forth in the Working Lands for Wildlife American Black Duck Initiative, but this only includes the Eastern Shore and Coastal Plain of Virginia. Added capacity to deliver federal cost share and easement programs is still needed across Virginia, and particularly in the piedmont and mountain regions.
- Agency staffing constraints impede project and monitoring report approvals leading to delays in project implementation and the release of credits. Suggestion: Allow DEQ more authority over monitoring report review and credits releases. Increase DEQ and Corps staffing levels.
- Staff capacity and funding are often barriers for our member Tribes. ICC as well as other partners have been able to provide some support with wetlands mapping, geospatial tools, and planning. Each Tribe has different needs and more discussion is needed before we can discuss all the barriers they face.

Funding

- Particularly for communities outside of the Chesapeake Bay watershed, there are few regulations and few funding sources available for any kind of environmental conservation work, not just wetlands. What funding is out there is often very competitive and the grant application process can be another arduous task for local staff with multiple other duties. A consistent, established funding source for resilience beyond the Bay and beyond the Coastal Zone would go a long way towards providing localities with the support they

need to prioritize these issues, ranging in form from workforce training to project implementation.

- Program gaps: DCR should establish a program within the Community Flood Preparedness Fund (CFPF) that explicitly allows resilience work on private property where public benefits can be demonstrated.
- Underutilized match opportunities: VMRC should also consider activating the Marine Habitat and Waterways Improvement Fund (§28.2-1204.2) as a formal grant-matching source for wetland restoration. Although this fund collects revenues from permit fees and royalties, it currently lacks a structured program and is not being used as the enabling legislation intended. The Commonwealth should also consider the creation of a state-wide In-lieu fee program rather than the locality specific programs that are not utilized. This program could consolidate in-lieu fees for grant match funding.
- Due to the popularity and success of riparian buffer programs, demand can often exceed available resources.
- Public land wetland projects are largely funded through competitive federal grant programs that require or strongly prefer projects that offer match dollars, which is a major limit factor in Virginia. Although there are a few state-administered funding opportunities to support restoration activities, only the Virginia Waterfowl Stamp Grant is dedicated to supporting non-tidal voluntary wetland restoration and enhancement activities. A state-sponsored funding source dedicated to supporting voluntary wetland restoration and enhancement efforts would help ensure that wetland projects have the funds they need to be planned and implemented.
- Lack of funding for non-regulatory wetland restoration and habitat projects. These are obligations in the Chesapeake Bay Agreement and as part of the Living Resources requirements. Suggestion: Increase funding for pay for performance programs, including grants, that are open to the private sector to accelerate wetland restoration and provide greater flood resiliency projects throughout the Commonwealth.
- Tribal Nations currently have limited eligibility for key funding programs; legal barriers prevent Tribes from holding conservation easements (including for wetlands) under Virginia law; and Tribal climate resilience and wetlands plans (e.g., Pamunkey shoreline and wetland restoration efforts) are ineligible for state funding nor are included or referenced as supporting implementation of policy.

Permitting

- Permitting challenges: The permitting process for non-standard or innovative designs is highly subjective and there is no regulatory guidance associated with BUDM and other large-scale restoration implementation. In addition, the existing Living Shoreline General Permits do not adequately account for resilience-focused designs and need to be updated to reflect current best practices.

- One barrier DEQ faces is the duplication of effort with U.S. Army Corps of Engineers (USACE) with permitting under § 404 of the Clean Water Act (CWA), which regulates the discharge of dredged and fill material into Waters of the United States (WOTUS), including wetlands. EPA has delegated administration of the § 404 permit program to the Regulatory Branch of the USACE. EPA has retained oversight and enforcement authority over all activities by § 404 within WOTUS. To be valid, all § 404 permits must be accompanied by state § 401 Water Quality Certification, which in Virginia comes in the form of a VWP permit but may also be a stand-alone document. Note: The VWP Permit Program does not have a stand-alone, updated process for issuing § 401 water quality certifications for a large majority of the activities it regulates, outside of its VWP permit process; however, the program is following the most recent version of the Section 401 Water Quality Certification rule/regulation promulgated by the federal government, as well as current state law, regulations, and guidance. The federal Section 401 rule/regulation has been in flux over the past several years with the changing federal administrations.
- The USACE Baltimore and the Norfolk Districts administer the Section 404 and 10 programs within Virginia, and EPA Region III staff oversee the USACE' administration of the § 404 program. This could be eliminated by the state assuming all responsibility for § 404 permitting, but this has not been done because of the cost (primarily staff) for the state/DEQ to take on this role. Current estimates are roughly \$5 million per year.
- On the Federal side, Corps staffing is inadequate. Corps unwillingness to confirm AJDs/PJDs not tied to permit applications.
- The Corps routinely does not initiate Section 106 and/or Section 7 as they are required to do. This is part of permitting critical path so any delay starting coordination with DHR, USFWS, NOAA delays permit issuance by Corps.
- The primary barrier is the prohibition on impacts to SAV, which significantly limits the ability of localities to implement innovative wetlands enhancement and creation projects.
- Permitting reform should explicitly require early Tribal consultation where cultural resources may be present and be advanced through coordination with Tribal Historic Preservation Offices and the DHR as a standard practice.

Programmatic

- Policy Flexibility: Although wetland migration will be a key policy tool for maintaining wetland acreage in the future, it cannot be the only tool. There will be large costs to regions and communities if this is the only official policy. We must also push towards marsh enhancement and active restoration practices that stabilize existing wetland systems in place or rebuild previously lost systems, elevate existing marsh platforms, and rebuild sediment supply to maintain ecological function where migration is not feasible. We should consider an approach that integrates marsh nourishment, island building, marsh elevation enhancement, sediment recycling, and hydrologic reconnection. This will

be critical to sustaining wetland and buffer services while protecting adjacent communities, farmland, and infrastructure.

- Landowner interest is one of the most critical components to increasing the scale of wetland project implementation across the watershed. Voluntary wetland project implementation is still limited by opportunity and available willing landowners. Outreach is needed to find willing landowners, and training is needed for public land managers and staff who frequently work with private landowners so they can help identify new project opportunities.
- Project Identification and Prioritization: Virginia could use high-level planning to identify and prioritize wetland projects that will have the greatest impact. One goal of the Statewide Wetlands Technical Team could be to develop a list of all known wetland projects being pursued so we can garner support for projects in need and track progress/success. This would also help us track our Bay agreement wetland outcome. The CBP tidal wetland workgroup is advocating that each state develop management plans for at least a few of the biggest publicly owned passively managed marshes to document historic changes, existing conditions, and plan for future “active” management. This would include conceptual plans for potential restoration or enhancement efforts and marsh migration facilitation strategies aimed at making these systems more resilient through time. We would use these sites as case studies to understand what strategies are most effective before developing best management practices for private landowners.
- Lack of Landowner Awareness: Per a recent survey by The Nature Conservancy, landowners are interested in knowing more, but limited capacity hinders moving landowners toward conservation opportunities. A major barrier is low awareness and participation. Programs that fund outreach coordinators and simplify access to restoration funding are critical.
- Lack of Wetland Conservation Support: There are a limited number of partners working in this space and a limited number of partners with the knowledge and skillset to advance wetland conservation.
- No regulatory program exists that has the explicit goal of creating new wetlands (versus regulating impacts to wetlands).
- Local government attempts to restrict or delay mitigation projects and their use. Enforce and support existing restrictions. Consider broader policies to assure that localities do not impede mitigation projects.
- Lack of mitigation bank credits for tidal and non-tidal wetlands, example - Lower James, Lower Chesapeake Bay
- The second barrier is a lack of clear and reasonable guidance on how to beneficially use dredge material for wetlands enhancement. Others would include lack of coordination between dredge projects and potential BU projects, capacity, and funding.

4. *What Virginia policies are working well?*

A number of Virginia wetlands policies and programs are working well and provide strong support for conservation and resilience efforts. Together, these programs create a stronger regulatory, funding, and technical framework for advancing wetland restoration, living shorelines, and coastal resilience throughout Virginia.

Laws/Regulations/Permitting

- Virginia Tidal Wetlands Act, Virginia Non-Tidal Wetlands Act: The state wetland protection laws, particularly since they are more protective than federal law now, are a great foundation. The fact that the state has adopted in policy a no net loss goal is impressive! This policy attempts to replace wetland function and values if impacts are authorized via regulatory permitting. Having state water/wetland definitions discrete from definitions of federal waters of the United States and having independent wetland regulations and mitigation requirements provides regulatory consistency and predictability and supports investment in wetland restoration.
- Living Shoreline General Permits: A major step forward in expediting permit review and reducing delays for shoreline protection projects, helping property owners and localities implement living shoreline solutions more efficiently and reduce the use of bulkheads.
- VMRC Mitigation Guidelines: Recent updates have streamlined and clarified the review process, providing clearer expectations and improving consistency in permitting.
- Virginia's Silvicultural Water Quality Laws and Associated BMPs: These laws and associated best management practices (BMPs) are working extremely well, and compliance from the logging and forestry communities is excellent. BMP implementation is at 95% implementation rate statewide. <https://dof.virginia.gov/forest-utilization-sustainability/logger-assistance/forestry-best-management-practices-bmps-for-water-quality/>
- Virginia Water Protection (VWP) Permit Program: The VWP, administered by the DEQ, is working well for regulating impacts to both tidal and non-tidal wetlands. The program has a voluntary certification program for professional wetland delineators, which helps streamline the process. DEQ is doing good jobs with State Surface Water Delineations (SSWD) and permit issuance in a timely fashion. The SSWD process also provides an avenue for a complete application without having to deal with ever-changing federal program on Waters of the United States (WOTUS).
- Wetlands Mitigation Banks and In-Lieu Fees: There is an established system and instruments to use. The geographic service area limitation for non-tidal wetland mitigation banks provides a good balance between having an economically viable geographic area in which mitigation credits can be used while limiting it to a scientifically defensible area. Requirements relating to long term protection and stewardship of mitigation projects facilitate an appropriate level of funding and oversight.

- Stream and Wetland Mitigation Program (SWMP): Formerly The Nature Conservancy’s Aquatic Resources Trust Fund, the SWMP allows developers to offset unavoidable wetland impacts by purchasing mitigation credits as an in-lieu fee mitigation option. The funds from these credits are used to support large-scale restoration and protection projects, which, since 1995, has led to the protection and restoration of over 20,000 acres, including public lands. This model has been adopted by other states.

Programs

- DWR Wetlands Team: The creation of a dedicated wetlands team within the Department of Wildlife Resources strengthens statewide capacity for habitat protection, technical support, and policy development.
- Virginia Coastal Zone Management (CZM) Program: An effective coordinating body that aligns federal, state, and local efforts while offering critical funding assistance. It also supports the use of natural features like wetlands and promotes living shorelines to reduce the impacts of coastal storms.
- Environment Virginia: Serves as a valuable forum for local updates, policy discussions, and stakeholder engagement, keeping practitioners informed of new opportunities and emerging issues.
- Center for Coastal Resources Management (CCRM) Tools: Resources such as the Adapt VA platform provide data, mapping, and guidance to help planners and local governments integrate wetlands into resilience and adaptation strategies.

Funding

- Community Flood Preparedness Fund (CFPF): A reliable source of funding that supports wetland restoration and flood resilience projects across the Commonwealth.
- Virginia Conservation Assistance Program (VCAP): Provides cost-share funding for practices that reduce runoff and enhance water quality, complementing wetland restoration and living shoreline projects.
- Clean Water Revolving Loan Fund: Offers low-interest financing that can be used for wetland restoration, living shorelines, and other resilience-related infrastructure.
- Infrastructure Investment and Jobs Act (IIJA) Funding through DEQ: Provides a significant new infusion of federal resources to support large-scale resilience and wetland projects at the state and local level.
- Virginia Migratory Waterfowl Conservation Stamp Law: The policies derived from this law provide a limited but steady funding source for waterfowl habitat improvement projects.

5. *Are there existing policies in other states that should be considered in Virginia?*

General Comments

- We need to ensure that our policies are aligned to support assisted marsh migration. Assisting marsh migration may be creating migration corridors, removing invasive species, relocating infrastructure, or conservation easements. A variety of permitting may be necessary to accommodate such things and the processes need to be streamlined appropriately.
- Reducing the required buffer widths and providing better crediting within that buffer like most other Corps districts would help with additional site feasibility and wetland restoration.

Planning

- New York State's wetlands policies include defined buffers of 100 feet for freshwater wetlands and 300 feet for tidal wetlands. In Virginia, buffer distances are not standardized and depend on the project. Building buffers into our wetlands policy can allow additional space for wetlands migration.
- In North Carolina, buffer zones are applied in nutrient-sensitive watersheds, which may be a good point of entry into regulating additional land areas surrounding wetlands.
- California has expanded upon 'No Net Loss' to include a 'Net Gain Mandate' in the quantity, quality and permanence of wetlands acreage.
- Oregon incorporates wetlands protections into local land use planning and decision-making framework. At a minimum, comprehensive plans must address wetlands and land use per state requirements, but can also create and adopt a Wetland Conservation Plan. Wetland Conservation Plans shift wetland permitting from a reactive, site-by-site process to a proactive, landscape-level strategy. They save time, reduce uncertainty, and improve ecological outcomes. If Virginia can find a way to fund such plans, either regionally or for each locality, it would largely reduce capacity issues and costs associated with the piecemeal processes we have right now, align local land use with state and federal regulations, and provide clear pathways for conservation, mitigation, and preservation.
- Maryland's Coast Smart program explicitly incorporates sea-level rise and marsh migration into planning and permitting decisions.
- Maryland has a Critical Area Commission looking at how to integrate regulatory guidance from the floodplain to subtidal under changing conditions.
- The Tennessee Department of Environment and Conservation (TDEC), in partnership with Skytec LLC, developed the Wetland Screening Tool for the State of Tennessee. This tool provides an interface where the end user can explore the results of a wetland model that utilizes machine learning and up to date high-resolution geospatial data to streamline the process of locating and approximating the extents of potential wetlands across the landscape. This type of information could be combined with a statewide requirement

comparable to Loudoun County's requirement to submit Wetland Data to the Loudoun County Department of Building and Development in a digital format in accordance with Section 8.111.A.6.b of the County's Facilities Standards Manual. See <https://www.loudoun.gov/DocumentCenter/View/17735/Wetland-Digital-Data-Requirements---FSM-7500-A3?bidId=>

- Allowing for a mosaic approach to wetland restoration/creation that produces a more diverse wetland habitat with 1:1 crediting. Multiple states (e.g., Indiana, Ohio) take that approach, and the projects are more successful because they do not require as much excavation and are more natural systems.
- It would be interesting to compare and contrast the wetland mitigation policy differences between Virginia and states that are currently updating their laws - Florida and Colorado.

Permitting

- Pennsylvania has been able to remove low head dams at a vastly greater scale than Virginia. An American Rivers report noted a restoration waiver (<https://www.rff.org/publications/reports/aligning-dam-removal-and-dam-safety/>).
- Wisconsin has a new Hydrologic Restoration General Permit (HRGP-22). This permit creates a general permit for stream, wetland, and floodplain restoration projects that improve hydrologic conditions, connections, and functions (<https://www.wisconsinwetlands.org/updates/new-hydrologic-restoration-general-permit-available/>).
- Living Shoreline permitting process used in North Carolina.
- Maryland and/or other states that have a mature permitting process for thin layer placement/alternative/beneficial use of dredge material programs. Other U.S. Army Corps of Engineers' Districts and Divisions have embraced these solutions.

Programs

- Vermont has a successful Beaver Wetlands Conservation Project which was established in 2000 to provide assistance for landowners, road crews and municipalities who were experiencing conflicts with beavers, in order to maintain valuable wetland habitat. The project is funded in part by a "Partners for Wildlife" grant (USFWS), Vermont Duck Stamp fund, and Federal Aid in Wildlife Restoration grant (USFWS) (<https://www.vtfishandwildlife.com/beavers>)
- The Pennsylvania Wetland Habitat Initiative is a \$6 million investment by the PA Game Commission and Ducks Unlimited to improve wetlands on state game lands by upgrading infrastructure over the next three years in an effort to ensure all managed wetlands are functioning as intended. The initiative, funded by the USFWS Wildlife and Sport Fish Restoration program through the Game Commission, will inject new life into Pennsylvania's wetlands, improving wildlife habitat, water quality, and flood control.

Funding

- Maryland has several successful state-sponsored wetland funding programs, including the Chesapeake and Atlantic Coastal Bays Trust Fund, Nontidal Wetlands Awards Program, and Community Wetland Restoration Grant Program, which can serve as potential models for Virginia state-sponsored funding mechanisms.
- New York State's Environmental Protection Fund (EPF) is a source of funding for capital projects that protect the environment and enhance communities. Capital projects are usually large projects that purchase land or construct facilities. Most projects that receive grants of EPF money combine it with other funding sources that require matching funds.

6. Are you aware of emerging science and innovation that should be explored to ensure wetland health and survival?

Advancing Policy, Programs, and Permitting for Wetland Protection

- Accessibility
 - Make wetland installation more affordable
 - Cost-effective methods for re-grading, planting, and sediment augmentation to restore tidal habitats
 - Improve permitting process by creating programs
 - Promote conservation easements without diminishing tax base
- Wetland policy language
 - Inventory waters no longer protected under federal law (Sackett vs EPA)
- Integrating Indigenous Knowledge and governance
 - Use Indigenous knowledge and values to guide policy.
 - Support Tribal codes for environmental protections, especially water.
 - Explore Rights of Nature frameworks to safeguard land and waters.
- Bay Program goals and outcomes: Understand changes under *Beyond 2025* and the Healthy Landscapes goal and identify why wetlands targets have not been met.
- CBPA riparian buffer effectiveness: Quantify how Virginia's Chesapeake Bay. Preservation Act has impacted riparian buffers and water quality, as no studies have yet documented these outcomes.

Advancing Restoration and Applied Research

Expanding Research to Strengthen Restoration Outcomes

- Improve understanding of sediment budgets, accretion, and blue-carbon sequestration to better predict marsh sustainability and prioritize conservation areas.
- Investigate how changing groundwater, saltwater intrusion, and subsidence affect wetland hydrology and long-term stability.
- Model marsh migration under different sea-level rise and land-use scenarios using GIS, AI, and remote-sensing tools to guide conservation priorities.

- Identify and propagate marsh vegetation tolerant of higher salinity, flooding, and temperature extremes.
- Update the cost comparison of living shorelines versus traditional shoreline armoring (riprap revetment), considering the recent living shoreline mandate.

Innovating Restoration Approaches and Practices

- Develop and advance techniques for thin-layer placement and strategic use of dredged fill to restore marsh islands, elevate existing marshes, and convert historic open-water tidal areas into vegetated wetlands and mudflats. This approach can protect tidal wetlands, improve flood control, expand habitat, support marsh migration, and lower dredge disposal costs.
- Promote berm/dam removals in both non-tidal and tidal waters.
 - Provides fish passage and creates recreational opportunities
 - Relieves landowners of maintenance for dams that fall under upgraded Dam Safety Regulations (not a concern for tidal waters).
- Explore strategies for wetland integration with floodplain reconnection and upstream water retention to reduce peak flows and improve water quality.
- Explore new opportunities to enhance SAV restoration in Chesapeake Bay.
- Explore new opportunities to integrate wetlands with agricultural practices.

Enhancing Mapping and Monitoring of Wetlands

- Update national wetlands inventory to improve identification and long-term monitoring
 - Including small, isolated wetlands
 - Particularly in the tidal space to track impacts of sea level rise
 - For conservation/preservation in flooded areas
- Advance technology to track wetland change, improve boundary delineation, and habitat classification via remote sensing, drones, AI-driven imagery analysis, real-time water level sensors
- Monitoring wetland health
 - To identify ecologically healthy wetlands
 - To advocate for their protection
 - For proactive adaptation planning (marsh migration)
 - Tracking fish and wildlife populations
- Using a holistic ecosystem-based approach to monitoring efforts

Strengthening Outreach and Partnerships

- Develop educational materials on:
 - Ecosystem services of wetlands
 - Living shorelines as preferred fishing areas

- Streamline information sharing for wetland restoration across partners (One Water approach)